

REQUEST FOR PROPOSAL #10-1701BS

FIBER OPTICAL CABLE INSTALLATION & INTERCONNECTION

Manatee County, a political subdivision of the State of Florida (hereinafter "Manatee County" or the "County") will receive proposals from individuals, corporations, partnerships, and other legal entities authorized to do business in the State of Florida, for the purpose of furnishing and installing a fiber optic cable system as detailed herein.

TIME AND DATE DUE: Proposals will be received until 3:00 p.m., Tuesday, June 29, 2010, at which time they will be publicly opened. All interested parties are invited to attend this opening.

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Important note: A prohibition of Lobbying has been enacted. Please review paragraph A.17 carefully to avoid violation and possible sanctions.

FOR INFORMATION CONTACT:
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bonnie.sietman@mymanatee.org
Manatee County, Financial Management Department
Purchasing Division

AUTHORIZED FOR RELEASE: _____

REQUEST FOR PROPOSAL #10-1701BS

SECTION A: INFORMATION TO PROPOSERS

PROPOSERS MUST COMPLY WITH THE FOLLOWING INSTRUCTIONS TO BE CONSIDERED FOR SELECTION.

A.01 OPENING LOCATION

These proposals will be publicly opened at Manatee County Purchasing, 1112 Manatee Avenue West, 8th Floor, Suite 803, Bradenton, Florida 34205, in the presence of County officials at the time and date stated on the cover sheet. All Proposers or their representatives are invited to attend.

Proposals become "Public Records" ten (10) days after the proposal opening or if an award decision is made earlier than this time as provided by Florida Statue 110.071. **No announcement of pricing or review of the proposal documents shall be conducted at the public opening of the proposals.**

A.02 PROPOSAL INFORMATION AND PROPOSAL DOCUMENTS

Notices of bidding or proposal opportunities and addenda are posted on DemandStar at <http://www.DemandStar.com> and on the Purchasing Division's web page at <http://www.mymanatee.org> which can be accessed by clicking on the "Purchasing" button on the left side of the screen and then clicking on the "Bids and Proposals" button.

The bid or proposal documents are available in a portable document format (.PDF) files which you may view and print using Adobe Acrobat software. You may download a free copy of this software (Adobe) from the County's web page if you do not have it.

DemandStar has an Agency level subscription option that allows vendors to download bid or proposal documents and transact business with any one (1) agency for free. Vendors will receive email/fax notices of the agency's formal bid or proposal and informal quote opportunities, at no charge. This includes unlimited downloads/print capabilities for all electronically uploaded files by the agency, at no charge. Agency level subscribers will receive a complimentary subscription to the agency, to be automatically renewed annually. If a vendor chooses to increase the number of agencies beyond their single agency, regular subscription fees will apply. If a vendor chooses to download documents from a bid or proposal outside their agency, they will be charged a \$5 download fee. You can register for free email notifications and downloads of Manatee County bids, proposals and addenda from DemandStar at <http://www.DemandStar.com/supplier/or> call DemandStar at 800-331-5537 if you have any questions.

A.02 PROPOSAL INFORMATION AND PROPOSAL DOCUMENTS (Continued)
NOTICE: AUTOMATED NOTICES OF ADDENDA ARE ISSUED ONLY VIA THE ONVIA DEMANDSTAR "PLANHOLDER" DISTRIBUTION SYSTEM.

IF YOU OBTAIN A COPY OF THIS PROPOSAL DOCUMENT FROM OTHER THAN REGISTERING WITH ONVIA DEMANDSTAR WEB SERVICE FOR THIS SPECIFIC PROPOSAL – YOU SHALL NOT RECEIVE AUTOMATED NOTIFICATIONS OF ADDENDA.

IT IS THE RESPONSIBILITY OF EACH PROPOSER, PRIOR TO SUBMITTING THEIR PROPOSAL, TO CONTACT THE MANATEE COUNTY PURCHASING OFFICE (see contact information on page one) TO DETERMINE IF ADDENDA WERE ISSUED AND TO MAKE SUCH ADDENDA A PART OF THEIR PROPOSAL.

Paper copies of proposal documents may be purchased from DemandStar or by ordering a copy from the Purchasing Office. The cost for copies of bid or proposal documents is established per document and the cost is published as part of the specific bid or proposal's detail, subsection "Legal Ad" on the DemandStar web pages.

Tabulation Sheets and Award Document/Recommendations appear on the DemandStar web page.

Notices of Source Selections appear on the DemandStar web page when the solicitation was made using this bid or proposal delivery service and the County's web page (Financial Management – Purchasing Division).

A public Internet connection to DemandStar is available during regular business hours in the lobby of the Purchasing Division. If you have questions which cannot be answered by these sources, please contact the individual named on the first page of the bid or proposal.

A.03 PROPOSAL FORM DELIVERY REQUIREMENTS

Any proposals received after the stated time and date will not be considered. It shall be the sole responsibility of the Proposer to have their proposal delivered to the Manatee County Purchasing office for receipt on or before the stated time and date. If a proposal is sent by U.S. Mail, the Proposer shall be responsible for its timely delivery to the Purchasing Office. Proposals delayed by mail shall not be considered, shall not be opened at the public opening, and arrangements shall be made for their return at the Proposer's request and expense.

A.04 CLARIFICATION & ADDENDA

Each Proposer shall examine all Request for Proposal documents and shall judge all matters relating to the adequacy and accuracy of such documents. Any inquiries, suggestions or requests concerning interpretation, clarification or additional information pertaining to the Request for Proposal shall be made in writing through the Manatee County Purchasing Office. The County shall not be responsible for oral interpretations given by any County employee, representative, or others. The issuance of a written addendum is the only official method whereby interpretation, clarification or additional information can be given.

It shall be the responsibility of each proposer, prior to submitting their proposal, to contact the Manatee County Purchasing Office (see contact information on page 1) to determine if addenda were issued and to make such addenda a part of the proposal.

Tuesday, June 15, 2010 at 4:00 p.m. shall be the deadline for clarification requests, inquiries, suggestions or interpretations and/or additional information pertaining to this Request for Proposals. This deadline has been established to maintain fair treatment for all potential bidders or proposers.

A.05 SEALED & MARKED

Four (4) signed copies of your proposal shall be submitted in one sealed package, clearly marked on the outside "**Sealed Proposal #10-1701BS**" and addressed to:

Manatee County Purchasing
1112 Manatee Avenue West, Suite 803
Bradenton, FL 34205

A.06 LEGAL NAME

Proposals shall clearly indicate the legal name, address and telephone number of the Proposer (company, firm, partnership, individual). Proposals shall be signed above the typed or printed name and title of the signer. The signer shall have the authority to bind the Proposer to the submitted proposal.

A.07 PROPOSAL EXPENSES

All expenses for making proposals to the County are to be borne by the Proposer.

A.08 EXAMINATION OF OFFER

The examination of the proposal and the Proposer generally requires a period of not less than ninety (90) calendar days from the date of the opening of the proposals.

A.09 DISCLOSURE

Upon receipt, all inquires and responses to inquires related to this Request For Proposal become "Public Records" and shall be subject to public disclosure consistent with Chapter 119, Florida Statutes.

Proposal become "Public Records" ten (10) days after the proposal opening or if an award decision is made earlier than this time as provided by Florida Statute 119.071, No announcement of pricing or review of the proposal documents shall be conducted at the public opening of the proposals.

A.10 RESERVED RIGHTS

The County reserves the right to accept or reject any and/or all proposals, to waive irregularities and technicalities, and to request resubmission. Any sole response received by the first submission date may or may not be rejected by the County, depending on available competition and timely needs of the County. The County reserves the right to award the contract to a responsible Proposer submitting a responsive proposal, with a resulting negotiated agreement which is most advantageous and in the best interests of the County. The County shall be the sole judge of the proposal, and the resulting negotiated agreement that is in its best interest and its decision shall be final. Also, the County reserves the right to make such investigation as it deems necessary to determine the ability of any Proposer to perform the work or service requested. Information the County deems necessary to make this determination shall be provided by the Proposer. Such information may include, but shall not be limited to: current financial statements prepared by an independent CPA; verification of availability of equipment and personnel; and past performance records.

A.11 APPLICABLE LAWS

Proposer must be authorized to transact business in the State of Florida. All applicable laws and regulations of the State of Florida and ordinances and regulations of Manatee County will apply to any resulting agreement. Any involvement with any Manatee County procurement shall be in accordance with Manatee County Purchasing Code Ordinance 99-37, as amended. Any actual or prospective Proposer who is aggrieved in connection with the solicitation or award of a contract may protest to the Board of County Commissioners of Manatee County as required in Section 9-101 of the Purchasing Code. A protest with respect to this Request for Proposal shall be submitted in writing prior to the scheduled opening date of this proposal, unless the aggrieved person did not know and could not have been reasonably expected to have knowledge of the facts giving rise to such protest prior to the scheduled opening date of this proposal. The protest shall be submitted within seven calendar days after such aggrieved person knows or could have reasonably been expected to know of the facts giving rise thereto.

A.12 CODE OF ETHICS

With respect to this proposal, if any Proposer violates or is a party to a violation of the Code of Ethics of Manatee County per Manatee County Purchasing Code Ordinance 99-37, Article 3, Ethics in Public Contracting, and/or the state of Florida per Florida Statutes, Chapter 112, Part III, Code of Ethics for Public Officers and Employees, such Proposer may be disqualified from performing the work described in this proposal or from furnishing the goods or services for which the proposal is submitted and shall be further disqualified from submitting any future proposals for work or for goods or services for Manatee County.

A.13 COLLUSION

By offering a submission to this Request for Proposal the Proposer certifies the Proposer has not divulged to, discussed or compared his proposal with other Proposers and has not colluded with any other Proposer or parties to this proposal whatsoever. Also, Proposer certifies, and in the case of a joint proposal, each party thereto certifies, as to their own organization that in connection with this proposal:

- a. any prices and/or data submitted have been arrived at independently, without consultation, communication or agreement, for the purpose of restricting competition, as to any matter relating to such prices and/or cost data, with any other Proposer or with any competitor;
- b. any prices and/or cost data quoted for this proposal have not been knowingly disclosed by the Proposer prior to the scheduled opening directly or indirectly to any competitor;
- c. no attempt has been made or will be made by the Proposer to induce any other person or firm to submit or not to submit a proposal for the purpose of restricting competition;
- d. the only person or persons interested in this proposal as principal or principals is/are named therein and that no person other than therein mentioned has any interest in this proposal or in the contract to be entered into; and
- e. no person or agency has been employed or retained to solicit or secure this contract upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees.

A.14 PROPOSAL FORMS

Proposals must be submitted in the format specified in Section B hereof. Additional support information may be included. Tabs are required to identify each item defined in Section B, Form of Proposal, and thereby facilitating expedient review of all responses.

