

Lee County Board Of County Commissioners
Agenda Item Summary

Blue Sheet No. 20020435

1. REQUESTED MOTION:

ACTION REQUESTED: Approve the utilization of piggybacking from Charlotte County, Bid #00-281/Contract #2000000281, for Wastewater Collection System Sewer Rehabilitation to Slip-line approx. 11,459 LF of Gravity Sewer Mains in Waterway Estates, with Azurix North America Underground Infrastructure Inc., in the amount of \$487,692.000.

WHY ACTION IS NECESSARY: In accordance with the Lee County Contract Manual, Section 5: Unique Services, 5.0 Piggybacking, The Board must approve all piggyback services over \$50,000.00.

WHAT ACTION ACCOMPLISHES: By allowing the department to piggyback onto the Charlotte County contract it will provide Lee County Utilities to complete the needed services before the rainy season arrives and with an estimated savings of \$22,500 per year in operating costs and a reduction of 0.025MGD of groundwater going into our system.

2. DEPARTMENTAL CATEGORY:

10. Utilities
COMMISSION DISTRICT #:

C10I

3. MEETING DATE:

05-07-2002

4. AGENDA:

5. REQUIREMENT/PURPOSE:
(Specify)

6. REQUESTOR OF INFORMATION:

CONSENT
 ADMINISTRATIVE
 APPEALS
 PUBLIC
 WALK ON
TIME REQUIRED:

STATUTE
 ORDINANCE
 ADMIN. CODE AC-4-4
 OTHER

A. COMMISSIONER
B. DEPARTMENT Public Works
C. DIVISION Utilities
BY: Rick Diaz, Director

[Handwritten signature]
4/22/02

7. BACKGROUND:

The Contracts Management office received a request from Lee County Utilities to utilize piggybacking from Charlotte County, Bid# 00-281/Contract #2000000281, for Wastewater Collection System Sewer Rehabilitation to Slip-line approx. 11,459 LF of Gravity Sewer Mains in Waterway Estates.

Section 5: Unique Services, 5.0 Piggybacking, of the Lee County Contract Manual allows Lee County to utilize the bids of other Governmental entities as long as the procurement has gone through their competitive bidding process.

Lee County Utilities and Contracts Management have reviewed and verified the documents used. In addition, permission has been Received from Charlotte County to utilize this bid. Therefore, approval is requested to utilize piggybacking from the Charlotte County Bid, which has gone through their formal bid process, for Wastewater Collection System Sewer Rehabilitation. Lee County Utilities Will utilize this bid to slip-line approximately 11,459 LF of gravity sewer mains in Waterway Estates, with Azurix North America Underground Infrastructure Inc., in the amount of \$487,692.000. The contractor will be required to execute the County's standard Construction contract, provide a public construction bond and insurance.

Funds are available in account #20724848720.506310 and #20724748720.506310RSM.

Attachments: 1. Department request to piggyback
2. Charlotte County Approval & Contract

8. MANAGEMENT RECOMMENDATIONS:

9. RECOMMENDED APPROVAL:

A Department Director	B Purchasing or Contracts	C Human Resources	D Other	E County Attorney	F Budget Services				G County Manager
					OA	OM	Risk	GC	
<i>[Signature]</i> 4/23/02	<i>[Signature]</i> 4/22/02	N/A		<i>[Signature]</i> 4/23/02	<i>[Signature]</i> 4/24/02	<i>[Signature]</i> 4/24/02	<i>[Signature]</i> 4/24	<i>[Signature]</i> 4.24.02	<i>[Signature]</i> 4.23.02

10. COMMISSION ACTION:

____ APPROVED
____ DENIED
____ DEFERRED
____ OTHER

RECEIVED BY
COUNTY ADMIN.
4/23/02
4:30 pm
COUNTY ADMIN.
FORWARDED TO:
4/25/02

RECVD. 4/23/02
by CO. ATTY.
3:30 pm
CO. ATTY.
FORWARDED TO:
3:50 pm

20020435

02 MAR 15 AM 10:42

MEMORANDUM

DATE: March 11, 2002

TO: Cheri Alexander, Purchasing Agent

THRU: Rick Diaz, PE, Utilities Director

FROM: Mike Crumpton, PE, Utilities Operations Manager / PEII *(signature)*

SUBJECT: Piggy Backing of Charlotte County Contract #2000000281

Cheri,

As previously discussed, the Utilities Division would like to piggy back onto Charlotte County's Contract with Azurix so that we may slip-line approximately 11,459 LF of gravity sewer mains in the Waterway Estates area at an estimated cost of \$487,692. This will account for the slip-lining of 5 of the 9 sub-basins contained in the Initial Focus Group as identified in the December 2001 report by Source Inc., the Division's engineering consultant. As this section of the County's service area is heavily impacted by infiltration/inflow during the rainy season, the estimated savings for the proposed work is \$22,500 per year in operating costs and a reduction of 0.025 MGD of groundwater going into our system.

