

Agenda Item Summary

1. ACTION REQUESTED/PURPOSE: Approve award of Formal Quotation #Q-040487, the Annual Purchase of Traffic Cable and Installation for DOT, to the qualified and low quoter meeting specifications, Fiber Solutions; at the prices listed on the attached tabulation sheet. The annual expenditure is anticipated to be approximately \$150,000.00. This quote shall be in effect for one year. Permission is also requested to exercise the price escalator clause as per the specifications on an as needed basis. Funding will be made available by individual departments and divisions account strings whom will be responsible for monitoring their individual expenditures.

2. WHAT ACTION ACCOMPLISHES: Allows DOT to have cable installed and repaired on an as needed basis using a qualified and dependable vendor.

3. MANAGEMENT RECOMMENDATION: Award as recommended. Purchasing to re-bid in one year.

4. Departmental Category: C9A **5. Meeting Date:** 05-24-2005

6. Agenda: <input checked="" type="checkbox"/> Consent <input type="checkbox"/> Administrative <input type="checkbox"/> Appeals <input type="checkbox"/> Public <input type="checkbox"/> Walk-On	7. Requirement/Purpose: (specify) Statute _____ Ordinance _____ <input checked="" type="checkbox"/> Admin. Code <u>AC-4-1</u> Other _____		8. Request Initiated: Commissioner _____ Department <u>Transportation</u> Division _____ By: <u>Scott Gilbertson, P.E.,</u> <u>Director</u>
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9. Background: Sealed two-step quotes were received by the Division of Purchasing on August 3, 2004. On that date, four responses were received; of which one was a "no bid". The three quotes received from TTM Inc, Kent Technologies and Fiber Solutions, were evaluated on November 9, 2004 by a committee consisting of DOT and Purchasing. The only company deemed qualified to proceed to step two and have their pricing revealed, on November 16, 2004, was Fiber Solutions*. Funds are available: (PD5410417500)

- ATTACHMENTS:**
- (1) Step One Tabulation Sheet
 - (2) Step Two Tabulation Sheet
 - (3) Step One Specifications
 - (4) Step Two Specifications
 - (5) Fiber Solution's Quotation
 - (6) Subcommittee's Recommendation

*Note: Due to a change in personnel it took a while for the recommendation for this quote. We have since found other qualified vendors that are willing to give us a quote so, we will be re quoting this in one year.

10. Review for Scheduling:

Department Director	Purchasing or Contracts	Human Resources	Other	County Attorney	Budget Services				County Manager/P.W. Director
					Analyst	Risk	Grants	Mgr.	
<i>Amelia H. Davis</i>	<i>4-14-05</i>			<i>5/9/05</i>	<i>RK 5/9</i>	<i>5/9/05</i>	<i>5/9/05</i>	<i>5/11/05</i>	<i>5-5-05</i>

11. Commission Action:

- Approved
- Deferred
- Denied
- Other

Rec. by CoAtty
Date: <u>5/5/05</u>
Time: <u>3:25</u>
Forwarded To:

RECEIVED BY COUNTY ADMIN:
<u>5-09-05</u> <u>MS</u>
<u>11:50</u>
COUNTY ADMIN FORWARDED TO:
<u>5/12/05</u>
<u>70m</u>

FORMAL QUOTATION #Q-040487	LEE COUNTY, FLORIDA TABULATION SHEET						
OPENING DATE: August 3, 2004	FOR						
BUYER: Kathy Ciccarelli	TRAFFIC CABLE AND INSTALLATION - STEP I						
VENDORS	TTM INC.	KENT TECHNOLOGIES	FIBER SOLUTIONS				
NUMBER OF COPIES	3	3	3				
WILL YOU DELIVER WITH OWN VEHICLE	YES	YES	YES				
QUOTE SIGNED	YES	YES	YES				
OCCUPATIONAL LICENSE	NA	41755	983231				
REQUIRED SUBMITTALS	NO	NO	YES				
SUBMITTED STEP II	YES	YES	YES				
QUALIFIED FOR STEP II	NO	NO	YES				
ACKNOWLEDGED ADDENDUM NO.1	YES	YES	YES				
NO BIDS							
CUSTOM CABLE INDUSTRIES							
POSTING TIME/DATE							
FROM: /							
UNTIL: /							
BY:							

ATTACHMENT 2

FORMAL QUOTATION #Q-040487		LEE COUNTY, FLORIDA TABULATION SHEET					
OPENING DATE: NOV. 16, 2004		FOR					
BUYER: KATHY CICCARELLI		TRAFFIC CABLE AND INSTALLATION - STEP II					
VENDORS	FIBER SOLUTIONS						
NUMBER OF COPIES	3						
WILL DELIVER WITH OWN VEHICLE	YES						
QUOTE SIGNED	YES						
REQUIRED SUBMITTALS	YES						
FIBER OPTIC CABLE							
ITEM 1: 12 STRAND MULTI-MODE CORNING CABLE LOOSE TUBE - PRICE PER FOOT INSTALLED	1.66						
ITEM 2: 6 STRAND MULTI-MODE CORNING CABLE LOOSE TUBE - PRICE PER FOOT INSTALLED	0.68						
ITEM 3: 12 STRAND SINGLE-MODE CORNING CABLE LOOSE TUBE - PRICE PER FOOT INSTALLED	0.81						
ITEM 4: 24 STRAND SINGLE-MODE CORNING CABLE LOOSE TUBE - PRICE PER FOOT INSTALLED	0.94						
ITEM 5: 48 STRAND SINGLE-MODE CORNING CABLE LOOSE TUBE - PRICE PER FOOT INSTALLED	1.33						
ITEM 6: 96 STRAND SINGLE-MODE CORNING CABLE LOOSE TUBE - PRICE PER FOOT INSTALLED	2.14						
ITEM 7: 6 STRAND MULTI-MODE CORNING CABLE LOOSE TUBE - PRICE PER FOOT INSTALLED	1.10						
ITEM 8: 24 STRAND MULTI-MODE CORNING CABLE LOOSE TUBE - PRICE PER FOOT INSTALLED	2.53						
ITEM 9: 48 STRAND MULTI-MODE CORNING CABLE LOOSE TUBE - PRICE PER FOOT INSTALLED	4.56						

VENDORS	FIBER SOLUTIONS						
HYBRID FIBER							
ITEM 10: 12 SM/6 MM LOOSE TUBE - PRICE PER FOOT INSTALLED	1.21						
ITEM 11: 24 SM/12 MM LOOSE TUBE - PRICE PER FOOT INSTALLED	1.94						
ITEM 12: 6 TWISTED PAIR PE 39 19 AWG INTERCONNECT CABLE W/ALUMINUM SHIELD - PRICE PER FOOT INSTALLED	0.94						
ITEM 13: 12 TWISTED PAIR PE 39 19 AWG INTERCONNECT CABLE W/ALUMINUM SHIELD - PRICE PER FOOT INSTALLED	1.27						
FIBER OPTIC CONNECTORS							
ITEM 14: CORNING UNICAM ST SINGLE MODE - PRICE EACH INSTALLED	*40.00						
ITEM 15: CORNING UNICAM ST MULTI MODE - PRICE EACH INSTALLED	*33.00						
FIBER BAYS							
ITEM 16: CORNING FIBER BAY PANEL WITH 6 CONNECTORS SINGLE MODE - PRICE EACH INSTALLED	378.20						
ITEM 17: CORNING FIBER BAY PANEL WITH 6 CONNECTORS MULTI MODE - PRICE EACH INSTALLED	378.20						
ITEM 18: CORNING FIBER BAY PANEL WITH 12 CONNECTORS SINGLE MODE - PRICE EACH INSTALLED	523.80						
ITEM 19: CORNING FIBER BAY PANEL WITH 12 CONNECTORS MULTI MODE - PRICE EACH INSTALLED	523.80						

BOARD OF COUNTY COMMISSIONERS

Writer's Direct Dial Number: _____

Bob Janes
District One

Douglas R. St. Cerny **July 16, 2004**
District Two

Ray Judah
District Three

Andrew W. Coy
District Four

John E. Albion
District Five

Donald D. Stilwell
County Manager

James G. Yaeger
County Attorney

Diana M. Parker
County Hearing Examiner

Formal Quotation No.: Q-040487

**LEE COUNTY ADDENDUM NUMBER ONE
TO THE SPECIFICATIONS FOR
TRAFFIC CABLE AND INSTALLATION**


**QUOTERS MUST ACKNOWLEDGE RECEIPT OF THIS ADDENDUM ON THE
PROPOSAL QUOTE FORM - PAGE 13.**

The original specifications and other contract documents are amended as noted below:

Please add ATTACHMENT A to Step I:

**If there are any questions regarding this addendum, please contact Kathy Ciccarelli at
239-344-5456.**

DIVISION OF PURCHASING


Kathy Ciccarelli
Buyer

Cc: Minutes



LEE COUNTY
SOUTHWEST FLORIDA

PROJECT NO.: Q-040487

OPEN DATE: AUGUST 3, 2004

AND TIME: 2:30 P.M.

PRE-BID DATE: JULY 19, 2004

AND TIME: 10:00 A.M.

LOCATION: 1825 HENDRY ST. 3RDFLOOR
FORT MYERS, FL 33901

REQUEST FOR QUOTATIONS

(STEP ONE – QUALIFICATIONS)

TITLE: TRAFFIC CABLE AND INSTALLATION

REQUESTER: LEE COUNTY BOARD OF COUNTY COMMISSIONERS
DIVISION OF PURCHASING

MAILING ADDRESS
P.O. BOX 398
FORT MYERS, FL 33902-0398

PHYSICAL ADDRESS
1825 Hendry St 3rd Floor
FORT MYERS, FL 33901

BUYER: KATHY CICCARELLI
BUYER
PHONE NO.: (239) 344-5450

GENERAL CONDITIONS

Sealed Quotations will be received by the DIVISION OF PURCHASING, until 2:30pm on the date specified on the cover sheet of this "Request for Quotations", and opened immediately thereafter by the Purchasing Director or designee.

Any question regarding this solicitation should be directed to the Buyer listed on the cover page of this solicitation, or by calling the Division of Purchasing at (239) 344-5450.

1. **SUBMISSION OF QUOTE:**

a. Quotations shall be sealed in an envelope, and the outside of the envelope should be marked with the following information:

1. Marked with the words "Sealed Quote"
2. Name of the firm submitting the quotation
3. Title of the quotation
4. Quotation number

b. The Quotation shall be submitted in triplicate as follows:

1. The original consisting of the Lee County quotes forms completed and signed.
2. A copy of the original quote forms for the Purchasing Director.
3. A second copy of the original quote forms for use by the requesting department.

c. The following should be submitted along with the quotation in a separate envelope. This envelope should be marked as described above, but instead of marking the envelope as "Sealed Quote", please indicate the contents; i.e., literature, drawings, submittals, etc. This information should be submitted in duplicate.

1. Any information (either required or in addition to that asked for by the specifications) necessary to analyze your quotation; i.e., required submittals, literature, technical data, financial statements.
2. Warranties and guarantees against defective materials and workmanship.

d. **ALTERNATE QUOTE:** If the vendor elects to submit more than one quote, then the quotes should be submitted in separate envelopes and marked as indicated above. The second, or alternate quote should be marked as "Alternate".

- e. **QUOTES RECEIVED LATE:** It is the quoter's responsibility to ensure that his quote is received by the Division of Purchasing prior to the opening date and time specified. Any quote received after the opening date and time will be promptly returned to the quoter unopened. Lee County will not be responsible for quotes received late because of delays by a third party delivery service; i.e., U.S. Mail, UPS, Federal Express, etc.
- f. **QUOTE CALCULATION ERRORS:** In the event there is a discrepancy between the total quoted amount or the extended amounts and the unit prices quoted, the unit prices will prevail and the corrected sum will be considered the quoted price.
- g. **PAST PERFORMANCE:** All vendors will be evaluated on their past performance and prior dealings with Lee County (i.e., failure to meet specifications, poor workmanship, late delivery, etc.).
- h. **WITHDRAWAL OF QUOTE:** No quote may be withdrawn for a period of 90 days after the scheduled time for receiving quotes. A quote may be withdrawn prior to the quote-opening date and time. Such a request to withdraw should be made in writing to the Purchasing Director, who will approve or disapprove of the request.
- i. **COUNTY RESERVES THE RIGHT:** The County reserves the right to waive minor informalities in any quote; to reject any or all quotes with or without cause; and/or to accept the quote that in its judgment will be in the best interest of the County of Lee.
- j. **EXECUTION OF QUOTE:** All quotes shall contain the signature of an authorized representative of the quoter in the space provided on the quote proposal form. All quotes shall be typed or printed in ink. The bidder may not use erasable ink. All corrections made to the quote shall be initialed.

2. **ACCEPTANCE**

The materials and/or services delivered under the quote **shall** remain the property of the seller until a physical inspection and actual usage of these materials and/or services is accepted by the County and is to be in compliance with the terms herein, fully in accord with the specifications and of the highest quality. In the event the materials and/or services supplied to the County are found to be defective or do not conform to specifications, the County reserves the right to cancel the order upon written notice to the seller and return such product to the seller at the seller's expense.

3. **SUBSTITUTIONS**

Whenever in these specifications a brand name or make is mentioned, it is the intention of the County only to establish a grade or quality of materials and not to rule out other brands or makes of equality. However, if a product other than that specified is quote, it is the vendor's responsibility to name such product with his quote and to prove to the County that said product is equal to the product specified. Lee County **shall** be the sole judge as to whether a product being offered by the quoter is actually equivalent to the one being specified by the detailed specifications. (Note: This paragraph does not apply when it is determined that the technical requirements of this solicitation require only a specific product as stated in the detailed specifications.)

4. **RULES, REGULATIONS, LAWS, ORDINANCES & LICENSES**

The awarded vendor shall observe and obey all laws, ordinances, rules, and regulations, of the federal, state, and local government, which may be applicable to the supply of this product or service.

- a. Occupational License – Vendor shall submit within 10 calendar days after request.
- b. Specialty License(s) – Vendor shall possess at the time of the opening of the quote all necessary permits and/or license required for the sale of this product and/or service and upon the request of the County provide copies of licenses and/or permits within 10 calendar days after request.

5. **RECYCLED PRODUCTS**

It is the Lee County Board of County Commissioners' stated policy objective to "Ensure all departments are aware of the availability of recycled products..." (Administrative Code #AC-10-4). In an effort to provide the utmost opportunity for the use of recycled products by Lee County, vendors should list on their letterhead, all necessary information regarding any applicable recycled products they have available. Recycled products should meet all other specifications listed and have a minimum of 50%-recycled content. Whenever fiscally feasible, available recycled products will be purchased.

6. **WARRANTY/GUARANTY** (unless otherwise specified)

All materials and/or services furnished under this quote shall be warranted by the vendor to be free from defects and fit for the intended use.

7. **PRE-BID CONFERENCE**

A pre-bid conference will be held at the location, date, and time specified on the cover of this solicitation. Pre-bid conferences are generally non-mandatory, but it is highly recommended that everyone planning to submit a quote attend.

In the event a pre-bid conference is classified as mandatory, it will be so specified on the cover of this solicitation and it will be the responsibility of the quoter to ensure that they are represented at the pre-bid. Only those quoters who attend the pre-bid conference will be allowed to quote on this project.

8. **BIDDERS LIST MAINTENANCE**

A bidder should respond to "Request for Quotations" in order to be kept on the Bidder's List. Failure to respond to three different "request for quotations" may result in the vendor being removed from the Bidder's List. A bidder may do one of the following, in order to respond properly to the request:

- a. Submission of a quotation prior to the quote receipt deadline.
- b. Submission of a "no bid" notice prior to the quote receipt deadline.

9. **LEE COUNTY PAYMENT PROCEDURES**

All vendors are requested to mail one original invoice and one invoice copy to:

Lee County Finance Department
Post Office Box 2238
Fort Myers, FL 33902-2238

All invoices will be paid as directed by the Lee County payment procedure unless otherwise differently stated in the detailed specification portion of this quote.

Lee county will not be liable for request of payment deriving from aid, assistance, or help by any individual, vendor, quoter, or bidder for the preparation of these specifications.

Lee County is generally a tax-exempt entity subject to the provisions of the 1987 legislation regarding sales tax on services. Lee County will pay those taxes for which it is obligated, or it will provide a Certificate of Exemption furnished by the Department of Revenue. All contractors or quoters should include in their quote all sales or use taxes, which they will pay when making purchases of material or subcontractor's services.

10. **LEE COUNTY BID PROTEST PROCEDURE**

Any contractor/vendor/firm that has submitted a formal bid/quote/proposal to Lee County, and who is adversely affected by an intended decision with respect to the award of the formal bid/quote/proposal, shall file with the County's Purchasing Director or Public Works Director a written "Notice of Intent to File a Protest" not later than seventy-two (72) hours (excluding Saturdays, Sundays and Legal Holidays) after receipt of a "Notice of Intended Decision" from the County with respect to the proposed award of the formal bid/quote/proposal.

The "Notice of Intent to File a Protest" is one of two documents necessary to perfect Protest. The second document is the "Formal Written Protest", both documents are described below.

The "Notice of Intent to File a Protest" document shall state all grounds claimed for the Protest, and clearly indicate it as the "Notice of Intent to File a Protest". Failure to clearly indicate the Intent to file the Protest shall constitute a waiver of all rights to seek any further remedies provided for under this Protest Procedure.

The "Notice of Intent to File a Protest" shall be received ("stamped in") by the Purchasing Director or Public Works Director not later than Four o'clock (4:00) PM on the third working day following the day of receipt of the County's Notice of Intended Decision.

The affected party shall then file its Formal Written Protest within ten (10) calendar days after the time for the filing of the Notice of Intent to File a Protest has expired. Except as provided for in the paragraph below, upon filing of the Formal Written Protest, the contractor/vendor/firm shall post a bond, payable to the Lee County Board of County Commissioners in an amount equal to five percent (5%) of the total bid/quote/proposal, or Ten Thousand Dollars (\$10,000.00), whichever is less. Said bond shall be designated and held for payment of any costs that may be levied against the protesting contractor/vendor/firm by the Board of County Commissioners, as the result of a frivolous Protest.

A clean, Irrevocable Letter of Credit or other form of approved security, payable to the County, may be accepted. Failure to submit a bond, letter of credit, or other approved security simultaneously with the Formal Written Protest shall invalidate the protest, at which time the County may continue its procurement process as if the original "Notice of Intent to File a Protest" had never been filed.

Any contractor/vendor/firm submitting the County's standard bond form (CSD: 514), along with the bid/quote/proposal, shall not be required to submit an additional bond with the filing of the Formal Written Protest.

The Formal Written Protest shall contain the following:

- County bid/quote/proposal identification number and title.
- Name and address of the affected party, and the title or position of the person submitting the Protest.
- A statement of disputed issues of material fact. If there are no disputed material facts, the Formal Protest must so indicate.
- A concise statement of the facts alleged, and of the rules, regulations, statues, or constitutional provisions, which entitle the affected party to relief.
- All information, documents, other materials, calculations, and any statutory or case law authority in support of the grounds for the Protest.
- A statement indicating the relief sought by the affected (protesting) party.
- Any other relevant information that the affected party deems to be material to Protest.

Upon receipt of a timely filed "Notice of Intent to File a Protest", the Purchasing Director or Public Works Director (as appropriate) may abate the award of the formal bid/quote/proposal as appropriate, until the Protest is heard pursuant to the informal hearing process as further outlined below, except and unless the County Manager shall find and set forth in writing, particular facts and circumstances that would require an immediate award of the formal bid/quote/proposal for the purpose of avoiding a danger to the public health, safety, or welfare. Upon such written finding by the County Manager, the County Manager may authorize an expedited Protest hearing procedure. The expedited Protest hearing shall be held within ninety-six (96) hours of the action giving rise to the contractor/vendor/firm's Protest, or as soon as may be practicable for all parties. The "Notice of Intent to File a Protest" shall serve as the grounds for the affected party's presentation and the requirements for the submittal of a formal, written Protest under these procedures, to include the requirement for a bond, shall not apply.

The Dispute Committee shall conduct an informal hearing with the protesting contractor/vendor/firm to attempt to resolve the Protest, within seven working days (excluding Saturdays, Sundays and legal holidays) from receipt of the Formal Written Protest. The Chairman of the Dispute Committee shall ensure that all affected parties may make presentations and rebuttals, subject to reasonable time limitations, as appropriate. The purpose of the informal hearing by the Dispute Committee, the protestor and other affected parties is to provide and opportunity: (1) to review the basis of the Protest; (2) to

evaluate the facts and merits of the Protest: and (3) to make a determination whether to accept or reject the Protest.

Once a determination is made by the Dispute Committee with respect to the merits of the Protest, the Dispute Committee shall forward to the Board of County Commissioners its recommendations, which shall include relevant background information related to the procurement.

Upon receiving the recommendation from the Dispute Committee, the Board of County Commissioners shall conduct a hearing on the matter at a regularly scheduled meeting. Following presentations by the affected parties, the Board shall render its decision on the merits of the Protest.

If the Board's decision upholds the recommendation by the Dispute Committee regarding the award, and further finds that the Protest was either frivolous and/or lacked merit, the Board, at its discretion, may assess costs, charges, or damages associated with any delay of the award, or any costs incurred with regard to the protest. These costs, charges or damages may be deducted from the security (bond or letter of credit) provided by the contractor/vendor/firm. Any costs, charges or damages assessed by the Board in excess of the security shall be paid by the protesting contractor/vendor/firm within thirty (30) calendar days of the Board's final determination concerning the award.

All formal bid/quote/proposal solicitations shall set forth the following statement:

“FAILURE TO FOLLOW THE BID PROTEST PROCEDURE REQUIREMENTS WITHIN THE TIME FRAMES AS PRESCRIBED HEREIN AND ESTABLISHED BY LEE COUNTY BOARD OF COUNTY COMMISSIONERS, FLORIDA, SHALL CONSTITUTE A WAIVER OF YOUR PROTEST AND ANY RESULTING CLAIMS.”

11. **PUBLIC ENTITY CRIME**

Any person or affiliate as defined by statute who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid or a contract to provide any goods or services to the County; may not submit a bid on a contract with the County for the construction or repair of a public building or a public work; may not submit bids or leases of real property to the County; may not be awarded or perform works as a contractor, supplier, subcontractor, or consultant under a contract with the County, and may not transact business with the County in excess of \$25,000.00 for a period of 36 months from the date of being placed on the convicted vendor list.

12. **QUALIFICATION OF QUOTERS** (unless otherwise noted)

Quotes will be considered only from firms normally engaged in the sale and distribution or provision of the services as specified herein. Quoters shall have adequate organization, facilities, equipment, and personnel to ensure prompt and efficient service to Lee County. The County reserves the right before recommending any award to inspect the facilities and organization; or to take any other action necessary to determine ability to perform is satisfactory, and reserves the right to reject quotes where evidence submitted or investigation and evaluation indicates an inability of the quoter to perform.

13. **MATERIAL SAFETY DATA SHEETS**

In accordance with Chapter 443 of the Florida Statutes, it is the vendor's responsibility to provide Lee County with Materials Safety Data Sheets on quoted materials, as may apply to this procurement.

14. **MISCELLANEOUS**

If a conflict exists between the General Conditions and the detailed specifications, then the detailed specifications shall prevail.

15. **WAIVER OF CLAIMS**

Once this contract expires, or final payment has been requested and made, the awarded contractor shall have no more than 30 days to present or file any claims against the County concerning this contract. After that period, the County will consider the Contractor to have waived any right to claims against the County concerning this agreement.

16. **AUTHORITY TO PIGGYBACK**

It is hereby made a precondition of any quote and a part of these specifications that the submission of any quote in response to this request constitutes a quote made under the same conditions, for the same price, and for the same effective period as this quote, to any other governmental entity.

17. **COUNTY RESERVES THE RIGHT**

a) **State Contract**

If applicable, the County reserves the right to purchase any of the items in this quote from State Contract Vendors if the prices are deemed lower on State Contract than the prices we receive in this quotation.

b) **Any Single Large Project**

The County, in its sole discretion, reserves the right to separately quote any project that is outside the scope of this quote, whether through size, complexity, or dollar value.

c) **Disadvantaged Business Enterprises**

The County, in its sole discretion, reserves the right to purchase any of the items in this quote from Disadvantage Business Enterprise vendor if the prices are determined to be in the best interest of the County, to assist the County in the fulfillment of any of the County's grant commitments to federal or state agencies.

The County further reserves the right to purchase any of the items in this quote from DBE's to fulfill the County's state policy toward DBE's as outlined in County Ordinance 88-45 and 90-04, as amended.

d) **Anti-Discrimination**

The vendor for itself, its successors in interest, and assignees, as part of the consideration there of covenant and agree that:

In the furnishing of services to the County hereunder, no person on the grounds of race, religion, color, age, sex, national origin, handicap or marital status shall be excluded from participation in, denied the benefits of, or otherwise be subjected to discrimination.

The vendor will not discriminate against any employee or applicant for employment because of race, religion, color, age, sex, national origin, handicap or marital status. The vendor will make affirmative efforts to insure that applicants are employed and that employees are treated during employment without regard to their race, religion, color, age, sex, national origin, handicap or marital status. Such action shall include, but not be limited to, acts of employment, upgrading, demotion or transfer; recruitment advertising; layoff or termination, rates of pay or other forms of compensation and selection for training, including apprenticeship.

Vendor agrees to post in a conspicuous place, available to employees and applicants for employment, notices setting forth the provisions of this anti-discrimination clause.

Vendor will provide all information and reports required by relevant regulations and/or applicable directives. In addition, the vendor shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the County to be pertinent to

ascertain compliance. The vendor shall maintain and make available relevant data showing the extent to which members of minority groups are beneficiaries under these contracts.

Where any information required of the vendor is in the exclusive possession of another who fails or refuses to furnish this information, the vendor shall so certify to the County its effort made toward obtaining said information. The vendor shall remain obligated under this paragraph until the expiration of three (3) years after the termination of this contract.

In the event of breach of any of the above anti-discrimination covenants, the County shall have the right to impose sanctions as it may determine to be appropriate, including withholding payment to the vendor or canceling, terminating, or suspending this contract, in whole or in part.

Additionally, the vendor may be declared ineligible for further County contracts by rule, regulation or order of the Board of County Commissioners of Lee County, or as otherwise provided by law.

The vendor will send to each union, or representative of workers with which the vendor has a collective bargaining agreement or other contract of understanding, a notice informing the labor union of worker's representative of the vendor's commitments under this assurance, and shall post copies of the notice in conspicuous places available to the employees and the applicants for employment.

The vendor will include the provisions of this section in every subcontract under this contract to insure its provisions will be binding upon each subcontractor. The vendor will take such actions with respect to any subcontractor, as the contracting agency may direct, as a means of enforcing such provisions, including sanctions for non-compliance.

18. **AUDITABLE RECORDS**

The awarded vendor shall maintain auditable records concerning the procurement adequate to account for all receipts and expenditures, and to document compliance with the specifications. These records shall be kept in accordance with generally accepted accounting methods, and Lee County reserves the right to determine the record-keeping method required in the event of non-conformity. These records shall be maintained for two years after completion of the project and shall be readily available to County personnel with reasonable notice, and to other persons in accordance with the Florida Public Disclosure Statues.

19. **DRUG FREE WORKPLACE**

Whenever two or more quotes/proposals, which are equal with respect to price, quality and service, are received for the procurement of commodities or contractual services, a quote/proposal received from a business that certifies that it has implemented a drug-free workplace program shall be given preference in the award process. In order to have a drug-free workplace program, a business shall comply with the requirements of Florida Statutes 287.087.

20. **REQUIRED SUBMITTALS**

Any submittals requested should be returned with the quote response. This information may be accepted after opening, but no later than 10 calendar days after request.