A.15 PUBLIC ENTITY CRIMES

In accordance with Section 287.133, Florida Statutes, a person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a proposal on a contract to provide any goods or services to a public entity, may not submit a proposal on a contract with a public entity for the construction or repair of a public building or public work, may not submit proposals on leases or real property to a public entity, may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity, and may not transact business with any public entity in excess of the threshold amount provided in Section 287.017 for Category Two (as of 1/01/2005 is \$25,000) for a period of 36 months from the date of being placed on the convicted vendor list.

A.16 DRUG FREE WORK PLACE

The Manatee County Board of County Commissioners adopted a policy regarding maintaining a Drug Free Work Place, Resolution R-93-22. Proposers are asked to review the attached copy of the Resolution and provide either a certification of compliance with the program outlined in this Resolution or describe your firm's policy or program as it relates to maintaining a drug free workplace. A Drug Free Work Place Certification is attached to this proposal for this purpose. This response will be considered with the other criteria described herein.

A.17 LOBBYING

After the issuance of any Request for Proposals or Invitations for Bids, prospective bidders, Proposers or any agent, representative or person acting at the request of such bidder or Proposer shall not contact, communicate with or discuss any matter relating in any way to the Request for Proposals or Invitation for Bids with any officer, agent or employee of Manatee County other than the Purchasing Manager or as directed in the Request for Proposals or Invitation for Bids. This prohibition begins with the issuance of any Request for Proposals or Invitation for Bids, and ends upon execution of the final contract or when the invitation or request has been canceled. Violators of this prohibition shall be subject to sanctions as provided in the Manatee County Purchasing Code.

A.18 PUBLIC CONTRACTING AND ENVIRONMENTAL CRIMES CERTIFICATION

In accordance with Ordinance 99-37, adding Article 6, Manatee County Board of County Commissioners adopted a policy prohibiting the award of County contracts to persons, business entities, or affiliates of business entities who have not submitted written certification to the County that they have not been convicted of bribery, attempted bribery, collusion, restraints of trade, price fixing, and violations of certain environmental laws. A Non-Conviction Certification Form is attached for this purpose.

A.19 EQUAL EMPLOYMENT OPPORTUNITY

Manatee County, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 and the Regulations of the Department of Commerce (15 CFR, Part 8) issued pursuant to such Act, hereby notifies all prospective Proposers that they will affirmatively ensure that in any contract entered into pursuant to this advertisement, minority business enterprises will be afforded full opportunity to participate in response to this advertisement and will not be discriminated against on the grounds of race, color, creed, sex, age or national origin in consideration for an award.

A.20 AMERICANS WITH DISABILITIES ACT

The Board of County Commissioners of Manatee County, Florida, does not discriminate upon the basis of any individual's disability status. This non-discrimination policy involves every aspect of the County's functions including one's access to, participation, employment, or treatment in its programs or activities. Anyone requiring reasonable accommodation for the **public meetings** specified herein (i.e. Information Conference or Proposal Opening), should contact the person named on the first page of this document at least twenty four (24) hours in advance of the activity.

SECTION B: FORM OF PROPOSAL

This section identifies specific information which must be included with each response. Each proposal shall be arranged with tabs identifying the response to each specific item. Proposals must contain:

B.01 MINIMUM QUALIFICATIONS

Documentation that your firm has performed fiber optical cable installation and interconnection in the last three (3) years in accordance with the specification found herein.

B.02 ADMINISTRATIVE SUBMITTAL

- a. Proposal Signature Form.
- b. Drug Free Work Place Certification (Attachment B).
- c. Public Contracting and Environmental Crimes Certification (Attachment C).

B.03 INFORMATION TO BE SUBMITTED

- a. Description of the proposer's **background and size**. Include a statement of qualifications that includes your firm's professional credentials and experience in providing the service enumerated in this Request for Proposal and the legal status of your organization
- b. Describe any **changes in the mode of conducting business** your firm has made in the past three (3) years, including any mergers, acquisitions, consolidations, downsizing or bankruptcy proceeding or filings.
- c. Identify each **principal of the firm and other "key personnel"** who will be professionally associated with the County. Describe their respective areas of expertise. Include personalized resumes which identify the qualifications, training and experience of each key personnel.
- d. Submit a **manning level statement** for your organization, detailing how many total employees work for your firm at any one time, including temporary, seasonal and part-time employees. List the ratios of full-time employees to part-time, temporary and seasonal employees.
- e. Response should provide detailed information on the approach you propose to accomplish the tasks stated in Section E, Scope of Service.

- f. Provide a **work plan** detailing how your firm would perform and meet the requirements of the Scope of Services and any additional services that may be offered as part of your proposal submission.
- g. Provide a list of at least **five (5) references (similar clients)** with knowledge of your firm's contract performance. References shall be employees in senior level management positions. Include the name of the entity, a description of the contract project, the dates of service and the name(s) and telephone number(s) of the contact persons.
- h. Provide a list of the **contracts your firm has obtained** within the past two (2) years, indicating the type of services provided and the locations. Provide a list of the contracts your firm has lost in the past two (2) years and state the reason for the loss and the location.
- i. Identify all licenses currently held by your firm.
- j. Provide your **proposed cost** for the required project including proposed hours, labor rates and materials.
- k. Submit any other additional information which would assist the County in the evaluation of your proposal.
- l. Submit a narrative explaining the direct economic benefit to Manatee County to be realized by selecting your firm. During the term of this agreement detail the employment, subcontracting and support service contracting as economic stimulus that your entity may generate that would directly benefit Manatee County.

NOTE: The County reserves the right to make such investigation and solicit additional information or submittals as it deems necessary to determine the ability of any Proposer to perform the Scope of Services stated in this Request for Proposal.

SECTION C: SELECTION

C.01 EVALUATION FACTORS

Evaluation factors are price, design and perceived ability of the Proposer to perform the Scope of Services as stated in this Request for Proposal in the timeliest and efficient manner, and the proposal(s) which will overall best meet the needs of Manatee County as determined from the responses to this Request for Proposal and subsequent investigation by the County.

C.02 RELATIVE IMPORTANCE OF EVALUATION FACTORS

No weight has been assigned to the Evaluation Factors stated above.

C.03 PRELIMINARY RANKING

A Selection Committee may determine from the response to this Request for Proposal and subsequent investigation as necessary, the Proposers most susceptible of being selected for award.

C.04 REVIEW OF PROPOSERS AND PROPOSALS

Review shall be conducted with responsible Proposers who may be reasonably susceptible of being selected for award, for the purposes of clarification to assure full understanding of and conformance to the solicitation requirements, the abilities of the Proposer, and the proposal submitted.

Firms responding to this Request for Proposal shall be available for presentation/interviews, to the Selection Committee and/or Board of County Commissioners upon notification from the Purchasing Office at a time and date determined by the County.

C.05 SELECTION FOR NEGOTIATION

The Proposers whose ability and proposal is determined to be the most advantageous to the County, taking into consideration the evaluation factors set forth in this Request for Proposal, shall be recommended to the Board of County Commissioners for authorization to negotiate an agreement for the stated Scope of Services.

C.06 AWARD

Award of an agreement is subject to the successful negotiations and approval by the Purchasing Official to execute the agreement.

SECTION D: NEGOTIATION OF THE AGREEMENT

D.01 GENERAL

The following general terms and conditions apply to the proposal submitted for consideration and the subsequent negotiations:

- a. The proposal will serve as a basis for negotiating an agreement.
- b. Upon submission, all proposals become the property of the County which has the right to use any or all ideas presented in any proposal submitted in response to this Request for Proposal whether or not the proposal is accepted.
- c. All products and papers produced in the course of this engagement become the property of the County upon termination or completion of the engagement.

D.02 AGREEMENT

The selected Proposers shall be required to negotiate a formal agreement, in a form acceptable to Manatee County.

The Manatee County Board of County Commissioners will be presented the negotiated agreement as the best and final offer for consideration of award and execution. The Board of County Commissioners shall determine if award of the agreement is to be: considered; rejected and direct further negotiations; rejected and terminate negotiations; or accepted, authorizing the chairman to execute the agreement.

SECTION E: SCOPE OF SERVICES

FIBER OPTICAL CABLE, CONDUIT, PULL BOX INSTALLATION & INTERCONNECTION

1. Fiber Optic Cable System

1.1 Description.

Furnish and install a fiber optic cable system, necessary conduit and pull boxes as described in the RFP and attached plans.

1.2 Materials

1.2.1 Fiber Optic Cable

To insure compatibility and maintain integrity with recently installed Manatee County fiber optic cable, the following is the preferred fiber optic cable type for this project; however, consideration will be given to equivalent products proposed:

Draka ezMICROduct Jetted Micro-Duct Loose Tube cable (or equivalent)
Draka Part # (F-MDS1JKT-12-ES-012-E3) 12-Count cable (or equivalent)
Draka Part # (F-MDS1JKT-12-ES-024-E3) 24-Count cable (or equivalent)
Draka Part # (F-MDS1JKT-12-ES-048-E3) 48-Count cable (or equivalent)
Draka Part # (F-MDS1JKT-12-ES-072-E3) 72-Count cable (or equivalent)

1.2.2 Splicing Materials

Ensure that all splice enclosures, organizers, cable end preparation tools, and procedures are compatible with the fiber optic cable, and are approved by the Engineer.

1.2.2.1 Splice Enclosures

Contain all optical fiber splices within a splice enclosure. Ensure that the enclosures provide storage for fiber splices, non-spliced fiber, and buffer tubes. Ensure that the splice enclosure restores the mechanical and environmental integrity of the fiber optic cable, encases the sheath opening in the cable, and organizes and stores optical fiber. Ensure all hinges and latching devices are stainless steel. Ensure that the enclosure is airtight and prevents water intrusion. Ensure that the splice enclosure can accommodate pressurization and has the ability to be reentered without requiring specialized tools or equipment. Ensure that the enclosure provides fiber and splice organizers including splice trays and strain relief. Ensure that splice enclosures allow re-entry and are hermetically sealed to protect internal components from environmental hazards such as moisture, insects, and UV light.

Fiber optic splice enclosures shall also:

Comply with the Telcordia Technologies' GR-711-CORE standard and all applicable NEC requirements. Provide space for future expansion equal to 100% of the initial utilization.

Provide fiber optic cable penetration end caps to accommodate a minimum installation of two trunk fiber optic cables and two fiber optic drop cables. Ensure that the enclosure end caps are factory-drilled to the proper diameter to accept and seal the fiber optic cable entries. Ensure that the cable entry locations can accommodate an assortment of cables with ODs ranging from 0.20 to 0.55 inch, +10%, without jeopardizing the waterproof characteristics of the enclosure.

Provide fiber optic splice enclosures meeting the following requirements:

Mechanical

Resist compression deformation to a maximum of 400 pounds.

Withstand impact energy to a maximum of 40 foot-pounds at 0° F.

Axial Tension: 100 pounds for 30 minutes.

Cable Torsion: ten 90-degree rotations.

Cable Flexing: ten 90-degree bends.

Environmental

Hydrostatic Pressure Head: Up to 20 foot-pounds (-9 pounds per square inch).

Withstand 40 freeze/thaw temperature cycles.

Ultraviolet resistant during a maximum 30-day exposure in compliance with the requirements detailed in the ASTM B117 standard.