The funds for this project will come from Account # 20724848720.506310 entitled "Inflow and Infiltration Rehabilitation".

cc: Pat Moore, Support Services Manager
 David Sabiston, Wastewater Collections Superintendent
 Orlando Figueroa, Fiscal Manager

LEE COUNTY
 RECEIVED
 02 MAR 22 PM 1:45
 COMM DEV/PUB WKS CNTR
 FOURTH FLOOR



COUNTY OF CHARLOTTE

PURCHASING DEPARTMENT

Charlotte County Administration Center
18500 Murdock Circle
Port Charlotte, Florida 33948-1094
Phone: (941) 743-1378
Fax: (941) 743-1384

Website: www.charlottecountyfl.com

March 12, 2002

Lee County Utilities Division
Attn: Cheri Alexander, C.P.M., CPPB
P.O. Box 398
Fort Myers, FL 33902-0398

Dear Cheri:

Per your request, please accept this letter as authorization from Charlotte County for Lee County Utilities Division to "piggyback" Bid #00-281, Wastewater Collection System Rehabilitation. It is understood that Lee County Utilities Division will establish its own contract with the successful bidder, place its own orders, be invoiced therefrom and make its own payments to the successful bidder in accordance with the terms of the contract established between the Lee County Utilities Division and the successful bidder. It is also hereby mutually understood and agreed that Charlotte County is not a legally bound party to any contractual agreement made between a successful bidder and any local entity other than Charlotte County Board of County Commissioners.

If you have any questions, please feel free to contact the Charlotte County Purchasing Department at 941-743-1370.

Sincerely,

Kimberly A. Corbett, C.P.M., CPPB
Director of Purchasing



Azurix North America
Underground Infrastructure, Inc.
109 Applewood Drive
Longwood, FL 32750-3450
Telephone (407) 260-9668
Fax (407) 260-9318
FL# CU C023665

February 25, 2002

Mr. F. Ivan Velez, P.E., PE III
Lee County Environmental Services Department
Utilities Division
1500 Monroe Street
P.O. Box 398
Ft. Myers, Florida 33902-0398

Re: Sanitary Sewer Rehabilitation
Charlotte County RFB/Contract #2000000281

Dear Mr. Velez:

This letter is to confirm that Azurix North America Underground Infrastructure, Inc. is offering to extend to Lee County the current U-Liner unit prices under the same terms and conditions as contained within our contract with Charlotte County. Copies of the Charlotte County contract documents, Notice Of Acceptance and a Certificate of Insurance were provided under separate cover.

Please contact me if you require additional information.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael Cannon".

Michael Cannon, P.E.
Vice President

cc: Vic Buscaino

ACORD CERTIFICATE OF INSURANCE

PRODUCER

FRENKEL & CO., INC.
1740 Broadway
5th Floor
New York, NY 10019

Phone No. (212) 488-0200
Fax No. (917) 286-6380

INSURED

Azurix North America
Underground Infrastructura, Inc.
109 Applewood Drive
Longwood, FL 32750

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

COMPANIES AFFORDING COVERAGE

COMPANY LETTER	A	Travelers Insurance Company
COMPANY LETTER	B	Lexington and CGNU (1861)
COMPANY LETTER	C	
COMPANY LETTER	D	
COMPANY LETTER	E	

COVERAGES

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED, NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN. THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