21. **TERMINATION**

Any agreement as a result of this quote may be terminated by either party giving thirty (30) calendar days advance written notice. The County reserves the right to accept or not accept a termination notice submitted by the vendor, and no such termination notice submitted by the vendor shall become effective unless and until the vendor is notified in writing by the County of its acceptance.

The Purchasing Director may immediately terminate any agreement as a result of this quote for emergency purposes, as defined by the Lee County Purchasing and Payment Procedure Manual.

Any vendor who has voluntarily withdrawn from a formal quote/proposal without the County's mutual consent during the contract period shall be barred from further County procurement for a period of 180 days. The vendor may apply to the Board of Lee County Commissioners for waiver of this debarment. Such application for waiver of debarment must be coordinated with and processed by Purchasing.

22. **CONFIDENTIALITY**

Vendors should be aware that all submittals (including financial statements) provided with a quote/proposal are subject to public disclosure and will **not** be afforded confidentiality.

23. **ANTI-LOBBYING CLAUSE**

All firms are hereby placed on formal notice that neither the County Commissioners nor candidates for County Commission, nor any employees from the Lee County Government, Lee County staff members, nor any members of the Qualification/Evaluation Review Committee are to be lobbied, either individually

or collectively, concerning this project. Firms and their agents who intend to submit qualifications, or have submitted qualifications, for this project are hereby placed on *formal notice* that they are *not* to contact County personnel for such purposes as holding meetings of introduction, meals, or meetings relating to the selection process outside of those specifically scheduled by the County for negotiations. Any such lobbying activities may cause immediate disqualification for this project.

24. **INSURANCE (AS APPLICABLE)**

Insurance shall be provided, per the attached insurance guide. Upon request, an insurance certificate complying with the attached guide may be required prior to award.

**LEE COUNTY, FLORIDA
PROPOSAL QUOTE FORM
FOR THE PURCHASE OF TRAFFIC CABLE AND INSTALLATION**

DATE SUBMITTED: _____

VENDOR NAME: _____

TO: The Board of County Commissioners
Lee County
Fort Myers, Florida

Having carefully examined the "General Conditions", and the "Detailed Specifications", all of which are contained herein, the Undersigned proposes to furnish the following which meet these specifications:

The undersigned acknowledges
receipt of Addenda numbers:

WILL YOU DELIVER WITH YOUR OWN VEHICLE AS OPPOSED TO COMMON CARRIER?

YES _____ NO _____

ANTI-COLLUSION STATEMENT

THE BELOW SIGNED QUOTER HAS NOT DIVULGED TO, DISCUSSED OR COMPARED HIS QUOTE WITH OTHER QUOTERS AND HAS NOT COLLUDED WITH ANY OTHER QUOTER OR PARTIES TO A QUOTE WHATSOEVER. NOTE: NO PREMIUMS, REBATES OR GRATUITIES TO ANY EMPLOYEE OR AGENT ARE PERMITTED EITHER WITH, PRIOR TO, OR AFTER ANY DELIVERY OF MATERIALS. ANY SUCH VIOLATION WILL RESULT IN THE CANCELLATION AND/OR RETURN OF MATERIAL (AS APPLICABLE) AND THE REMOVAL FROM THE MASTER BIDDERS LIST.

FIRM NAME _____

BY (Printed): _____

BY (Signature): _____

TITLE: _____

FEDERAL ID # OR S.S.# _____

ADDRESS: _____

PHONE NO.: _____

FAX NO.: _____

CELLULAR PHONE/PAGER NO.: _____

LEE COUNTY OCCUPATIONAL LICENSE NUMBER: _____

E-MAIL ADDRESS: _____

REVISED: 7/28/00

PROJECT OVERVIEW

GENERAL DESCRIPTION: Purchase and installation of Traffic Cable to be used Countywide

PROJECT NAME: TRAFFIC CABLE AND INSTALLATION

PROJECT LOCATION: Countywide

TWO-STEP QUOTE PROCESS

NOTE: PLEASE SUBMIT STEPS 1 AND 2 TOGETHER ON THE PROJECT OPENING DATE.

PLEASE USE SEPARATE SEALED ENVELOPES MARKED "STEP 1" AND "STEP 2"

Lee County is utilizing a two-step process to evaluate the qualifications of quoters and allow only qualified companies to have their pricing opened and considered under Step Two.

*Step One will require interested vendors to submit the qualifications of their company.

*In Step Two, only those companies qualified in Step One will be eligible to have their pricing opened and considered.

STEP ONE – REQUEST FOR QUALIFICATIONS

In Step One, please submit all requested information to Lee County Purchasing, 1825 Hendry Street, 3rd Floor, Fort Myers, FL 33901, before the deadline given on the cover of this solicitation. Qualifications received after this date and time will not be accepted.

All of the qualifications received will then be reviewed and evaluated by County staff, and a decision made as to which companies are qualified and which are not. Each company submitting qualifications will receive a letter stating whether they are qualified or not. Only those companies found to be qualified will be allowed to proceed to Step Two.

In order for a company to be considered responsive in Step One, it should submit all information requested, including appropriate signatures. Failure to meet these requirements may cause your company to be declared non-responsive.

STEP TWO – REQUEST FOR QUOTATIONS – PRICES

Firms found to be qualified in Step One will be eligible to have their pricing opened and considered. This information must be completed and returned to Lee County Purchasing, 1825 Hendry Street, 3rd Floor, Fort Myers, FL 33901, before the given deadline. Pricing information received after this date and time will not be accepted.

PLEASE USE ADDITIONAL SHEETS OF PAPER AS NECESSARY TO RESPOND IN FULL TO THE FOLLOWING QUESTIONS/REQUIREMENTS.

PLEASE SUBMIT ALL REQUIRED SUBMITTALS IN TRIPLICATE.

CONTRACTS/AGREEMENTS

If your firm will require Lee County to sign any type of contract and/or agreement as part of this purchase, please include a copy of these documents with Step One of the quotation.

VENDOR QUALIFICATIONS

To qualify for consideration for selection as a qualified vendor, a vendor must meet certain designated minimum experience and qualifications. These minimum qualifications are outlined in the following sections. A vendor must also demonstrate that he/she is financially qualified.

NOTE: IN ORDER TO QUALIFY TO PROCEED TO STEP TWO AS A QUALIFIED VENDOR; A "PASS" MUST BE OBTAINED FOR ALL OF THE EVALUATION CRITERIA – SEE THE EVALUATION SHEETS FOR REQUEST FOR QUALIFICATIONS" IN EACH SECTION.

In order to qualify to be awarded The Traffic Cable quote you must answer and receive a pass on all the following questions:

- I. Experience
- II. Financial Qualifications
- III. Corning Cable
- IV. Pipe Repairs
- V. BICSI Certification
- VI. Maintenance of Traffic Certification
- VII. Emergency Repair Response Time
- VIII. Location

REQUIRED SUBMITTALS FOR THIS RFQ ARE AS FOLLOWS:

I. EXPERIENCE

Companies submitting this prequalification request shall have demonstrable, professional experience and background in the sale and installation of cable such as that specified in this quotation. Further, all companies submitting a prequalification request shall provide a minimum of five (5) references listing customer names, addresses, telephone numbers, and contact person, for whom similar work has been done.

Describe experience in narrative form, no longer than two (2) 8-1/2" x 11" pages and include references.

II. FINANCIAL QUALIFICATIONS (MINIMUM)

STANDARD CONTRACT - Contracts that will not exceed three hundred and sixty five (365) calendar days; or where costs will not exceed \$500,000; and/or there are no unusual hazards present.

1. **Insurance Requirements:** *These are minimum requirements, which are subject to modification in response to operations involving a higher level of loss exposure.*

a. **Workers' Compensation** - Statutory benefits as defined by FS 440 encompassing all operations contemplated by this contract or agreement to apply to all owners, officers, and employees regardless of the number of employees. Individual employees may be exempted per State Law. Employers' liability will have minimum limits of:

\$500,000 per accident
\$500,000 disease limit
\$500,000 disease limit per employee

b. **Commercial General Liability** - Coverage shall apply to premises and/or operations, products and/or completed operations, independent contractors, contractual liability, and broad form property damage exposures with minimum limits of:

\$500,000 bodily injury per person (BI)
\$1,000,000 bodily injury per occurrence (BI)
\$500,000 property damage (PD) or
\$1,000,000 combined single limit (CSL) of BI and PD

- c. Business Auto Liability - The following Automobile Liability will be required and coverage shall apply to all owned, hired and non-owned vehicles use with minimum limits of:

\$500,000 bodily injury per person (BI)
\$1,000,000 bodily injury per occurrence (BI)
\$100,000 property damage (PD) or
\$1,000,000 combined single limit (CSL) of BI and PD

**The required limit of liability shown in Standard Contract: 1.a; 1.b; 1.c; may be provided in the form of "Excess Insurance" or "Commercial Umbrella Policies." In which case, a "Following Form Endorsement" will be required on the "Excess Insurance Policy" or "Commercial Umbrella Policy."*

2. Verification of Coverage:

- a. Ten (10) days prior to the commencement of any work under this contract a certificate of insurance will be provided to the Risk Manager for review and approval. The certificate shall provide for the following:

1. ***"Lee County, a political subdivision and Charter County of the State of Florida, its agents, employees, and public officials@ will be named as an "Additional Insured" on the General Liability policy.***
2. Lee County will be given thirty (30) days notice prior to cancellation or modification of any stipulated insurance. Such notification will be in writing by registered mail, return receipt requested and addressed to the Risk Manager (P.O. BOX 398 Ft. Myers, FL 33902).

3. Special Requirements:

- a. An appropriate "Indemnification" clause shall be made a provision of the contract.
- c. It is the responsibility of the general contractor to insure that all subcontractors comply with all insurance requirements.

Please include copies of current Certificates of Insurance or a letter from your insurance company evidencing the ability of your company to be insured for the amounts required under this RFQ.

III. CORNING CABLE

- A. Can you provide Corning brand fiber cable?
- B. Are you an authorized Extended Warranty Partner with Corning? Please provide a certificate.
- C. Do you have a Corning Design Course (TR-07-S) Certification? Please provide a certificate.
- D. Each technician shall have a Corning Installation Course (TR-02-S) Certification. Please provide certificates.

Please explain how your firm complies with this requirement.

IV. PIPE REPAIRS

On an as needed basis in the course of doing the work pipe repairs may be required. This will involve repairing/installing conduit of varying sizes as well as pull boxes. The County will provide all materials.

Please explain how your firm complies with this requirement.

V. BICSI CERTIFICATION

Companies submitting this prequalification request must have a minimum of one certified Registered Communications Distribution Designer (RCDD) on staff. Please include a copy of their current RCDD certification.

Please explain how your firm complies with this requirement.

VI. MAINTENANCE OF TRAFFIC CERTIFICATION (PLEASE SEE ATTACHMENT A)

Companies submitting this prequalification request must have an FDOT/MOT certification for all staff members working on the highway or any other area that involves traffic. A refresher course or the course shall have been completed in the last four years. Please include copies of current certifications for all your employees.

Please explain how your firm complies with this requirement.

VII. EMERGENCY REPAIR RESPONSE TIME

Companies submitting this prequalification must be able to provide 2-hour or less response times to perform emergency on-site repairs.

Please explain how your firm complies with this requirement.

VIII. LOCATION

Do you have a location within a 50 mile radius of downtown Fort Myers, Florida?

Please explain how your firm complies with this requirement.

**EVALUATION SHEETS FOR
REQUEST FOR QUALIFICATIONS**

Project Name: **TRAFFIC CABLE AND INSTALLATION**

Quotation No.: Q-040487

Committee Evaluation Date/Time: _____

Company Evaluated: _____

I. EXPERIENCE

Companies submitting this prequalification request shall have demonstrable, professional experience and background in the sale and installation of cable such as that specified in this quotation. Was the narrative describing this provided and are the qualifications acceptable?

_____ PASS _____ FAIL

All companies submitting a prequalification request shall provide a minimum of five (5) references listing customer names, addresses, telephone numbers, and contact person, for whom equipment, similar to that detailed in this quotation, has been installed and is currently in use. Were the references and accompanying information provided? Were the reference checks acceptable?

_____ PASS _____ FAIL

II. FINANCIAL QUALIFICATIONS

Were current Certificates of Insurance or letter from insurance company evidencing the Vendor's ability to obtain insurance provided and acceptable?

_____ PASS _____ FAIL

III. CORNING CABLE

A .Can they supply Corning cable?

_____ PASS _____ FAIL

B .Are they an authorized Extended Warranty Partner?

_____ PASS _____ FAIL

C. Do they have a Corning Design Course (TR-07-S) Certification?

_____ PASS _____ FAIL

D. Do their technicians have a Corning Installation Course (TR-02-S) Certification?

_____ PASS _____ FAIL

IV. PIPE REPAIRS

Can they repair/install conduit and pull boxes?

_____ PASS _____ FAIL

V. BICSI CERTIFICATION

Did they submit a Registered Communications Distribution Designer (RCDD) certification?

_____ PASS _____ FAIL

VI. MAINTENANCE OF TRAFFIC CERTIFICATION

Did they submit current DOT/ MOT certifications for all their employees?

_____ PASS _____ FAIL

VII. EMERGENCY REPAIR RESPONSE TIME

Did this vendor adequately explain its ability to provide 2-hour or less response times to perform emergency on-site repairs.

_____ PASS _____ FAIL

VIII. LOCATION

Does this vendor have a location within a 50 mile radius?

_____ PASS _____ FAIL

SAMPLE REFERENCE CHECK FORM

Quotation No.: **Q-040487**

Project Name: **TRAFFIC CABLE AND INSTALLATION**

Company Name Being Evaluated: _____

1. Has this company provided cable and installation similar to that being quoted to Lee County to your firm/entity?

Yes _____ No _____

2. During the installation, how was their response time to your requests?

Excellent _____ Satisfactory _____ Poor _____

3. The County has a two hour response time for emergencies. Do you think that they can respond in two hours or less?

Yes _____ No _____

4. Once the installation was completed, how would you rate the follow-up and availability of their managerial and support staff?

Excellent _____ Satisfactory _____ Poor _____

5. Have they ever started a project and not completed it?

Yes _____ No _____

If yes, please explain: _____

6. Would you recommend employment of this company?

Yes _____ No _____

If no, please explain: _____

OVERALL COMMENTS: _____

REFERENCE CALLED: _____

NAME: _____

DATE: _____ TIME: _____

CHECKER'S SIGNATURE: _____

LEE COUNTY PURCHASING - BIDDERS CHECK LIST

IMPORTANT: Please read carefully and return with your bid proposal.
Please check off each of the following items as the necessary action is completed:

- 1. The Quote has been signed.
- 2. The Quote prices offered have been reviewed.
- 3. The price extensions and totals have been checked.
- 4. The original (must be manually signed) and 2 copies of the quote have been submitted.
- 5. Three (3) identical sets of descriptive literature, brochures and/or data (if required) have been submitted under separate cover.
- 6. All modifications have been acknowledged in the space provided.
- 7. All addendums issued, if any, have been acknowledged in the space provided.
- 8. Erasures or other changes made to the quote document have been initialed by the person signing the quote.
- 9. Bid Bond and/or certified Check, (if required) have been submitted with the quote in amounts indicated.
- 10. Any Delivery information required is included.

11. The mailing envelope has been addressed to:

MAILING ADDRESS

Lee County Purchasing
P.O. Box 398 or
Ft. Myers, FL 33902-0398

PHYSICAL ADDRESS

Lee County Purchasing
1825 Hendry St 3rd Floor
Ft. Myers, FL 33901

- 12. The mailing envelope **MUST** be sealed and marked with:
Quote Number
Opening Date and/or Receiving Date
- 13. The quote will be mailed or delivered in time to be received no later than the specified opening date and time. (Otherwise quote cannot be considered or accepted.)
- 14. If submitting a "NO BID" please write quote number here _____
and check one of the following:
 Do not offer this product Insufficient time to respond.
 Unable to meet specifications (why)
 Unable to meet bond or insurance requirement.
Other: _____

Company Name and Address:

SECTION 102 MAINTENANCE OF TRAFFIC

102-1 Description.

Maintain traffic within the limits of the project for the duration of the construction period, including any temporary suspensions of the work. Construct and maintain detours. Provide facilities for access to residences, businesses, etc., along the project. Furnish, install and maintain traffic control and safety devices during construction. Furnish and install work zone pavement markings for maintenance of traffic in construction areas. Provide any other special requirements for safe and expeditious movement of traffic specified on the plans. Maintenance of Traffic includes all facilities, devices and operations as required for safety and convenience of the public within the work zone.

Do not maintain traffic over those portions of the project where no work is to be accomplished or where construction operations will not affect existing roads. Do not obstruct or create a hazard to any traffic during the performance of the work, and repair any damage to existing pavement open to traffic.

Include the cost of any work that is necessary to meet the requirements of the Contract Documents under the MOT pay item, when there is not a pay item provided.

102-2 Materials.

Meet the following requirements:

Raised Retro-reflective Pavement Markers.....	990
Bituminous Adhesive	Section 970
Work Zone Pavement Markings.....	971-1 and 971-19
Paint.....	Section 971
Glass Spheres	Section 971
Preformed Pavement Stripes and Markings	971-18

102-2.1 Temporary Traffic Control Devices: Use only the materials meeting the requirements of Section 990, Design Standards and the MUTCD.

102-2.2 Detour: Provide all materials for the construction and maintenance of all detours.

102-2.3 Commercial Materials for Driveway Maintenance: Provide materials of the type typically used for base, including recycled asphalt pavement material, and having stability and drainage properties that will provide a firm surface under wet conditions.

102-3 Specific Requirements.

102-3.1 Beginning Date of Contractor's Responsibility: Maintain traffic starting the day work begins on the project or on the first day Contract time is charged, whichever is earlier.

102-3.2 Worksite Traffic Supervisor: Provide a Worksite Traffic Supervisor in accordance with Section 105.

Ensure that the Worksite Traffic Supervisor is available on a 24-hour per day basis, participates in all changes to traffic control and reviews the project on a day-to-day basis.

Ensure that the Worksite Traffic Supervisor is present to direct the initial setup of the traffic control plan and any changes. Provide the Worksite Traffic Supervisor with all equipment and materials needed to set up, and maintain traffic control and handle traffic-related situations.

Ensure that the Worksite Traffic Supervisor immediately corrects all safety deficiencies. Do not allow minor deficiencies that are not immediate safety hazards to remain uncorrected for more than 24 hours.

Ensure that the Worksite Traffic Supervisor is available within 45 minutes after notification of an emergency situation and is prepared to positively respond to repair the work zone traffic control or to provide alternate traffic arrangements.

The Department may disqualify and remove from the project a Worksite Traffic Supervisor that fails to comply with the provisions of this Subarticle. The Department may temporarily suspend all activities, except traffic and erosion control and such other activities that are necessary for project maintenance and safety, for failure to comply with these provisions.

Ensure that the Worksite Traffic Supervisor performs a drive-through inspection and observes traffic flow as soon as the work zone is activated and in each subsequent phase of work as they are opened to traffic. Provide to the Engineer a report, using the current Department's approved form, listing any deficiencies and proposed corrective measures.

Ensure that the Worksite Traffic Supervisor conducts within the limits of the project, daily daytime and weekly night time inspections within the limits of the project for projects with predominate daytime work activities and daily nighttime and weekly daytime inspections for projects with predominate nighttime work, of all traffic control devices, traffic flow, pedestrian, bicyclist, and business accommodations.

Advise the project personnel of the schedule of these inspections and give them the opportunity to join in the inspection as is deemed necessary. Submit a comprehensive weekly report, using the current Department's approved form, to the Engineer and include condition of all traffic control devices (including pavement markings) being used. The inspection report will also include assurances that pedestrians are accommodated with a safe travel path around work sites and safely separated from mainline traffic, that existing or detoured bicyclist paths are being maintained satisfactorily throughout the project limits, and that existing businesses in work areas are being provided with adequate entrances for vehicular and pedestrian traffic during business hours. The Worksite Traffic Supervisor will sign the report and certify that all of the above issues are being handled in accordance with the Contract Documents. If deficiencies are noted, the Worksite Traffic Supervisor is to note such deficiencies and include the proposed corrective actions.

102-4 Alternative Traffic Control Plan.

The Contractor may propose an alternative Traffic Control Plan (TCP) to the plan presented in the Contract Documents. Have a Specialty Engineer sign and seal the alternative plan. Prepare the TCP in conformance with and in the form outlined in the current version of the Roadway Plans Preparation Manual. Indicate in the plan a TCP for each phase of activities. Take responsibility for identifying and assessing any potential impacts to a utility that may be caused by the alternate TCP proposed by the Contractor, and notify the Department in writing of any such potential impacts to utilities.

Engineer's approval of the alternate TCP does not relieve the Contractor of sole responsibility for all utility impacts, costs, delays or damages, whether direct or indirect, resulting from Contractor initiated changes in the design or construction activities from those in the original Contract Specifications, design plans (including traffic control plans) or other Contract Documents and which effect a change in utility work different from that shown in the utility plans, joint project agreements or utility relocation schedules.

The Department reserves the right to reject any Alternative Traffic Control Plan. Obtain the Engineer's written approval before beginning work using an alternate TCP. The Engineer's written approval is required for all modifications to the TCP. The Engineer will only allow changes to the TCP in an emergency without the proper documentation.

102-5 Traffic Control.

102-5.1 Standards: FDOT Design Standards (DS) are the minimum standards for the use in the development of all traffic control plans. The MUTCD Part VI is the minimum national

standard for traffic control for highway construction, maintenance, and utility operations. Follow the basic principles and minimum standards contained in these documents for the design, application, installation, maintenance, and removal of all traffic control devices, warning devices and barriers which are necessary to protect the public and workers from hazards within the project limits.

102-5.2 Maintenance of Roadway Surfaces: Maintain all lanes that are being used for the maintenance of traffic, including those on detours and temporary facilities, under all weather conditions. Keep the lanes reasonably free of dust, potholes and rutting. Provide the lanes with the drainage facilities necessary to maintain a smooth riding surface under all weather conditions.

102-5.3 Number of Traffic Lanes: Maintain one lane of traffic in each direction. Maintain two lanes of traffic in each direction at existing four (or more) lane cross roads, where necessary to avoid undue traffic congestion. Construct each lane used for maintenance of traffic at least as wide as the traffic lanes existing in the area before commencement of construction. Do not allow traffic control and warning devices to encroach on lanes used for maintenance of traffic.

The Engineer may allow the Contractor to restrict traffic to one-way operation for short periods of time provided that the Contractor employs adequate means of traffic control and does not unreasonably delay traffic. When a construction activity requires restricting traffic to one-way operations, locate the flaggers within view of each other when possible. When visual contact between flaggers is not possible, equip them with 2-way radios, official, or pilot vehicle(s), or use traffic signals.

102-5.4 Crossings and Intersections: Provide and maintain adequate accommodations for intersecting and crossing traffic. Do not block or unduly restrict any road or street crossing the project unless approved by the Engineer. Maintain all existing actuated or traffic responsive mode signal operations for main and side street movements for the duration of the Contract. Restore any loss of detection within 12 hours. Use only detection technology listed on the Department's Approved Products List (APL) and approved by the Engineer to restore detection capabilities.

Before beginning any construction, provide the Engineer a plan for maintaining detection devices for each intersection and the name(s) and phone numbers of persons that can be contacted when signal operation malfunctions.

102-5.5 Access for Residences and Businesses: Provide continuous access to all residences and all places of business.

102-5.6 Protection of the Work from Injury by Traffic: Where traffic would be injurious to a base, surface course, or structure constructed as a part of the work, maintain all traffic outside the limits of such areas until the potential for injury no longer exists.

102-5.7 Flagger: Provide trained flaggers in accordance with Section 105.

102-5.8 Use of Orange Vest/Garments: Provide personnel with orange vest/garments. Ensure that these vest/garments be worn whenever the workers are within 15 feet [5 m] of the edge of the travelway. Workers operating machinery or equipment in which loose clothing could become entangled during operation are exempt from this requirement. Such exempt workers will be required to wear orange shirts or jackets.

Require Contractor personnel to wear reflective orange vest/garment during nighttime operations.

Replace faded vest/garments.

102-5.9 Existing Pavement Markings: Where a detour changes the lane use or where normal vehicle paths are altered during construction, remove all existing pavement markings that will conflict with the adjusted vehicle paths. Do not overpaint. Remove existing pavement markings using a method that will not damage the surface texture of the pavement and which will eliminate the previous marking pattern regardless of weather and light conditions.

Remove all pavement markings that will be in conflict with "next phase of operation" vehicle paths as described above, before opening to traffic.

Cost for removing existing pavement markings to be included in Maintenance of Traffic, Lump Sum.

102-5.10 No Waiver of Liability: Conduct operations in such a manner that no undue hazard results due to the requirements of this Article. The procedures and policies described herein in no way acts as a waiver of any terms of the liability of the Contractor or his surety.

102-6 Detours.

102-6.1 General: Construct and maintain detour facilities wherever it becomes necessary to divert traffic from any existing roadway or bridge, or wherever construction operations block the flow of traffic.

102-6.2 Construction: Plan, construct, and maintain detours for the safe passage of traffic in all conditions of weather. Provide the detour with all facilities necessary to meet this requirement.

Where the plans call for the Department to furnish detour bridge components, construct the pile bents in accordance with the Structures Design Office Standard Drawings, Index No. 1600 and 1601, unless otherwise authorized by the Engineer.

Submit a letter with the following: company name, phone number, office address, project contact person, project number, detour bridge type, bridge length, span length, location and usage time frames, to the Engineer at least 30 calendar days before the intended pick-up date, to obtain the storage facility location and list of components for the project. Upon receipt of letter, the Engineer will, within ten calendar days provide an approved material list to the Contractor and the appropriate Department storage yard.

Provide a letter with an original company seal, identifying the representative with authority to pick up components, to the Engineer at least ten calendar days before the proposed pick-up date. The Department is not obligated to load the bridge components without this notice. Take responsibility and sign for each item loaded at the time of issuance.

Provide timber dunnage, and transport the bridge components from the designated storage facility to the job site. Unload, erect, and maintain the bridge, then dismantle the bridge and load and return the components to the designated storage facility.

Notify the Engineer in writing at least ten calendar days before returning the components. Include in this notice the name of the Contractor's representative authorized to sign for return of the bridge components. The yard supervisor is not obligated to unload the bridge components without this notice.

The Department will provide equipment and an operator at the Department's storage facility to assist in loading and unloading the bridge components. Furnish all other labor and equipment required for loading and unloading the components.

The Department's representative will record all bridge components issued or returned on the Detour Bridge Issue and Credit Ticket. The Tickets must be signed by a Department and Contractor representative, after loading or unloading each truck to document the quantity and type of bridging issued or returned.

Bind together all bridge components to be returned in accordance with the instructions given by the storage facility. The yard supervisor will repack components that are not packed in compliance with these instructions. Upon request, written packing instructions will be made available to the Contractor, before dismantling of the bridge for return to the Department's storage facility.

Assume responsibility for any shortage or damage to the bridge components. Monies due the Contractor will be reduced at the rate of \$35.00 per hour plus materials for repacking, repairs or replacement of bridge components.

The skid resistance of open steel grid decking on the detour bridge may decrease gradually after opening the bridge to traffic. The Department will furnish a pneumatic floor scabbler machine for roughening the roadway surface of the detour bridge decking. Provide an air

compressor at the job site with 200 ft³/minute [6 m³/minute] capacity, 90 psi [620 kPa] air pressure for the power supply of the machine, and an operator. Transport the scabblers machine to and from the Department's Structures Shop. Repair any damage to the scabblers machine caused by operations at no expense to the Department. Perform scabbling when determined necessary by the Engineer. The Department will pay for the cost of scabbling as Unforeseeable Work in accordance with 4-4.