Chemical

Withstand a 90-day exposure to solutions of 3% sulfuric acid, 0.2 normal of sodium hydroxide, 10% Igepal®, kerosene, and be fungus resistant as required in the ASTM G21 standard.

1.2.2.2 Splice Trays

Ensure that the splice trays are securely attached and accessible, and provide adequate storage for the fiber cable. Ensure the splice trays provide access to individual fibers without disrupting other fibers in the tray. Ensure that the splice trays hold the buffer tubes rigidly in place and provide protection for fusion splices. Ensure that the raceway accommodates the minimum bend radius of the fiber. Ensure that splice trays allow visible inspection of the fiber. Ensure that the splice tray includes a cover with a locking mechanism to hold it in place.

1.2.3 Cable Terminations

Use Type LC connectors only, as specified in the plans or by the Engineer. Ensure that connectors provide a strain relief mechanism when installed on a single fiber cable that contains strength elements. Ensure that the optical fiber within the body of all connectors is mechanically isolated from cable tension, bending, and twisting. Ensure that all connectors are compliant with the TIA/EIA-568-A and TIA/EIA-604 standards, as applicable, and are tested according to the Telcordia/Bellcore GR-326-CORE standard. When tested according to the TIA and EIA's Fiber Optic Test Procedure (FOTP)-171 (TIA/EIA-455-171),

ensure that the connectors test to an average insertion loss of ≤ 0.4 decibel and a maximum loss of ≤ 0.5 decibel. Test the connectors as detailed in FOTP-107 (TIA/EIA-455-107) to reflectance values of ≤ -50 decibels. Ensure that the connectors have an operating and storage temperature range of -30° to 165° F as per the NEMA TS 2 standard.

1.2.3.1 Pre-terminated Connector Assemblies (pigtailed)

Ensure that pre-terminated connector assemblies are used for fiber termination. Ensure that the pre-terminated cable assemblies consist of fiber optic cables with factory-installed Type LC connectors on one end of the cable and an un-terminated optical fiber on the other. Ensure that the pre-terminated connector assemblies are installed with fusion splices. Ensure that all buffer tubes and fibers are protected once the attachment of pre-terminated connector assemblies is complete.

1.2.3.2 Buffer Tube Fan-out Kits

Ensure that a buffer tube fan-out kit is installed when fiber optic cables are terminated. Use a kit compatible with the fiber optic cable being terminated and that is color-coded to match the optical fiber color scheme. Ensure that the buffer tube fan-out kit supports 12 fiber strands. Ensure that output tubing and the fiber strands contained therein are of sufficient length for routing and attachment of fiber optic cable to connected electronics or as directed by the Engineer. Ensure that the kit and the connectors are supplied by the same manufacturer.

1.2.4 Patch Panels

Ensure that the patch panel is compatible with the fiber optic cable being terminated and color-coded to match the optical fiber color scheme. Ensure that the patch panel has a minimum of twelve Type LC panel connectors. Ensure that the patch panel is suitable for mounting within an approved cabinet at the field device location.

1.2.4.1 Pre-terminated Patch Panels

Ensure that the pre-terminated patch panel is a termination panel that includes a factory installed all-dielectric SMF cable stub. Ensure that the panel includes factory-installed and terminated Type LC panel connectors. Ensure that the cable stub is of adequate length to splice the stub and provide a fiber connection between the panel and the backbone fiber cable or as directed by the Engineer.

1.2.4.2 Field Assembled and Terminated Patch Panels

Ensure that the field-assembled patch panel is a termination panel that includes a connector panel and the hardware required to mount the patch panel within an approved cabinet at the field device location and connect the panel to the backbone fiber cable.

1.2.4.2.1 Connector Panel

Ensure that the connector panel provides twelve Type LC bulkhead-mount coupling connectors. Ensure that each coupling connector allows connection of a cable terminated on one side of the panel to a cable on the opposite side. Ensure that each bulkhead-mount coupling connector includes a locknut for mounting the connector in predrilled or punched holes in the connector panel.

1.2.5.1 Cable End-Sealing

Ensure that fiber optic cable ends are capped or sealed to prevent the entry of moisture during shipping, handling, storage, and installation. Equip one end of the fiber optic cable with flexible pulling eyes.

1.2.5.2 Protective Wrap

Ensure that the fiber optic cable is shipped and stored with a protective wrap or other approved mechanical reel protection device over the outer turns of the fiber optic cable on each reel. Ensure that the wrap is weather resistant and protects the cable reel from environmental hazards. Ensure that the cable reel remains wrapped until cable is to be installed.

1.2.5.3 Packaging, Shipping and Receiving

Ensure that the packaging and delivery of fiber optic cable reels comply with the following minimum requirements:

1. Ensure cable is shipped on reels of marked continuous length.
2. Ensure each cable is shipped on a separate, strongly constructed reel designed to prevent damage to the cable during shipment and installation.
3. Ensure each reel has a minimum of 6 feet on each end of the cable available for testing.
4. Ensure that all fiber optic cable is continuous and free from damage.
5. Ensure no point discontinuities greater than 0.1 decibel per reel.
6. Ensure that all cable delivered has been manufactured within 6 months of the delivery date.
7. Provide a copy of the transmission loss test results as required by the EIA/TIA-455-61 standard, as well as results from factory tests performed prior to shipping.
8. Ensure that the manufacturer provides the date of manufacture; product and serial numbers; cable data, including the reel length; refraction index; the project name and location; type of fiber and quantity of strands used; technical product data sheet(s); and reel number(s).

1.3 Installation

Install all equipment according to the latest version of the manufacturer's installation procedures and the industry-accepted installation standards, codes, and practices, or as directed by the Engineer. Ensure that all materials and installation practices are in accordance with the applicable OSHA requirements as found in 29 Code of Federal Regulations (CFR) Part 1926, Safety and Health Standards for Construction. In addition, perform the following:

1. Ensure conduit and inner-duct is clean and free from damage prior to installing fiber optic cable.
2. Document the sequential cable length markings at each splice box and pull box wall that the cable passes through, and include the information with the as-built documentation.

Provide all incidental parts needed to complete the installation, but not specified in the plans, as necessary for a complete and properly operating system.

1.3.1 Fiber Optic Cable Installation

Use preapproved cable nomenclature to create cable tags for the identification of fiber optic cable. Provide cable tag identification on all test results or fiber related documents provided to the Engineer. Install cable tags within 1 foot of each splice and/or termination point indicating the cable type, fiber count, and each fiber optic cable origination and termination points. Ensure that the cable tags are permanent labels suitable for outside plant applications and are affixed to all fiber optic cables. Ensure that lettering is in permanent ink and displays the phrase "MANATEE COUNTY FIBER OPTIC CABLE".

1.3.1.1 Pulling

Install the fiber optic cable by hand when necessary. **The use of mechanical pulling machines is prohibited.** Ensure that at no time the manufacturer's recommended maximum pulling tension is exceeded. Ensure that the central strength member and aramid yarn are attached directly to the pulling eye during cable pulling. Use pulling attachments, such as "basket grip" or "Chinese finger" type, to ensure that the optical and mechanical characteristics are not degraded during the fiber optic cable installation. Ensure that excess cable is coiled in a figure eight and fed manually when pulling through pull boxes and splice boxes by hand. If pulleys and sheaves will be used to mechanically pull through pull boxes and splice boxes, provide a drawing of the proposed layout showing that the cable will never be pulled through a radius less than the manufacturer's minimum bend radius. Use large diameter wheels, pulling sheaves, and cable guides to maintain the appropriate bend radius. Provide tension monitoring at all times during the pulling operation. Ensure that cable pulling lubricant used during installation is recommended by the optical fiber cable manufacturer.

1.3.1.2 Blowing

Follow installation procedures and practices as listed in the Draka JETnet Design (or equivalent) installation guideline document.

1.3.1.3 Slack Cable Storage

Provide and store fiber optic cable at each pull box and splice box to allow for future splices, additions, or repairs to the fiber network. Store the fiber optic cable without twisting or bending the cable below the minimum bend radius. Store a total of 100 feet of fiber optic cable in splice boxes, with 50 feet of cable on each side of the cable splice point or as shown in the plans. Store 50 feet of spare fiber optic cable in specified pull boxes.

1.3.2 Splicing

Perform all optical fiber splicing using the fusion splicing technique, and according to the latest version of the manufacturer's cable installation procedures; industry-accepted installation standards, codes, and practices; or as directed by the Engineer. Ensure that all splices match fiber and buffer tube colors unless shown otherwise in the plans. Where a fiber cable is to be accessed for lateral or drop signal insertion, only open the buffer tube containing the fiber to be accessed and only cut the actual fiber to be accessed. If a fiber end is not intended for use, cut the fiber to a length equal to that of the fiber to be used and neatly lay it into the splice tray. Treat any fibers exposed during splicing with a protective coating and place in a protective sleeve or housing to protect the fiber from damage or contaminants.

1.3.2.1 Splice Plan

Provide a splice plan showing the location and configuration of splices in the system for approval by the Engineer. Perform all splicing according to the plan. Document each splice location and identify the source and destination of each fiber in each splice tray. Document all fiber colors and buffer jacket colors used during installation, and develop a sequential fiber numbering plan as required in the TIA/EIA-598-A standard for color-coding in the documentation. Neatly store all splice enclosures within a splice box. Attach the splice enclosure to the splice box interior wall to prevent the enclosure from lying on the bottom of the splice box.

1.3.2.2 Splice Equipment Specifications

Use a fusion splice machine to splice all optical fiber. Ensure that the unit is portable, and capable of 120 VAC and internal battery-powered operation. Ensure that the unit is able to splice fibers with a 250-micrometer coating. The fusion splice machine shall have the following capabilities:

1. Splice loss measurement.
2. Splice protection sleeve heater.
3. Battery with charging unit and power cable.
4. Spare electrodes, fuses, and lamps.
5. Power meter/light source with carrying case.

Ensure that the power meter/light source is a calibrated pair that is portable and battery operated. Ensure that the power meter/light source operates at selectable wavelengths of 850/1,300/1,550 nanometers. Ensure that the power meter has a decibel milliwatt measurement scale with a range of +3 to -45 decibel milliwatts for SMF operation and an accuracy of 0.5 decibel or better. Ensure that the splice machine is new from the factory, or serviced and certified by the factory or its authorized representative within the previous 6 months from the commencement of its use. Provide the Engineer with a letter from the manufacturer or his authorized representative certifying compliance. Clean all splicing equipment and calibrate according to the manufacturer's recommendations prior to each splicing session at each location.

1.3.3 Cable Termination Installation

Ensure that cables, buffer tubes, or strands are neatly routed, secured and terminated in a patch panel. Ensure all cable termination points include documentation regarding the identification, route, and function of each fiber installed at that location. Ensure that at least one copy of this information is placed alongside the installed equipment (for instance, in a document pouch or drawer within a field cabinet).