CO LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YYYY)	POLICY EXPIRATION DATE (MM/DD/YYYY)	LIMITS
A	GENERAL LIABILITY <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS MADE <input checked="" type="checkbox"/> OCCUR. <input type="checkbox"/> OWNER'S & CONTRACTOR'S PROT. <input type="checkbox"/> <input type="checkbox"/>	GLSA260T331701	10/1/2001	10/1/2002	GENERAL AGGREGATE \$ 12,000,000 PRODUCTS-COMP/OP AGG. \$ 12,000,000 PERSONAL & ADV INJURY \$ 1,000,000 EACH OCCURRENCE \$ 1,000,000 FIRE DAMAGE (ANY ONE FIRE) \$ 1,000,000 MED. EXPENSE (ANY ONE PERSON) \$ 5,000
A	AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> NON-OWNED AUTOS <input type="checkbox"/> GARAGE LIABILITY	CAP260T329801	10/1/2001	10/1/2002	COMBINED SINGLE LIMIT \$ 1,000,000 BODILY INJURY (PER PERSON) \$ BODILY INJURY (PER ACCIDENT) \$ PROPERTY DAMAGE \$
B	EXCESS LIABILITY <input type="checkbox"/> UMBRELLA FORM <input checked="" type="checkbox"/> OTHER THAN UMBRELLA FORM	LOCX045	10/1/2001	10/1/2002	EACH OCCURRENCE \$ 10,000,000 AGGREGATE \$ 10,000,000
A	WORKER'S COMPENSATION AND EMPLOYERS LIABILITY	UB260T326201	10/1/2001	10/1/2002	<input checked="" type="checkbox"/> STATUTORY LIMITS EACH ACCIDENT \$ 1,000,000 DISEASE-POLICY LIMIT \$ 1,000,000 DISEASE-EACH EMPLOYEE \$ 1,000,000
A	OTHER CONTRACTORS EQUIPMENT	CMB295T525501	10/1/2001	10/1/2002	\$5,000,000 RENTED AND/OR LEASED EQUIPMENT

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/SPECIAL ITEMS

CERTIFICATE HOLDER

This Certificate Has Been Issued To Show Evidence of Insurance Only

CANCELLATION :

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO MAIL SUCH NOTICE SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE COMPANY, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE

[Handwritten Signature]



COUNTY OF CHARLOTTE

PURCHASING DEPARTMENT

CHARLOTTE COUNTY ADMINISTRATION CENTER
18500 MURDOCK CIRCLE
PORT CHARLOTTE, FLORIDA 33948-1094
(941) 743-1378

August 14, 2001

Mark Harris, Senior Vice President
Azurix North America Underground Infrastructure, Inc.
109 Applewood Drive
Longwood, FL 32750

Re: NOTICE OF ACCEPTANCE - CHANGE ORDER #1

Dear Mr. Harris:

This letter shall serve as notification of official acceptance by the Board of County Commissioners of Change Order #1 to Contract #00-281, Wastewater Collection System Sewer Rehabilitation, with Azurix North America Underground Infrastructure, Inc.

By acceptance of the renewal option, the parties hereby amend Contract 00-281 as follows:

Item #1 - The contract term shall be extended one (1) additional year through and including September 30, 2002.

Item #2 - All other provisions of Contract #00-281 not in conflict with this change order shall remain the same.

Your signature below represents your concurrence with and acceptance of the terms set forth in this letter and the original Contract Documents dated October 25, 2000.

This change order shall become active as of October 1, 2001 and shall remain in full force and effect through and including September 30, 2002.

If you have any questions or concerns, please do not hesitate to contact me.

Sincerely,

Kimberly A. Corbett, C.P.M., CPPB
Director of Purchasing

KAC/jo

ACCEPTED:

Mark Harris

Date:

8/20/01

cc: Richard E. Howell, Director of Utilities
Clerks Office, Minutes Division
File



COUNTY OF CHARLOTTE

PURCHASING DEPARTMENT

CHARLOTTE COUNTY ADMINISTRATION CENTER
18500 MURDOCK CIRCLE
PORT CHARLOTTE, FLORIDA 33948-1094
(941) 743-1378

October 25, 2000

Mark Harris, Senior Vice President
AZURIX NORTH AMERICA UNDERGROUND INFRASTRUCTURE, INC.
109 Applewood Drive
Longwood, FL 32750

Re: NOTICE OF ACCEPTANCE

Dear Mr. Harris:


This letter shall serve as notification of official acceptance by the Board of County Commissioners of award of Bid #2000000281, Wastewater Collection System Rehabilitation, Package B, submitted by Azurix North America Underground Infrastructure, Inc. The acceptance of your Bid Form, properly executed by an authorized representative of the company, together with the complete bid package furnished by Charlotte County, constitutes a binding contract.

Your signature below represents your concurrence with and acceptance of the terms set forth in this letter, the Instructions to Bidders, Technical Specifications & Conditions, and Bid Form submitted by your company on September 19, 2000. Purchase orders will be issued on an as-needed basis throughout the term of the contract. Payment shall be made based on the unit prices in your Bid Form and in accordance with the Prompt Payment Act of the Florida State Statutes.