Return the bridge components to the designated storage facility beginning no later than ten calendar days after the date the detour bridge is no longer needed, the date the new bridge is placed in service, or the date Contract Time expires, whichever is earliest. Return the detour bridging at an average of not less than 200 feet [61 m] per week. Upon failure to return the bridge components to the Department within the time specified, compensate the Department for the bridge components not returned at the rate of \$5.00 per 10 feet [\$1.65 per meter], per day, per bridge, for single lane; and \$10.00 per 10 feet [\$3.30 per meter], per day, per bridge, for dual lane until the bridge components are returned to the Department.

102-6.3 Construction Methods: Select and use construction methods and materials that provide a stable and safe detour facility. Construct the detour facility to have sufficient durability to remain in good condition, supplemented by maintenance, for the entire period that the detour is required.

102-6.4 Removal of Detours: Remove detours when they are no longer needed and before the Contract is completed. Take ownership of all materials from the detour and dispose of them, except for materials, which might be on loan from the Department with the stipulation that they are returned.

102-6.5 Detours Over Existing Roads and Streets: When the Department specifies that traffic be detoured over roads or streets outside the project area, do not maintain such roads or streets. However, maintain all signs and other devices placed for the purpose of the detour.

102-6.6 Operation of Existing Movable Bridges: The Department will maintain and operate existing moveable bridges that are to be removed by the Contractor until such time as they are closed to traffic. During this period, make immediate repairs of any damage to such structures caused by use or operations related to the work at no expense to the Department, but do not provide routine repairs or maintenance. In the event that use or operations result in damage to a bridge requiring repairs, give such repairs top priority to any equipment, material, or labor available.

102-7 Traffic Control Officer.

Provide uniformed law enforcement officers, including marked law enforcement vehicles, to assist in controlling and directing traffic in the work zone when the following types of work is necessary on projects:

1. Traffic control in a signalized intersection when signals are not in use.
2. When Standard Index no. 627 is used on Interstate at nighttime and required by the plans.
3. When pacing/rolling blockade specification is used.

102-8 Driveway Maintenance.

102-8.1 General: Ensure that each residence and or business has safe, stable, and reasonable access.

102-8.2 Construction Methods: Place, level, manipulate, compact, and maintain the material, to the extent appropriate for the intended use.

As permanent driveway construction is accomplished at a particular location, the Contractor may salvage and reuse previously placed materials that are suitable for reuse on other driveways.

102-9 Temporary Traffic Control Devices.

102-9.1 Installation and Maintenance: Install and maintain adequate traffic control devices, warning devices and barriers to protect the traveling public and workers, and to safeguard the work area. Erect the required traffic control devices, warning devices and barriers to prevent any hazardous conditions and in conjunction with any necessary traffic re-routing. Use only those devices that are included on the Qualified Products List (QPL). Specific requirements for Maintenance of Traffic devices, additional to the requirements of this Section, are contained in the 600 series of the Design Standards. Immediately remove, turn or cover any devices or barriers that do not apply to existing conditions.

All QPL approved safety devices must meet the requirements of National Cooperative Highway Research Report 350 (NCHRP 350) and current FHWA directives. Manufacturers seeking evaluation must furnish certified test reports showing that their product meets all test requirements set forth by NCHRP 350.

Notify the Engineer of any scheduled operation, which will affect traffic patterns or safety, sufficiently in advance of commencing such operation to permit his review of the plan for the proposed installation of traffic control devices, warning devices or barriers.

Ensure an employee is assigned the responsibility of maintaining the position and condition of all traffic control devices, warning devices and barriers throughout the duration of the Contract. Keep the Engineer advised at all times of the identification and means of contacting this employee on a 24-hour basis.

Keep traffic control devices, warning devices, safety devices and barriers in the correct position, properly directed, clearly visible and clean, at all times. Immediately repair, replace or clean damaged, defaced or dirty devices or barriers.

102-9.2 Work Zone Signs: Provide signs in accordance with the plans and Design Standards. Meet the requirements of 700-2.5 and 700-5.5.

102-9.3 Business Signs: Provide and place signs in accordance with the plans and Design Standards. Meet the sign background sheeting requirements of Section 700. Furnish signs having a Type III reflectorized blue background with a 4 inches [100 mm] series B white legend and a white border. The maximum sign size is 24 by 36 inches [600 by 900 mm].

Use signs meeting the requirements of Index 17355 unless specific business names signs are requested and approved by the Engineer. In those cases, show specific business names on each sign. Install logos provided by business owners and approved by the Engineer.

102-9.4 High Intensity Flashing Lights: Furnish Type B lights in accordance with the plans and Design Standards.

102-9.5 Warning/Channelizing Devices: Furnish warning/channelizing devices in accordance with the plans and Design Standards.

102-9.5.1 Reflective Collars for Traffic Cones: Use cone collars at night designed to properly fit the taper of the cone when installed. Place the upper 6 inches [150 mm] collar a uniform 3 1/2 inch [90 mm] distance from the top of the cone and the lower 4 inch [100 mm] collar a uniform 2 inch [50 mm] distance below the bottom of the upper 6 inch [150 mm] collar. Ensure that the collars are capable of being removed for temporary use or attached permanently to the cone in accordance with the manufacturer's recommendations. Provide a white sheeting having a smooth outer surface and that essentially has the property of a retroreflector over its entire surface.

102-9.5.2 Barrier Wall (Temporary): Furnish, install, maintain, remove and relocate a temporary barrier wall in accordance with the plans. Temporary concrete barrier wall will be in accordance with Index No. 415 or identified on the QPL. Temporary water filled barrier wall will be in accordance with Index No. 416 or identified on the QPL.

102-9.5.3 Glare Screen (Temporary): Furnish, install, maintain, remove and relocate glare screen systems in conjunction with temporary barrier wall at locations identified in the plans.

Ensure the anchorage of the glare screen to the barrier is capable of safely resisting an equivalent tensile load of 600 lb/ft [8.8 kN/m] of glare screen, with a requirement to use a minimum of three fasteners per barrier section.

When glare screen is utilized on temporary barrier wall, warning lights will not be required.

102-9.6 Temporary Vehicle Impact Attenuator (Redirect/Inertia): Furnish, install, maintain and subsequently remove temporary vehicular impact attenuators in accordance with the details and notes shown in the plans, and the Design Standards. Maintain the attenuators until their authorized removal. Repair all attachment scars to permanent structures and pavements after attenuator removal. Make necessary repairs due to defective material, work, or Contractor operations at no cost to the Department. Restore attenuators damaged by the traveling public within 24 hours after notification as authorized by the Engineer.

102-9.7 Guardrail (Temporary): Furnish guardrail (temporary) in accordance with the plans and Design Standards. Meet the requirements of Section 536.

102-9.8 Advance Warning Arrow Panel: Furnish advance warning panel in accordance with the plans and Design Standards.

102-9.9 Portable Changeable (Variable) Message Sign (PCMS): Furnish changeable (variable) message sign in accordance with the plans and Design Standards.

The 7 foot by 10 foot [2.1 by 3 m] PCMS as defined in 990-4.3 may be used as advanced warning maintenance of traffic devices and to supplement other traffic control devices used in work zones.

The 5 foot by 8 foot [1.5 by 2.4 m] PCMS as defined in 990-4.3 may be used as alternates to either type A or type B arrow board on advanced warning vehicles or to supplement other traffic control devices used in a work zone.

A 5 foot by 8 foot [1.5 by 2.4 m] PCMS may be used as a stand alone maintenance of traffic device only when used for accident or incident management situations as defined in the MUTCD.

102-9.10 Portable Highway Advisory Radio System: Furnish portable highway advisory radio in accordance with the plans and Design Standards.

102-9.11 Portable Regulatory Signs: Provide portable regulatory signs in accordance with the plans and Design Standards.

This specification establishes the physical display and operational requirements for solar powered portable regulatory signs. Ensure all portable regulatory signs meet the physical display and operational requirements as described in the Federal Highway Administration's MUTCD.

The portable regulatory sign must be activated only during active work activities and deactivated when no work is being performed. Ensure the sign can be activated and deactivated by a dial-up control system to allow operation of the sign from a remote location via cellular phone or standard telephone line. The sign must be protected by a security code.

Manufacturers seeking approval for Portable Regulatory Signs must submit an application, Material Safety Data Sheet (MSDS) and certification in accordance with 6-1.

Only use Portable Regulatory Signs listed on the QPL.

Manufacturers providing the signs must provide a certified test report to the Engineer indicating that the signs meet these specification requirements.

102-9.12 Radar Speed Display Unit: Furnish radar speed display unit in accordance with the plans and Design Standards.

This Specification establishes the physical display and operational requirements for solar powered, Radar Speed Display Units used in active work zones to inform motorists of the posted speed and their actual speed.

Ensure the radar speed display is activated only during active work activities and deactivated when no work is being performed. Ensure the display unit can be activated and

deactivated by a dial-up control system to allow operation of the display unit from a remote location via cellular phone or standard telephone line. The display unit must be protected by a security code.

Manufacturers seeking approval for a Radar Speed Display Unit must submit an application, MSDS and certification in accordance with 6-1.

Only use Radar Speed Display Units listed on the QPL.

Manufacturers providing the device described herein must provide a certified test report to the Engineer indicating the device meets these specification requirements.

102-9.13 Safety Warning Transmitter: Furnish safety-warning transmitter in accordance with the plans and Design Standards.

This Specification establishes the physical display and operational requirements for Safety Warning Transmitter units, which employs special microwave transmitters to generate messages in receivers that alert drivers to the presence of specific hazards and traffic conditions. These units may be attached to other devices when called for in the plans or requested by the Engineer. Safety Warning Transmitter units must be Part 90 FCC accepted and meet all requirements specified herein.

The Safety Warning Transmitter must be activated only during active work activities and deactivated when no work is being performed. The warning transmitter must be activated and deactivated by a dial-up control system to allow operation of the sign from a remote location via cellular phone or standard telephone line. The warning transmitter must be protected by a security code.

Manufacturers seeking approval for a Safety Warning Transmitter must submit an application, MSDS and certification in accordance with 6-1.

Only use Safety Warning Transmitters listed on the QPL.

102-9.14 Temporary Traffic Control Signals: Furnish, install and operate temporary traffic control signals as indicated in the plans. Temporary traffic control signals will consist of either portable or fixed traffic signals.

Provide certification that the portable traffic signals meet the requirements of the Design Standards and 603-2. The Engineer may approve used signal equipment if it is in acceptable condition.

102-9.15 Temporary Traffic Detection Technology: Furnish, install and operate Temporary Traffic Detection Technology listed on the Department's APL and approved by the Engineer to restore detection capabilities.

102-9.16 Trucks and Truck Mounted Impact Attenuators: Furnish, install and maintain only those attenuators that have been certified as meeting the requirements of NCHRP 350 and have been properly maintained. Include the cost of trucks and truck mounted impact attenuators in MOT.

Use Truck Mounted Attenuators (TMA), when called for in the Design Standards. Limit TMA's to those items listed on the QPL.

Manufacturers seeking approval of their TMA must provide the Department certified test reports showing the TMA meets all requirements set by the National Cooperative Research Program Report 350. Certification must include drawings and calculations signed and sealed by a Professional Engineer registered in the State of Florida for each model.

Use truck mounted attenuator systems designed and installed in accordance with the manufactures recommendations.

Equip the TMA cartridge with lights and reflectors in compliance with applicable Florida motor vehicle laws, including turn signals, dual tail lights, and brake lights. Ensure that lights are visible in both the raised and lowered positions if the unit is capable of being raised.

Ensure that the complete unit is painted DOT yellow (Fed. Std. 595 b, No. 13538). Stripe the rear facing of the cartridge in the operating position with the alternating 6 inch [150 mm] white and 6 inch [150 mm] safety orange 45 degree striping to form an inverted "V" at

the center of the unit and slope down and toward the outside of the unit, in both directions from the center. Ensure the bottom of the cartridge has the same pattern, covering the entire bottom, with 6 inch [150 mm] white and 6 inch [150 mm] safety orange stripes. Use Type III reflectorized sheeting for striping.

The trucks and truck mounted impact attenuators will not be paid for separately, but will be included in the cost of Maintenance of Traffic. Payment includes all costs, including furnishing, maintaining and removal when no longer required, and all materials, labor, tools, equipment and incidentals required for attenuator maintenance.

102-10 Work Zone Pavement Marking.

102-10.1 Description: Furnish and install Work Zone Pavement Markings for maintenance of traffic in construction areas and in close conformity with the lines and details shown on the plans. Measure the reflectivity of white and yellow stripes in accordance with Florida Method FM 5-541. Re-stripe anytime the reflectivity falls below the final values shown in FM 5-541.

Use only pavement marking materials that do not contain any lead or chromium compounds. Manufacturers seeking product approval must furnish certified test reports showing the Work Zone Pavement Marking material meets the requirements of this Section.

Centerlines, lane lines, edgelines, stop bars and turn arrows in work zones will be required in accordance with the MUTCD with the following additions:

(a) Install edgelines on paved shoulders.

(b) Place edgelines on all detours where vehicle paths are altered from normal operations and where a lane is narrowed from its normal width for any reason.

(c) Apply Work Zone Pavement Markings, including arrows and messages as determined by the Engineer to be required for the safe operation of the facility, before the end of the day if the highway is open to traffic. Channelizing devices may be used to direct traffic during the day before placing the Work Zone Pavement Markings.

(d) Work Zone Pavement Markings will be designated in the plans or by the Engineer as removable or non-removable.

Work Zone Raised Pavement Markers (WZRPM's) may be used in lieu of Removable Tape or Paint. Removable Work Zone Pavement Markings consists of materials that can be taken up by hand. An example of this category of markings is plastic film (Tape), or Work Zone Raised Pavement Markers (WZRPM's).

Non-Removable Work Zone Pavement Markings consists of markings that are not classified as removable.

Use of Removable or Non-Removable Work Zone Pavement Markings are as follows:

Application	Category
Finish Pavement*	
All stripes representing final pavement markings	Non-Removable
All stripes in an area where the traffic pattern will be altered before project acceptance	Removable
Intermediate Pavement Course	
All stripes in pavement areas that will be covered with a subsequent course of pavement before altering of the traffic pattern within such area.	Non-Removable
All stripes where the traffic pattern will be altered before placing of the subsequent paving course within such area.	Removable
Existing Pavement	
All stripes that will be removed or overlaid with new pavement before altering the traffic pattern within such area.	Non-Removable
All stripes where the traffic pattern will be altered before removal or overlaying of such area.	Removable
*Place striping representing final markings in the permanent location unless excepted in writing by the Engineer.	

102-10.2 Preformed Removable Pavement Marking Film (Tape):

102-10.2.1 Application Requirements: Apply removable Pavement Marking Film (Tape) with a mechanical applicator to provide pavement lines that are neat, accurate and uniform. Equip the mechanical applicator with a film cut-off device and with measuring devices that automatically and accumulatively measure the length of each line placed within an accuracy tolerance of $\pm 2\%$. Ensure pavement marking films (tape) adheres to the road surface. Tape may be placed by hand on short sections 500 feet [150 m] or less if it is done in a neat accurate manner.

102-10.2.2 Removability: Provide preformed plastic pavement marking film capable of being removed from bituminous concrete and portland cement concrete pavement intact or in substantially large strips, either manually or by a mechanical roll-up device, at temperatures above 40°F [4°C], without the use of heat, solvents, grinding or blasting. Ensure that the manufacturer shows documented reports that the retro-reflective preformed plastic pavement marking film meets this requirement after being in place for a minimum of 90 days and under an average daily traffic count per lane of at least 9,000 vehicles per day.

102-10.3 Work Zone Raised Pavement Markers (WZRPM's): Apply all markers in accordance with the Design Standards, Index No. 600.

102-10.4 Paint and Glass Beads: Meet the requirements of Section 710.

102-10.5 Preformed Non-removable Pavement Marking Film (Tape): Meet the requirements of Section 713.

102-11 Method of Measurement.

102-11.1 General: Devices installed/used on the project on any calendar day or portion thereof, within the allowable Contract Time, including time extensions which may be granted, will be paid for at the Contract unit price for the applicable pay item, except those paid for as Lump Sum.

102-11.2 Traffic Control Officers: The quantity to be paid for will be at the Contract unit price per hour (4 hour minimum) for the actual number of officers certified to be on the project site, including any law enforcement vehicle(s) and all other direct and indirect costs. Payment will be made only for those traffic control officers specified in the Plans and authorized by the Engineer.

102-11.3 Special Detours: When a detour facility is specifically detailed in the plans, or is otherwise described or detailed as a special item, and an item for separate payment is included in the proposal, the work of constructing, maintaining, and subsequently removing such detour facilities will be paid for separately. Traffic control devices, warning devices, barriers, signing, and pavement markings for Special Detours will also be paid for separately.

When the plans show more than one detour, each detour will be paid for separately, at the Contract lump sum price for each.

Where a separate item for a specific detour facility is included in the proposal, payment will be made under Special Detour.

102-11.4 Commercial Material for Driveway Maintenance: The quantity to be paid for will be the certified volume, in cubic yards [cubic meters], of all materials authorized by the Engineer, acceptably placed and maintained for driveway maintenance. The volume, which is authorized to be reused, and which is acceptably salvaged, placed, and maintained in other designated driveways will be included again for payment.

102-11.5 Work Zone Signs: The number of signs (Temporary Regulatory, Warning and Guide) certified as installed/used on the project will be paid for at the Contract unit price for Work Zone Signs. When multiple signs are located on single or multiple post(s), each sign panel will be paid individually. Signs $>20 \text{ ft}^2$ [$>1.9 \text{ m}^2$] and detailed in the plans will be paid for under Lump Sum MOT.

Portable signs (excluding Mesh signs and signs mounted with <1 foot [$<0.3 \text{ m}$] ground clearance) and Vehicular Mounted Signs will be included for payment under work zone signs, only if used in accordance with the Design Standards.

102-11.6. Business Signs: The number of business signs certified as installed/used on the project will be paid for at the Contract unit price for Business Signs.

102-11.7 High Intensity Flashing Lights: The number of high intensity flashing lights (Type B) certified as installed/used on the project will be paid for at the Contract unit price for High Intensity Flashing Lights (Temporary - Type B).

102-11.8 Warning/Channelizing Devices: The number of Type I, Type II, Type III, Vertical Panel and Drum Warning Devices certified as installed/used on the project meeting the requirements of Design Standards, Index No. 600 and have been properly maintained will be paid for at the Contract unit prices for Barricade (Temporary).

102-11.9 Barrier Wall (Temporary): The Contract unit price for Barrier Wall (Temporary) will be full compensation for furnishing, installing, maintaining, and removing the barrier wall. When called for, the Contract unit price for Barrier Wall (Temporary/Relocate) will be full compensation for relocating the barrier. The certified quantity to be paid for will be determined by the number of sections times the nominal length of each section.

102-11.10 Lights, Temporary, Barrier Wall Mount: The number of Type C Steady Burn lights, mounted on barrier wall, certified as installed/used on the project, meeting the requirements of the Design Standards and have been properly maintained will be paid for at the Contract unit price for Lights Temporary, Barrier Wall Mount.

102-11.11 Glare Screen (Temporary): The quantity to be paid for will be determined by the number of sections times the nominal length of each section.

102-11.12 Temporary Vehicular Impact Attenuator:

102-11.12.1 Redirective: The quantity to be paid for will be the number of Temporary Vehicular Impact Attenuators (Redirective) certified as installed/used and maintained on the project, including object marker.

102-11.12.2 Inertia: The quantity to be paid for will be the number of Temporary Vehicular Impact Attenuators (Inertia) modules to form each attenuator and certified as installed/used and maintained in accordance with the plans and Design Standards, Index No. 417.

102-11.13 Temporary Guardrail: The quantity to be paid for will be the length, in feet [meters], of temporary guardrail constructed and certified as installed/used on the project. The length of a run of guardrail will be determined as a multiple of the nominal panel lengths.

102-11.14 Advance Warning Arrow Panel: The quantity to be paid for will be the number of advance warning arrow panels certified as installed/used on the project (with a five day minimum/per each) on any calendar day or portion thereof within the contract time. The five day minimum will be paid for each panel mobilized and installed on the project, with days consecutively counted beginning on the day of first installation/use. The Engineer reserves the right to require the panel to remain on site and/or have it relocated on site at no additional cost during the full five day minimum period.

102-11.15 Changeable (Variable) Message Sign: The quantity to be paid for will be the number of changeable (variable) message signs certified as installed/used on the project (with a five day minimum/per each) on any calendar day or portion thereof within the contract time. The five day minimum will be paid for each sign mobilized and installed on the project, with days consecutively counted beginning on the day of first installation/use. The Engineer reserves the right to require the sign to remain on site and/or have it relocated on site at no additional cost during the full five day minimum period. Payment will be made for each Changeable (Variable) message sign this is used during the period beginning fourteen working days before Contract Time begins as authorized by the Engineer.

102-11.16 Portable Highway Advisory Radio System: The quantity to be paid for will be the number of portable highway advisory radio system certified as installed/used on the project on any calendar day or portion thereof within the contract time, will be paid for the contract unit price for portable highway advisory radio system.

102-11.17 Portable Regulatory Signs: The quantity to be paid for will be the number of portable regulatory sign certified as installed/used on the project on any calendar day or portion thereof within the contract time, will be paid for the contract unit price for portable regulatory sign.

102-11.18 Radar Speed Display Unit: The quantity to be paid for will be the number of radar speed display units certified as installed/used on the project on any calendar day or portion thereof within the contract time, will be paid for the contract unit price for radar speed display unit.

102-11.19 Safety Warning Transmitter: The quantity to be paid for will be the number of safety warning transmitter certified as installed/used on the project on any calendar day or portion thereof within the contract time, will be paid for the contract unit price for safety warning transmitter.

102-11.20 Temporary Traffic Control Signals: The quantity of Temporary Traffic Control Signals to be paid for will be the number of completed installations (each signalized location) of portable traffic signals, or the number of fixed traffic signals in place and operating on the project, as authorized by the Engineer and certified as in place and in operation on the project.

102-11.21 Temporary Traffic Detection Technology: The quantity of Temporary Traffic Detection Technology to be paid for will be the number of completed and accepted intersections utilizing Temporary Traffic Detection Technology, authorized by the Engineer and certified as completed on the project. Compensation will begin the day Temporary Traffic Detection Technology is placed into operation and approved by the Engineer and will end the day the permanent detection is operational and approved by the Engineer.

102-11.22 Work Zone Pavement Markings: The quantities, furnished and installed, to be paid for will be the length of skip and solid pavement markings, and the area of pavement markings placed as follows:

(a) The total transverse distance, in feet [meters], of skip pavement marking authorized and acceptably applied. The length of actual applied line will depend on the skip ratio

of the material used. Measurement will be the distance from the beginning of the first stripe to the end of the last stripe with proper deductions made for unpainted intervals as determined by plan dimensions or stations, subject to 9-1.3. Unpainted intervals will not be included in pay quantity when WZRPM's are substituted for skip lines.

(b) The net length, in feet [meters], of solid pavement marking authorized and acceptably applied. When substituting WZRPM's for removable tape, payment will be as if removal pavement markings were used.

(c) The number of directional arrows or pavement messages authorized and acceptably applied.

102-12 Submittals.

102-12.1 Submittal Instructions: Prepare a certification of quantities, using the Department's current approved form, for certified Maintenance of Traffic payment items for each project in the Contract. Submit the certification of quantities to the Engineer. The Department will not pay for any disputed items until the Engineer approves the certification of quantities.

102-12.2 Contractor's Certification of Quantities: Request payment by submitting a certification of quantities no later than Twelve O'clock noon Monday after the estimate cut-off date or as directed by the Engineer, based on the amount of work done or completed. Ensure the certification consists of the following:

(a) Contract Number, FPID Number, Certification Number, Certification Date and the period that the certification represents.

(b) The basis for arriving at the amount of the progress certification, less payments previously made and less an amount previously retained or withheld. The basis will include a detail breakdown provided on the certification of items of payment in accordance with 102-13. After the initial setup of the maintenance of traffic items and counts, the interval for recording the counts will be made weekly on the certification sheet unless there is a change. This change will be documented on the day of occurrence. Some items may necessitate a daily interval of recording the counts.

102-13 Basis of Payment.

102-13.1 Maintenance of Traffic (General Work): When an item of work is included in the proposal, price and payment will be full compensation for all work and costs specified under this Section except as may be specifically covered for payment under other items.

102-13.2 Traffic Control Officers: Price and payment will be full compensation for the services of the traffic control officers.

102-13.3 Special Detours: Price and payment will be full compensation for providing all detour facilities shown on the plans and all costs incurred in carrying out all requirements of this Section for general maintenance of traffic within the limits of the detour, as shown on the plans.

102-13.4 Commercial Materials for Driveway Maintenance: Price and payment will be full compensation for all work and materials specified for this item, including specifically all required shaping and maintaining of driveways.

102-13.5 Work Zone Signs: Price and payment will be full compensation for all work and materials for furnishing signs, supports and necessary hardware, installation, relocating, maintaining and removing signs.

102-13.6. Business Signs: Price and payment will be full compensation for all materials and labor required for furnishing, installing, relocating, maintaining, and removing the signs as well as the cost of installing any logos provided by business owners.

102-13.7 High Intensity Warning Lights: Price and payment will be full compensation for furnishing, installing, operating, relocating, maintaining and removing high intensity flashing lights (Type B).

102-13.8 Channelizing Devices: Prices and payment will be full compensation for furnishing, installing, relocating, maintaining and removing the warning devices, including the costs associated with attached warning lights as required.

102-13.9 Barrier Wall (Temporary): Price and payment will be full compensation for furnishing, installing, maintaining, and removing the barrier. When called for, Barrier Wall (Temporary) (Relocate) will be full compensation for relocating the barrier.

102-13.10 Lights, Temporary, Barrier Wall Mount: Price and payment will be full compensation for all work and materials for furnishing, installing and maintaining the warning lights mounted on barrier wall. Payment will not be made for lights that are improperly placed or are not working.

102-13.11 Glare Screen (Temporary): Price and payment will be full compensation for furnishing, installing, maintaining, and removing the glare screen certified as installed/used on the project. When called for, Glare Screen (Relocate) will be full compensation for relocating the glare screen.

102-13.12 Temporary Vehicular Impact Attenuator:

102-13.12.1 Redirective: Price and payment will be full compensation for furnishing, installing, maintaining and subsequently removing such attenuators. . Restoration of damaged attenuators will be paid for at the invoice price plus 20%, for the new parts as authorized by the Engineer. Payment for restoration will be full compensation for all necessary work and materials.

102-13.12.2 Inertia: Price and payment for the number of modules necessary for the completed attenuator will be full compensation for furnishing, installing, maintenance and removal at each specified location. In addition, payment will be made for new modules replaced due to damages, excluding damage caused by the Contractor's operations.

102-13.13 Temporary Guardrail: Price and payment will be full compensation for furnishing all materials required for a complete installation, including end anchorage assemblies and any end connections to other structures and for installing, maintaining and removing guardrail.

102-13.14 Advance Warning Arrow Panel: Price and payment will be full compensation for furnishing, installing, operating, relocating, maintaining and removing advance warning arrow panels.

102-13.15 Changeable (Variable) Message Sign: Price and payment will be full compensation for furnishing, installing, operating, relocating, maintaining and removing changeable message signs.

102-13.16 Portable Highway Advisory Radio System: Price and payment will be full compensation for furnishing and installing, all labor, cables, hardware, accessories, incidental items necessary for a complete and functional system as described in these Specifications, including relocating if necessary and any field intensity or other measurements needed to insure that the system is operating properly and conforms to all F.C.C. requirements.

102-13.17 Portable Regulatory Signs: Price and payment will be full compensation for furnishing, installing, relocating, maintaining and removing a completely functioning system as described in these specifications portable regulatory signs. Price and payment will be full compensation for furnishing, installing, operating, relocating, maintaining and removing changeable message signs.

Payment will include all labor, materials, incidentals, repairs and any actions necessary to operate and maintain the unit at all times that work is being performed or traffic is being affected by construction and/or maintenance of traffic operations.