1.3.4 Patch Panel Installation

Ensure that patch panels neatly installed and secured in a rack or wall mount. Ensure all patch panel connectors are clearly and permanently labeled. Ensure all installed patch panels include documentation regarding the identification, route, and function of each patch panel connector at that location. Ensure that at least one copy of this information is placed alongside the installed equipment.

1.4 Testing and Certification

1.4.1 Manufacturer's Testing

Provide documentation of all factory tests performed by the manufacturer for all fiber optic cable, splicing material, cable terminations, and patch panels.

1.4.2 Installation Testing

Notify the Engineer of cable testing at least 14 calendar days in advance. Provide the testing procedures to the Engineer for approval prior to commencement of testing. Perform all tests at 1,310/1,550 nanometer wavelengths, and include the last calibration date of all test equipment with the test parameters set on the equipment in the test documentation. Test all installed fibers (terminated and un-terminated) using methods approved by the Engineer.

1.4.2.1 End to End Attenuation Testing

Perform test on all fibers to ensure that no discontinuities greater than 0.2 decibel per 300 feet exist. Repair or replace cable sections exceeding allowable attenuation at no cost to the County.

1.4.2.2 OTDR Tracing

Test all fibers from both cable end points with an optical time domain reflectometer (OTDR) at wavelengths of 1310 and 1550 nm. Test the fibers that are not terminated at the time of installation using a bare fiber adapter. Present the results of the OTDR testing (i.e., traces for each fiber) and a loss table showing details for each splice or termination tested to the Engineer in an approved electronic format. Ensure all OTDR testing complies with the EIA/TIA-455-61 standard.

1.4.2.3 Splice Loss Testing

Ensure that the splice loss for a SMF fusion splice does not exceed a maximum bidirectional average of 0.1 decibel per splice. Repair or replace splices that exceed allowable attenuation at no cost to the County.

1.4.2.4 Connector Loss Testing

Ensure that the attenuation in the connector at each termination panel and its associated splice does not exceed 0.5 decibel. Repair or replace connectors exceeding allowable attenuation at no cost to the County.

1.4.2.5 Guaranty Provisions

Ensure that the fiber optic cable, the splice enclosures, and termination points have a two-year manufacturer's warranty from the date of final acceptance by the Engineer of all the work to be performed under the Contract. If the manufacturer's warranties for the components are for a longer period, those longer period warranties will apply. Ensure that the manufacturer's warranties on the fiber optic cable, the splice enclosures, and termination points are fully transferable from the Contractor to the County. Ensure that these warranties require the manufacturer to furnish replacements for any part or equipment found to be defective during the warranty period at no cost to the County within 10 calendar days of notification by the County.

2 Conduit System Overview

The County is requesting proposals for tie in connections to the existing telecommunications conduit infrastructure. Once complete the conduit extensions will provide fiber optic cable pathways between County facilities. This system will include underground conduit, fiber optic cable splice boxes, fiber optic cable pull boxes, and other items required to provide a turnkey solution for the subsequent installation of single mode fiber optic cables. The Contractor, with final approval by the County, will be responsible for determining the best and most cost effective conduit installation method for the routes identified in Attachment D. A 1 ¼ inch HDPE conduit inner duct will be installed on all routes. The conduit system must comply with the requirements specified in Section 2. All underground conduit must also include a locate system. The locate system must include aboveground route markers, warning tape, tone wire, and electronics that allow detection of buried conduit and other related underground facilities as specified in Section 2.

2.1.1 Conduit

The County requires the Contractor install a 1¼" inch orange high density polyethylene (HDPE) outer conduit that is suitable for underground use in an ambient temperature range of -30 to 130 degrees F without degradation of material properties along most routes. Installation should be done using trenching and/or directional boring processes at a minimum depth of 36 inches below grade or greater.

All conduits must conform to the requirements specified in Section 2, and shall be installed so as not to violate minimum bend radius requirements associated with the future fiber optic cable installation.

2.2 Pull Boxes and Splice Boxes

The Contractor is required to furnish and install pull boxes and splice boxes of the type, size, and quantity as specified in Section 3.

2.3 Locate System

The Contractor is required to furnish and install a locate system as directed by the County and ensure that the locate system conforms to the requirements specified in Section 4.

2.4 Conduit System

2.4.1 General

All conduits, orange inner ducts, splice boxes and pull boxes shall be installed underground and within existing right-of-way. All inner ducts shall be 1¼" High-Density Polyethylene (HDPE). All conduits shall be installed a minimum of 36" below finished grade.

2.4.2 Junction Box Interface

Conduit shall enter the communications fiber optic pull boxes at a 45-degree angle relative to the vertical wall of the pull box. The conduit shall terminate in each communications fiber optic pull box at diagonally opposite corners and extend into the fiber optic pull box to a distance of 12 inches from the opposite wall. Any modifications to typical conduit and fiber optic boxes shall be submitted to the County and approved prior to installation.

2.4.3 Conduit Configuration

Communications conduit shall include no more than 180 degrees of total bend and shall have a bending radius of at least ten (10) times the conduit diameter. All conduits shall be placed a minimum of 36 inches below the finished grade.

2.4.4 Tracer Wire

All installed conduit routes must contain a continuous or spliced, conductive, insulated #12 AWG locate wire with a minimum 2 feet of wire accessible at each conduit termination point. The locate wire shall be installed at the same time the conduit system is installed.

2.4.5 Conduit End Preparations

All conduit ends shall be properly capped. Duct seal shall be used on all conduit openings.

2.4.6 Identification Tape

All underground conduit installed by open trenching methods shall be identified by conduit identification tape. Identification tape shall be a minimum of 2 ½ inches wide and be of a plastic-based non-deteriorating non-color-fading material capable of stretching at least 600 percent in length before breaking. Identification tape shall be orange in accordance with the American Public Works Association criteria, and shall be continuous emblazoned with black non-fading ink with the message "WARNING, BURIED FIBER OPTIC CABLE BELOW" or approved equal by the County. Identification tape shall be installed for the entire length of the trench and shall be 12 inches directly above the conduit(s).

2.4.7 Conduit Protection

The Contractor must prevent the ingress of water, dirt, sand, and other foreign materials into the conduit prior to, during, and after construction. Water and debris from buried conduit shall be excluded using a foam-sealing material, rubber plug, or other device designed for this application and approved by the County.

2.4.8 Conduit Fittings

All conduit fittings including, but not limited to, bends, sweeps, bells, bushings, couplings, caps, sealants, and all other incidental materials necessary to fully construct a complete telecommunications conduit system shall be provided by the Contractor. Approved methods for connecting inner duct or conduit within or between plowed portions, trenched portions, and bored portions shall be used.

2.4.9 Locate Wire

Continuity tests and insulation resistance tests shall be performed on all locate wires. The Contractor shall provide the County with all test results and replace or repair defective locator wire at no additional cost. The Contractor shall ensure that locate wire splices are waterproof and suitable for direct burial. Locate wire splices at the pull box must meet National Electric Code (NEC) requirements. The Contractor shall ensure that locate wire splices include a mechanical crimp connection with a butt sleeve, an oxide-preventing aerosol lacquer, mastic electrical splicing tape, and standard electrical tape using methods and materials approved by the County. At the completion of the installation, the Contractor shall provide the County with as-built drawings that document all splice locations.

3 Fiber Optic Pull Boxes and Splice Boxes

3.1.1 Materials

The Contractor must ensure that all pull boxes and splice boxes are compatible with fiber optic cable and are approved by the County. Pull boxes and splice boxes that are stackable and are structurally designed to meet or exceed ANSI Tier 15 loading requirements shall be used.

The Contractor shall ensure that all pull box and splice box covers comply with ASTM C857 and are a single piece providing a 20,000-pound gross vehicle weight capacity with a live load rating of 20,000 pounds as required for ANSI Tier 15 loading conditions. All pull box and splice box covers shall include bolt holes and stainless steel hex head bolts to secure the cover to the box. Bolts shall be 0.375 inch in diameter with 16 unified coarse threads (UNC) for every 1 inch. The Contractor shall ensure that covers and bolts seat flush when installed on the box and that covers are equipped with a minimum 0.5 inch by 2 inch lifting slot with lift pin.

The Contractor shall ensure that all pull box and splice box covers include the words "MANATEE COUNTY FIBER OPTIC SYSTEM" permanently cast into their top surface. The manufacturer's logo shall be stamped on each pull box cover. Markings shall be permanently affixed and clearly visible after installation.

3.1.2 Pull Box

The Contractor shall ensure that all pull boxes have an open bottom and are constructed of polymer concrete consisting of an aggregate matrix bound together with a polymer resin. Box construction shall include internal reinforcement by means of steel, fiberglass, or a combination of the two. The pull box shall be equipped with a nonskid cover secured by hex head bolts and any other miscellaneous hardware required for installation or as shown in the plans. The Contractor shall ensure that the minimum pull box size is approximately 2 feet wide by 3 feet long by 3 feet deep, or as required in the plans.

3.1.3 Splice Box

The Contractor shall use 3' x 5' x 3' splice boxes at all fiber optic splice locations, as shown in the plans, and at other locations as approved by the County. All splice boxes shall have an open bottom and be constructed of polymer concrete consisting of an aggregate matrix bound together with a polymer resin. Box construction shall include internal reinforcement by means of steel, fiberglass, or a combination of the two. The splice box shall be equipped with a nonskid cover secured by hex head bolts, cable racks and hooks, pulling eyes, and any other miscellaneous hardware required for installation or as shown in the plans.

All splice boxes shall be large enough to house coiled fiber optic cable without subjecting the cable to a bend radius less than 14 times the diameter of the largest cable in the box.

3.1.4 Installation Requirements

The Contractor shall install all pull boxes and splice boxes according to the manufacturer's recommendations and shall provide all pull boxes and splice boxes at final finish grade elevation. Pull box and splice box installation sites shall be excavated to a depth of 1 foot below the bottom of the box and replaced with a 1 foot bed of pea rock or crushed stone at the excavation base prior to installing the box.

The box cover shall be flush with the existing finish grade after installation. Finish grade contour shall be tapered to provide drainage from the splice or pull box.

3.1.5 General Placement and Spacing

The Contractor shall place pull boxes and splice boxes as detailed in the plans and at the following locations unless directed otherwise by the County.

- ❖ At all major fiber optic cable and conduit junctions.
- ❖ Approximately every 2,500 feet in rural areas with any continuous section of straight conduit if no fiber optic cable splice is required.
- ❖ At a maximum of 1,760 feet in metropolitan areas.
- ❖ At each end of a tunnel and on each side of a river or lake crossing.
- ❖ On each side of an aboveground conduit installation, such as an attachment to a bridge or wall.
- ❖ At all 90-degree turns in the conduit system.

Pull boxes shall not be placed in roadways, driveways, parking areas, ditches, or public sidewalk curb ramps. Placing pull boxes and splice boxes on steep slopes where the cover cannot be leveled within a tolerance of 1 inch of drop to 1 foot of grade or in low-lying locations with poor drainage should be avoided.