The contract shall become active immediately and shall remain in full force and effect through and including September 30, 2001.

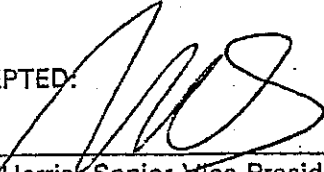
If you have any questions or concerns, please do not hesitate to contact me.

Sincerely,


Kimberly A. Churchwell, C.P.M., CPPB
Director of Purchasing

/jo

ACCEPTED:



Mark Harris, Senior Vice President

Date: 10/30/00

cc: Richard E. Howell, Director of Utilities
Caroline Lounsbury, Clerk's Minutes

SCHEDULE OF PRICES - Package "B" Only

ITEM #	ITEM DESCRIPTION	UNIT	UNIT PRICE	TOTAL
13	8" Fold-And-Formed Pipe Lining (Rear Lot Easement)	1000 LF	\$36.00	\$36,000.00
14	8" Fold-And-Formed Pipe Lining (Roadway R.O.W.)	5000 LF	\$36.00	\$180,000.00
15	10" Fold-And-Formed Pipe Lining (Rear Lot Easement)	500 LF	\$41.00	\$20,500.00
16	10" Fold-And-Formed Pipe Lining (Roadway R.O.W.)	500 LF	\$39.00	\$19,500.00
17	12" Fold-And-Formed Pipe Lining (Rear Lot Easement)	500 LF	\$52.00	\$26,000.00
18	12" Fold-And-Formed Pipe Lining (Roadway R.O.W.)	500 LF	\$47.00	\$23,500.00
19	Reinstatement Of Service Laterals	150 EA	\$250.00	\$37,500.00
20	Bypass Pumping Of Sewers - 8" Sewer	3 LS/EA	\$1.00	\$3.00
21	Bypass Pumping Of Sewers - 10"-12" Sewer	1 LS/EA	\$500.00	\$500.00
22	Root Removal In Sewer Lines - 8" Sewer	1000 LF	\$3.00	\$3,000.00
23	Root Removal In Sewer Lines - 10"-12" Sewer	500 LF	\$4.00	\$2,000.00
24	Warranty TV Survey	8000 LF	\$2.00	\$16,000.00

TOTAL FOR PACKAGE "B" → \$364,503.00

BIDDER'S NAME AZURIX NORTH AMERICA UNDERGROUND INFRASTRUCTURE, INC.

The original, plus one copy, of this form must be completed and returned

If notified of the acceptance of this Bid Form, the undersigned agrees to execute a Contract for the stated compensation in the form as prescribed by the County, within the time constraints outlined in Instructions to Bidders.

Enclosed is a cashier's check, or bid bond in the amount of \$ 5%, which is not less than 5% of the total bid price, as guarantee that the undersigned will enter into a Contract for the work/material as required in this Bid Document. Note: Failure to submit a 5% bid bond will be cause for rejection of bid.

The undersigned acknowledges receipt of the following addenda, and the cost, if any, of such revisions has been included in the price bid.

Addendum No. N/A Dated _____; Addendum No. _____, Dated _____; Addendum No. _____, Dated _____

HOLD HARMLESS AGREEMENT:

The bidding firm as indicated below, it's officers and members shall, through the signing of this document by any authorized party or agent, indemnify, hold harmless and defend Charlotte County, a political subdivision of the State of Florida, its officers, agents, employees, and volunteers from all suits and actions, including attorney's fees and all costs of litigation and judgment of every name and description brought against the County as a result of loss, damage or injury to person or property by reason of any act or failure to act by the bidding firm, its agents, servants or employees.

Type of Organization (Please Check One): Individual Ownership _____ Joint Venture _____
Partnership _____ Corporation

Name of Bidding Firm AZURIX NORTH AMERICA UNDERGROUND INFRASTRUCTURE, INC.