102-13.18 Radar Speed Display Unit: Price and payment will be made only for a completely functioning system as described in these specifications. Payment will include all labor, hardware, accessories, signs, and incidental items necessary for a complete system.

Payment will include any measurements needed to insure that the unit conforms to all specification requirements.

Payment will include all labor, materials, incidentals, repairs and any actions necessary to operate and maintain the unit at all times that work is being performed or traffic is being affected by construction and/or maintenance of traffic operations. Price and payment will be full compensation for furnishing, installing, operating, relocating, maintaining and removing radar speed display unit.

102-13.19 Safety Warning Transmitter: Price and payment will be full compensation for furnishing and installing and relocating if required to provide a completely functioning system as described in these specifications. Payment will include all labor, hardware, accessories, and incidental items necessary for a complete system.

Payment will include any measurements needed to insure that the transmitter conforms to all specification requirements, all labor, materials, incidentals, repairs and any actions necessary to operate and maintain the unit at all times during active work activities.

102-13.20 Temporary Traffic Control Signals: Price and payment will constitute full compensation for furnishing, installing, operating, maintaining and removing temporary traffic control signals including all equipment and components necessary to provide an operable traffic signal.

102-13.21 Temporary Traffic Detection Technology: Price and payment of per intersection/per day will constitute full compensation for furnishing, installing, operating, maintaining and removing temporary traffic detection technology including all equipment and components necessary to provide an acceptable signalized intersection. Take ownership of all equipment and components.

102-13.22 Work Zone Pavement Markings: Prices and payments will be full compensation for all work specified in Section 710, including, all cleaning and preparing of surfaces, furnishing of all materials, application, curing and protection of all items, protection of traffic, furnishing of all tools, machines and equipment, and all incidentals necessary to complete the work. Final payment will be withheld until all deficiencies are corrected.

Removable Pavement Markings may be substituted for Non-Removable Work Zone Pavement Markings at no additional cost to the Department.

Payment for class A or B Raised Pavement Markers used to supplement line markings will be paid for under Item No. 102-78 [Item No. 2102-78], Reflective Pavement Marker. Install these markers as detailed in the Design Standards.

102-13.23 Payment Items: Payment will be made under:

Item No. 102-	1-	Maintenance of Traffic - lump sum.
Item No. 2102-	1-	Maintenance of Traffic - lump sum.
Item No. 102-	2-	Special Detour - lump sum.
Item No. 2102-	2-	Special Detour - lump sum.
Item No. 102-	3-	Commercial Materials for Driveway Maintenance - per cubic yard.
Item No. 2102-	3-	Commercial Materials for Driveway Maintenance - per cubic meter.
Item No. 102-	14-	Traffic Control Officers - per hour.
Item No. 2102-	14-	Traffic Control Officers - per hour.
Item No. 102-	60-	Work Zone Signs - per each per day.
Item No. 2102-	60-	Work Zone Signs - per each per day.
Item No. 102-	61-	Business Signs - each.
Item No. 2102-	61-	Business Signs - each.
Item No. 102-	71-	Barrier Wall - per foot.
Item No. 2102-	71-	Barrier Wall - per meter.
Item No. 102-	94-	Glare Screen - per foot.

Item No. 2102- 94-	Glare Screen - per meter.
Item No. 102- 73-	Guardrail (Temporary) - per foot.
Item No. 2102- 73-	Guardrail (Temporary) - per meter.
Item No. 102- 74-	Barricade (Temporary) - per each per day.
Item No. 2102- 74-	Barricade (Temporary) - per each per day.
Item No. 102- 76-	Advanced Warning Arrow Panel - per each per day.
Item No. 2102- 76-	Advanced Warning Arrow Panel - per each per day.
Item No. 102- 77-	High Intensity Flashing Lights (Temporary - Type B) - per each per day.
Item No. 2102- 77-	High Intensity Flashing Lights (Temporary - Type B) - per each per day.
Item No. 102- 78-	Reflective Pavement Markers - each.
Item No. 2102- 78-	Reflective Pavement Markers - each.
Item No. 102- 79-	Lights, Temporary, Barrier Wall Mount - per each per day.
Item No. 2102- 79-	Lights, Temporary, Barrier Wall Mount - per each per day.
Item No. 102- 81-	Vehicular Impact Attenuator Modules (Inertia Temporary) - each.
Item No. 2102- 81-	Vehicular Impact Attenuator Modules (Inertia Temporary) - each.
Item No. 102- 89-	Vehicular Impact Attenuator (Temporary) - per location.
Item No. 2102- 89-	Vehicular Impact Attenuator (Temporary) - per location.
Item No. 102- 99-	Changeable (Variable) Message Sign (Temporary) - per each per day.
Item No. 2102- 99-	Changeable (Variable) Message Sign (Temporary) - per each per day.
Item No. 102-104-	Temporary Traffic Control Signals (Portable) - per each per day.
Item No. 2102-104-	Temporary Traffic Control Signals (Portable) - per each per day.
Item No. 102-104-	Temporary Traffic Control Signals (Fixed) - per each per day.
Item No. 2102-104-	Temporary Traffic Control Signals (Fixed) - per each per day.
Item No. 102-107-	Temporary Traffic Detection - per day.
Item No. 2102-107-	Temporary Traffic Detection - per day.
Item No. 102-150-	Portable Regulatory Signs - per each per day.
Item No. 2102-150-	Portable Regulatory Signs - per each per day.
Item No. 102-150-	Radar Speed Display Unit - per each per day.
Item No. 2102-150-	Radar Speed Display Unit - per each per day.
Item No. 102-150-	Safety Warning Transmitter - per each per day.
Item No. 2102-150-	Safety Warning Transmitter - per each per day.
Item No. 102-150-	Highway Advisory Radio - per each per day.
Item No. 2102-150-	Highway Advisory Radio - per each per day.
Item No. 102-911-	Removable Pavement Marking (White/Black) - per foot.

Item No. 2102-911-	Removable Pavement Marking (White/Black) - per meter.
Item No. 102-912-	Removable Pavement Marking (Yellow) - per foot.
Item No. 2102-912-	Removable Pavement Marking (Yellow) - per meter.
Item No. 711- 31-	Skip Traffic Stripe (White) - per gross mile.
Item No. 2711- 31-	Skip Traffic Stripe (White) - per gross kilometer.
Item No. 711- 32-	Skip Traffic Stripe (Yellow) - per gross mile.
Item No. 2711- 32-	Skip Traffic Stripe (Yellow) - per gross kilometer.
Item No. 711- 33-	Skip Traffic Stripe (White) - per foot.
Item No. 2711- 33-	Skip Traffic Stripe (White) - per meter.
Item No. 711- 34-	Skip Traffic Stripe (Yellow) - per foot.
Item No. 2711- 34-	Skip Traffic Stripe (Yellow) - per meter.
Item No. 711- 35-	Solid Traffic Stripe (White) - per foot.
Item No. 2711- 35-	Solid Traffic Stripe (White) - per meter.
Item No. 711- 36-	Solid Traffic Stripe (Yellow) - per foot.
Item No. 2711- 36-	Solid Traffic Stripe (Yellow) - per meter.
Item No. 711- 37-	Solid Traffic Stripe (White) - per net mile.
Item No. 2711- 37-	Solid Traffic Stripe (White) - per net kilometer.
Item No. 711- 38-	Solid Traffic Stripe (Yellow) - per net mile.
Item No. 2711- 38-	Solid Traffic Stripe (Yellow) - per net kilometer.
Item No. 710- 21-	Skip Traffic Stripe (White/Black) - per gross mile.
Item No. 2710- 21-	Skip Traffic Stripe (White/Black) - per gross kilometer.
Item No. 710- 22-	Skip Traffic Stripe (Yellow) - per gross mile.
Item No. 2710- 22-	Skip Traffic Stripe (Yellow) - per gross kilometer.
Item No. 710- 23-	Solid Traffic Stripe (White/Black) - per net mile.
Item No. 2710- 23-	Solid Traffic Stripe (White/Black) - per net kilometer.
Item No. 710- 24-	Solid Traffic Stripe (Yellow) - per net mile.
Item No. 2710- 24-	Solid Traffic Stripe (Yellow) - per net kilometer.
Item No. 710- 25-	Solid Traffic Stripe (White/Black) - per foot.
Item No. 2710- 25-	Solid Traffic Stripe (White/Black) - per meter.
Item No. 710- 26-	Solid Traffic Stripe (Yellow) - per foot.
Item No. 2710- 26-	Solid Traffic Stripe (Yellow) - per meter.
Item No. 710- 6-	Directional Arrows, Painted - each.
Item No. 2710- 6-	Directional Arrows, Painted - each.
Item No. 710- 7-	Pavement Messages, Painted - each.
Item No. 2710- 7-	Pavement Messages, Painted - each.

ATTACHMENT 4



PROJECT NO.: Q-040487

OPEN DATE: AUGUST 3, 2004

AND TIME: 2:30 P.M.

PRE-BID DATE: JULY 19, 2004

AND TIME: 10:00 A.M.

LOCATION: 1825 HENDRY ST. 3rd FLOOR
FORT MYERS, FL 33901

REQUEST FOR QUOTATIONS

(STEP TWO – PRICING)

TITLE: TRAFFIC CABLE AND INSTALLATION

REQUESTER: LEE COUNTY BOARD OF COUNTY COMMISSIONERS
DIVISION OF PURCHASING

MAILING ADDRESS
P.O. BOX 398
FORT MYERS, FL 33902-0398

PHYSICAL ADDRESS
1825 Hendry St 3rd Floor
FORT MYERS, FL 33901

BUYER: KATHY CICCARELLI
BUYER
PHONE NO.: (239) 344-5450

GENERAL CONDITIONS

Sealed Quotations will be received by the DIVISION OF PURCHASING, until 2:30pm on the date specified on the cover sheet of this "Request for Quotations", and opened immediately thereafter by the Purchasing Director or designee.

Any question regarding this solicitation should be directed to the Buyer listed on the cover page of this solicitation, or by calling the Division of Purchasing at (239) 344-5450.

1. **SUBMISSION OF QUOTE:**

- a. Quotations shall be sealed in an envelope, and the outside of the envelope should be marked with the following information:
 - 1. Marked with the words "Sealed Quote"
 - 2. Name of the firm submitting the quotation
 - 3. Title of the quotation
 - 4. Quotation number

- b. The Quotation shall be submitted in triplicate as follows:
 - 1. The original consisting of the Lee County quotes forms completed and signed.
 - 2. A copy of the original quote forms for the Purchasing Director.
 - 3. A second copy of the original quote forms for use by the requesting department.

- c. The following should be submitted along with the quotation in a separate envelope. This envelope should be marked as described above, but instead of marking the envelope as "Sealed Quote", please indicate the contents; i.e., literature, drawings, submittals, etc. This information should be submitted in duplicate.
 - 1. Any information (either required or in addition to that asked for by the specifications) necessary to analyze your quotation; i.e., required submittals, literature, technical data, financial statements.
 - 2. Warranties and guarantees against defective materials and workmanship.

- d. **ALTERNATE QUOTE:** If the vendor elects to submit more than one quote, then the quotes should be submitted in separate envelopes and marked as indicated above. The second, or alternate quote should be marked as "Alternate".

- e. **QUOTES RECEIVED LATE:** It is the quoter's responsibility to ensure that his quote is received by the Division of Purchasing prior to the opening date and time specified. Any quote received after the opening date and time will be promptly returned to the quoter unopened. Lee County will not be responsible for quotes received late because of delays by a third party delivery service; i.e., U.S. Mail, UPS, Federal Express, etc.
- f. **QUOTE CALCULATION ERRORS:** In the event there is a discrepancy between the total quoted amount or the extended amounts and the unit prices quoted, the unit prices will prevail and the corrected sum will be considered the quoted price.
- g. **PAST PERFORMANCE:** All vendors will be evaluated on their past performance and prior dealings with Lee County (i.e., failure to meet specifications, poor workmanship, late delivery, etc.).
- h. **WITHDRAWAL OF QUOTE:** No quote may be withdrawn for a period of 90 days after the scheduled time for receiving quotes. A quote may be withdrawn prior to the quote-opening date and time. Such a request to withdraw should be made in writing to the Purchasing Director, who will approve or disapprove of the request.
- i. **COUNTY RESERVES THE RIGHT:** The County reserves the right to waive minor informalities in any quote; to reject any or all quotes with or without cause; and/or to accept the quote that in its judgment will be in the best interest of the County of Lee.
- j. **EXECUTION OF QUOTE:** All quotes shall contain the signature of an authorized representative of the quoter in the space provided on the quote proposal form. All quotes shall be typed or printed in ink. The bidder may not use erasable ink. All corrections made to the quote shall be initialed.

2. **ACCEPTANCE**

The materials and/or services delivered under the quote **shall** remain the property of the seller until a physical inspection and actual usage of these materials and/or services is accepted by the County and is to be in compliance with the terms herein, fully in accord with the specifications and of the highest quality. In the event the materials and/or services supplied to the County are found to be defective or do not conform to specifications, the County reserves the right to cancel the order upon written notice to the seller and return such product to the seller at the seller's expense.

3. **SUBSTITUTIONS**

Whenever in these specifications a brand name or make is mentioned, it is the intention of the County only to establish a grade or quality of materials and not to rule out other brands or makes of equality. However, if a product other than that specified is quote, it is the vendor's responsibility to name such product with his quote and to prove to the County that said product is equal to the product specified. Lee County **shall** be the sole judge as to whether a product being offered by the quoter is actually equivalent to the one being specified by the detailed specifications. (Note: This paragraph does not apply when it is determined that the technical requirements of this solicitation require only a specific product as stated in the detailed specifications.)

4. **RULES, REGULATIONS, LAWS, ORDINANCES & LICENSES**

The awarded vendor shall observe and obey all laws, ordinances, rules, and regulations, of the federal, state, and local government, which may be applicable to the supply of this product or service.

- a. Occupational License – Vendor shall submit within 10 calendar days after request.
- b. Specialty License(s) – Vendor shall possess at the time of the opening of the quote all necessary permits and/or license required for the sale of this product and/or service and upon the request of the County provide copies of licenses and/or permits within 10 calendar days after request.

5. **RECYCLED PRODUCTS**

It is the Lee County Board of County Commissioners' stated policy objective to "Ensure all departments are aware of the availability of recycled products..." (Administrative Code #AC-10-4). In an effort to provide the utmost opportunity for the use of recycled products by Lee County, vendors should list on their letterhead, all necessary information regarding any applicable recycled products they have available. Recycled products should meet all other specifications listed and have a minimum of 50%-recycled content. Whenever fiscally feasible, available recycled products will be purchased.

6. **WARRANTY/GUARANTY** (unless otherwise specified)

All materials and/or services furnished under this quote shall be warranted by the vendor to be free from defects and fit for the intended use.

7. **PRE-BID CONFERENCE**

A pre-bid conference will be held at the location, date, and time specified on the cover of this solicitation. Pre-bid conferences are generally non-mandatory, but it is highly recommended that everyone planning to submit a quote attend.

In the event a pre-bid conference is classified as mandatory, it will be so specified on the cover of this solicitation and it will be the responsibility of the quoter to ensure that they are represented at the pre-bid. Only those quoters who attend the pre-bid conference will be allowed to quote on this project.

8. **BIDDERS LIST MAINTENANCE**

A bidder should respond to "Request for Quotations" in order to be kept on the Bidder's List. Failure to respond to three different "request for quotations" may result in the vendor being removed from the Bidder's List. A bidder may do one of the following, in order to respond properly to the request:

- a. Submission of a quotation prior to the quote receipt deadline.
- b. Submission of a "no bid" notice prior to the quote receipt deadline.

9. **LEE COUNTY PAYMENT PROCEDURES**

All vendors are requested to mail one original invoice and one invoice copy to:

Lee County Finance Department
Post Office Box 2238
Fort Myers, FL 33902-2238

All invoices will be paid as directed by the Lee County payment procedure unless otherwise differently stated in the detailed specification portion of this quote.

Lee county will not be liable for request of payment deriving from aid, assistance, or help by any individual, vendor, quoter, or bidder for the preparation of these specifications.

Lee County is generally a tax-exempt entity subject to the provisions of the 1987 legislation regarding sales tax on services. Lee County will pay those taxes for which it is obligated, or it will provide a Certificate of Exemption furnished by the Department of Revenue. All contractors or quoters should include in their quote all sales or use taxes, which they will pay when making purchases of material or subcontractor's services.

10. **LEE COUNTY BID PROTEST PROCEDURE**

Any contractor/vendor/firm that has submitted a formal bid/quote/proposal to Lee County, and who is adversely affected by an intended decision with respect to the award of the formal bid/quote/proposal, shall file with the County's Purchasing Director or Public Works Director a written "Notice of Intent to File a Protest" not later than seventy-two (72) hours (excluding Saturdays, Sundays and Legal Holidays) after receipt of a "Notice of Intended Decision" from the County with respect to the proposed award of the formal bid/quote/proposal.

The "Notice of Intent to File a Protest" is one of two documents necessary to perfect Protest. The second document is the "Formal Written Protest", both documents are described below.

The "Notice of Intent to File a Protest" document shall state all grounds claimed for the Protest, and clearly indicate it as the "Notice of Intent to File a Protest". Failure to clearly indicate the Intent to file the Protest shall constitute a waiver of all rights to seek any further remedies provided for under this Protest Procedure.

The "Notice of Intent to File a Protest" shall be received ("stamped in") by the Purchasing Director or Public Works Director not later than Four o'clock (4:00) PM on the third working day following the day of receipt of the County's Notice of Intended Decision.

The affected party shall then file its Formal Written Protest within ten (10) calendar days after the time for the filing of the Notice of Intent to File a Protest has expired. Except as provided for in the paragraph below, upon filing of the Formal Written Protest, the contractor/vendor/firm shall post a bond, payable to the Lee County Board of County Commissioners in an amount equal to five percent (5%) of the total bid/quote/proposal, or Ten Thousand Dollars (\$10,000.00), whichever is less. Said bond shall be designated and held for payment of any costs that may be levied against the protesting contractor/vendor/firm by the Board of County Commissioners, as the result of a frivolous Protest.

A clean, Irrevocable Letter of Credit or other form of approved security, payable to the County, may be accepted. Failure to submit a bond, letter of credit, or other approved security simultaneously with the Formal Written Protest shall invalidate the protest, at which time the County may continue its procurement process as if the original "Notice of Intent to File a Protest" had never been filed.

Any contractor/vendor/firm submitting the County's standard bond form (CSD: 514), along with the bid/quote/proposal, shall not be required to submit an additional bond with the filing of the Formal Written Protest.

The Formal Written Protest shall contain the following:

- County bid/quote/proposal identification number and title.
- Name and address of the affected party, and the title or position of the person submitting the Protest.
- A statement of disputed issues of material fact. If there are no disputed material facts, the Formal Protest must so indicate.
- A concise statement of the facts alleged, and of the rules, regulations, statutes, or constitutional provisions, which entitle the affected party to relief.
- All information, documents, other materials, calculations, and any statutory or case law authority in support of the grounds for the Protest.
- A statement indicating the relief sought by the affected (protesting) party.
- Any other relevant information that the affected party deems to be material to Protest.

Upon receipt of a timely filed "Notice of Intent to File a Protest", the Purchasing Director or Public Works Director (as appropriate) may abate the award of the formal bid/quote/proposal as appropriate, until the Protest is heard pursuant to the informal hearing process as further outlined below, except and unless the County Manager shall find and set forth in writing, particular facts and circumstances that would require an immediate award of the formal bid/quote/proposal for the purpose of avoiding a danger to the public health, safety, or welfare. Upon such written finding by the County Manager, the County Manager may authorize an expedited Protest hearing procedure. The expedited Protest hearing shall be held within ninety-six (96) hours of the action giving rise to the contractor/vendor/firm's Protest, or as soon as may be practicable for all parties. The "Notice of Intent to File a Protest" shall serve as the grounds for the affected party's presentation and the requirements for the submittal of a formal, written Protest under these procedures, to include the requirement for a bond, shall not apply.

The Dispute Committee shall conduct an informal hearing with the protesting contractor/vendor/firm to attempt to resolve the Protest, within seven working days (excluding Saturdays, Sundays and legal holidays) from receipt of the Formal Written Protest. The Chairman of the Dispute Committee shall ensure that all affected parties may make presentations and rebuttals, subject to reasonable time limitations, as appropriate. The purpose of the informal hearing by the Dispute Committee, the protestor and other affected parties is to provide and opportunity: (1) to review the basis of the Protest; (2) to

evaluate the facts and merits of the Protest: and (3) to make a determination whether to accept or reject the Protest.

Once a determination is made by the Dispute Committee with respect to the merits of the Protest, the Dispute Committee shall forward to the Board of County Commissioners its recommendations, which shall include relevant background information related to the procurement.

Upon receiving the recommendation from the Dispute Committee, the Board of County Commissioners shall conduct a hearing on the matter at a regularly scheduled meeting. Following presentations by the affected parties, the Board shall render its decision on the merits of the Protest.

If the Board's decision upholds the recommendation by the Dispute Committee regarding the award, and further finds that the Protest was either frivolous and/or lacked merit, the Board, at its discretion, may assess costs, charges, or damages associated with any delay of the award, or any costs incurred with regard to the protest. These costs, charges or damages may be deducted from the security (bond or letter of credit) provided by the contractor/vendor/firm. Any costs, charges or damages assessed by the Board in excess of the security shall be paid by the protesting contractor/vendor/firm within thirty (30) calendar days of the Board's final determination concerning the award.

All formal bid/quote/proposal solicitations shall set forth the following statement:

“FAILURE TO FOLLOW THE BID PROTEST PROCEDURE REQUIREMENTS WITHIN THE TIMEFRAMES AS PRESCRIBED HEREIN AND ESTABLISHED BY LEE COUNTY BOARD OF COUNTY COMMISSIONERS, FLORIDA, SHALL CONSTITUTE A WAIVER OF YOUR PROTEST AND ANY RESULTING CLAIMS.”

11. **PUBLIC ENTITY CRIME**

Any person or affiliate as defined by statute who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid or a contract to provide any goods or services to the County; may not submit a bid on a contract with the County for the construction or repair of a public building or a public work; may not submit bids or leases of real property to the County; may not be awarded or perform works as a contractor, supplier, subcontractor, or consultant under a contract with the County, and may not transact business with the County in excess of \$25,000.00 for a period of 36 months from the date of being placed on the convicted vendor list.

12. **QUALIFICATION OF QUOTERS** (unless otherwise noted)

Quotes will be considered only from firms normally engaged in the sale and distribution or provision of the services as specified herein. Quoters shall have adequate organization, facilities, equipment, and personnel to ensure prompt and efficient service to Lee County. The County reserves the right before recommending any award to inspect the facilities and organization; or to take any other action necessary to determine ability to perform is satisfactory, and reserves the right to reject quotes where evidence submitted or investigation and evaluation indicates an inability of the quoter to perform.

13. **MATERIAL SAFETY DATA SHEETS**

In accordance with Chapter 443 of the Florida Statutes, it is the vendor's responsibility to provide Lee County with Materials Safety Data Sheets on quoted materials, as may apply to this procurement.

14. **MISCELLANEOUS**

If a conflict exists between the General Conditions and the detailed specifications, then the detailed specifications shall prevail.

15. **WAIVER OF CLAIMS**

Once this contract expires, or final payment has been requested and made, the awarded contractor shall have no more than 30 days to present or file any claims against the County concerning this contract. After that period, the County will consider the Contractor to have waived any right to claims against the County concerning this agreement.

16. **AUTHORITY TO PIGGYBACK**

It is hereby made a precondition of any quote and a part of these specifications that the submission of any quote in response to this request constitutes a quote made under the same conditions, for the same price, and for the same effective period as this quote, to any other governmental entity.

17. **COUNTY RESERVES THE RIGHT**

a) **State Contract**

If applicable, the County reserves the right to purchase any of the items in this quote from State Contract Vendors if the prices are deemed lower on State Contract than the prices we receive in this quotation.

b) **Any Single Large Project**

The County, in its sole discretion, reserves the right to separately quote any project that is outside the scope of this quote, whether through size, complexity, or dollar value.

c) **Disadvantaged Business Enterprises**

The County, in its sole discretion, reserves the right to purchase any of the items in this quote from Disadvantage Business Enterprise vendor if the prices are determined to be in the best interest of the County, to assist the County in the fulfillment of any of the County's grant commitments to federal or state agencies.

The County further reserves the right to purchase any of the items in this quote from DBE's to fulfill the County's state policy toward DBE's as outlined in County Ordinance 88-45 and 90-04, as amended.

d) **Anti-Discrimination**

The vendor for itself, its successors in interest, and assignees, as part of the consideration there of covenant and agree that:

In the furnishing of services to the County hereunder, no person on the grounds of race, religion, color, age, sex, national origin, handicap or marital status shall be excluded from participation in, denied the benefits of, or otherwise be subjected to discrimination.

The vendor will not discriminate against any employee or applicant for employment because of race, religion, color, age, sex, national origin, handicap or marital status. The vendor will make affirmative efforts to insure that applicants are employed and that employees are treated during employment without regard to their race, religion, color, age, sex, national origin, handicap or marital status. Such action shall include, but not be limited to, acts of employment, upgrading, demotion or transfer; recruitment advertising; layoff or termination, rates of pay or other forms of compensation and selection for training, including apprenticeship.

Vendor agrees to post in a conspicuous place, available to employees and applicants for employment, notices setting forth the provisions of this anti-discrimination clause.

Vendor will provide all information and reports required by relevant regulations and/or applicable directives. In addition, the vendor shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the County to be pertinent to

ascertain compliance. The vendor shall maintain and make available relevant data showing the extent to which members of minority groups are beneficiaries under these contracts.

Where any information required of the vendor is in the exclusive possession of another who fails or refuses to furnish this information, the vendor shall so certify to the County its effort made toward obtaining said information. The vendor shall remain obligated under this paragraph until the expiration of three (3) years after the termination of this contract.

In the event of breach of any of the above anti-discrimination covenants, the County shall have the right to impose sanctions as it may determine to be appropriate, including withholding payment to the vendor or canceling, terminating, or suspending this contract, in whole or in part.

Additionally, the vendor may be declared ineligible for further County contracts by rule, regulation or order of the Board of County Commissioners of Lee County, or as otherwise provided by law.

The vendor will send to each union, or representative of workers with which the vendor has a collective bargaining agreement or other contract of understanding, a notice informing the labor union of worker's representative of the vendor's commitments under this assurance, and shall post copies of the notice in conspicuous places available to the employees and the applicants for employment.

The vendor will include the provisions of this section in every subcontract under this contract to insure its provisions will be binding upon each subcontractor. The vendor will take such actions with respect to any subcontractor, as the contracting agency may direct, as a means of enforcing such provisions, including sanctions for non-compliance.

18. **AUDITABLE RECORDS**

The awarded vendor shall maintain auditable records concerning the procurement adequate to account for all receipts and expenditures, and to document compliance with the specifications. These records shall be kept in accordance with generally accepted accounting methods, and Lee County reserves the right to determine the record-keeping method required in the event of non-conformity. These records shall be maintained for two years after completion of the project and shall be readily available to County personnel with reasonable notice, and to other persons in accordance with the Florida Public Disclosure Statues.

19. **DRUG FREE WORKPLACE**

Whenever two or more quotes/proposals, which are equal with respect to price, quality and service, are received for the procurement of commodities or contractual services, a quote/proposal received from a business that certifies that it has implemented a drug-free workplace program shall be given preference in the award process. In order to have a drug-free workplace program, a business shall comply with the requirements of Florida Statutes 287.087.

20. **REQUIRED SUBMITTALS**

Any submittals requested should be returned with the quote response. This information may be accepted after opening, but no later than 10 calendar days after request.

21. **TERMINATION**

Any agreement as a result of this quote may be terminated by either party giving thirty (30) calendar days advance written notice. The County reserves the right to accept or not accept a termination notice submitted by the vendor, and no such termination notice submitted by the vendor shall become effective unless and until the vendor is notified in writing by the County of its acceptance.