3.1.6 Bonding and Grounding

The Contractor shall ensure that pull box and splice box installation includes a bonding and grounding system including a driven rod that is a minimum of 10 feet in length and 0.75 inches in diameter. Grounding rod shall be constructed of copper clad steel and comply with the UL 467 standard. Bonding conductors shall be bare solid AWG #6 copper wire. Splice and termination components shall meet or exceed the UL 467 requirements and are clearly marked with the manufacturer, catalog number, and conductor size. Grounding system shall comply with NEC requirements.

3.1.7 Material Removal and Restoration Specifications

The Contractor shall provide all material, equipment, and labor for the removal of turf, earth, concrete/asphalt pavement, or other site specific material to be removed for box installation. Original turf, earth, concrete/asphalt pavement, or other site specific material shall be restored to its original condition once box installation is complete.

The Contractor must perform compaction tests for each soil type encountered. Sufficient in-place density tests shall be provided to confirm the adequacy and uniformity of the compaction procedures as required by the governing authorities or right-of-way owners, or as shown in the plans. Compaction testing shall be performed by an independent agency at the Contractor's expense.

4 Locate System

4.1.1 Standard Route Marker

The Contractor shall ensure that the SRM post is white with a top fitting cover that is orange with white lettering and graphics, or otherwise approved by the County and. SRM shall be a tubular configuration with both the marker post and the top fitting made from virgin Type 111 HDPE. Any fasteners used with the SRM shall be constructed of stainless steel.

All SRMs shall have a minimum outside diameter (OD) of 3.5 inches with a 0.125-inch wall thickness and a minimum 10-foot length. The top fitting cover shall be a minimum of 1.5 feet long and have an OD of 3.75 inches with a 0.125-inch wall thickness. Each SRM shall provide a tensile strength of 4,200 pounds per square inch [29 megapascals] as required in the ASTM D638 standard. Each SRM shall be manufactured for use in temperatures range of -30° to 165° F [-34° to 74° C] as per the NEMA TS 2 standard.

The Contractor shall ensure that an SRM installed at the minimum 2-foot depth withstands at least one vehicle impact at 45 miles per hour by a car or truck weighing no less than 3,500 pounds. After impact, each post will return to an upright position within 10 degrees of vertical alignment within 30 seconds from the time of impact. All SRMs shall withstand a 12-gauge shotgun blast without penetration by any pellets when fired from a 50-foot distance.

The Contractor shall ensure that route marker signs are labeled with a unique identification number, as detailed in the plans or as approved by the County. As-built documentation shall be provided at the completion of installation that includes identification number and location of all installed route markers and correlates the marker to the fiber optic infrastructure that it signifies. (See Marker Post Detail)

4.1.2 Locate Wire Surge Protection

The Contractor shall furnish and install a locate wire surge protection system as directed by the County. Locate wires shall be attached to a surge protection system dedicated to safely dissipating high transient voltages or other foreign electrical surges induced into the designating system. Grounding shall be provided through a stand-alone system that does not include electric power device grounding. The Contractor shall ensure that the surge protection system normally allows signals generated by locate system transmitters to pass through the protection system without going to ground. The protection system shall

automatically reset and pass locate system transmitter signals after the unit has grounded to dissipate over-voltages. The locate wire surge protection is intended for below- or above-grade applications. The locate wire surge protection system shall be grounded to a driven rod within 10 feet of the system using a AWG #6 single conductor wire with green insulation. The locate wire surge protection shall be enclosed for protection from environmental hazards and accessible for connection of portable locate system transmitters. (See Locate Detail.)

The Contractor shall ensure that the locate wire surge protection system meets the following minimum standards for surge protection:

Surge Element	3-element maximum duty fail-safe gas tube.
Rating	40,000 A surge capacity (single-cycle, 8 by 20 microsecond waveform).
Life	Minimum 1,000 surges (1000 A to ground).
Fail-Safe	Integral fail-shortened device.
Insulation Resistance	1,000 megohm minimum at 100 volts of direct current (VDC).
Clamp Voltages	a. Impulse at 100 Volts per Microsecond: Typically 500 volts. b. Direct Current: 300 to 500 volts.

5 Design Requirements

The Contractor shall be responsible for providing all design for the installation of a complete, functional system. This shall include all necessary supporting components to produce the functional system, whether included in this specification or not. Detailed descriptions of all components/products shall be included as part of the system design/submittal documents and shall be subject to approval or request for modification by the County.

The Contractor shall submit a list of all selected technologies/products; product cut sheets, selection alternatives, reasons for selection, and selected component locations and construction details to the County for review and approval prior to commencement of any materials procurement or contract installation. No device shall be procured or installed prior to this approval. The system components shall be new production products. Untried or prototype units shall not be acceptable.

5.1 Design and Construction Plan

The plan will develop design and construction stages for the project and develop scheduling for each of the identified stages. The Design and Construction plan will identify all design methods and procedures to be utilized for each of the design phases and detail methods of construction for constructing of the project. No formal design may commence without formal written approval of the Design and Construction Plan by the County.

5.1.1 Stages

Through coordination with the County, the Contractor shall develop an optimized construction staging plan, detailing the breakdown of each of the stages of the project. The stages shall be configured to optimize the design and construction processes, as well as minimize any impacts to the County.

The County shall participate in the development of the stages, as well as conduct a final review and approval of the stages prior to commencing with formal design activities.

5.1.2 Scheduling

The Design and Construction Plan will include scheduling for the project. The Contractor shall develop a design and construction schedule for each of the stages. The schedule will specify all start and completion dates for the design and construction of each stage. The schedule will specify the start and completion dates for all design milestones, as well as define the start and completion dates for the construction of each stage.

5.1.3 Permits

The Design and Construction Plan will also identify all permits that will be required for the project. The Contractor will be responsible for obtaining all permits for the successful design and construction of the project.

5.1.4 Utilities

The Design and Construction Plan will identify methods and procedures to be used to identify existing utilities, identify possible conflicts or issues pertaining to existing utilities as well as procedures for addressing any conflicts or issues identified. The Contractor shall fully define in the Design and Construction Plan a utility coordination plan that identifies the methods and procedures for utility coordination to be utilized by the Contractor. The Design and Construction Plan shall include a listing of all utility companies located within the project limits, as well as primary points of contact for each of the utility companies.

5.1.5 Project Management

The Design and Construction Plan shall include a detailed project management plan. The project management plan shall identify all meetings and other management tasking to be included in the project. The project management plan shall define a communications plan and establish points of contact, including all contact information for each person included in the plan. Emergency contact information shall be included. The project management plan shall include a cost estimate template that is to be used for the construction cost estimates for each stage.

5.1.6 Survey

The Contractor will be responsible for all survey work necessary to validate right-of-way for the project. The Contractor shall be responsible for preparing base mapping with correct right-of-way data included.

5.1.7 Maintenance of Traffic Plan

The Contractor will be required to develop a comprehensive Maintenance of Traffic Plan that defines all operational maintenance and traffic maintenance required during the entire length of the project. The Contractor shall submit for review and formal approval to the County two (2) copies of the Contractor's proposed overall plan and methods for performing the work including a listing of equipment and personnel anticipated for use. The Contractor's safety and traffic plan shall show the proposed methods of ensuring safety and minimum interference with the normal flow of traffic on the travel lanes. Approval of the Contractor's safety and traffic plan by the County shall not relieve the Contractor of responsibility or liability for injury to persons or damage to property caused by the operation of equipment and/or personnel. The design shall include the preparation of all maintenance of traffic plans required for each of the project stages. The detailed plans or quote of FDOT indexes shall be developed in accordance to all applicable standards and specifications, as well as requirements defined in this Scope of Services.

5.1.8 Weekly Meetings

The Contractor shall meet with the County and representatives once per week to provide a weekly plan of work, and the associated traffic management measures to be implemented between each weekly meeting.

5.1.9 Lane Closures

As a general rule, lane closures will not be permitted between 6:00 am and 10:00 am and 3:00 pm and 7 pm., on any roadway on any day of the week unless approved by the County. If the Contractor wants to close lanes on any roadway during hours other than those permitted, the Contractor shall submit a request to the County with a detailed traffic control plan at least seven (7) calendar days prior to the desired closure date. Lane closures at times other than those permitted above will not be allowed without the written approval of the County. If, in the opinion of the County any lane closure(s) causes extended traffic congestion, the County may direct the Contractor to open any temporary lane closure(s) until traffic is returned to an acceptable flow as determined by the County.

5.1.10 Maintenance of Traffic Staffing

The Contractor shall provide capable, experienced personnel with the ability to interpret traffic engineering standards and applications, and to make judgments in the field as situations warrant. Personnel shall be certified by the American Traffic Safety Services Association under its Worksite Traffic Supervisor Certification Program (or an equal approved by the County) and FDOT procedure 750-030-006(a), which are hereby incorporated by reference and made a part of the Contract as if fully set forth herein. The contractor shall ensure that its workers and subcontractors use orange vests/garments conforming to ANSI/ISEA 107-1999 Standard Class 3 whenever workers are within 15 feet of the edge of the travel way. Class 3 vest garments will be required for all speeds.

An off-duty law enforcement officer with a marked law enforcement vehicle shall be provided by the Contractor at each location where lane closures are in effect unless otherwise approved by the County.

5.1.11 Traffic Control Devices

Traffic control devices, warning devices and barriers shall be kept in the correct position and clearly visible and clean at all times. Batteries in barricades equipped with flashers shall be checked and replaced if necessary to ensure proper operation. Damaged, defaced, or dirty devices or barriers shall immediately be repaired, replaced or cleaned as directed by the County.

The Contractor shall be responsible for performing regular inspection (not less than every other day including weekends and holidays) of all traffic control devices installed and replacing all equipment and devices not conforming with the specified standards during that inspection.

6 MATERIAL STAGING

All staging of construction materials and equipment shall be the responsibility of the Contractor. The County will not be able to provide staging locations.

7 DOCUMENTATION

The Contractor shall be responsible for all project documentation necessary to fully document the project, including the design, materials used, construction, the as-built plans and the operations and maintenance of the constructed facilities. Project documentation shall include, but is not limited to:

- base mapping
- design plans,
- product information and specifications,
- maintenance of traffic plans,
- operations and maintenance manuals,
- record drawings (as-builts),
- cable testing results

8 FURNISH AND INSTALL

The fiber optic and conduit system shall be measured for payment per site inclusive of conduit, fiber optic cable, terminating components, buried cable warning tape, and locate wire that is furnished, installed, designated with markers, grounded, and protected. The conduit and fiber optic cable system shall be warranted, made fully operational, and tested according to this specification.

The contract unit price, furnished and installed, will include furnishing, placement, and testing of all materials and equipment, and for all tools, labor, equipment, hardware, operational software package(s) and firmware(s), supplies, support, personnel training, shop drawings, documentation, and incidentals necessary to complete the work.

The contract price per site inclusive of conduit, fiber optic cable, terminating components, locate wire, or route markers and each pull box or splice box, furnished, will include all equipment plus all shipping and handling costs involved in delivery.

The contractor's per site price of conduit, installed, will include all miscellaneous hardware and materials, labor, trenching, backfilling, drilling, boring, testing, and restoration materials necessary for a complete and accepted installation.