Mailing Address 109 APPLEWOOD DRIVE, LONGWOOD, FL 32750

Location Address 109 APPLEWOOD DRIVE

City & State LONGWOOD, FL ZIP 32750

Telephone 407-260-9668 Fax Number 407-260-9318

Name/Title of person authorized to bind the Company: MARK HARRIS, SENIOR VICE PRESIDENT

Signature of person authorized to bind the Company: 

Date: SEPTEMBER 19, 2000

BIDDER'S NAME AZURIX NORTH AMERICA UNDERGROUND INFRASTRUCTURE, INC.
The original, plus one copy, of this form must be completed and returned

SOURCE OF SUPPLY AND SUBCONTRACTORS

The following sources of supply and subcontractors shall be used for WASTEWATER COLLECTION SYSTEM REHABILITATION project:

Source of Supply	Subcontractor(s)
1. <u>CSR PIPELINE SYSTEMS - U-LINER</u>	1. <u>N/A</u>
2. <u>NATIONAL ENVIROTECH GROUP LLC - NATIONAL LINER</u>	2. _____
3. <u>AVANTI INTERNATIONAL - GROUT</u>	3. _____
4. _____	4. _____
5. _____	5. _____

DRUG FREE WORKPLACE FORM

The undersigned vendor in accordance with Florida Statute 287.087 hereby certifies that AZURIX NORTH AMERICA UNDERGROUND INFRASTRUCTURE, INC. (name of business) does:

1. Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.
2. Inform employees about the dangers of drug abuse in the workplace, the business's policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation, and employee assistance programs, and the penalties that may be imposed upon employees for drug abuse violations.
3. Give each employee engaged in providing the commodities or contractual services that are under bid a copy of the statement specified in subsection (1).
4. In the statement specified in subsection (1), notify the employees that, as a condition of working on the commodities or contractual services that are under bid, the employee will abide by the terms of the statement and will notify the employer of any conviction of, or plea of guilty or nolo contendere to, any violation of Chapter 893 or of any controlled substance law of the United States or any state, for a violation occurring in the workplace no later than five (5) days after such conviction.
5. Impose a sanction on, or require the satisfactory participation in a drug abuse assistance or rehabilitation program if such is available in the employee's community, by any employee who is so convicted.
6. Make a good faith effort to continue to maintain a drug-free workplace through implementation of this section.

As the person authorized to sign the statement, I certify that this firm complies fully with the above requirements.

Signature

ASSISTANT SECRETARY

Dated

9/19/00

BIDDER'S NAME AZURIX NORTH AMERICA UNDERGROUND INFRASTRUCTURE, INC.

The original, plus one copy, of this form must be completed and returned



**LIBERTY
BOND SERVICES**

BID BOND

Bond Number: 2000-590

KNOW ALL MEN BY THESE PRESENTS, that we **AZURIX NORTH AMERICA UNDERGROUND INFRASTRUCTURE, INC.**
as Principal, (the "Principal"), and **LIBERTY MUTUAL INSURANCE COMPANY**, a mutual company duly organized under the
laws of the Commonwealth of Massachusetts as Surety, (the "Surety"), are held and firmly bound unto
CHARLOTTE COUNTY, FLORIDA

as Obligee, (the "Obligee"), in the penal sum of **FIVE PERCENT OF THE LARGEST TOTAL AMOUNT BID-----**

----- Dollars (\$ **5%**),
for the payment of which sum well and truly to be made, the said Principal and the said Surety, bind ourselves, our heirs,
executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted a bid for
WASTEWATER COLLECTION SYSTEM REHABILITATION, BID NO. 2000000281

NOW, THEREFORE, if the Obligee shall accept the bid of the Principal within the period specified therein, or, if no period be
specified, within sixty (60) days after opening, and the Principal shall enter into a contract with the Obligee in accordance with
the terms of such bid, and give such bond or bonds as may be specified in the bidding or contract documents, or in the event
of the failure of the Principal to enter into such contract and give such bond or bonds, if the Principal shall pay to the Obligee
the difference in money not to exceed the penal sum hereof between the amount specified in said bid and such larger amount
for which the Obligee may in good faith contract with another party to perform the work covered by said bid, then this obligation
shall be null and void; otherwise to remain in full force and effect. In no event shall the liability hereunder exceed the penal sum
hereof.

DATED as of this 20TH day of SEPTEMBER, 19 2000.