The Purchasing Director may immediately terminate any agreement as a result of this quote for emergency purposes, as defined by the Lee County Purchasing and Payment Procedure Manual.

Any vendor who has voluntarily withdrawn from a formal quote/proposal without the County's mutual consent during the contract period shall be barred from further County procurement for a period of 180 days. The vendor may apply to the Board of Lee County Commissioners for waiver of this debarment. Such application for waiver of debarment must be coordinated with and processed by Purchasing.

22. **CONFIDENTIALITY**

Vendors should be aware that all submittals (including financial statements) provided with a quote/proposal are subject to public disclosure and will **not** be afforded confidentiality.

23. **ANTI-LOBBYING CLAUSE**

All firms are hereby placed on formal notice that neither the County Commissioners nor candidates for County Commission, nor any employees from the Lee County Government, Lee County staff members, nor any members of the Qualification/Evaluation Review Committee are to be lobbied, either individually

or collectively, concerning this project. Firms and their agents who intend to submit qualifications, or have submitted qualifications, for this project are hereby placed on *formal notice* that they are *not* to contact County personnel for such purposes as holding meetings of introduction, meals, or meetings relating to the selection process outside of those specifically scheduled by the County for negotiations. Any such lobbying activities may cause immediate disqualification for this project.

24. **INSURANCE (AS APPLICABLE)**

Insurance shall be provided, per the attached insurance guide. Upon request, an insurance certificate complying with the attached guide may be required prior to award.

**LEE COUNTY, FLORIDA
PROPOSAL QUOTE FORM
FOR THE PURCHASE OF TRAFFIC CABLE AND INSTALLATION**

DATE SUBMITTED: _____

VENDOR NAME: _____

TO: The Board of County Commissioners
Lee County
Fort Myers, Florida

Having carefully examined the "General Conditions", and the "Detailed Specifications", all of which are contained herein, the Undersigned proposes to furnish the following which meet these specifications:

The undersigned acknowledges
receipt of Addenda numbers:

WILL YOU DELIVER WITH YOUR OWN VEHICLES AS OPPOSED TO COMMON CARRIER?

YES _____

NO _____

PLEASE QUOTE ON THE FOLLOWING ITEMS **(NO SUBSTITUTIONS):**

NOTE: The "installed" prices quoted for the various types of cable, connectors, fiber bays, fiber trays, and cabinets shall include all labor as well as any miscellaneous hardware, etc. which may be required for a turn-key installation.

FIBER OPTIC CABLE

ITEM 1: 12 Strand Multi-Mode Corning cable loose tube
Price Per Foot Installed \$ _____

ITEM 2: 6 Strand Single-Mode Corning cable loose tube
Price Per Foot Installed \$ _____

ITEM 3: 12 Strand Single-Mode Corning cable loose tube
Price Per Foot Installed \$ _____

ITEM 4: 24 Strand Single-Mode Corning cable loose tube
Price Per Foot Installed \$ _____

ITEM 5: 48 Strand Single-Mode Corning cable loose tube
Price Per Foot Installed \$ _____

ITEM 6: 96 Strand Single-Mode Corning cable loose tube
Price Per Foot Installed \$ _____

ITEM 7: 6 Strand Multi-Mode Corning cable loose tube
Price Per Foot Installed \$ _____

ITEM 8: 24 Strand Multi-Mode Corning cable loose tube
Price Per Foot Installed \$ _____

ITEM 9: 48 Strand Multi-Mode Corning cable loose tube
Price Per Foot Installed \$ _____

HYBRID FIBER:

ITEM 10: 12 SM/6 MM Loose Tube
Price Per Foot Installed \$ _____

ITEM 11: 24 SM/12 MM Loose Tube
Price Per Foot Installed \$ _____

TWISTED PAIR

ITEM 12: 6 Twisted Pair PE 39 19AWG Interconnect Cable w/Aluminum Shield
Price Per Foot Installed \$ _____

ITEM 13: 12 Twisted Pair PE 39 19AWG Interconnect Cable w/Aluminum Shield
Price Per Foot Installed \$ _____

FIBER OPTIC CONNECTORS:

ITEM 14: Corning Unicam ST Single Mode
Price Each Installed \$ _____

ITEM 15: Corning Unicam ST Multi Mode
Price Each Installed \$ _____

FIBER BAYS:

ITEM 16: Corning Fiber Bay Panel with 6 connectors Single Mode
Price Each Installed \$ _____

ITEM 17: Corning Fiber Bay Panel with 6 connectors Multi Mode
Price Each Installed \$ _____

ITEM 18: Corning Fiber Bay Panel with 12 connectors Single Mode
Price Each Installed \$ _____

ITEM 19: Corning Fiber Bay Panel with 12 connectors Multi Mode
Price Each Installed \$ _____

FIBER TRAYS:

ITEM 20: Corning Fiber Stackable Trays
Price Each Installed \$ _____

ITEM 21: Leviton Fiber Stackable Trays
Price Each Installed \$ _____

ITEM 22: Fusion Splicing Per Strand
Price Each Installed \$ _____

FIBER INTERCONNECT CABINETS:

ITEM 23: Rackmount with Coupler Panels
Price Each Installed \$ _____

ITEM 24: Wallmount with Coupler Panels
Price Each Installed \$ _____

GRAND TOTAL \$ _____

OPTIONAL LABOR RATE:

OPTION A: Normal Work Hours (7 a.m. – 6 p.m. Mon. – Fri.)
Price Per Hour \$ _____

OPTION B: Overtime Labor Rate (7 p.m. – 6 a.m. Mon. – Fri.)
Price per hour \$ _____

OPTION C: Weekends/Holiday Labor Rate (see page 21)
Price per hour \$ _____

CONDUIT REPAIR:

OPTION D: Labor to repair conduit, pull box, connectors, etc. (Materials provided by Lee County DOT for conduit replacement).
Price Per Hour Installed \$ _____

TO BE STARTED WITHIN _____ CALENDAR DAYS AFTER RECEIPT OF AWARD AND PURCHASE ORDER.

Is your firm interested in being considered for the Local Vendor Preference?
Yes _____ No _____

If yes, then read the paragraph entitled “Local Vendor Preference” included in these specifications. Also complete the Local Vendor Preference Questionnaire and return with your quotation.

Quoters should carefully read all the terms and conditions of the specifications. Any representation of deviation or modification to the quote may be grounds to reject the quote.

Are there any modifications to the quote or specifications:

Yes _____ No _____

Failure to clearly identify any modifications in the space below or on a separate page may be grounds for the quoter being declared nonresponsive or to have the award of the quote rescinded by the County.

MODIFICATIONS:

Quoter shall submit his/her quote on the County's Proposal Quote Form, including the firm name and authorized signature. Any blank spaces on the Proposal Quote Form, qualifying notes or exceptions, counter offers, lack of required submittals, or signatures, on County's Form may result in the Quoter/Quote being declared non-responsive by the County.

ANTI-COLLUSION STATEMENT

THE BELOW SIGNED QUOTER HAS NOT DIVULGED TO, DISCUSSED OR COMPARED HIS QUOTE WITH OTHER QUOTERS AND HAS NOT COLLUDED WITH ANY OTHER QUOTER OR PARTIES TO A QUOTE WHATSOEVER. NOTE: NO PREMIUMS, REBATES OR GRATUITIES TO ANY EMPLOYEE OR AGENT ARE PERMITTED EITHER WITH, PRIOR TO, OR AFTER ANY DELIVERY OF MATERIALS. ANY SUCH VIOLATION WILL RESULT IN THE CANCELLATION AND/OR RETURN OF MATERIAL (AS APPLICABLE) AND THE REMOVAL FROM THE MASTER BIDDERS LIST.

FIRM NAME _____

BY (Printed): _____

BY (Signature): _____

TITLE: _____

FEDERAL ID # OR S.S.# _____

ADDRESS: _____

PHONE NO.: _____

FAX NO.: _____

CELLULAR PHONE/PAGER NO.: _____

LEE COUNTY OCCUPATIONAL LICENSE NUMBER: _____

E-MAIL ADDRESS: _____

REVISED: 7/28/00

**LEE COUNTY, FLORIDA
DETAILED SPECIFICATIONS
FOR THE PURCHASE OF TRAFFIC CABLE AND INSTALLATION**

SCOPE

The intent of this quote is to provide the purchase and installation of Traffic Cable for various Lee County departments and divisions.

TERM OF QUOTE

This quote shall be in effect for one-year, or until new quotes are taken and awarded. This quote, or any portion thereof, has the option of being renewed for four additional one-year periods, upon mutual agreement of all parties, under the same terms and conditions.

WORKMANSHIP

All work shall be done by skilled mechanics in accordance with BICSI standard practices and in a manner acceptable to the County. All fiber will be tested and certified and printed test reports will be provided. Worksite should be left in a neat and orderly condition. All cable should be properly installed and contained. Any work not conforming to these specifications shall be corrected to the satisfaction of the County. Such corrections shall be made at the expense of the contractor.

GENERAL INFORMATION

The equipment provided under these specifications shall be new and unused. All wire frames, racks, punch blocks, jacks, plugs, duct, connectors, other materials, labor and other necessary items to perform this job will be supplied by the awarded vendor unless specifically noted herein or other arrangements made.

All copper and fiber cabling runs will be tested and follow the industry standards for Category 6 installation, testing and acceptance.

The cable must meet the requirements of the National Electrical Code (NEC) section 770. Please see ATTACHMENT B.

All wiring runs will be documented at termination points and other intermediary locations, with all necessary information, including far-end punch blocks or patch panels and the station locations. Complete documentation of all cabling and test results will be displayed at IDF room and delivered to Lee County at the completion of the project. The vendor will fire caulk all sleeves and penetration required for cable installation. Vendor will provide sleeves with end bushings for project as needed. All fire walls require penetrations to be sleeved. Size of sleeves shall be determined based on quantities of cables need for serviced area. Please see ATTACHMENT C and ATTACHMENT D.

CERTIFICATION

A minimum of one (1) member of the awarded vendor's staff must hold a current RCDD certification. Should the employment status of the person with the certification change Lee County must be notified immediately.

SUPERVISION AND SAFETY

The contractor shall be responsible for the supervision and direction of the work performed by his employees and subcontractors; and shall, at all times provide a full time manager or crew leader on the premises to carry out the responsibility. The manager or crew leader shall have the authority to act as agent for the contractor in his absence, and shall be fully qualified to implement the contract specifications.

The contractor shall be responsible for instructing his employees in all safety measures. All equipment used by the contractor shall be maintained in safe operating condition at all times, free from defects or wear which may in any way constitute a hazard to any person or persons on County property. All electrical equipment will be properly grounded. All employees will wear proper personal protective equipment while working on County premises (including protection from reactive products). Adequate ventilation of fumes shall be provided at all times.

ESTIMATED DOLLAR VOLUME

Lee County anticipates spending approximately \$100,000.00 for the purchase and installation of Traffic Cable over the next 12 months.

PRICE INCREASES

If an awarded vendor experiences a major price increase from suppliers for items in this quotation, or increases their advertised hourly rate, the vendor may submit a written request to increase pricing. All information necessary to review and analyze the request must be submitted to Lee County Purchasing. Lee County shall have the right to grant the price increase, or requote, at the County's sole discretion.

TERM OF AGREEMENT

This agreement shall become effective immediately upon issuance of a "Notice to Proceed" by the County and shall continue in full force and effect for a period of one-year from the commencement date, with an option to renew for four additional one-year periods, upon mutual agreement of both parties unless this agreement is mutually agreed by both parties to terminate sooner, or until a contract is awarded and in place.

GENERAL WORK REQUIREMENTS

Each employee shall wear a photo identification tag with other necessary information, provided and paid for by the vendor.

DESIGNATED CONTACT

The awarded vendor shall appoint two people to act as primary contacts with Lee County. They shall be readily available during normal working hours by phone or in person, and shall be knowledgeable of the terms and procedures involved.

SCHEDULING

Lee County, working with the vendor, may designate the time during which work may be performed. For the purpose of this quote the County will consider work hours as follows:

- (1) Normal work hours will be between 7 a.m. and 6 p.m. Monday through Friday.
- (2) After hours overtime between 7 p.m. and 6 a.m.
- (3) Weekends include Saturday and Sunday.
- (4) Holidays are as follows:

New Years Day	- January 1
Martin Luther King Day	- To Be Designated
Memorial Day	- To Be Designated
Fourth of July	- July 4
Labor Day	- 1st Monday in Sept.
Veterans Day	- To Be Designated
Thanksgiving Day	- 4th Thursday in Nov. Friday After Thanksgiving Day
Christmas Day	- December 25

* A notice of 24 hours must be given in order to get into a Traffic Signal Cabinet.

BASIS OF AWARD

The basis of award for this quotation will be the overall low quoter (Grand Total) meeting specifications.

It is the County's intent to award to a primary and secondary vendor.

The County reserves the right to reject any unbalanced quotes.

The County reserves the right to go to the secondary vendor if in its opinion the primary vendor cannot meet the two-hour response time.

In the event that Corning Cable is not available the County reserves the right to select a substitute cable of the same quality.

LOCAL BIDDER'S PREFERENCE

Note: In order for your firm to be considered for the local vendor preference, you must complete and return the attached "Local Vendor Preference Questionnaire" with your quotation.

The Lee County Local Bidder's Preference Ordinance No. 00-10 is being included as part of the award process for this project. As such, Lee County at its sole discretion, may choose to award a preference to any qualified "Local Contractor/Vendor" in an amount not to exceed 3 % of the total amount quoted by that firm.

"Local Contractor / Vendor" shall mean: a) any person, firm, partnership, company or corporation whose principal place of business in the sole opinion of the County, is located within the boundaries of Lee County, Florida; or b) any person, firm, partnership, company or corporation that has provided goods or services to Lee County on a regular basis for the preceding consecutive five (5) years, and that has the personnel, equipment and materials located within the boundaries of Lee County sufficient to constitute a present ability to perform the service or provide the goods.

The County reserves the exclusive right to compare, contrast and otherwise evaluate the qualifications, character, responsibility and fitness of all persons, firms, partnerships, companies or corporations submitting formal bids or formal quotes in any procurement for goods or services when making an award in the best interests of the County.

ATTACHMENT A
LOCAL VENDOR PREFERENCE QUESTIONNAIRE
(LEE COUNTY ORDINANCE NO. 00-10)

Instructions: Please complete either Part A or B whichever is applicable to your firm

PART A: VENDOR'S PRINCIPAL PLACE OF BUSINESS IS LOCATED WITHIN LEE COUNTY (Only complete Part A if your principal place of business is located within the boundaries of Lee County)

- 1. What is the physical location of your principal place of business that is located within the boundaries of Lee County, Florida?**

- 2. What is the size of this facility (i.e. sales area size, warehouse, storage yard, etc.)**

PART B: VENDOR'S PRINCIPAL PLACE OF BUSINESS IS NOT LOCATED WITHIN LEE COUNTY OR DOES NOT HAVE A PHYSICAL LOCATION WITHIN LEE COUNTY (Please complete this section.)

1. How many employees are available to service this contract? _____

2. Describe the types and amount of equipment you have available to service this contract.

LOCAL VENDOR PREFERENCE QUESTIONNAIRE CONTINUED

3. Describe the types and amount of material stock that you have available to service this contract.

4. Have you provided goods or services to Lee County on a regular basis for the preceding, consecutive five years?

Yes _____ No _____

If yes, please provide your contractual history with Lee County for the past five, consecutive years. Attach additional pages if necessary.

STANDARD CONTRACT - Contracts that will not exceed three hundred and sixty five (365) calendar days; or where costs will not exceed \$500,000; and/or there are no unusual hazards present.

1. **Insurance Requirements:** *These are minimum requirements, which are subject to modification in response to operations involving a higher level of loss exposure.*

a. **Workers' Compensation** - Statutory benefits as defined by FS 440 encompassing all operations contemplated by this contract or agreement to apply to all owners, officers, and employees regardless of the number of employees. Individual employees may be exempted per State Law. Employers' liability will have minimum limits of:

\$500,000 per accident
\$500,000 disease limit
\$500,000 disease limit per employee

b. **Commercial General Liability** - Coverage shall apply to premises and/or operations, products and/or completed operations, independent contractors, contractual liability, and broad form property damage exposures with minimum limits of:

\$500,000 bodily injury per person (BI)
\$1,000,000 bodily injury per occurrence (BI)
\$500,000 property damage (PD) or
\$1,000,000 combined single limit (CSL) of BI and PD

c. **Business Auto Liability** - The following Automobile Liability will be required and coverage shall apply to all owned, hired and non-owned vehicles use with minimum limits of:

\$500,000 bodily injury per person (BI)
\$1,000,000 bodily injury per occurrence (BI)
\$100,000 property damage (PD) or
\$1,000,000 combined single limit (CSL) of BI and PD

****The required limit of liability shown in Standard Contract: 1.a; 1.b; 1.c; may be provided in the form of "Excess Insurance" or "Commercial Umbrella Policies." In which case, a "Following Form Endorsement" will be required on the "Excess Insurance Policy" or "Commercial Umbrella Policy."***

2. Verification of Coverage:

a. Ten (10) days prior to the commencement of any work under this contract a certificate of insurance will be provided to the Risk Manager for review and approval. The certificate shall provide for the following:

1. ***“Lee County, a political subdivision and Charter County of the State of Florida, its agents, employees, and public officials” will be named as an “Additional Insured” on the General Liability policy.***
2. Lee County will be given thirty (30) days notice prior to cancellation or modification of any stipulated insurance. Such notification will be in writing by registered mail, return receipt requested and addressed to the Risk Manager (P.O. BOX 398 Ft. Myers, FL 33902).

3. Special Requirements:

- a. An appropriate “Indemnification” clause shall be made a provision of the contract.
- b. It is the responsibility of the general contractor to insure that all subcontractors comply with all insurance requirements.

Your certificate of insurance must meet the following requirements

Requirement #1: The Lee County Board of County Commissioners shall be added as an additional insured on the comprehensive general liability policy.

Requirement #2: Certificate holder shall be listed as follows:

**Lee County Board of County Commissioners
C/O Lee County Purchasing
P.O. Box 398
Fort Myers, FL 33902**

Requirement #3: Each policy shall provide a 30 day notification clause in the event of cancellation, non-renewal or adverse change.

LEE COUNTY PURCHASING - BIDDERS CHECK LIST

IMPORTANT: Please read carefully and return with your bid proposal.
Please check off each of the following items as the necessary action is completed:

- 1. The Quote has been signed.
- 2. The Quote prices offered have been reviewed.
- 3. The price extensions and totals have been checked.
- 4. The original (must be manually signed) and 2 copies of the quote have been submitted.
- 5. Three (3) identical sets of descriptive literature, brochures and/or data (if required) have been submitted under separate cover.
- 6. All modifications have been acknowledged in the space provided.
- 7. All addendums issued, if any, have been acknowledged in the space provided.
- 8. Erasures or other changes made to the quote document have been initialed by the person signing the quote.
- 9. Bid Bond and/or certified Check, (if required) have been submitted with the quote in amounts indicated.
- 10. Any Delivery information required is included.

- 11. The mailing envelope has been addressed to:

MAILING ADDRESS	PHYSICAL ADDRESS
Lee County Purchasing	Lee County Purchasing
P.O. Box 398 or	3434 Hancock Bridge Pkwy #307
Ft. Myers, FL 33902-0398	N. Ft. Myers, FL 33903

- 12. The mailing envelope **MUST** be sealed and marked with:
Quote Number
Opening Date and/or Receiving Date

- 13. The quote will be mailed or delivered in time to be received no later than the specified opening date and time. (Otherwise quote cannot be considered or accepted.)

- 14. If submitting a "NO BID" please write quote number here _____
and check one of the following:
 Do not offer this product Insufficient time to respond.
 Unable to meet specifications (why)
 Unable to meet bond or insurance requirement.
 Other: _____

Company Name and Address:

ATTACHMENT B

CORNING CABLE SYSTEMS GENERIC SPECIFICATION FOR LOOSE TUBE OPTICAL FIBER CABLES FOR LOW-SMOKE, ZERO HALOGEN APPLICATIONS

February 2004

Revision 16

Corning Cable Systems reserves the right to update this specification without prior notification.

1.0 General Considerations

The cable must meet the requirements of the National Electrical Code® (NEC)® Section 770.

- 1.1 Low-Smoke Zero-Halogen – Applicable Flame-Smoke Test: UL 1685. Cable shall be listed OFN-LS. Interlocking armored cables shall be listed OFC-LS.
- 1.2 Finished cables shall conform to the applicable performance requirements of the Insulated Cable Engineers Association, Inc. (ICEA) *Standard for Indoor-Outdoor Optical Fiber Cable* (ICEA S-104-696).

2.0 Fiber Specifications

- 2.1 Detailed information on the fiber types available for this cable design can be found in the following documents:

Dispersion Un-shifted and Non-zero Dispersion Shifted Single-mode Fiber: Generic Specification F1, "Generic Specification for Single-mode Optical Fiber in Loose Tube and Ribbon Cables."

50/125 μm and 62.5/125 μm Multimode Fiber: Generic Specification F2, "Generic Specification for Multimode Optical Fiber in Loose Tube and Ribbon Cables."

3.0 Cable Construction

- 3.1 Optical fibers shall be placed inside a loose buffer tube. The nominal outer diameter of the buffer tube shall be 3.0 mm.
- 3.2 Each buffer tube shall contain up to 12 fibers.
- 3.3 The fibers shall not adhere to the inside of the buffer tube.
- 3.4 Each fiber shall be distinguishable by means of color coding in accordance with TIA/EIA-598, "Optical Fiber Cable Color Coding."
- 3.5 The fibers shall be colored with ultraviolet (UV) curable inks.
- 3.6 Buffer tubes containing fibers shall be color coded with distinct and recognizable colors in accordance with TIA/EIA-598, "Optical Fiber Cable Color Coding."

- 3.6.1 Buffer tube colored stripes shall be inlaid in the tube by means of co-extrusion when required. The nominal stripe width shall be 1 mm.
- 3.7 For dual layer buffer tube construction cables, standard colors are used for tubes 1 through 12 and stripes are used to denote tubes 13 through 24. The color sequence applies to tubes containing fibers only, and shall begin with the first tube. If fillers are required, they shall be placed in the inner layer of the cable. The tube color sequence shall start from the inside layer and progress outward.
- 3.8 In buffer tubes containing multiple fibers, the colors shall be stable across the specified storage and operating temperature range and not subject to fading or smearing onto each other or into the gel filling material. Colors shall not cause fibers to stick together.
- 3.9 The buffer tubes shall be resistant to kinking.
- 3.10 Fillers may be included in the cable core to lend symmetry to the cable cross-section where needed. Fillers shall be placed so that they do not interrupt the consecutive positioning of the buffer tubes. In dual layer cables, any fillers shall be placed in the inner layer. Fillers shall be nominally 3.0 mm in outer diameter.
- 3.11 The central member shall consist of a dielectric, glass reinforced plastic (GRP) rod. The purpose of the central member is to prevent buckling of the cable. The GRP rod shall be overcoated with a thermoplastic, when required, to achieve dimensional sizing to accommodate buffer tubes/fillers.
- 3.12 Each buffer tube shall be filled with a non-hygroscopic, non-nutritive to fungus, electrically non-conductive, homogenous gel. The gel shall be free from dirt and foreign matter. The gel shall be readily removable with conventional nontoxic solvents.
- 3.13 Buffer tubes shall be stranded around the dielectric central member using the reverse oscillation, or "S-Z," stranding process. Water blocking yarn(s) shall be applied longitudinally along the central member during stranding.
- 3.14 Two polyester yarn binders shall be applied contrahelically and with sufficient tension to secure each buffer tube layer to the dielectric central member without crushing the buffer tubes. The binders shall be non-hygroscopic, non-wicking and dielectric with low shrinkage.
- 3.15 For single layer cables, a water blocking tape shall be applied longitudinally around the outside of the stranded tubes/fillers. The tape shall be held in place by a single polyester binder yarn. The water blocking tape shall be non-nutritive to fungus and electrically non-conductive. It shall also be free from dirt and foreign matter.
- 3.16 For dual layer cables, a second (outer) layer of buffer tubes shall be stranded over the original core to form a two-layer core. A water blocking tape shall be

applied longitudinally over both the inner and outer layer with each being held in place with a single polyester binder yarn. The water blocking tape shall be non-nutritive to fungus and electrically non-conductive. It shall also be free from dirt and foreign matter.

- 3.17 Non-armored cables shall contain at least one ripcord under the sheath for easy sheath removal.
- 3.18 Flame-retardant tape may be applied to provide resistance to flame propagation.
- 3.19 A water blocking tape shall be applied longitudinally around the outside of the flame retardant tape.
- 3.20 The tensile strength shall be provided by the central member, and additional dielectric yarns as required. The dielectric yarns shall be helically stranded evenly around the cable core.
- 3.21 Cables shall be sheathed with flame-retardant polyethylene (FRPE). Jacketing material shall be applied directly over the tensile strength members and water blocking tape. The flame-retardant polyethylene outer jacket shall contain carbon black to provide ultraviolet light protection and shall not promote the growth of fungus.
- 3.22 The jacket shall be continuous, free from pinholes, splits, blisters, or other imperfections. The jacket shall have a consistent, uniform thickness; jackets extruded under high pressure are not acceptable. The jacket shall be smooth, as is consistent with the best commercial practice. The jacket shall provide the cable with a tough, flexible, protective coating, able to withstand the stresses expected in normal installation and service.
- 3.22 Cable jackets shall be marked with the manufacturer's name or file number, month and year of manufacture, sequential meter or foot markings, a telecommunication handset symbol as required by Section 350G of the National Electrical Safety Code[®] (NESC[®]), fiber count, and fiber type, flame rating and listing marking. The actual length of the cable shall be within -0/+1% of the length markings. The print color shall be white, with the exception that cable jackets containing one or more coextruded white stripes, which shall be printed in light blue. The height of the marking shall be approximately 2.5 mm.
- 3.24 The maximum pulling tension shall be 2700 N (600 lbf) during installation (short term) and 890 N (200 lbf) long term installed.
- 3.25 The cable specified herein shall be available in two sheath designs.
 - 3.25.1 Un-armored, all-dielectric cables shall be listed OFNR and shall be as described previously in this section.
 - 3.25.2 Interlocking armored cables shall be as described previously in this section but shall also include an interlocking aluminum armor applied

helically around the outside of the cable jacket. The interlocking armor may be left un-jacketed or may have a FRPE outer jacket. The armor for these cables shall be comparable to liquid tight flexible metal conduit if jacketed, or flexible metal conduit if not jacketed. Because of the interlocking metallic armor, this cable shall be listed OFC-LS. The interlocking armor and outer jacket options will be specified on the purchase order. Cables with interlocking armor shall be available in fiber counts up to 96 fibers.

4.0 Cable Specifications

4.1 Temperature Range.

The storage temperature range for the cable on the original shipping reel shall be -40 °C to +70 °C. The installation temperature range for the cable shall be -10 °C to +60 °C. The operating temperature range for the cable shall be -40 °C to +70 °C. Testing shall be in accordance with FOTP-3.

4.2 Tensile Loading and Fiber Strain

When tested in accordance with FOTP-33, "Fiber Optic Cable Tensile Loading and Bending Test," and FOTP-38, "Measurement of Fiber Strain in Cables Under Tensile Load," a length of cable shall be tested to the rated tensile load. The rated tensile load shall be 2670 N (600 lbf). While under the rated tensile load, the fiber shall not experience a measured fiber strain greater than 60% of the fiber proof test level. After being held at the residual load (30% of the rated tensile load) the fiber shall not experience a measured fiber strain greater than 20% of the fiber proof test level nor an attenuation change greater than 0.40 dB at 1550 nm (single-mode) or greater than 0.60 dB at 1300 nm (multimode). After the tensile load is removed, the fibers shall not experience an attenuation change greater than 0.40 dB at 1550 nm (single-mode) or greater than 0.60 dB at 1300 nm (multimode).