9 BASIS OF PAYMENT

Prices and payments will be full compensation for all work described herein or shown in the plans.

PROPOSAL SIGNATURE FORM
RFP #10-1701BS

_____ Firm Name	Mailing Address: _____
_____ e-mail address	_____ Street Address
(_____) _____ Telephone Number	_____ City, State, Zip Code

The undersigned attests to his (her, their) authority to submit this proposal and to bind the firm herein named to perform as per agreement. If the firm is selected by the County the undersigned certifies that he/she will negotiate in good faith to establish an agreement to provide fiber optical cable installation and interconnection according to the requirements of this RFP #10-1701BS.

_____ Signature	_____ Witness Signature
Date: _____	Date: _____
_____ Name and Title of Above Signer	_____ Name and Title of Above Signer

Address of any branch office
proposed to service Manatee County other than above

Name and Title of Firm's Representative for Manatee County

Telephone Number of Firm's Representative for Manatee County

ATTACHMENT "A"

RESOLUTION R-93-22

A RESOLUTION OF THE BOARD OF COUNTY COMMISSIONERS OF MANATEE COUNTY, FLORIDA, IMPLEMENTING ¶3-101(7)3(1) OF THE MANATEE COUNTY PROCUREMENT CODE (ORDINANCE 84-02 AS AMENDED) TO ESTABLISH MINIMUM REQUIREMENTS FOR BIDDERS WITH RESPECT TO MAINTAINING A DRUG FREE WORKPLACE; REQUIRING WRITTEN CERTIFICATION TO THE COUNTY OF COMPLIANCE WITH THE REQUIREMENTS ESTABLISHED HEREIN; AND PROVIDING FOR SEVERABILITY AND EFFECTIVE DATE.

WHEREAS, the Board of County Commissioners of Manatee County recognizes that substance abuse is a complex societal problem that continues to threaten the welfare of the residents and community; and

WHEREAS, the Board of County Commissioners considers substance abuse on the job to be an unsafe and counter-productive work practice; and

WHEREAS, consistent with its policy to promote a safe work environment and encourage personal health for all citizens of Manatee County, the Commission finds it necessary to combat substance abuse in the workplace by promoting education and awareness; and

WHEREAS, consistent with the Drug Free Workplace Act (§112.0455, Florida Statutes) and policies applicable to Manatee County employees pursuant to Resolution R-93-10, the Board of County Commissioners of Manatee County has determined that it is necessary and in the best interest of the County to adopt the drug free workplace requirements for persons or entities contracting with Manatee County; and

WHEREAS, ¶3-101(7)B of the Manatee County procurement Code (Ordinance 84-02, as amended) authorizes the adoption of requirements for maintaining a drug free workplace applicable to persons or entities bidding on contracts with Manatee County.

NOW, THEREFORE, BE IT RESOLVED by the Board of County Commissioners of Manatee County, Florida, as follows:

1. **Certification Required:** No person or entity submitting a bid pursuant to ¶3-101 shall be awarded or receive a county contract for public improvements, procurement of goods or services (including professional services) or a county lease, franchise,

concession or management agreement, unless such person or entity has submitted a written certification to the county that it will provide a drug free workplace by:

- a. providing a written statement to each employee notifying such employee that the unlawful manufacture, distribution, dispensation, possession or use of a controlled substance as defined in §893.02(4), Florida statutes, as the same may be amended from time to time, in the person's or entity's workplace is prohibited specifying the actions that will be taken against employees for violation of such prohibition. Such written statement shall inform employees about:
 - (i) the dangers of drug abuse in the workplace;
 - (ii) the person's or entity's policy of maintaining a drug free environment at all its workplaces, including but not limited to all locations where employees perform any task relating to any portion of such contract, business transaction or grant;
 - (iii) any available drug counseling, rehabilitation, and employee assistance programs; and
 - (iv) the penalties that may be imposed upon employees for drug abuse violations.
- b. Requiring the employee to sign a copy of such written statement to acknowledge his or her receipt of same and advice as to the specifics of such policy. Such person or entity shall retain the statements signed by its employees. Such person or entity shall also post in a prominent place at all of its workplaces a written statement of it's policy containing the foregoing elements (i) through (iv).
- c. Notifying the employee in the statement required by subsection 1. that as a condition of employment the employee will:
 - (i) abide by the terms of the statement; and
 - (ii) notify the employer of any criminal drug statute conviction for a violation occurring in the workplace no later than five (5) days after such a conviction.

- d. At all times pertinent to the performance of any contract with Manatee County, notify the county within ten (10) days after receiving notice under subsection c. from an employee or otherwise receiving actual notice of such conviction.
 - e. Imposing appropriate personnel action against such employee up to and including termination; or requiring such employee to satisfactorily participate in a drug abuse assistance or rehabilitation program approved for such purposes by a federal, state or local health, law enforcement, or other appropriate agency.
 - f. Making a good faith effort to continue to maintain a drug free workplace through implementation of sections a. through e. of this subsection.
2. **Severability.** If any part, section, subsection, or other portion of this Resolution, or any application thereof to any person or circumstances declared to be void, unconstitutional, or invalid for any reason, such part, section, subsection, or other portion, or the prescribed application thereof, shall be severable, and the remaining provisions of this Resolution, and all applications thereof not having been declared void, unconstitutional or invalid, shall remain in full force and effect.
 3. **Effective Date.** This Resolution shall take effect ninety (90) days after adoption by the Board of County Commissioners.

ADOPTED in open session by a majority of the duly elected Board of County Commissioners of Manatee County, Florida, this 2nd day of February, 1993.

**ORIGINAL DOCUMENT SIGNED BY BOARD OF COUNTY COMMISSIONERS
CHAIRMAN MS. LARI ANN HARRIS ON FEBRUARY 2, 1993 AND IS ON FILE AT
MANATEE COUNTY CLERK'S OFFICE.**

<R93 - 22>

Attachment "B"

SECTION 00491

Drug Free Work Place Certification

SWORN STATEMENT PURSUANT TO SECTION 6-101(7)(B),
MANATEE COUNTY PURCHASING CODE, ON DRUG FREE WORK PLACES

THIS FORM MUST BE SIGNED AND SWORN TO IN THE PRESENCE OF A NOTARY PUBLIC OR OTHER OFFICIAL AUTHORIZED TO ADMINISTER OATHS.

This sworn statement is submitted to the Manatee County Board of County Commissioners by _____ [print individual's name and title]

_____ for _____
[print name of entity submitting sworn statement]

whose business address is _____

and (if applicable) its Federal Employer Identification Number (FEIN) is _____ (If the entity has no FEIN, include the Social Security Number of the individual signing this sworn statement: _____)

I understand that no person or entity shall be awarded or receive a county contract for public improvements, procurement of goods or services (including professional services) or a county lease, franchise, concession or management agreement, or shall receive a grant of county monies unless such person or entity has submitted a written certification to the County that it will provide a drug free work place by:

(1) providing a written statement to each employee notifying such employee that the unlawful manufacture, distribution, dispensation, possession or use of a controlled substance as defined by 893.02(4), Florida Statutes, as the same may be amended from time to time, in the person's or entity's work place is prohibited specifying the actions that will be taken against employees for violation of such prohibition. Such written statement shall inform employees about:

- (i) the dangers of drug abuse in the work place;
- (ii) the person's or entity's policy of maintaining a drug free environment at all its work places, including but not limited to all locations where employees perform any task relating to any portion of such contract, business transaction or grant;
- (iii) any available drug counseling, rehabilitation, and employee assistance programs; and
- (iv) the penalties that may be imposed upon employees for drug abuse violations.

(2) Requiring the employee to sign a copy of such written statement to acknowledge his or her receipt of same and advice as to the specifics of such policy. Such person or entity shall retain the statements signed by its employees. Such person or entity shall also post in a prominent place at all of its work places a written statement of its policy containing the foregoing elements (i) through (iv).

(3) Notifying the employee in the statement required by subsection (1) that as a condition of employment the employee will:

- (i) abide by the terms of the statement; and
- (ii) notify the employer of any criminal drug statute conviction for a violation occurring in the work place no later than five (5) days after such a conviction.

(4) Notifying the County within ten (10) days after receiving notice under subsection (3) from an employee or otherwise receiving actual notice of such conviction.

(5) Imposing appropriate personnel action against such employee up to and including termination; or requiring such employee to satisfactorily participate in a drug abuse assistance or rehabilitation program approved for such purposes by a federal, state, or local health, law enforcement, or other appropriate agency.

(6) Making a good faith effort to continue to maintain a drug free work place through implementation of sections (1) through (5) stated above.

I UNDERSTAND THAT THE SUBMISSION OF THIS FORM TO THE CONTRACTING OFFICER FOR MANATEE COUNTY IS VALID THROUGH DECEMBER 31 OF THE CALENDAR YEAR IN WHICH IT IS FILED. I ALSO UNDERSTAND THAT ANY CONTRACT OR BUSINESS TRANSACTION SHALL PROVIDE FOR SUSPENSION OF PAYMENTS, OR TERMINATION, OR BOTH, IF THE CONTRACTING OFFICER OR THE COUNTY ADMINISTRATOR DETERMINES THAT:

- (1) Such person or entity has made false certification.
- (2) Such person or entity violates such certification by failing to carry out the requirements of sections (1), (2), (3), (4), (5), or (6) or subsection 3-101(7)(B); or
- (3) Such a number of employees of such person or entity have been convicted of violations occurring in the work place as to indicate that such person or entity has failed to make a good faith effort to provide a drug free work place as required by subsection 3-101(7)(B).

[Signature]

STATE OF FLORIDA
COUNTY OF _____

Sworn to and subscribed before me this _____ day of _____, 20____ by.

Personally known _____ OR Produced identification _____
[Type of identification]

Notary Public Signature My commission expires _____

[Print, type or stamp Commissioned name of Notary Public]

Attachment C

PUBLIC CONTRACTING AND ENVIRONMENTAL CRIMES CERTIFICATION

SWORN STATEMENT PURSUANT TO ARTICLE V MANATEE COUNTY PURCHASING CODE

THIS FORM MUST BE SIGNED AND SWORN TO IN THE PRESENCE OF A NOTARY PUBLIC OR OTHER OFFICIAL AUTHORIZED TO ADMINISTER OATHS.