**AZURIX NORTH AMERICA UNDERGROUND
INFRASTRUCTURE, INC.** (Seal)
Principal

Principal

WITNESS/ATTEST:

Michael Cannon
ASSISTANT SECRETARY

By: *MS*
Name: **MARK HARRIS**
Title: **VICE PRESIDENT**

COUNTERSIGNING FL RESIDENT AGENT
AON RISK SERVICES OF FLORIDA
MIAMI, FL

LIBERTY MUTUAL INSURANCE COMPANY (Seal)
(Surety)

BY: *William L. Parker*
William L. Parker

By: *Cheryl Baxley*
Cheryl Baxley, Attorney-In-Fact



PURCHASING DEPARTMENT

Charlotte County Administration Center
18500 Murdock Circle
Port Charlotte, Florida 33948-1094

NOTICE OF AVAILABILITY OF BID SPECIFICATIONS

**REQUEST FOR BIDS
CHARLOTTE COUNTY, FLORIDA**

The County of Charlotte will be receiving sealed bids at the Purchasing Department, Suite 344, Charlotte County Administration Center, 18500 Murdock Circle, Port Charlotte, Florida 33948-1094 (941-743-1379), for:

**BID NO. 2000000281
WASTEWATER COLLECTION SYSTEM REHABILITATION**

**PRE-BID MEETING: 3:00 p.m., SEPTEMBER 6, 2000
Purchasing Department Conference Room**

**BID OPENING: 2:00 p.m., SEPTEMBER 20, 2000
PURCHASING DEPARTMENT CONFERENCE ROOM**

This is an annual contract for the rehabilitation of existing sanitary sewer pipes, utilizing one or more of the following four technologies: cured-in-place pipe lining, PE fold-and-form pipe lining, chemical grout, or fold-and-form PVC or PVC alloy pipe lining. Complete Bid Documents may be obtained by contacting Judy Oleckniche, Senior Contract Specialist, at (941) 743-1379.

Charlotte/AM and Englewood/AM
Sarasota Herald-Tribune
August 24 & August 31, 2000

BID 2000000281

Charlotte County Purchasing Department
18500 Murdock Circle
Port Charlotte, Florida 33948-1094
941-743-1378

STATEMENT OF NO BID

If you **do not** intend to bid on this commodity/service, please return this form to the above address immediately. If this statement is not completed and returned, your company may be deleted from the Charlotte County Vendors' list for this commodity/service.

We the undersigned, have declined to bid on requested service Bid #2000000281, WASTEWATER COLLECTION SYSTEM REHABILITATION for the following reason:

- Specifications too "tight", i.e. geared toward one brand or manufacturer only (explain below).
- Insufficient time to respond to the Invitation to Bid.
- We do not offer this product or service.
- Our schedule would not permit us to perform.
- Unable to meet bond/insurance requirements.
- Unable to meet specifications.
- Specifications are unclear (explain below).
- Remove us from your vendors' list for this commodity/service.
- Other (specify below).

Remarks: _____

Company name: _____

Signature: _____

Telephone: _____ Date: _____

Jo

BID 2000000281

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BID NO. 2000000281

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This entire package is printed on recycled paper

**INSTRUCTIONS TO BIDDERS
WASTEWATER COLLECTION SYSTEM REHABILITATION
BID NO. 2000000281**

B-01 QUALIFICATIONS OF BIDDERS: It is the intent of the County to award this contract to the lowest responsive, responsible bidder, qualified by experience and capable of providing collateral as bid bond acceptable to the County.

B-02 GENDER DESIGNATION: The County and the Contractor are treated throughout the Contract Documents as if each were of the singular number and masculine gender.

B-03 EXAMINATION OF CONSTRUCTION DOCUMENTS/SITE: Prior to the submission of a bid form, bidders shall examine the documents, visit the site of the work, and fully inform themselves as to all existing conditions and limitations that affect the work to be performed under this contract.

A. Examination of Documents - The bidding contractor is instructed to carefully examine the bid package, including the Request for Bids, Instructions to Bidders, Technical Specifications & Conditions, Special Provisions, General Provisions, Insurance Requirements, Permit Fees, Maintenance of Traffic Policy (M.O.T.), Bid Form, Plans and all other related bid documents, including all modifications thereof, incorporated in the bid package.

Discrepancies, omissions, or questions about the intent of the documents should be submitted to the Purchasing Department in written form as a request for interpretation no later than five days prior to bid opening (or shall be verbally addressed at the pre-bid conference).

B. Examination of Site: Prior to submitting a bid form, each bidder shall examine the site and all conditions thereon. All bid forms shall be presumed to include all such existing conditions as may affect any work to be done on this project. Failure to familiarize himself with such conditions will in no way relieve the successful bidder from the necessity of furnishing any materials or performing any work that may be required to complete the work in accordance with the drawings and Specifications.