4.3 Compressive Loading Test

When tested in accordance with FOTP-41, "Compressive Loading Resistance of Fiber Optic Cables," the cable shall withstand a minimum compressive load of 220 N/cm (125 lbf/in) applied uniformly over the length of the sample. The 220 N/cm (125 lbf/in) load shall be applied at a rate of 2.5 mm (0.1 in) per minute. The load shall be maintained for a period of 1 minute. The load shall then be decreased to 110 N/cm (63 lbf/in). Alternatively, it is acceptable to remove the 220 N/cm (125 lbf/in) load entirely and apply the 110 N/cm (63 lbf/in) load within five minutes at a rate of 2.5 mm (0.1 in) per minute. The 110 N/cm (63 lbf/in) load shall be maintained for a period of 10 minutes. Attenuation measurements shall be performed before release of the 110 N/cm (63 lbf/in) load. The change in attenuation shall not exceed 0.40 dB at 1550 nm for single-mode fibers and 0.60 dB at 1300 nm for multimode fiber.

4.4 Cyclic Flexing

When tested in accordance with FOTP-104, "Fiber Optic Cable Cyclic Flexing Test," the cable shall withstand 25 mechanical flexing cycles at a rate of 30 ± 1 cycles per minute. The fiber shall not experience an attenuation change greater than 0.40 dB at 1550 nm (single-mode) or greater than 0.60 dB at 1300 nm (multimode). No cracks, splits, tears or other opening shall be present on the inner or outer surface of the jacket. No visible cracks greater than 5 mm in the armor, if present, shall be present.

4.5 Twist Test

When tested in accordance with FOTP-85, "Fiber Optic Cable Twist Test," a length of cable no greater than 2 meters will withstand 10 cycles of mechanical twisting. The fiber shall not experience an attenuation change greater than 0.40 dB at 1550 nm (single-mode) or greater than 0.60 dB at 1300 nm (multimode). No cracks or splits in the jacket shall be present when inspected under 5X magnification.

4.6 High and Low Temperature Bend

When tested in accordance with FOTP-37, "Fiber Optic Cable Bend Test, Low and High Temperature," the cable shall withstand four full turns around a mandrel at test temperatures of $-10\text{ }^{\circ}\text{C}$ and $+60\text{ }^{\circ}\text{C}$. The fibers shall not experience an attenuation change greater than 0.40 dB at 1550 nm (single-mode) or greater than 0.60 dB at 1300 nm (multimode).

4.7 Impact Resistance

When tested in accordance with FOTP-25, "Repeated Impact Testing of Fiber Optic Cables and Cable Assemblies," the cable shall withstand a minimum of 2 impact cycles at 3 locations separated by at least 150 mm. The impact energy shall be 4.4 N•m. The fibers shall not experience an attenuation change greater than 0.40 dB at 1550 nm (single-mode) or greater than 0.60 dB at 1300 nm (multimode). The presence of visible cracks, splits, tears, or other openings on the outer surface of the jacket constitute a failure.

4.8 Temperature Cycling

When tested in accordance with FOTP-3, "Procedure to Measure Temperature Cycling Effects on Optical Fiber, Optical Cable, and Other Passive Fiber Optic Components," the change in attenuation after 2 cycles at extreme operational temperatures ($-40\text{ }^{\circ}\text{C}$ to $+70\text{ }^{\circ}\text{C}$) shall not exceed 0.40 dB/km at 1550 nm (single-mode) or 0.60 dB/km at 1300 nm (multimode). The change in attenuation is measured with respect to the baseline values measured at room temperature before temperature cycling after the last low and last high temperature.

4.9 Water Penetration

When tested in accordance with FOTP-82, "Fluid Penetration Test for Fluid-Blocked Fiber Optic Cable", a one meter length of unaged cable shall withstand a one meter static head or equivalent continuous pressure of water for one hour without leakage through the open cable end.

4.10 Cold Impact Test

When tested in accordance with FOTP-25, "Repeated Impact Testing of Fiber Optic Cables and Cable Assemblies," the cable shall withstand a minimum of 2 impact cycles at 3 locations separated by at least 150 mm. The impact energy shall be 2.9 N•m. The cable shall be conditioned for at least 4 hours at the minimum installation temperature (-10 °C). The presence of visible cracks on either the inner or outer surface of the jacket constitutes a failure. No optical measurements are required.

5.0 Packing and Shipping

5.1 The completed cable shall be packaged for shipment on non-returnable wooden reels. Required cable lengths shall be stated in the purchase order.

5.2 Top and bottom ends of the cable shall be available for testing.

5.3 Both ends of the cable shall be sealed to prevent the ingress of moisture.

5.4 The attenuation shall be measured at 850 nm and 1300 nm for multimode fiber. The attenuation shall be measured at 1310 nm and 1550 nm for single-mode fiber. The manufacturer shall store these values for a minimum of 5 years. These values are available upon request.

5.5 Reel Marking and Labeling. Every cable shall come with the following information:

5.5.1 Reel Label:

Part number
Reel number
Length (ft/m)
Marking (ft/m) top and bottom
Date of Manufacture
UL/ETL/CSA listing information

5.5.2 Bar Code Label:

Package ID
Reel number
Quantity
Customer ID
Package count
Factory order number
Release part number

Length (ft)
"Ship to:" Address
"Attention to:"

5.5.3 Stenciling:

Manufacturer's name and address
Direction of rotation
Reel Size
"DO NOT LAY REEL ON SIDE"

6.0 Quality Assurance Provisions

- 6.1 All optical fibers in cables lengths of 300 m or greater shall be 100 % attenuation tested. The attenuation shall be measured at 850 nm and 1300 nm for multimode fibers. The attenuation shall be measured at 1310 nm and 1550 nm for single-mode fibers. The manufacturer shall store these values for a minimum of 5 years. These values shall be available upon request.
- 6.2 The cable manufacturer shall be TL 9000 registered.

7.0 Miscellaneous

- 7.1 At the request of the customer, the cable manufacturer shall provide installation procedures and technical support concerning the items contained in this specification.

Communication & Network Services

Technical Specifications for the Installation of Fiber Optic Cable

1.0 Introduction

Communication and Network Services (CNS) currently specifies the installation of 62.5/125 micron multimode and 8.3/125 micron singlemode fiber optic cable to support data communication services on the Berkeley campus.

The following CNS specifications for the selection and installation of fiber-optic cable and associated hardware are intended to ensure a reliable and consistent fiber optic media infrastructure for the Berkeley campus.

2.0 Fiber Cable Specifications

Fiber installed on the Berkeley campus must meet or exceed the following specifications.

2.1 Multimode Fiber

Installed cable shall be 62.5/125micron core/cladding, enhanced grade, multimode, and graded index glass fiber. All materials in the cable shall be dielectric.

2.1.1 Performance

Installed fiber must meet or exceed the following performance specifications.

Wavelength (nm)	Max. Attn. (dB/Km)	Min. Bandwidth (Mhz*Km)
850	3.0	200
1,300	0.9	500

2.1.2 Cable Construction

Installed cable must be manufactured to meet or exceed the following specifications:

2.1.2.1 Plenum Cable (Inside Cable)

Plenum rated cable shall be used for all interior installations. Installed cable shall meet or exceed the following specifications:

- a. Tight buffered 900 um, mechanical strippable Teflon (for plenum applications).
- b. EIA/TIA -598 color coding for fiber optic cable.
- c. Aramid yarn strength member, capable of supporting a short-term tensile load of 400 lb. without stretching.
- d. Capable of bend radii as small as 20 x outside cable diameter (under installation load) and 10 x outside cable diameter (long term load).
- e. Capable of a minimum crush resistance of 850 lb./in.

2.1.2.2 Outside Plant Cable

Outside plant cable shall be used for all applications where cable is to be run in underground conduits. Outside plant cable may not be used for interior applications and shall meet the following specifications:

- a. Gel filled buffer tube, 250 um, acrylate.

- b. EIA/TIA-598 color coding for fiber optic cable.
- c. Flooded core
- d. Capable of bend radii as small as 20 x outside cable diameter (under installation load) and 10 x outside cable diameter (long term load).
- e. Capable of a minimum crush resistance of 850 lb./in.

2.1.3 Recommended Suppliers

Corning and Berk-Tech fiber are currently recommended for installation on campus. Cable from other manufacturers will be considered. All cable installed must be cleared by CNS prior to installation.

2.2 Singlemode Fiber

Installed cable shall be 8.3/125micron core/cladding, singlemode, and graded index glass fiber. All materials in the cable are to be dielectric.

2.2.1 Performance

Installed fiber must meet or exceed the following performance specifications.

Fiber cable types	Wavelength (nm)	Max. Attn. (dB/Km)
Singlemode, Inside plant	1,310	1.0
	1,550	1.0
Singlemode, Outside plant	1,310	0.35
	1,550	0.2

2.2.2 Cable Construction

Riser or plenum rated cable shall be used for all interior installations. Installed cable shall meet or exceed the following specifications:

2.2.2.1 Riser or Plenum (Inside Cable)

Riser cable shall be used for all interior installations and shall meet the following specifications:

- a. Tight buffered 900 um, mechanical strippable Teflon.
- b. EIA/TIA -598 color coding for fiber optic cable.
- c. Aramid yarn strength member, capable of supporting a short-term tensile load of 400 lb. without stretching.
- d. Capable of bend radii as small as 20 x outside cable diameter (under installation load) and 10 x outside cable diameter (long term load).
- e. Capable of a minimum crush resistance of 850 lb./in.

2.2.2.2 Outside Plant Cable

Outside plant cable shall be used for all applications where cable is to be run in underground conduits. Outside plant cable may not be used for interior applications and shall meet the following specifications:

- a. Gel filled buffer tube, 250 um, acrylate.
- b. EIA/TIA -598 color coding for fiber optic cable.
- c. Flooded core
- d. Capable of bend radii as small as 20 x outside cable diameter (under installation load) and 10 x outside cable diameter (long term load).

- e. Capable of a minimum crush resistance of 850 lb./in.

2.2.3 Recommended Suppliers

Corning and Berk-Tech fiber are currently recommended for installation on campus. Cable from other manufacturers will be considered. All cable installed must be cleared by CNS prior to installation.

3.0 Installation Standards

3.1 Underground Inter-Building Cable

All fiber cable is to be protected with inner duct. After installation, inner ducts are to be permanently labeled as containing fiber optic cable. Instruction for labeling will be provided by CNS.

All cable and inner duct are to be fully supported throughout its entire run.

At no time shall more than 400 pounds of tension be placed on any fiber cable while it is being pulled through tray or conduit. It is preferred that all fiber cable be pulled with hand power only. If power winches or mechanical advantage devices are used to pull cable, a tensionometer must be used to insure that maximum tension is not exceeded. Alternatively, a "mechanical fuse" rated at 350 pounds may be included in the linkage. Torsion shall be avoided by the use of a swivel at the cable end. While under tension, a minimum bend radius of 20 times the outside cable diameter will be maintained through the use of pulleys and sheaves where required. After pulling, no bend may have a radius, at rest, of less than 10 times the outside cable diameter.

3.1.1 Labeling

Each cable and inner duct is to be permanently labeled at each end with a unique cable number. In addition, labels shall be affixed to the cable/inner duct at every transition of a vault, hand hole, riser closet, or major pull box. Labels will be in the form of "CNS-Location one-Location two- sequence number". For example, cable number 123 from Evans Hall to Wurster Hall would be labeled as "CNS-Eva-Wur-123.

Each fiber optic strand shall be labeled with a unique identifier at the ST coupler in the FIC. Connectors shall be labeled on the identifying sheets on the front of the FIC.

Each fiber shall be labeled where it enters the back of the coupler panels. The identifier shall be in the format Cable # - tube- strand. For tight buffered cables the "tube identifier" shall be "xx".

3.1.2 Conduit Assignments

The Berkeley Campus has a conduit management system in force. Scopes of Work for cable installation, supplied by CNS for each project, will specify which conduits are to be used for cable installation.

4.0 Termination Standards

The terminal ends of all fibers cable strands shall be field connectorized. The connectors shall be mounted on bulkheads and installed in enclosures called Fiber Integration Centers (FIC). It is CNS's practice to terminate both ends of all fibers within a fiber cable with ST, epoxy and polish style connectors. Termination of older cables may be of several types including mechanical or fusion spliced pigtails. The choice of termination method must be cleared with CNS prior to termination.

4.1 Fiber Organizers

Fiber cables are to be terminated in one of two types of enclosures. CNS may specify either wall-mounted or rack-mountable stand-alone units for installation. Rack mounted units made by ADC, Avaya, or an equivalent, will be acceptable. The final choice of fiber organizer shall be cleared with CNS prior to installation.

Each enclosure shall be labeled with a machine made label with permanent black ink on a white background. Labels shall be in the format "FIC_NN", with the numbers, "NN", supplied by CNS. In addition, each FIC shall be labeled on the face plate with the identifiers of the cables it contains.

Each fiber optic strand shall be labeled with a unique identifier at the ST coupler in the FIC. Connectors shall be labeled on the identifying sheets on the front of the FIC. Each fiber shall be labeled where it enters the back of the coupler panels. The identifier shall be in the format Cable #-tube- fiber strand #. For tight buffered cables the "tube identifier" shall be "xx".

4.2 Connectors and Splices

Fiber ends are to be terminated in ST-type connectors with composite ferrules. They must be of the "epoxy and polish". Exceptions may occur when an older UCB installation is being expanded. Some older locations are terminated with connectors such as biconic. In all cases, CNS will specify connector requirements.

If it is necessary to splice pigtailed onto an existing, partially terminated fiber cable, the splice type utilized must conform to whatever is already in use at that location. Clearance from CNS must be obtained before installing any type of splice.

4.3 Miscellaneous

At each end of the cable, sufficient slack (15 - 30') shall be left to facilitate reasonable future relocation of the FIC. Slack shall be mounted on walls or upper ladder racks according to CNS' direction.

5.0 Testing

5.1 Before Installation

It is suggested that each individual fiber in a cable be tested with an OTDR for length and transmission anomalies while on the reel before installation.

5.2 After Installation and termination

5.2.1. All single mode and multi mode fiber strands shall be tested end-to-end for bi-directional attenuation, 850 nm/1300 nm for multimode and 1310 nm/1550 nm for singlemode fibers. Tests should be conducted in compliance with EIA/TIA-526-14 or OFSTP 14, Method B, according to the manufacturer's instructions for the test set being utilized.

5.2.2. Tests must ensure that the measured link loss for each strand does not exceed the "worst case" allowable loss defined as the sum of the connector loss (based on the number of mated connector pairs at the EIA/TIA-568 B maximum allowable loss of 0.75 dB per mated pair) and the optical loss (based on the performance standard above, 2.1.1 and 2.2.1).

5.2.3. After the cable is in place it shall be tested in the following manner:

- a. After termination, each fiber shall be tested with an ODTR for length, transmission anomalies, and end-to-end attenuation. Results are to be recorded and supplied to CNS in the form of hard-copy printouts or photographs of screen traces.
- b. After termination and bulkhead mounting, each terminated fiber is to be tested for end-to-end loss with a power meter/light source. As above, results are to be recorded and supplied to CNS.
- c. The maximum allowable attenuation for any splice or termination is 0.3 dB.

5.2.4. The contractor shall review all end faces of field terminated connectors with a fiber inspection scope following the final polish. Connector end faces with hackles,

scratches, cracks chips and or surface pitting shall be rejected and repolished or replaced if repolishing will not remove the end face surface defects. The recommended minimum viewing magnifications for connector ends are 100X for multimode fiber and 200X for singlemode fiber.

Any deviation from these test procedures must be approved in writing in advance by CNS. Questions regarding means, methods, or materials should be directed to Jay Kim at (510) 642-9344 or cns-projects@uclink.berkeley.edu.

Version 1.7

Updated 1/13/2004 by Development, Operations, Installations, and Repair.

Send comments to cns-projects@uclink.berkeley.edu

Internal

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Technical inquiries: oir-website@uclink.berkeley.edu

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COMPUTERIZED SIGNAL SYSTEM TECHNICAL SPECIAL PROVISIONS

23.1 - GENERAL

SECTION 603 - GENERAL REQUIREMENTS FOR THE INSTALLATION AND EVALUATION OF TRAFFIC CONTROL SIGNAL EQUIPMENT AND MATERIALS:

SECTION 603 - GENERAL REQUIREMENTS FOR THE INSTALLATION AND EVALUATION OF TRAFFIC CONTROL SIGNAL EQUIPMENT AND MATERIALS (PAGES 713 - 716 OF THE SPECIFICATIONS) IS EXPANDED BY THE FOLLOWING NEW ARTICLE.

603-10 SCOPE OF PROJECT:

THE WORK UNDER THIS CONTRACT SHALL CONSIST OF FURNISHING AND INSTALLING ALL NECESSARY EQUIPMENT FOR THE EXPANSION OF THE EXISTING DISTRIBUTED MASTER (CLOSED-LOOP) SIGNAL SYSTEM FOR THE LEE COUNTY URBAN AREA. THE PRIMARY FUNCTION OF THE SYSTEM IS TO DETECT TRAFFIC FLOWING THROUGH SIGNALIZED INTERSECTIONS AND TO CONTROL IT IN AN OPTIMIZED MANNER TO REDUCE MOTORIST STOPS AND DELAYS. THE CONTRACTOR SHALL INSTALL NEW CONTROLLER ASSEMBLIES WITH INTERNAL COORDINATION/COMMUNICATION UNITS AT THE INTERSECTIONS SHOWN ON THE PLANS. THE CONTRACTOR SHALL ALSO INSTALL NEW COMMUNICATIONS CABLE AS SHOWN IN THE PLANS. THE LOCAL CONTROLLERS SHALL IMPLEMENT COORDINATED SIGNAL TIMINGS AT THE INTERSECTIONS IN ACCORDANCE WITH INSTRUCTIONS RECEIVED FROM THE ON-STREET MASTER.

THE ROADSIDE MASTER (OFTEN CALLED ON-STREET MASTER) SHALL SELECT TIMING PLANS BASED ON CURRENT TRAFFIC CONDITIONS AS DESCRIBED ABOVE AND TRANSMIT THAT INFORMATION TO EACH LOCAL CONTROLLER FOR IMPLEMENTATION. THE SIGNAL SYSTEM SHALL ALSO BE CAPABLE OF OPERATING IN A TIME-OF-DAY/DAY-OF-WEEK MODE. THE ROADSIDE MASTER SHALL COMMUNICATE WITH THE EXISTING CENTRAL MICRO-COMPUTER ASSEMBLY VIA MODEM OVER STANDARD DIAL-UP TELEPHONE LINES.

THE DISTRIBUTED MASTER SYSTEM FURNISHED AND INSTALLED BY THE CONTRACTOR SHALL MEET THE SPECIAL REQUIREMENTS OF THIS TECHNICAL SPECIAL PROVISION AND SHALL BE COMPATIBLE WITH EXISTING "ECONOLITE" DISTRIBUTED MASTER SYSTEM

INSTALLED FOR LEE COUNTY. THE CONTRACTOR IS FULLY RESPONSIBLE FOR FURNISHING AND INSTALLING EQUIPMENT, MATERIALS, AND OTHER ITEMS NECESSARY FOR A COMPLETE AND SUCCESSFULLY OPERATING SYSTEM.

SECTION 611- ACCEPTANCE PROCEDURES:

ARTICLE 611-4 -FIELD TESTS OF SIGNAL INSTALLATIONS (PAGES 718 - 719 OF THE SPECIFICATIONS) IS EXPANDED BY THE FOLLOWING NEW SUB ARTICLES:

611-4.1 SUBSYSTEM DEMONSTRATION TEST: SUBSYSTEM DEMONSTRATION TESTS SHALL BE CONDUCTED FOR EACH SUBSYSTEM ON-STREET MASTER LOCATION IN THE CONTRACT. SUBSYSTEM DEMONSTRATION TESTING FOR A SPECIFIC SUBSYSTEM ON-STREET MASTER LOCATION SHALL COMMENCE ONLY AFTER ALL OF THE FOLLOWING REQUIREMENTS HAVE BEEN MET:

- (A) ALL WORK SHOWN IN THE PLANS IN THAT SUBSYSTEM IS COMPLETED.
- (B) FORTY-EIGHT HOUR TESTING IS SUCCESSFULLY COMPLETED FOR ALL TRAFFIC SIGNAL INSTALLATIONS IN THAT SUBSYSTEM;
- (C) ALL COMMUNICATIONS CABLE TESTING FOR THAT SUBSYSTEM IS SUCCESSFULLY COMPLETED.
- (D) THE CONTRACTOR HAS REQUESTED IN WRITING A SUBSYSTEM DEMONSTRATION TEST FOR THAT SUBSYSTEM AT LEAST FIVE (5) WORKING DAYS IN ADVANCE AND THE ENGINEER HAS APPROVED THE START OF THE TEST FOR THAT SUBSYSTEM.

AS PART OF THE CONTRACT MATERIALS SUBMISSION REQUIREMENTS, THE CONTRACTOR SHALL SUBMIT FOR APPROVAL A SUBSYSTEM DEMONSTRATION TESTING PROCEDURE THAT AS A MINIMUM SHALL ADDRESS THE FOLLOWING FUNCTIONAL TRIALS:

- (1) PROPER AND SATISFACTORY COMMUNICATIONS BETWEEN THE NEW ON-STREET MASTER AND EACH SUBSYSTEM TRAFFIC SIGNAL INSTALLATION;
- (2) PROPER AND SATISFACTORY COMMUNICATIONS BETWEEN THE NEW ON-STREET MASTER AND THE EXISTING CENTRAL CONTROL SYSTEM; AND,
- (3) PROPER AND SATISFACTORY OPERATION OF THE SYSTEM SENSOR DATA COLLECTION FUNCTIONS, SUBSYSTEM

MESSAGE UPLOADING/DOWNLOADING, VARIOUS DATA STORAGE FUNCTIONS, TIMEKEEPING FUNCTIONS, ETC.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING ALL INTERSECTION AND SYSTEM OPERATIONAL PARAMETERS, MATERIALS AND DOCUMENTATION NECESSARY TO CONDUCT THE SUBSYSTEM DEMONSTRATION TESTS.

EACH SUBSYSTEM DEMONSTRATION TEST SHALL CONSIST OF TWO PARTS. THE FIRST PART SHALL BE A FIELD INSPECTION OF EACH LOCAL INTERSECTION AND THE ON-STREET MASTER LOCATION TO BE TESTED. FOR THIS PART OF THE TEST, THE ENGINEER SHALL BE ACCOMPANIED BY THE CONTRACTOR'S REPRESENTATIVE. THE SECOND PART OF THE TEST SHALL COMMENCE ONLY UPON THE ENGINEER'S ACCEPTANCE OF THE FIRST PART OF THE TEST. THE SECOND PART OF THE TEST SHALL CONSIST OF THE EXECUTION, BY THE CONTRACTOR, OF THE CONTRACTOR'S APPROVED SUBSYSTEM DEMONSTRATION TEST AT THE ON-STREET MASTER LOCATION, AND ALSO AT THE CONTROL CENTER FOR THE ON-STREET MASTER LOCATION. IF ANY UNSATISFACTORY PERFORMANCE DEVELOPS, THE FAILING CONDITION SHALL BE CORRECTED AND BOTH PARTS OF THE TEST SHALL BE REPEATED, WITH THE CONTRACTOR FURNISHING WRITTEN DOCUMENTATION OF THE FAILING CONDITION AND THE STEPS TAKEN TO CORRECT THE CONDITION AND DEMONSTRATING THE CORRECTIONS IN THE APPROPRIATE PART(S) OF THE TEST.

611-4.2 COMMUNICATIONS CABLE TESTING: COMMUNICATIONS CABLE TESTING SHALL BE PERFORMED BY THE CONTRACTOR FOR EACH CABLE PAIR THAT IS FURNISHED AND INSTALLED UNDER THIS CONTRACT.

AS PART OF THE CONTRACTOR'S MATERIALS SUBMISSION REQUIREMENTS, THE CONTRACTOR SHALL FURNISH SUBMITTAL DATA ON THE TEST PROCEDURES, TEST EQUIPMENT AND DOCUMENTATION FORMS THAT HE PROPOSES TO USE TO PERFORM ALL COMMUNICATIONS CABLE TESTING. NO COMMUNICATIONS CABLE TESTING SHALL COMMENCE UNTIL ALL TEST PROCEDURES, TEST EQUIPMENT AND DOCUMENTATION FORMS HAVE BEEN APPROVED.

COMMUNICATIONS CABLE TESTING ON INSTALLED COMMUNICATIONS CABLES IN A SUBSYSTEM SHALL NOT COMMENCE UNTIL ALL COMMUNICATIONS CABLE INSTALLATION IN THAT SUBSYSTEM IS COMPLETE. ALL COMMUNICATIONS CABLE TESTING SHALL BE PERFORMED IN THE PRESENCE OF THE ENGINEER. THE CONTRACTOR SHALL REQUEST AT LEAST THREE WORKING DAYS IN ADVANCE FOR AUTHORIZATION TO COMMENCE COMMUNICATION CABLE TESTING IN A SUBSYSTEM. ONCE COMMUNICATIONS CABLE TESTING COMMENCES IN A SUBSYSTEM, TESTING SHALL CONTINUE UNINTERRUPTED UNTIL ALL COMMUNICATIONS CABLE TESTING IN THAT SUBSYSTEM IS COMPLETE. ALL COMMUNICATIONS CABLE BONDING, GROUNDING AND TERMINATION SHALL BE COMPLETED PRIOR TO ANY CABLE TESTING. ALL

JUMPERS FROM THE COMMUNICATIONS TERMINATION PANEL SHALL BE REMOVED DURING TESTING.

ALL COMMUNICATIONS CABLE TESTING, REGARDLESS OF THE TEST RESULTS, SHALL BE FULLY DOCUMENTED. FOUR COPIES OF THE TEST DOCUMENTATION FOR EACH SPECIFIC CABLE SEGMENT SHALL BE PROVIDED TO THE ENGINEER WITHIN TWO DAYS OF THE COMPLETION OF THE TEST.

PRIOR TO THE INSTALLATION OF ANY COMMUNICATIONS CABLE FROM A SPECIFIC CABLE REEL, THE CONTRACTOR SHALL TEST ALL CABLE PAIRS IN ACCORDANCE WITH TEST 1 AND 2 BELOW WHILE THE CABLE IS STILL ON THE CABLE REEL. IF ANY TEST OR ANY PORTION THEREOF IS FAILED, THE ENTIRE CABLE REEL SHALL BE REJECTED AND SHALL NOT BE USED. NO CABLE FROM A SPECIFIC CABLE REEL MAY BE USED UNLESS THE ENGINEER HAS REVIEWED THE TEST RESULTS AND APPROVED THAT CABLE REEL FOR USE.

SUBSEQUENT TO CABLE INSTALLATION, CABLE TESTS 1, 2, 3 AND 4 SPECIFIED BELOW SHALL BE PERFORMED ON EACH CABLE ROUTE FROM THE ON-STREET MASTER LOCATION TO EACH END OF THE CABLE NETWORK IN THAT SUBSYSTEM UNTIL ALL CABLE ROUTES AND SEGMENTS IN THAT SUBSYSTEM HAVE BEEN TESTED. ALL CABLE ROUTES IN ALL SUBSYSTEMS IN THE CONTRACT SHALL BE TESTED. IF ALL CABLE TEST VALUES ARE ACCEPTABLE AS REQUIRED BELOW, NO FURTHER CABLE TESTING SHALL BE REQUIRED IN THAT SUBSYSTEM. FOR ALL CABLE ROUTES THAT HAVE NON-ACCEPTABLE CABLE TEST VALUES, THE CONTRACTOR SHALL PERFORM COMPLETE CABLE TESTING ON CABLE SEGMENTS BETWEEN CONTROLLER CABINETS UNTIL THE FAULTY CABLE SEGMENT(S) AND/OR CABLE TERMINATIONS(S) ARE ISOLATED AND IDENTIFIED. THE CONTRACTOR SHALL REPLACE THE FAULTY COMMUNICATIONS CABLE SEGMENT(S) AND/OR CABLE TERMINATION(S) FURNISHED AND INSTALLED BY HIM AND SHALL PERFORM COMPLETE COMMUNICATIONS CABLE TESTING FROM THE ON-STREET MASTER TO EACH END OF THE CABLE ROUTE(S) CONTAINING THE REPLACED CABLE SEGMENTS(S) AND/OR CABLE TERMINATION(S).