This sworn statement is submitted to the Manatee County Board of County Commissioners by _____ [print individual's name and title]

for _____ [print name of entity submitting sworn statement]

whose business address is: _____

and (if applicable) its Federal Employer Identification Number (FEIN) is _____. If the entity has no FEIN, include the Social Security Number of the individual signing this sworn statement: _____

I understand that no person or entity shall be awarded or receive a county contract for public improvements, procurement of goods or services (including professional services) or a county lease, franchise, concession or management agreement, or shall receive a grant of county monies unless such person or entity has submitted a written certification to the County that it has not:

(1) been convicted of bribery or attempting to bribe a public officer or employee of Manatee County, the State of Florida, or any other public entity, including, but not limited to the Government of the United States, any state, or any local government authority in the United States, in that officer's or employee's official capacity; or

(2) been convicted of an agreement or collusion among bidders or prospective bidders in restraint of freedom of competition, by agreement to bid a fixed price, or otherwise; or

(3) been convicted of a violation of an environmental law that, in the sole opinion of the County's Purchasing Director, reflects negatively upon the ability of the person or entity to conduct business in a responsible manner; or

(4) made an admission of guilt of such conduct described in items (1), (2) or (3) above, which is a matter of record, but has not been prosecuted for such conduct, or has made an admission of guilt of such conduct, which is a matter of record, pursuant to formal prosecution. An admission of guilt shall be construed to include a plea of nolo contendere; or

(5) where an officer, official, agent or employee of a business entity has been convicted of or has admitted guilt to any of the crimes set forth above on behalf of such and entity and pursuant to the direction or authorization of an official thereof (including the person committing the offense, if he is an official of the business entity), the business shall be chargeable with the conduct herein above

Attachment C

PUBLIC CONTRACTING AND ENVIRONMENTAL CRIMES CERTIFICATION (Continued)

set forth. A business entity shall be chargeable with the conduct of an affiliated entity, whether wholly owned, partially owned, or one which has common ownership or a common Board of Directors. For purposes of this Form, business entities are affiliated if, directly or indirectly, one business entity controls or has the power to control another business entity, or if an individual or group of individuals controls or has the power to control both entities. Indicia of control shall include, without limitation, interlocking management or ownership, identity of interests among family members, shared organization of a business entity following the ineligibility of a business entity under this Article, or using substantially the same management, ownership or principles as the ineligible entity.

Any person or entity who claims that this Article is inapplicable to him/her/it because a conviction or judgement has been reversed by a court of competent jurisdiction, shall prove the same with documentation satisfactory to the County's Purchasing Director. Upon presentation of such satisfactory proof, the person or entity shall be allowed to contract with the County.

I UNDERSTAND THAT THE SUBMISSION OF THIS FORM TO THE CONTRACTING OFFICER FOR MANATEE COUNTY IS VALID THROUGH DECEMBER 31 OF THE CALENDAR YEAR IN WHICH IT IS FILED. I ALSO UNDERSTAND THAT ANY CONTRACT OR BUSINESS TRANSACTION SHALL PROVIDE FOR SUSPENSION OF PAYMENTS, OR TERMINATION, OR BOTH, IF THE CONTRACTING OFFICER OR THE COUNTY ADMINISTRATOR DETERMINES THAT SUCH PERSON OR ENTITY HAS MADE FALSE CERTIFICATION.

[Signature]

STATE OF FLORIDA
COUNTY OF _____

Sworn to and subscribed before me this _____ day of _____, 2008 by _____

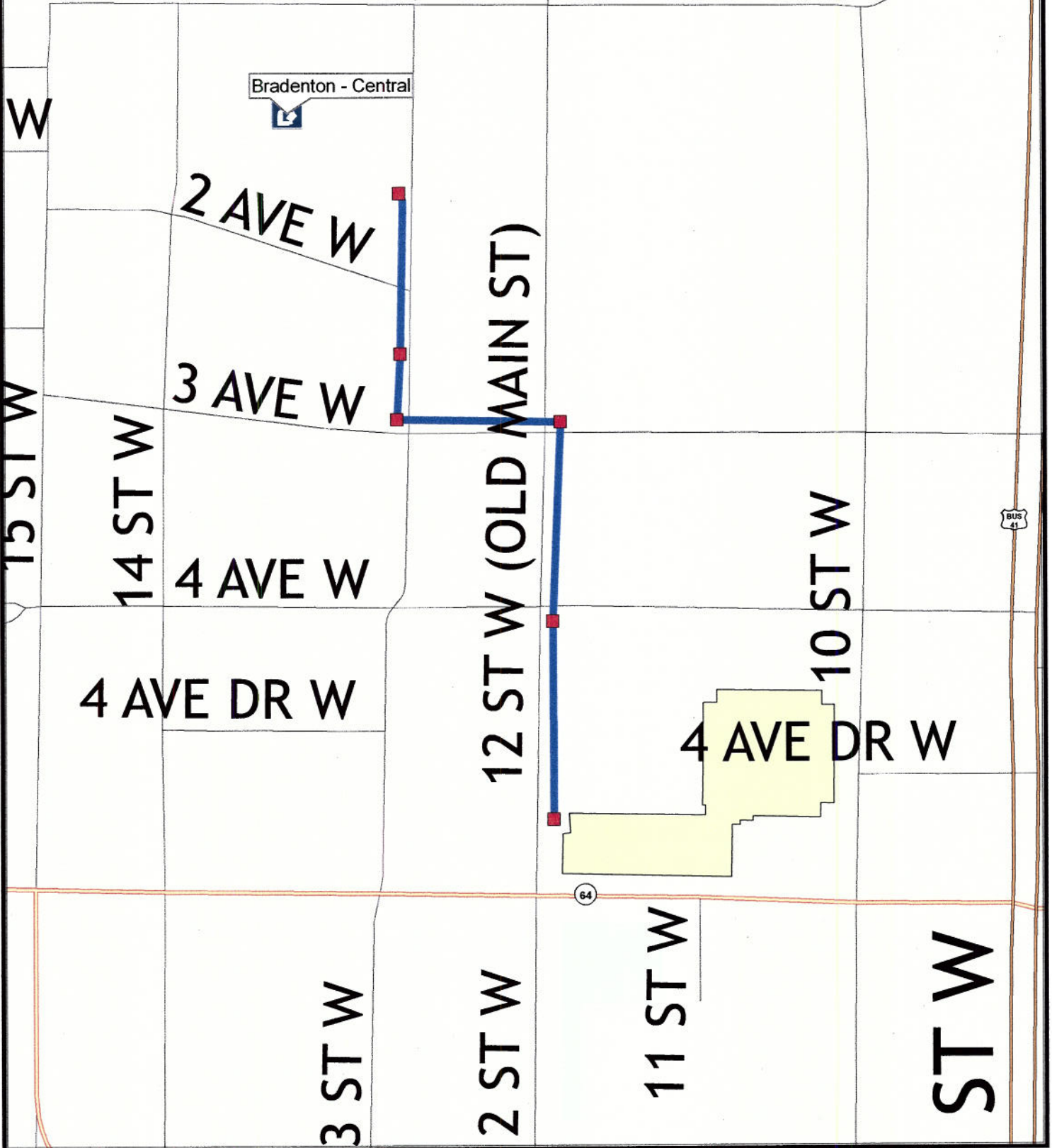
[Print, type or stamp Commissioned name of Notary Public]

Signatory Requirement - In the case of a business entity other than a partnership or a corporation, this affidavit shall be executed by an authorized agent of the entity. In the case of a partnership, this affidavit shall be executed by the general partner(s). In the case of a corporation, this affidavit shall be executed by the corporate president.

ATTACHMENT "D"
AERIAL VIEWS OF LIBRARIES



1 AVE W (BARCARROTA AVE)



Bradenton - Central

BUS 41

64

W

15 ST W
14 ST W

14 ST W

2 AVE W

3 AVE W

4 AVE W

4 AVE DR W

12 ST W (OLD MAIN ST)

10 ST W

4 AVE DR W

3 ST W

2 ST W

11 ST W

ST W

CENTRAL LIBRARY DRAWING 1A



Existing Transition Box
12"X12"X6

Existing Conduit

Existing Pull Box

2nd Ave W

Manatee County Geographic Information Systems

0

0.009mi

13th St W

LAMB SUTTON PARK

6th St W

PALMETTO LIBRARY DRAWING 2A

Existing pull box

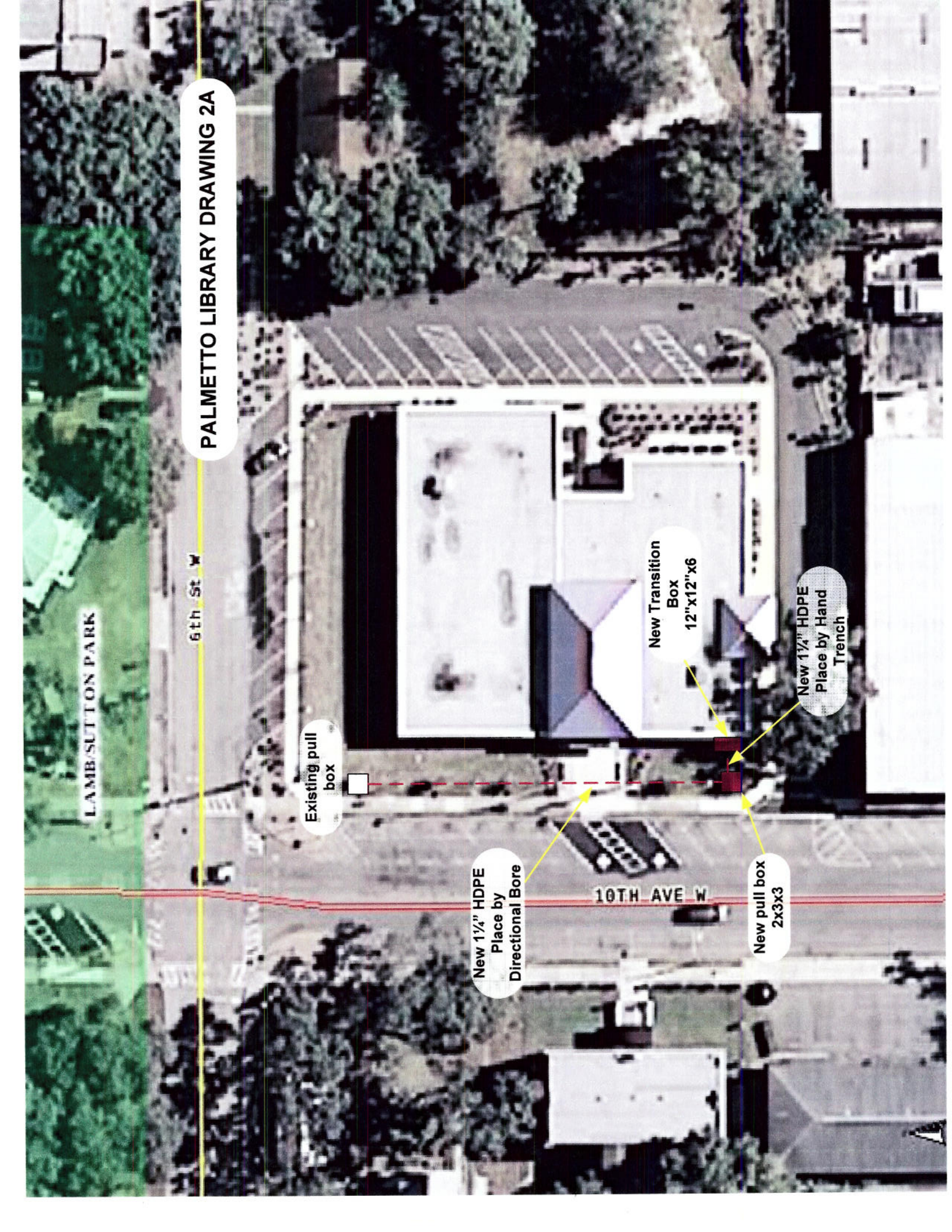
New 1 1/4" HDPE Place by Directional Bore