C. Interpretations of any of the bid documents or the project will be in the form of a written addendum. The County will attempt to notify all prospective bidders of the issuance of addenda, however, it is the responsibility of the bidder, prior to submitting his bid, to contact the Purchasing Department to determine if addenda were issued, acknowledging and incorporating it into their bid. Receipt of any addenda by each bidder must be acknowledged on the bid form, indicating the addendum number and date of issue, therein becoming a part of the contract. No oral explanations shall be binding.

IB-04 PREPARATION AND SUBMISSION OF BID FORM REQUIREMENTS: Bid Form: Bid Forms shall be made on forms supplied by the County, or reasonable facsimile thereof and attached thereto, or as otherwise specified. Indicate the number of calendar days required to complete the project (unless length of time required for completion is identified by the County in the Bid Form), and acknowledgment of receipt of any addenda received during the bid period.

Each bid must give the full business address of the bidder and state whether bidder is an individual, corporation or partnership. Bid Forms by a corporation must be signed in the name of the corporation, followed by the original signature and designation of the officer or other person authorized to bind the corporation.

Bid Forms by partnerships shall show the names of all partners. The partnership title shall be followed by the original signature of each partner.

Any erasures or other corrections in the bid form must be explained or noted over the signature of the bidder. Bid Forms containing any conditions, omissions, unexplained erasures, alterations, or irregularities of any kind may be rejected by the County.

Bid Forms shall be submitted sealed, and the envelope/package clearly marked with the Bid Number and the Name and Business Address of the individual/firm submitting the bid. Bids postmarked prior to said time and date but not received shall not be considered and will be returned to bidder unopened, with explanation.

BID 2000000281

Bid Guarantee: Each bid must be accompanied by a bid bond, cashier's check or irrevocable letter of credit in the amount not less than 5% of the total amount of the bid as a guarantee that the bidder will not withdraw his bid for a period of sixty (60) days after the scheduled opening of bids. Cashier's Checks/Letters of Credit (as bid bond) will be returned to all bidders after award of bid.

IB-05 BID MODIFICATIONS: Bid modifications will be accepted from a bidder only if received in writing, properly signed by an officer/partner of the bidder's firm, whichever is applicable, and received either with or after presentation of the bid, up until the opening of the bids. Bid modifications must be identified as such and will be opened with the bidder's bid form.

IB-06 WITHDRAWAL OF BIDS: Bids may be withdrawn by request of the bidder prior to the time fixed for opening. Error or negligence on the part of the bidder in preparing the bid confers no right for the withdrawal of the bid after it has been opened.

IB-07 BID TABULATION: All bid tabulations shall be posted in the Charlotte County Purchasing Department reception area, 18500 Murdock Circle, Suite 344, Port Charlotte, within ten (10) days after opening. Those bidders interested in receiving a copy of the unofficial results of this bid may contact the Purchasing Department's Automated FaxBack System at (941) 623-1034, and request Current Solicitations, Document Number 002814. No verbal inquiries will be addressed.

IB-08 RESERVED RIGHTS: The County reserves the right to accept or reject any and/or all bids, to waive irregularities and technicalities, and to request resubmission of bids. Also, the County reserves the right to accept all or any part of the bid and to increase or decrease quantities to meet additional or reduced requirements of the County. Any sole response received the first submission date may be rejected by the County depending on available competition and timely needs of the County.

IB-09 FORM OF CONTRACT: The submitted Bid Form signed by the Bidder, together with the complete bid package furnished by the County, shall constitute a binding contract. The Bidder shall be required to perform according to the Bidder's submitted Bid Form and the County's bid package when a purchase order, signed by the Director of Purchasing or his/her designee, is transmitted to the Bidder. The transmitted purchase order shall serve as both a Notice of Acceptance and Notice to Proceed to the Bidder. Failure to comply with the conditions set forth in the purchase order shall be deemed a breach of contract subjecting the Bidder to forfeiture of the bid bond or other posted security and other possible penalties.

IB-10 NOTICE TO PROCEED/DELIVERY: A pre-construction meeting will be called, at which time a starting date will be determined. A Notice to Proceed, or Purchase Order, shall be issued bearing the agreed-upon date. No work under the Contract shall be commenced until after the Notice to Proceed/Purchase Order has been issued.

IB-11 PAYMENT: Request for payment must be submitted to the Charlotte County Purchasing Department on a form approved by the County. All invoices will be paid in accordance with the Florida Prompt Payment Act, Section 218.74 F.S.

IB-12 PERFORMANCE EVALUATION: At the end of the Contract, the receiving department will evaluate the successful bidder's performance. This evaluation will become public record.