THE FOLLOWING TESTS SHALL BE CONDUCTED FOR ALL CONDUCTOR PAIRS IN EACH CABLE:

- (1) TEST 1 – CONTINUITY TEST -THE CONTINUITY OF EACH PAIR AND THE SHIELD SHALL BE MEASURED. EACH PAIR SHALL SHOW A RESISTANCE OF NOT MORE THAN 184 OHMS (AT 25°C) PER 1.61 LOOP KILOMETER. THE RESISTANCE SHALL BE

MEASURED WITH AN OHMMETER HAVING A - MINIMUM INPUT RESISTANCE OF 10 MEG OHMS PER VOLT. THE RESISTANCE OF EACH PAIR AND THE SHIELD SHALL BE RECORDED AND FURNISHED TO THE ENGINEER.

(2) TEST 2 -INSULATION RESISTANCE TEST THE INSULATION RESISTANCE OF EACH CONDUCTOR SHALL BE MEASURED. THIS TEST SHALL BE A TWO-PART TEST. PART ONE SHALL MEASURE THE INSULATION RESISTANCE BETWEEN EACH CONDUCTOR AND THE SHIELD. PART TWO SHALL MEASURE THE INSULATION RESISTANCE WITH ALL OTHER CONDUCTORS GROUNDED. THE MEASUREMENTS SHALL BE MADE WITH ALL OTHER CONNECTIONS TO THE CONDUCTOR REMOVED. THE MEASUREMENTS SHALL BE MADE WITH A DC POTENTIAL OF NOT LESS THAN 250 VOLTS, NOR MORE THAN 300 VOLTS, APPLIED FOR NO LONGER THAN 60 SECONDS. INSULATION RESISTANCE SHALL EXCEED 500 MEG OHM MILES FOR BOTH PART ONE AND PART TWO. THE INSULATION RESISTANCE OF EACH CONDUCTOR SHALL BE PERMANENTLY RECORDED AND FURNISHED TO THE ENGINEER.

(3) TEST 3- INDUCED VOLTAGE TEST -THE INDUCED VOLTAGE TEST IS A TEST OF THE CABLE TO DETERMINE IF ANY OF THE CABLES IN THE NETWORK HAVE BACKGROUND VOLTAGE ON THE CABLE AS A RESULT OF MUTUAL INDUCTANCE FROM A POWER CABLE ADJACENT TO THE NETWORK. THE TEST PROCEDURE IS TO PLACE A VOLT METER BETWEEN ALL CONDUCTORS TIED ELECTRICALLY TOGETHER IN THE CABLE AND GROUND, TO EVALUATE IF THERE IS A VOLTAGE POTENTIAL BETWEEN THE CABLE BEING TESTED AND GROUND. IF A VOLTAGE GREATER THAN TWO VOLTS IS FOUND, THE CONTRACTOR SHALL PERFORM REMEDIAL ACTION TO REDUCE THE VOLTAGE LEVEL

BELOW TWO VOLTS. THE OPPOSITE END OF THE CABLE BEING TESTED SHALL NOT BE CONNECTED TO GROUND OR ANY OTHER CIRCUIT AT THE TIME OF TESTING. THIS TEST SHALL BE REPEATED FOR A TEST BETWEEN THE CABLE SHIELD AND GROUND.

(4) TEST 4- ATTENUATION TEST -THE ATTENUATION DISTORTION SHALL BE MEASURED FOR EACH PAIR BETWEEN THE COUPLING LOCATION AND EACH FIELD TERMINATION LOCATION. A 1,004 HZ TEST FREQUENCY SHALL BE TRANSMITTED AT THE 0 DBM DATA LEVEL. AT THE

RECEIVING END, THE RECEIVED POWER SHALL BE RECORDED TO OBTAIN A 1,004 HZ REFERENCE LEVEL. THE FREQUENCY SHALL THEN BE TRANSMITTED AT 1,200 HZ AND 2,200 HZ (WHILE MAINTAINING THE 0 DBM DATA LEVEL), AND THE RECEIVED POWER RECORDED IN EACH CASE. THE 1,004 HZ RECEIVED REFERENCED POWER SHALL BE SUBTRACTED FROM THE RECEIVED POWERS TO OBTAIN THE FREQUENCY ATTENUATION CHARACTERISTICS OF THE PAIR IN DBM. THE ATTENUATION DISTORTION SHALL NOT EXCEED 3DBM PER 1.61 KILOMETERS FOR ANY PAIR AT ANY FREQUENCY. THE RECEIVED REFERENCE POWER AND FREQUENCY RECEIVED POWERS, AND THE CALCULATED ATTENUATION DISTORTION, SHALL BE RECORDED AND FURNISHED TO THE ENGINEER.

SECTION 632 -SIGNAL AND INTERCONNECT CABLE:

SUB ARTICLE A632-2.2 -INTERCONNECT CABLE (PAGE 11 OF THE MSTCSD, DATED JULY, 2000) IS DELETED AND THE FOLLOWING SUBSTITUTED:

ALL COMMUNICATIONS CABLE SHALL BE REA SPECIFICATION PE-39, REA DESIGNATION BJFA, WITH TWELVE (12) PAIR #19AWG CONDUCTORS.

SUB ARTICLE 632-3.4 -CABLE TERMINATIONS (PAGE 728 OF THE SPECIFICATIONS) IS EXPANDED AS FOLLOWS:

NO BUTT SPLICES, WIRE NUTS, PIGTAIL CRIMPS, WIRE CAPS OR TAPED SPLICES ARE PERMITTED UNLESS SPECIFICALLY APPROVED BY THE ENGINEER.

ARTICLE 632-5- INTERCONNECT CABLE (PAGE 729 OF THE SPECIFICATIONS) IS EXPANDED AS FOLLOWS:

632-5.1 COMMUNICATIONS CABLE:

632-5.1.1 GENERAL REQUIREMENTS: ALL COMMUNICATIONS CABLE SHALL BE INSTALLED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND ALL INDUSTRY STANDARDS AND SAFETY PRACTICES FOR TELEPHONE COMMUNICATIONS CABLE INSTALLATION. ALL COMMUNICATIONS CABLE SHALL BE INSTALLED IN THE PRESENCE OF THE ENGINEER.

AS PART OF THE CONTRACTOR'S MATERIALS SUBMISSION REQUIREMENTS, THE CONTRACTOR SHALL FURNISH THE CABLE MANUFACTURER'S RECOMMENDED AND MAXIMUM PULLING

TENSIONS AND THE MINIMUM BENDING RADIUS OF THE COMMUNICATIONS CABLE. THESE PULLING TENSIONS SHALL BE SPECIFIED FOR PULLING FROM THE CABLE'S OUTER JACKET. UNDER NO CIRCUMSTANCES SHALL ANY TENSION GREATER THAN THE MANUFACTURER'S RECOMMENDED PULLING TENSION BE APPLIED TO ANY COMMUNICATIONS CABLE SEGMENT; VIOLATION OF THIS REQUIREMENT SHALL BE GROUNDS FOR REJECTION OF THAT CABLE SEGMENT REGARDLESS OF THE RESULTS OF ANY COMMUNICATIONS CABLE TESTING.

AS PART OF THE CONTRACTOR'S MATERIALS SUBMISSION REQUIREMENTS, THE CONTRACTOR SHALL SUBMIT FOR APPROVAL THE SPECIFIC PULLING LUBRICANT HE PROPOSES TO USE. CABLE LUBRICANT AND CABLE GEL FILLING COMPOUND CLEANERS SHALL ALSO BE SUBMITTED. ONLY WATER-BASED PULLING LUBRICANTS SPECIFICALLY APPROVED FOR USE ON REA SPECIFICATION PE-39 LOW-DENSITY POLYETHYLENE JACKETED CABLE SHALL BE PERMITTED. ALL CABLE LUBRICANT SHALL BE THOROUGHLY AND COMPLETELY CLEANED FROM ALL CABLES IN CONTROLLER CABINETS.

THE COMMUNICATIONS CABLE SHALL ENTER THE CONTROLLER CABINETS AS SHOWN IN THE PLANS THROUGH NEW CONDUIT INSTALLED IN NEW FOUNDATIONS.

632-5.1.2 INSTALLATION REQUIREMENTS: THE CONTRACTOR SHALL TAKE EVERY PRECAUTION TO ENSURE THAT THE CABLE IS NOT DAMAGED DURING STORAGE OR INSTALLATION. THE CABLE SHALL NOT BE STEPPED ON BY WORKMEN NOR RUN OVER BY ANY VEHICLE OR EQUIPMENT. THE CABLE SHALL NOT BE PULLED ALONG THE GROUND OR OVER OR AROUND OBSTRUCTIONS. ALL CABLE SHALL BE INSPECTED AND APPROVED BY THE ENGINEER BEFORE INSTALLATION. THE MANUFACTURER'S MINIMUM BENDING RADIUS SHALL NOT BE VIOLATED DURING ANY INSTALLATION PROCEDURE OR IN ANY FINAL INSTALLATION.

ALL CABLE SHALL RUN CONTINUOUSLY WITHOUT SPLICING FROM TERMINATION POINT TO TERMINATION POINT IN CONTROLLER CABINETS. THE CONTRACTOR SHALL CAREFULLY DETERMINE THE LENGTH OF CABLE NECESSARY TO REACH FROM TERMINATION POINT TO TERMINATION POINT. TERMINATION OF CABLE AT ANY LOCATION OTHER THAN CONTROLLER CABINETS IS NOT PERMITTED. SPLICING OF CABLE IN CONDUIT, PULL BOXES, UNDERGROUND VAULTS, MANHOLES, HAND HOLES OR ANY OTHER LOCATION IS NOT PERMITTED.

THE EXPOSED END OF ALL CABLES SHALL BE TAPED AND WATERPROOFED PRIOR TO THE PULLING OF THE CABLES INTO CONDUIT, PULL BOXES OR POLES.

AT ALL TERMINATION POINTS, ANY CABLE THAT IS NOT IMMEDIATELY TERMINATED SHALL BE SEALED WITH ELECTRICAL TAPE AND AN APPROVED CABLE SEALANT TO PREVENT MOISTURE OR DIRT ENTERING THE CABLE END. THE CABLE END SHALL REMAIN SEALED UNTIL TERMINATION TAKES PLACE. CABLES THAT ARE NOT IMMEDIATELY TERMINATED SHALL HAVE 1.8 METERS OF SLACK. SLACK IS DEFINED AS THE LENGTH OF CABLE EXTENDING OUT OF THE CONTROLLER CABINET OPENING WHEN THE CABLE IS HELD STRAIGHT OUTWARD.

ALL SIGNAL CABLE, COMMUNICATIONS CABLE, LOOP LEAD-IN CABLES AND ANY OTHER WIRES OR CABLES SHALL BE REMOVED FROM OR INSTALLED IN CONDUIT BY HAND-PULLING METHODS ONLY; NO MECHANICAL PULLING METHODS FOR THE INSTALLATION OF CABLE IS PERMITTED.

632-5.1.3 INSTALLATION OF UNDERGROUND COMMUNICATIONS CABLE: ALL UNDERGROUND COMMUNICATIONS CABLE SHALL BE INSTALLED IN NEW OR EXISTING CONDUIT. NO DIRECT BURIED CABLE IS PERMITTED. COMMUNICATIONS CABLE SHALL NOT BE PULLED THROUGH ANY INTERMEDIATE PULL BOX, JUNCTION BOX, HAND HOLE, OR ANY OTHER OPENING IN THE CONDUIT UNLESS OTHERWISE APPROVED BY THE ENGINEER. THE NECESSARY LENGTH OF CABLE TO BE INSTALLED SHALL BE PULLED FROM THE PULL BOX OR CABINET TO THE NEXT DOWNSTREAM PULL BOX OR CABINET. THE REMAINING LENGTH OF CABLE TO BE INSTALLED IN THE NEXT CONDUIT SHALL BE CAREFULLY STORED IN A MANNER THAT IS NOT HAZARDOUS TO PEDESTRIAN OR VEHICULAR TRAFFIC, AND WHICH ENSURES THAT NO DAMAGE TO THE CABLE SHALL OCCUR. CABLE SHALL BE STORED IN A MANNER THAT ALLOWS THAT LENGTH OF CABLE TO BE SAFELY PULLED INTO THE NEXT CONDUIT. MINIMUM SIZE CONDUIT FOR COMMUNICATIONS CABLE IS 3 INCH. USE RIDGED GALVANIZED SWEEPS. INSTALL BUSHINGS OVER THREADS. IF PVC IS USED AS A STUB UP INSIDE PULL BOX INSTALL A MALE TERMINAL ADAPTER AND BUSHING.

CABLE SHALL ENTER A PULL BOX OR CABINET DIRECTLY FROM THE CABLE REEL OR STORAGE STACK. AN APPROVED CABLE FEEDER GUIDE SHALL BE USED BETWEEN THE CABLE REEL OR STORAGE STACK AND THE CONDUIT OPENING TO PROTECT THE CABLE, AND TO GUIDE THE CABLE INTO THE CONDUIT AS IT IS PLAYED OFF THE REEL OR FROM THE STORAGE STACK. THE DIMENSIONS AND SET-UP OF THE FEEDER GUIDE SHALL BE SUCH THAT THE CABLE DOES NOT BEND AT ANY LOCATION TO A RADIUS LESS THAN THE MANUFACTURER'S MINIMUM BENDING RADIUS. THE MINIMUM BENDING RADIUS OF THE CABLE SHALL NOT BE EXCEEDED AT

ANYTIME DURING CABLE INSTALLATION. CABLE SHALL NOT BE PULLED OVER EDGES OR CORNERS, OVER OR AROUND OBSTRUCTIONS, OR THROUGH UNNECESSARY CURVES OR BENDS. CABLES SHALL BE

LOOPED IN AND OUT OF CABINETS, AND PULL BOXES TO PROVIDE ADEQUATE SLACK AND THE LEAST AMOUNT OF STRESS ON CONDUCTORS.

ALL COMMUNICATIONS CABLES INSTALLED IN UNDERGROUND CONDUIT SEGMENTS OF 15.2 METERS OR MORE IN LENGTH SHALL BE LUBRICATED. CABLE PULLING LUBRICANT SHALL BE APPLIED IN ACCORDANCE WITH THE LUBRICANT MANUFACTURER'S DIRECTIONS.

632-5.1.4 COMMUNICATIONS CABLE BONDING, GROUNDING, AND TERMINATION: ALL COMMUNICATIONS CABLE BONDING AND GROUNDING SHALL BE IN ACCORDANCE WITH REA SPLICING STANDARD PC-2 EXCEPT AS SPECIFICALLY MODIFIED BY THESE TECHNICAL SPECIAL PROVISIONS.

THE COMMUNICATIONS CABLE SHIELD SHALL BE MADE ELECTRICALLY AND MECHANICALLY SECURE TO FORM A SEPARATE CONTINUOUS SYSTEM. ALL COMMUNICATIONS CABLE SHIELDS SHALL BE BONDED ON ONE END OF EACH ROW OF CABLE. THE BONDING CONDUCTOR SHALL BE INSULATED (GREEN) #10AWG COPPER WIRE. THE COMMUNICATIONS SHIELD SYSTEM SHALL BE COMPLETELY AND SECURELY INSULATED AT ALL POINTS. NO OTHER DEVICES OR MATERIALS SHALL BE BONDED TO THE SHIELD SYSTEM EXCEPT FOR THOSE DEVICES AND MATERIALS THAT ARE BONDED TO THE CONTROLLER CABINET GROUND.

THE CONTRACTOR SHALL BOND THE SPARE PAIRS TO THE COMMUNICATIONS CABLE TERMINATION PANEL GROUND AT THE NEW ON-STREET MASTER CABINET.

THE COMMUNICATIONS CABLE SHALL BE OPENED IN THE FOLLOWING MANNER FOR TERMINATION

- (1) REMOVE ENOUGH OF THE OUTER JACKET TO PROVIDE THE PROPER LENGTH OF THE INDIVIDUAL CONDUCTORS IN A MANNER THAT DOES NOT DAMAGE THE SHIELD'S PROTECTIVE COATING.
- (2) SEPARATE THE SHIELD FROM THE CONDUCTORS.

- (3) THOROUGHLY CLEAN THE CABLE FILLING COMPOUND FROM EACH CABLE CONDUCTOR, THE CABLE SHIELD AND THE CABLE JACKET.
- (4) PERMANENTLY ATTACH BONDING WIRE TO THE SHIELD IN ACCORDANCE WITH REA SPLICING STANDARD PC-2
- (5) PROVIDE A MINIMUM OF 152MM SLACK BETWEEN THE TERMINATION BLOCK AND CABLE OUTER JACKET OPENING FOR ALL CONDUCTORS.
- (6) COVER THE CABLE TO APPROXIMATELY 25MM BEYOND EACH END OF THE SHIELD WITH THREE HALF-LAPPED LAYERS OF HEAVY DUTY SELF-FUSING INSULATING TAPE. COVER THE SELF-FUSING TAPE TO APPROXIMATELY 25MM BEYOND EACH END OF THE SELF-FUSING TAPE WITH TWO HALF- LAPPED LAYERS OF ELECTRICAL TAPE.

ALL COMMUNICATIONS CABLE PAIRS SHALL BE TERMINATED IN A NEATLY ARRANGED MANNER. AFTER THE CABLE HAS BEEN OPENED FOR TERMINATION, EACH CABLE PAIR SHALL BE IMMEDIATELY TWISTED A MINIMUM OF 1 FULL TWIST PER 25MM. CABLE PAIRS OR PAIR CONDUCTORS SHALL NOT BE TWISTED OR CROSSED WITH ANY OTHER PAIRS OR PAIR CONDUCTORS. EACH CABLE PAIR CONDUCTOR OF EACH COMMUNICATIONS CABLE SHALL BE TERMINATED; BUNDLING OR WIRE NUTTING OF ANY CABLE PAIRS OR PAIR CONDUCTORS IS NOT PERMITTED. CABLE TERMINATIONS SHALL BE PERFORMED ONLY ON APPROVED MEANS INSIDE THE CABINETS. THE CONTRACTOR SHALL USE UR OR UY CONNECTORS AND FURNISH AND INSTALL THE NECESSARY ACCESSORIES TO COMPLETE TERMINATION OF THE CABLE.

THE INCOMING CONDUCTORS (I.E., FROM THE ON-STREET MASTER) SHALL BE TERMINATED ON THE LEFT SIDE OF THE COMMUNICATIONS TERMINAL PANEL. THE OUT GOING CONDUCTORS (I.E., GOING AWAY FROM THE ON-STREET MASTER) SHALL BE TERMINATED UNDER THE SAME TERMINAL SCREW. ALL OTHER SPARE PAIRS SHALL BE TERMINATED USING UR OR UY CONNECTORS. EACH CABLE SHALL BE IDENTIFIED ON EACH END OF A TERMINATION WITH PERMANENT TAGS INDICATING THE CABLE NUMBER AND PAIR COUNT.

SECTION 670- TRAFFIC CONTROLLER ASSEMBLY:

ARTICLE 670-1 -DESCRIPTION (PAGE 749 OF THE SPECIFICATIONS) IS EXPANDED AS FOLLOWS:

670-1.1 COMMUNICATIONS TERMINATION PANEL: CONTROLLER ASSEMBLIES FURNISHED AND INSTALLED UNDER THIS CONTRACT SHALL HAVE A COMMUNICATIONS TERMINATION PANEL. THE COMMUNICATIONS TERMINATION PANEL BACK PLATE SHALL BE CONSTRUCTED OF 5052 SHEET ALUMINUM ALLOY WITH 3MM

THICKNESS. THE BACK PLATE SHALL BE PREPARED FROM A SINGLE SHEET OF MATERIAL; NO SEAMS OR JOINTS OF ANY KIND WILL BE PERMITTED. ALL EDGES AND HOLES SHALL BE SMOOTH AND FREE OF BURRS. THE PLANE SURFACES SHALL HAVE A SMOOTH, UNIFORM NATURAL ALUMINUM FINISH. ALL HARDWARE USED TO MOUNT ANY DEVICE OR ITEM TO THE BACK PLATE OR TO MOUNT THE BACK PLATE TO THE CABINET SHALL BE STAINLESS STEEL MACHINE BOLTS OF THE APPROPRIATE SIZE WITH STAINLESS STEEL LOCK WASHERS AND NUTS. WHERE APPLICABLE, THE BODY OF THE MOUNTED DEVICES AND ITEMS SHALL BE ELECTRICALLY BONDED TO THE BACK PLATE.

THE PANEL SHALL CONTAIN A PLUG-IN SURGE PROTECTION DEVICE'S INSTALLED ON APPROPRIATE MOUNTING SOCKETS (EDCO PC-642 OR EQUIVALENT) .THE SURGE PROTECTION DEVICES SHALL BE MECHANICALLY AND ELECTRICALLY BONDED TO THE BACK PLATE THROUGH THE MOUNTING SOCKETS. THE SURGE PROTECTION DEVICE SHALL PROTECT TWO (2) COMMUNICATIONS CABLE PAIRS. THE SURGE PROTECTION DEVICE SPECIFICATIONS ARE DETERMINED BY THE COMMUNICATIONS CABLE PAIR FUNCTION AND SHALL BE AS FOLLOWS:

TRAFFIC CONTROL DATA PAIRS (2 AND 3):

- (1) LINE TO LINE CLAMP
- (2) NON POLARIZED
- (3) TWO STAGE PROTECTION, WITH THREE-ELEMENT GAS TUBE (PRIMARY) AND SOLID STATE CLAMPS (SECONDARY)
- (4) CLAMPING VOLTAGE 8V

TWO TERMINAL STRIPS SHALL BE INSTALLED ON THE COMMUNICATIONS PANEL, ONE ON THE UNPROTECTED SIDE OF THE SURGE PROTECTOR AND ONE ON THE PROTECTED SIDE OF THE SURGE PROTECTOR. EACH TERMINAL STRIP SHALL BE A DOUBLE-ROW, 6-POSITION, BARRIER- TYPE CLOSED BACK TERMINAL STRIP.

A 1/4" PHONE JACK SHALL BE INSTALLED FOR CONNECTING LEE COUNTY'S EXISTING PORTABLE TELEPHONES TO THE VOICE COMMUNICATIONS CABLE PAIR. THE PHONE JACK SHALL HAVE THE CONDUCTOR CONFIGURATION REQUIRED TO MATCH THE PORTABLE TELEPHONES I PHONE PLUGS. THE PHONE JACK SHALL BE INTENDED FOR OUTDOOR USE AND SHALL BE MOUNTED TO AND COMPLETELY ENCLOSED BY A SMALL CASE. THE CASE SHALL BE PLASTIC AND MOLDED OF A SELF-EXTINGUISHING MATERIAL OR SHALL BE ALUMINUM. THE CASE SHALL BE SECURELY MOUNTED TO THE BACK PLATE.

THE TERMINATION PANEL SHALL BE MOUNTED ON THE INSIDE OF THE CONTROLLER CABINET ASSEMBLY WITH A MINIMUM OF FOUR BOLTS IN AN UNOBSTRUCTED, EASILY ACCESSED AND MAINTAINED LOCATION. ALL MOUNTING HARDWARE SHALL BE STAINLESS STEEL MACHINE BOLTS WITH STAINLESS STEEL LOCK WASHERS AND NUTS.

THE TERMINATION PANEL SHALL BE ELECTRICALLY AND MECHANICALLY BONDED TO THE CONTROLLER CABINET. THE GROUNDING OF THE TERMINATION PANEL AND OF THE SURGE PROTECTION DEVICES SHALL BE TESTED BY THE CONTRACTOR SEPARATELY. WRITTEN TEST RESULTS SHALL BE PROVIDED TO THE ENGINEER AS PART OF THE CONTROLLER ASSEMBLY DOCUMENTATION AND PRIOR TO ACCEPTANCE OF THE CONTROLLER ASSEMBLY INSTALLATION. THE TESTS SHALL BE PERFORMED FROM THE SURGE PROTECTION DEVICE GROUND TO THE

CABINET GROUNDING ELECTRODE OR WIRE IN THE CABINET. MAXIMUM RESISTANCE TO CABINET GROUNDING ELECTRODE SHALL BE 2 OHMS.

THE TERMINATION PANELS INSTALLED IN THE CONTROLLER CABINETS AT THOSE LOCATIONS WHERE ON-STREET MASTERS ARE TO BE INSTALLED SHALL BE WIRED TO CONNECT THE COMMUNICATIONS CABLE VOICE PAIR AT THE TERMINAL STRIP TO THE VOICE COMMUNICATIONS MODULAR PHONE PLUG ON THE AUTO-DIAL/AUTO-ANSWER EXTERNAL COMMUNICATIONS MODEM. THE VOICE COMMUNICATIONS WIRING SHALL BE OF SUFFICIENT LENGTH TO ALLOW THE AUTO-DIAL/AUTO-ANSWER EXTERNAL COMMUNICATIONS MODEM TO BE EASILY MOVED TO ANY POSITION ON THE TWO UPPER PRIMARY SHELVES IN THE CONTROLLER CABINET. STRAIN RELIEF SHALL BE PROVIDED ON ALL WIRING AT ALL TERMINATIONS.

THE TERMINATION PANELS SHALL BE FROM THE SAME MANUFACTURER AS THE CONTROLLER EQUIPMENT.

670-1.2 DOOR SWITCH: CONTROLLER ASSEMBLIES FURNISHED AND INSTALLED UNDER THIS CONTRACT SHALL INCLUDE A CABINET DOOR SWITCH. THE SWITCH SHALL SIGNAL TO THE CONTROLLER UNIT THAT THE CABINET DOOR IS OPEN. THE CABINET DOOR OPEN/CLOSE SWITCH SHALL BE MONITORED BY THE CENTRAL COMPUTER AND REPORTED AS AN EVENT.

SUB ARTICLE 670-3.1 -CONTROLLER CABINETS (PAGE 749 OF THE SPECIFICATIONS) IS EXPANDED AS FOLLOWS:

THE CONTROLLER AND COORDINATION/COMMUNICATIONS UNITS SHALL BE A PART OF A CLOSED-LOOP SIGNAL SYSTEM THAT IS PRE-APPROVED BY THE DEPARTMENT, AND SHALL BE COMPATIBLE WITH THE EXISTING "ECONOLITE" DISTRIBUTED MASTER SYSTEM IN LEE COUNTY.

670-3.1.1 INSTALLATION REQUIREMENTS:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ALL LOCAL INTERSECTION AND LOCAL COORDINATION UNIT-SUPERVISOR OPERATIONAL PARAMETERS AND DATA BASE REQUIRED FOR THE FULL AND COMPLETE OPERATION OF THE INTERSECTION WITHIN A "CLOSED-LOOP" SUBSYSTEM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING THE ABOVE OPERATIONAL PARAMETERS AND DATA BASE REQUIRED IN THE EXISTING CENTRAL COMPUTER EQUIPMENT ASSEMBLY. INCLUDING BUT NOT LIMITED TO ALL INTERSECTION CONFIGURATION, COMMUNICATIONS ADDRESSES, AND ALL MONITORING AND GRAPHICS CONFIGURATION OF ALL INTERSECTION AND SYSTEM EQUIPMENT, INCLUDING BUT NOT LIMITED TO INTERSECTION AND SYSTEM SENSOR LOOP DETECTORS.