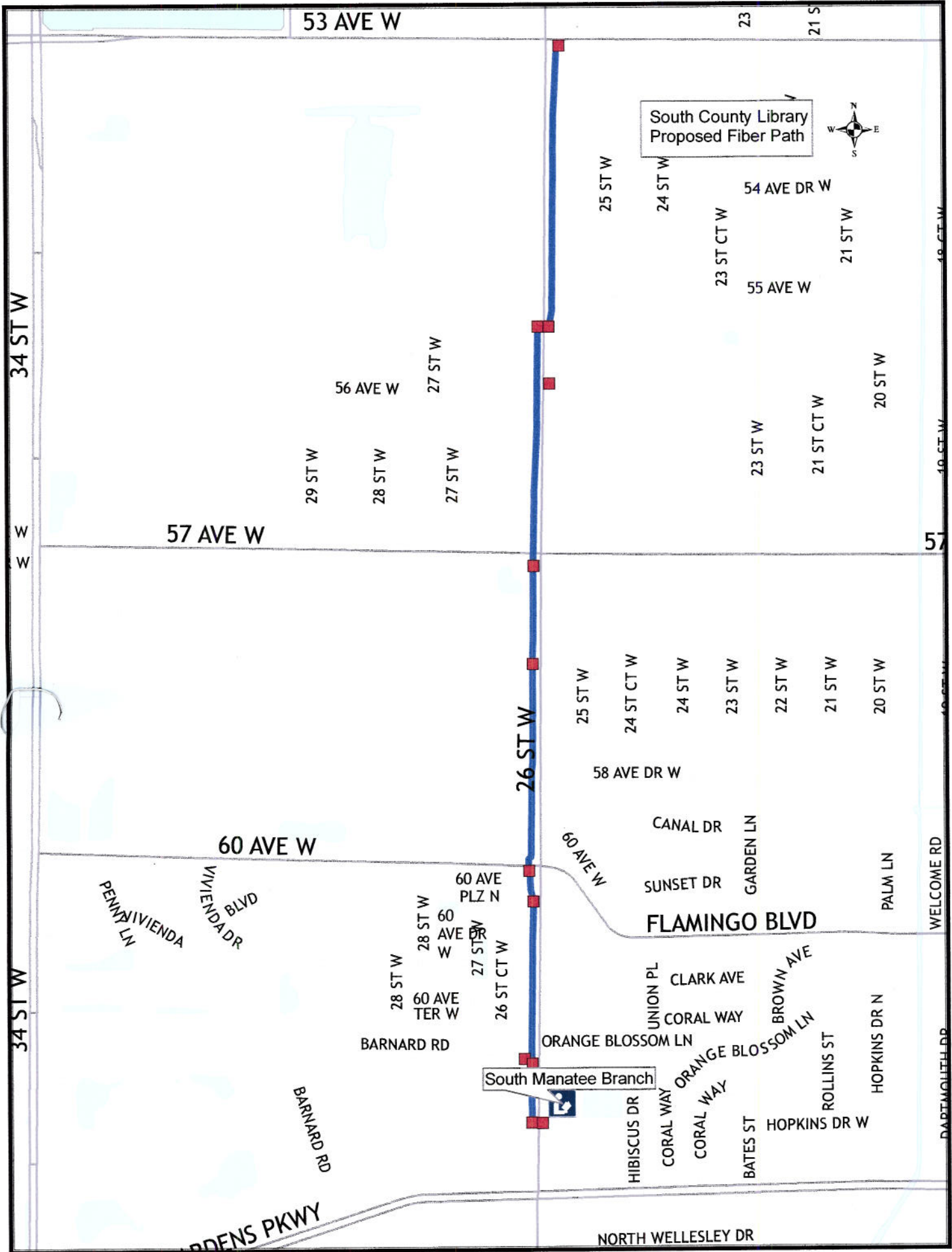
New Transition Box 12"x12"x6

New pull box 2x3x3

New 1 1/4" HDPE Place by Hand Trench

10TH AVE W





**SOUTH COUNTY LIBRARY
DRAWING 3A**

**New Transition
Box
12" x 12" x 6"**

**New 1 1/4" HDPE
Place by
Directional Bore**

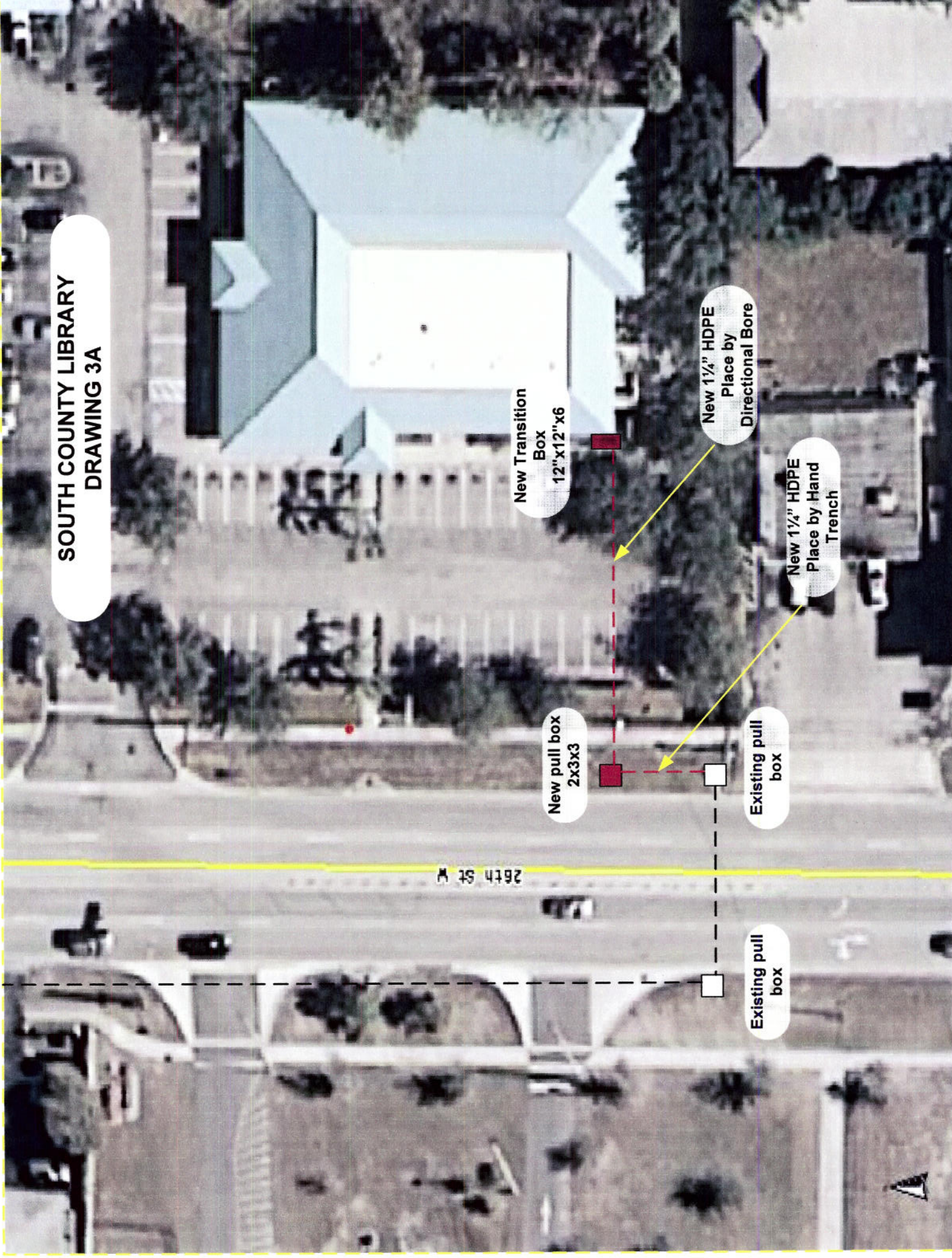
**New 1 1/4" HDPE
Place by Hand
Trench**

**New pull box
2x3x3**

**Existing pull
box**

**Existing pull
box**

26th St W



**BRADEN RIVER LIBRARY
DRAWING 4A**

New Transition
Box
12"x12"x6

New 1 1/2" HDPE
Pipe by Trench

New pull box
2x3x3

New 1 1/2" HDPE
Pipe by
Directional Bore

Existing pull
box

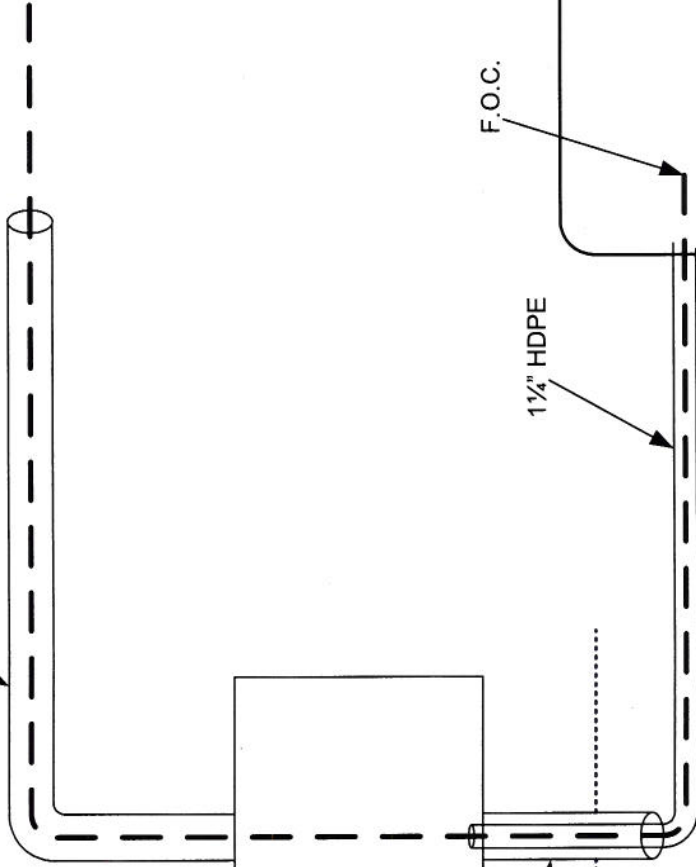


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ATTACHMENT "E"
ASSOCIATED EQUIPMENT LAYOUTS
&
PRODUCT SPECIFICATIONS

**BUILDING ENTRANCE
(TYPICAL)**

2" EMT conduit placed to
data rack / backboard area.
Stub below ceiling.



12"x12"x6"
Metal NEMA
rated transition
box. Wall
mounted.

2" PVC
Length as
needed.
Stub Below
Grade.

F.O.C.

1 1/4" HDPE

2X3X3
PULL BOX