THE FOLLOWING NEW SECTION IS ADDED TO THE SPECIFICATIONS:

680-1 SCOPE:

THIS SECTION COVERS THE MATERIALS, MINIMUM PERFORMANCE REQUIREMENTS AND INSTALLATION REQUIREMENTS OF THE SYSTEM CONTROL EQUIPMENT. INCLUDED IN THIS SECTION IS THE AUTO-DIAL/AUTO ANSWER EXTERNAL COMMUNICATIONS MODEMS, AND ROADSIDE MASTER CONTROLLERS.

680-2 GENERAL REQUIREMENTS:

THIS SECTION SPECIFIES MATERIALS AND MINIMUM PERFORMANCE REQUIREMENTS OF EACH COMPONENT OF EACH ITEM DEFINED HEREIN AS SYSTEM CONTROL EQUIPMENT. UNDER ALL CIRCUMSTANCES AND CONDITIONS OF OPERATION OF THE TRAFFIC CONTROL SYSTEM BEING INSTALLED UNDER THIS CONTRACT, ALL SYSTEM CONTROL EQUIPMENT COMPONENTS AND ITEMS SHALL FULLY OPERATE AND FUNCTION IN COMPLETE COMPATIBILITY WITH THE ENTIRE TRAFFIC CONTROL SYSTEM. ANY SPECIFIC COMPONENT THAT MEETS THE REQUIREMENTS OF THESE TECHNICAL SPECIAL PROVISIONS SPECIFIC TO THAT COMPONENT BUT DOES NOT OPERATE AND FUNCTION IN COMPLETE COMPATIBILITY WITH THE TRAFFIC CONTROL SYSTEM IS NOT ACCEPTABLE.

ALL CABLES, CONNECTORS, INTERFACES, SUPPLIES AND ANY OTHER ITEMS NECESSARY FOR THE PROPER OPERATION AND FUNCTION OF ANY COMPONENT WITH ANY OTHER COMPONENTS OF THE SYSTEM CONTROL EQUIPMENT ARE THE RESPONSIBILITY OF THE CONTRACTOR.

680-3 AUTO-DIAL/AUTO-ANSWER EXTERNAL COMMUNICATIONS MODEM:

THE CONTRACTOR SHALL FURNISH INDUSTRY-STANDARD AUTO-DIAL/ AUTO-ANSWER EXTERNAL COMMUNICATIONS MODEMS. ALL CABLES, CONNECTORS, INTERFACES, FILTERS AND INCIDENTAL ITEMS REQUIRED FOR FULL OPERATION SHALL BE IN ACCORDANCE WITH THE MODEM MANUFACTURER'S REQUIREMENTS. THE MODEM SHALL MEET THE MINIMUM REQUIREMENTS SPECIFIED BELOW:

- {A) THE MODEMS SHALL FULLY SUPPORT ASYNCHRONOUS AND SYNCHRONOUS COMMUNICATION MODES.
- {B) THE MODEM SHALL SUPPORT THE FOLLOWING COMMUNICATIONS STANDARDS BELL 103, BELL 212A/CCITT V.22, AND, CCITT V.22BIS.
- {C) THE MODEL SHALL SUPPORT PROGRAMMABLE COMMUNICATIONS RATES FROM 0-2400 BPS AND SHALL PROVIDE FULLY AUTOMATIC COMMUNICATIONS RATE SELECTION.
- {D) THE MODEM SHALL HAVE A 255-CHARACTER COMMAND BUFFER AND SHALL FULLY SUPPORT THE HAYES AT COMMAND SET STANDARD AND V-SERIES COMMANDS AS APPROPRIATE.
- {E) THE MODEMS CASE SHALL BE FCC CLASS B CERTIFIED FOR A COMPUTING DEVICE AND SHALL HAVE AN ON-OFF SWITCH AND TWO MODULAR TELEPHONE JACKS.

680-4 ROADSIDE MASTER:

ROADSIDE MASTERS SHALL BE A PART OF A CLOSED-LOOP SIGNAL SYSTEM WHICH IS PRE-APPROVED BY THE DEPARTMENT. ALL ROADSIDE MASTER CONTROLLER UNITS FURNISHED AND INSTALLED UNDER THIS CONTRACT SHALL FUNCTION WITH NEW ACTUATED SOLID STATE DIGITAL CONTROLLER UNITS AS SPECIFIED IN SUB ARTICLE 670-3.1 OF THESE TECHNICAL SPECIAL PROVISIONS. ROADSIDE MASTERS SHALL BE COMPATIBLE WITH THE EXISTING "ECONOLITE" DISTRIBUTED MASTER SYSTEM IN LEE COUNTY.

680-5 INSTALLATION REQUIREMENTS:

680-5.1 AUTO-DIAL/AUTO ANSWER EXTERNAL COMMUNICATIONS MODEM: THE CONTRACTOR SHALL INSTALL AUTO-DIAL/AUTO-ANSWER EXTERNAL COMMUNICATIONS MODEMS WHERE SHOWN IN THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONFIGURATION, PROGRAMMING, BUFFERING AND ANY OTHER INSTALLATION NECESSARY TO PROVIDE A COMPLETE AND OPERATIONAL INSTALLATION.

WHERE MODEMS ARE TO BE INSTALLED IN THE ROADSIDE MASTER CONTROLLER CABINET, THE MODEM SHALL BE INSTALLED IN ACCORDANCE WITH THE SPECIFICATIONS FOR CONTROLLER ASSEMBLY EQUIPMENT. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL CABLING NECESSARY TO CONNECT THE MODEM TO THE TELEPHONE INTERFACE ASSEMBLY AND TO THE VOICE COMMUNICATIONS TERMINALS ON THE COMMUNICATIONS CABLE TERMINATION PANEL. STRAIN RELIEF SHALL BE PROVIDED ON ALL CABLING. ALL CABLES SHALL BE APPROPRIATELY LABELED AT ALL TERMINATION POINTS.

680-5.2 ROADSIDE MASTER: ROADSIDE MASTER CONTROLLER UNITS SHALL BE INSTALLED IN ACCORDANCE WITH ALL REQUIREMENTS OF THE SPECIFICATIONS, THESE TECHNICAL SPECIAL PROVISIONS AND ANY INSTALLATION REQUIREMENTS OF THE ROADSIDE MASTER CONTROLLER UNIT'S MANUFACTURER. ROADSIDE MASTERS SHALL BE INSTALLED IN TRAFFIC SIGNAL

CONTROLLER CABINETS ALONG WITH LOCAL CONTROLLER EQUIPMENT AT LOCATIONS INDICATED IN THE PLANS. THE CONTRACTOR SHALL INSTALL ALL CABLING, HARNESSSES AND TERMINATION PANELS AS NECESSARY. ALL CONNECTIONS AND OPERATIONS OF THE ROADSIDE MASTER, ANY PERIPHERAL ROADSIDE MASTER EQUIPMENT AND TELEPHONE COMMUNICATIONS EQUIPMENT SHALL BE INSTALLED AS REQUIRED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ALL MASTER OPERATIONAL PARAMETERS AND DATA BASE REQUIRED FOR THE FULL AND COMPLETE OPERATION OF THE ROADSIDE MASTER AND "CLOSED LOOP" SUBSYSTEM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ALL OF THE ABOVE OPERATIONAL PARAMETERS AND DATA BASE REQUIRED IN THE EXISTING CENTRAL COMPUTER ASSEMBLY, INCLUDING, BUT NOT LIMITED TO ALL INTERSECTION, ROADSIDE MASTER, AND SUBSYSTEM GRAPHICS CONFIGURATIONS.

680-6 METHOD OF MEASUREMENT:

THE UNIT PRICE FOR SYSTEM CONTROL EQUIPMENT FURNISHED AND INSTALLED SHALL INCLUDE ALL EQUIPMENT, LABOR,

MATERIALS AND SERVICES NECESSARY FOR A COMPLETE AND ACCEPTED INSTALLATION.

680-7 BASIS OF PAYMENT:

THE CONTRACT UNIT PRICE FOR SYSTEM CONTROL EQUIPMENT SHALL BE FULL COMPENSATION FOR FURNISHING AND INSTALLING A COMPLETE AND ACCEPTED INSTALLATION. PAYMENT SHALL BE MADE UNDER:

2680-111 ROADSIDE MASTER -EACH

2680-115 AUTO-DIAL/AUTO-ANSWER EXTERNAL COMMUNICATIONS MODEM- EACH. THE FOLLOWING NEW SECTION IS ADDED TO THE SPECIFICATIONS:

SECTION 685- SYSTEM AUXILIARIES:

THIS SECTION SPECIFIES THE REQUIREMENTS FOR EQUIPMENT, MATERIALS, AND INSTALLATION REQUIREMENTS USED TO PROVIDE TELEPHONE COMMUNICATIONS TO THE ON- STREET MASTER CONTROLLER LOCATIONS. THE TELEPHONE CONNECTION BOX WILL PROVIDE TERMINATION FACILITIES FOR THE TELEPHONE TERMINATION INTERFACE AND THE TELEPHONE DROP WIRE TO BE FURNISHED AND INSTALLED BY THE LOCAL TELEPHONE COMPANY DURING THE PROGRESS OF THIS CONTRACT.

685-2 TELEPHONE CONNECTION BOX:

INSTALL CORNING CAG 7600 OUTDOOR NETWORK INTERFACE DEVICE OR EQUAL. PLACEMENT SHALL BE ON SERVICE POLE OR ON A PEDESTAL NEXT TO SERVICE POLE.

685-3 CONDUIT RISER:

THE CONDUIT RISERS FROM UNDERGROUND AT THE SERVICE POLE TO THE TELEPHONE CONNECTION BOX SHALL BE 25MM INTERMEDIATE METAL CONDUIT IN ACCORDANCE WITH ARTICLE A630-2 OF THE MINIMUM SPECIFICATIONS FOR TRAFFIC CONTROL SIGNALS AND DEVICES, DATED JULY 2000.

685-4 INSTALLATION REQUIREMENTS:

THE CONNECTION BOX SHALL BE MOUNTED ON A SERVICE POLE FURNISHED AND INSTALLED BY THE CONTRACTOR ADJACENT TO THE CONTROLLER CABINET. THE ENCLOSURE SHALL BE MOUNTED IN SUCH A WAY THAT NEITHER THE CONNECTION BOX NOR THE CONDUIT RISER

PRESENTS A HAZARD TO PEDESTRIAN TRAFFIC. THE EXACT LOCATION OF EACH CONNECTION BOX SHALL BE APPROVED BY THE ENGINEER PRIOR TO THE START OF INSTALLATION

609MM OF #12WG GREEN-INSULATED STRANDED COPPER GROUNDING CONDUCTOR SHALL BE PROVIDED IN THE INTERFACE ENCLOSURE. THIS CONDUCTOR SHALL BE BONDED TO THE GROUNDING CONDUCTOR OF THE CONTROLLER CABINET AS PHYSICALLY CLOSE TO THE GROUNDING CONDUCTOR CONDUIT AS POSSIBLE.

TWO 25MM CONDUITS SHALL BE INSTALLED AS PART OF THE TELEPHONE CONNECTION BOX. ONE CONDUIT FOR THE TELEPHONE WIRE AND GROUNDING CONDUCTOR SHALL BE INSTALLED FROM THE TELEPHONE CONNECTION BOX ON THE SERVICE POLE TO THE CONTROLLER CABINET THROUGH THE NEW FOUNDATION. ONE CONDUIT FOR USE BY THE LOCAL TELEPHONE COMPANY SHALL BE INSTALLED FROM THE TELEPHONE CONNECTION BOX DOWN THE SERVICE POLE UNDERGROUND TO A POINT EXTENDING OUT 304MM FROM THE SERVICE POLE.

685-5 RESPONSIBILITIES OF THE CONTRACTOR AND THE LOCAL TELEPHONE COMPANY:

THE CONTRACTOR SHALL FURNISH AND INSTALL A TELEPHONE CONNECTION BOX AS REQUIRED IN THESE TECHNICAL SPECIAL PROVISIONS. THE LOCAL TELEPHONE COMPANY WILL FURNISH AND INSTALL A TELEPHONE NETWORK INTERFACE TERMINATION AND TELEPHONE DROP WIRE IN THE TELEPHONE CONNECTION BOX TO PROVIDE TELEPHONE COMMUNICATIONS SERVICE TO THE ON-STREET MASTER CONTROLLER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING HIS ACTIVITIES WITH THE LOCAL TELEPHONE COMPANY.

685-6 METHOD OF MEASUREMENT:

THE UNIT PRICE FOR TELEPHONE CONNECTION BOXES FURNISHED AND INSTALLED SHALL CONSIST OF THE TELEPHONE CONNECTION BOX AS SHOWN IN THE PLANS AND DESCRIBED IN THESE TECHNICAL SPECIAL PROVISIONS, PLUS ALL LABOR, MATERIALS, AND SERVICES NECESSARY FOR A COMPLETE AND ACCEPTED INSTALLATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL INSTALLATION CHARGES LEVIED BY THE LOCAL TELEPHONE COMPANY, AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MONTHLY TELEPHONE CHARGES UP TO THE TIME OF FINAL ACCEPTANCE.

PAYMENT FOR TWO CONDUITS AS PART OF THE TELEPHONE CONNECTION BOX SHALL INCLUDE THE CONDUIT WHICH IS VERTICALLY ATTACHED TO THE ASSEMBLY WHICH RUNS VERTICALLY DOWN THE SERVICE POLE, AND THE HORIZONTAL CONDUIT RUN TO THE CONTROLLER CABINET. ALSO ALL NIPPLES, LOCK NUTS, SEALS, BUSHINGS AND ELBOWS THAT ARE NECESSARY TO MAKE A COMPLETE AND ACCEPTABLE INSTALLATION. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL TELEPHONE CABLE NECESSARY TO CONNECT THE MODEM IN THE CABINET TO THE LOCAL TELEPHONE COMPANY PHONE SERVICE POINT IN THE TELEPHONE CONNECTION BOX.

685-7 BASIS OF PAYMENT:

THE CONTRACT UNIT PRICE FOR EACH TELEPHONE CONNECTION BOX SHALL BE FULL COMPENSATION FOR A COMPLETE AND ACCEPTED INSTALLATION. PAYMENT SHALL BE MADE UNDER:

2685-127 SYSTEM AUXILIARIES (TELEPHONE CONNECTION BOX) - EACH

**LEE COUNTY, FLORIDA
PROPOSAL QUOTE FORM
FOR THE PURCHASE OF TRAFFIC CABLE AND INSTALLATION**

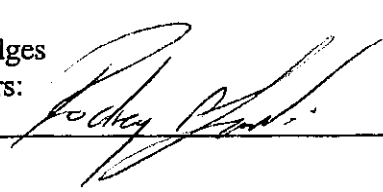
DATE SUBMITTED: August 3, 2004

VENDOR NAME: Fiber Solutions

TO: The Board of County Commissioners
Lee County
Fort Myers, Florida

Having carefully examined the "General Conditions", and the "Detailed Specifications", all of which are contained herein, the Undersigned proposes to furnish the following which meet these specifications:

The undersigned acknowledges receipt of Addenda numbers:



WILL YOU DELIVER WITH YOUR OWN VEHICLES AS OPPOSED TO COMMON CARRIER?

YES ✓ NO _____

PLEASE QUOTE ON THE FOLLOWING ITEMS (NO SUBSTITUTIONS):

NOTE: The "installed" prices quoted for the various types of cable, connectors, fiber bays, fiber trays, and cabinets shall include all labor as well as any miscellaneous hardware, etc. which may be required for a turn-key installation.

FIBER OPTIC CABLE

ITEM 1: 12 Strand Multi-Mode Corning cable loose tube
Price Per Foot Installed \$ 1.66

ITEM 2: 6 Strand Single-Mode Corning cable loose tube
Price Per Foot Installed \$ 0.68

ITEM 3: 12 Strand Single-Mode Corning cable loose tube
Price Per Foot Installed \$ 0.81

ITEM 4: 24 Strand Single-Mode Corning cable loose tube
Price Per Foot Installed \$ 0.94

ITEM 5: 48 Strand Single-Mode Corning cable loose tube
Price Per Foot Installed \$ 1.33

ITEM 6: 96 Strand Single-Mode Corning cable loose tube
Price Per Foot Installed \$ 2.14

ITEM 7: 6 Strand Multi-Mode Corning cable loose tube
Price Per Foot Installed \$ 1.10

ITEM 8: 24 Strand Multi-Mode Corning cable loose tube
Price Per Foot Installed \$ 2.53

ITEM 9: 48 Strand Multi-Mode Corning cable loose tube
Price Per Foot Installed \$ 4.56

HYBRID FIBER:

ITEM 10: 12 SM/6 MM Loose Tube
Price Per Foot Installed \$ 1.21

ITEM 11: 24 SM/12 MM Loose Tube
Price Per Foot Installed \$ 1.94

TWISTED PAIR

ITEM 12: 6 Twisted Pair PE 39 19AWG Interconnect Cable w/Aluminum Shield
Price Per Foot Installed \$ 0.94

ITEM 13: 12 Twisted Pair PE 39 19AWG Interconnect Cable w/Aluminum Shield
Price Per Foot Installed \$ 1.27

FIBER OPTIC CONNECTORS:

ITEM 14: Corning Unicam ST Single Mode
Price Each Installed \$ 40.00 - terminated & tested.

ITEM 15: Corning Unicam ST Multi Mode
Price Each Installed \$ 33.00 - terminated & tested.

FIBER BAYS:

ITEM 16: Corning Fiber Bay Panel with 6 connectors Single Mode
Price Each Installed \$ 378.20 / PART: EDC-06P

ITEM 17: Corning Fiber Bay Panel with 6 connectors Multi Mode
Price Each Installed \$ 378.20 / PART: EDC-06P

ITEM 18: Corning Fiber Bay Panel with 12 connectors Single Mode
Price Each Installed \$ 523.80 / PART: EDC-12P

ITEM 19: Corning Fiber Bay Panel with 12 connectors Multi Mode
Price Each Installed \$ 523.80 / PART: EDC-12P

FIBER TRAYS:

ITEM 20: Corning Fiber Stackable Trays
Price Each Installed \$ 40.10

ITEM 21: Leviton Fiber Stackable Trays
Price Each Installed \$ 53.30

ITEM 22: Fusion Splicing Per Strand
Price Each Installed \$ 50.00 - includes testing.

FIBER INTERCONNECT CABINETS:

ITEM 23: Rackmount with Coupler Panels

Price Each Installed \$ 327.15/PART: CCH-02U

ITEM 24: Wallmount with Coupler Panels

Price Each Installed \$ 127.88/PART: WCH-02P

GRAND TOTAL \$ 2,496.54

OPTIONAL LABOR RATE:

OPTION A: Normal Work Hours (7 a.m. – 6 p.m. Mon. – Fri.)

Price Per Hour \$ 48.00

OPTION B: Overtime Labor Rate (7 p.m. – 6 a.m. Mon. – Fri.)

Price per hour \$ 60.00

OPTION C: Weekends/Holiday Labor Rate (see page 21)

Price per hour \$ 72.00

CONDUIT REPAIR:

OPTION D: Labor to repair conduit, pull box, connectors, etc. (Materials provided by Lee County DOT for conduit replacement).

Price Per Hour Installed \$ 48.00

TO BE STARTED WITHIN 3 CALENDAR DAYS AFTER RECEIPT OF AWARD AND PURCHASE ORDER.

Is your firm interested in being considered for the Local Vendor Preference?

Yes No

If yes, then read the paragraph entitled "Local Vendor Preference" included in these specifications. Also complete the Local Vendor Preference Questionnaire and return with your quotation.

Quoters should carefully read all the terms and conditions of the specifications. Any representation of deviation or modification to the quote may be grounds to reject the quote.

Are there any modifications to the quote or specifications:

Yes _____ No ✓

Failure to clearly identify any modifications in the space below or on a separate page may be grounds for the quoter being declared nonresponsive or to have the award of the quote rescinded by the County.

MODIFICATIONS:

Quoter shall submit his/her quote on the County's Proposal Quote Form, including the firm name and authorized signature. Any blank spaces on the Proposal Quote Form, qualifying notes or exceptions, counter offers, lack of required submittals, or signatures, on County's Form may result in the Quoter/Quote being declared non-responsive by the County.

ANTI-COLLUSION STATEMENT

THE BELOW SIGNED QUOTER HAS NOT DIVULGED TO, DISCUSSED OR COMPARED HIS QUOTE WITH OTHER QUOTERS AND HAS NOT COLLUDED WITH ANY OTHER QUOTER OR PARTIES TO A QUOTE WHATSOEVER. NOTE: NO PREMIUMS, REBATES OR GRATUITIES TO ANY EMPLOYEE OR AGENT ARE PERMITTED EITHER WITH, PRIOR TO, OR AFTER ANY DELIVERY OF MATERIALS. ANY SUCH VIOLATION WILL RESULT IN THE CANCELLATION AND/OR RETURN OF MATERIAL (AS APPLICABLE) AND THE REMOVAL FROM THE MASTER BIDDERS LIST.

FIRM NAME Fiber Solutions

BY (Printed): Rodney A. Lavoie

BY (Signature): *Rodney A. Lavoie*

TITLE: owner / President

FEDERAL ID # OR S.S.# 65-0813368

ADDRESS: 12771 Metro Parkway

Suite 7, Fort Myers, FL 33912

PHONE NO.: 239-561-6814

FAX NO.: 239-561-0832

CELLULAR PHONE/PAGER NO.: 239-707-0957

LEE COUNTY OCCUPATIONAL LICENSE NUMBER: 983231

E-MAIL ADDRESS: rodney@Fiber-solutions.com

REVISED: 7/28/00

ATTACHMENT A
LOCAL VENDOR PREFERENCE QUESTIONNAIRE
(LEE COUNTY ORDINANCE NO. 00-10)

Instructions: Please complete either Part A or B whichever is applicable to your firm

PART A: VENDOR'S PRINCIPAL PLACE OF BUSINESS IS LOCATED WITHIN LEE COUNTY (Only complete Part A if your principal place of business is located within the boundaries of Lee County)

1. **What is the physical location of your principal place of business that is located within the boundaries of Lee County, Florida?**

12771 Metro Parkway, Suite 7
Fort Myers, FL 33912.

2. **What is the size of this facility (i.e. sales area size, warehouse, storage yard, etc.)**

7,500 square feet.

PART B: VENDOR'S PRINCIPAL PLACE OF BUSINESS IS NOT LOCATED WITHIN LEE COUNTY OR DOES NOT HAVE A PHYSICAL LOCATION WITHIN LEE COUNTY (Please complete this section.)

1. **How many employees are available to service this contract?** _____

2. **Describe the types and amount of equipment you have available to service this contract.**

LOCAL VENDOR PREFERENCE QUESTIONNAIRE CONTINUED

3. Describe the types and amount of material stock that you have available to service this contract.

Fiber Solutions maintains current inventory
of several types of fiber optic cable,
connectors fiber bands etc.

4. Have you provided goods or services to Lee County on a regular basis for the preceding, consecutive five years?

Yes

No

If yes, please provide your contractual history with Lee County for the past five, consecutive years. Attach additional pages if necessary.

See attachment 7.



ATTACHMENT 7

Contractual history with Lee County for the past five, consecutive years.

Fiber Solutions has provided Lee County with voice, data, video, and fiber optic complete installations since 1997. Our Lee County customers include

- Lee County Clerk of Courts
- Lee County Court Administration
- Lee County Property Appraisers Office
- Lee County Department of Transportation
- Lee County Port Authority
- Local State Attorneys Office
- Lee County Tax Collectors Office
- Lee County Parks & Recreation
- Lee County Finance
- Lee County School District
- Lee County Sheriffs Office
- Lee County Public Works
- Lee County Public Safety
- Lee County Utilities
- Lee County Code Enforcement
- Lee County Elections Office
- Lee County Facilities Management
- Lee County Libraries

Completed Projects

- Complete Fiber Optic Backbone Replacement for Lee County Justice Center and Lee County Administration Building.
- Complete Inner-duct and Fiber Optic installation from Lee County DOT in Billy's Creek to Lee County Emergency Operations Center.
- Complete Fiber Optic Backbone from Lee County Justice Center to Lee County Administration building, City Hall, Public Works, Code Enforcement and Downtown Fort Myers Library.
- Complete Voice, Data, Fiber Optic installation for Lee County Sheriffs Department at the Downtown Stockade and Ortiz Core Building, as well as ongoing maintenance of the Six Mile Cypress Facility.
- Complete Fiber Optic installation for traffic signals and video on SR82 and Ortiz Avenue.

- Complete Fiber Optic Backbone installation of CJIS (Criminal Justice Information Systems) in Lee County Justice Center.
- Complete Fiber Optic Backbone installation for Lee County Clerk of Courts from 3rd floor Justice Center computer room to the 5th floor computer room in the Lee County Administration Building.
- Complete Fiber Optic installation from Lee County Stockade (Ortiz Ave) to Lee County Emergency Operations Center.

Fiber Solutions has an extensive project list that can be provided to Lee County Purchasing upon request.

LEE COUNTY PURCHASING - BIDDERS CHECK LIST

IMPORTANT: Please read carefully and return with your bid proposal.
Please check off each of the following items as the necessary action is completed:

- 1. The Quote has been signed.
- 2. The Quote prices offered have been reviewed.
- 3. The price extensions and totals have been checked.
- 4. The original (must be manually signed) and 2 copies of the quote have been submitted.
- 5. Three (3) identical sets of descriptive literature, brochures and/or data (if required) have been submitted under separate cover.
- 6. All modifications have been acknowledged in the space provided.
- 7. All addendums issued, if any, have been acknowledged in the space provided.
- 8. Erasures or other changes made to the quote document have been initialed by the person signing the quote.
- 9. Bid Bond and/or certified Check, (if required) have been submitted with the quote in amounts indicated.
- 10. Any Delivery information required is included.
- 11. The mailing envelope has been addressed to:

MAILING ADDRESS	PHYSICAL ADDRESS
Lee County Purchasing	Lee County Purchasing
P.O. Box 398 or	3434 Hancock Bridge Pkwy #307
Ft. Myers, FL 33902-0398	N. Ft. Myers, FL 33903
- 12. The mailing envelope **MUST** be sealed and marked with:
Quote Number
Opening Date and/or Receiving Date
- 13. The quote will be mailed or delivered in time to be received no later than the specified opening date and time. (Otherwise quote cannot be considered or accepted.)
- 14. If submitting a "NO BID" please write quote number here _____ and check one of the following:
 Do not offer this product Insufficient time to respond.
 Unable to meet specifications (why)
 Unable to meet bond or insurance requirement.
 Other: _____

Company Name and Address:

ATTACHMEN

FLORIDA

BOARD OF COUNTY COMMISSIONERS

Writer's Direct Dial Number: _____

Bob Janes
District One

Douglas R. St. Cerny
District Two

Ray Judah
District Three

Andrew W. Coy
District Four

John E. Albion
District Five

Donald D. Stilwell
County Manager

James G. Yaeger
County Attorney

Diana M. Parker
County Hearing
Examiner

November 9, 2004

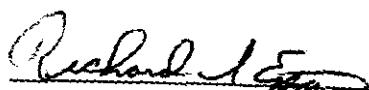
RE: Q-040487 Traffic Cable and Installation

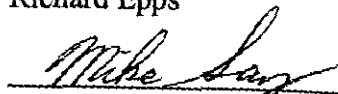
The evaluation committee met today. The undersigned evaluation committee members agree that the following firm has passed the step one qualifications criteria and is recommended to proceed to step two.

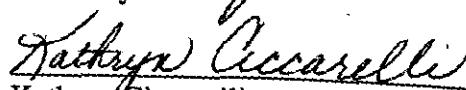
Fiber Solutions

The following did NOT pass the step one qualifications criteria and are recommended NOT to proceed to step two.

**Kent Technologies
TTM, Inc.**


Richard Epps


Mike Say


Kathryn Ciccarelli