IB-13 ARITHMETIC DISCREPANCIES: For the purpose of initial evaluation of bids, the following will be utilized in resolving arithmetic discrepancies found on the face of the bid forms as submitted by bidders:

- A. Obviously misplaced decimal points will be corrected.
- B. In case of discrepancy between unit price and extended price, the unit price will govern. Apparent errors in extension will be corrected.
- C. Apparent errors in addition of lump sum and extended prices will be corrected.

For the purpose of bid evaluation, the County will proceed on the assumption that the bidder intends his bid be evaluated on the basis of the unit prices, extensions, and totals arrived at by resolution of arithmetic discrepancies as provided above, and the bid will be so reflected on the tabulation of bids.

IB-14 DESCRIPTIVE INFORMATION: Unless otherwise specifically provided in the specifications, all equipment, materials and articles incorporated in the work covered by this contract are to be new and of the most suitable grade for the purpose intended. Unless otherwise specifically provided in the specifications, reference to any equipment, material, article or patented

process, by trade name, make or catalogue number, shall be regarded as establishing a standard of quality and shall not be construed as limiting competition. If the bidder wishes to make a substitution to the specifications, the bidder shall furnish to the County the name of the manufacturer, the model number, and other identifying data and information necessary to aid the County in evaluating the substitution, and such substitution shall be subject to County approval. Substitutions shall be approved only if determined by the County to be equivalent to the specifications. A bid containing a substitution is subject to disqualification if the substitution is not approved by the County.

IB-15 QUALITY GUARANTEE: If any product delivered does not meet applicable specifications, or if the product will not produce the effect that the successful bidder represents to the County, the successful bidder shall pick up the product from the County at no expense to the County. Also, the successful bidder shall refund to Charlotte County any money which has been paid for same. The successful bidder will be responsible for reasonable County attorney fees expended to obtain compliance with this provision in the event the successful bidder defaults under this provision.

IB-16 RELEASE OF LIENS: The contractor is required to pay all money due subcontractors and material dealers promptly. The Contractor shall submit releases of liens, satisfactory to the County, certifying that all payrolls, material bills, and other indebtedness incurred by the Contractor in connection with this project have been paid in full.

IB-17 REGULATIONS/APPLICABLE LAWS: It shall be the responsibility of each Contractor to assure compliance with any OSHA, EPA, and/or other Federal or State of Florida rules, regulations or other requirements, as each may apply.

When applicable, as required under the provisions of Florida's Right-To-Know-Law, Florida Statutes, Chapter 442, the manufacturer, importer or distributor of a toxic substance will provide a material safety data sheet with the bid.

Bidder 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 Charlotte County will apply to any resulting agreement.

IB-18 CODE OF ETHICS: With respect to this bid, if any bidder violates or is a party to a violation of the State of Florida/Florida Statutes, Chapter 112, Part III, Code of Ethics for Public Officers and Employees, such bidder may be disqualified from furnishing goods or services for which the bid is submitted and shall be further disqualified from submitting future bids for goods or services for Charlotte County.

IB-19 COLLUSION: By offering a submission to this invitation for bid, the bidder certifies the bidder has not divulged to, discussed or compared his bid with other bidders and has not colluded with any other bidder or parties to this bid whatever. Also, bidder certifies, and in the case of a joint bid each party thereto certifies as to his own organization, that in connection with this bid:

- any prices and/or cost 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 bidder or with any competitor;
- any prices and/or cost data quoted for this bid have not been knowingly disclosed by the bidder and will not knowingly be disclosed by the bidder prior to the scheduled opening directly or indirectly to any other bidder or to any competitor;
- no attempt has been made or will be made by the bidder to induce any other person or firm to submit or not to submit a bid for the purpose of restricting competition;
- the only person or persons interested in this bid, principal or principals is/are named therein and that no person other than therein mentioned has any interest in this bid or in the contract to be entered into; and
- 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 or established commercial agencies maintained by the Purchaser for the purpose of doing business.

IB-20 SOURCE OF SUPPLY AND SUBCONTRACTORS: Bidders are to complete the attached Source of Supply and Subcontractors form. This form must be completed and included with the bid form. If bidder does not have a source of supply or subcontractor, insert "to be determined". When source or subcontractor is determined, selection will be subject to County approval.

IB-21 DRUG FREE WORKPLACE FORM: It is strongly suggested that the attached Drug Free Workplace Form be signed and returned to this office with bid form. In the event of a tie bid, the presence of a valid and accurate form may be used as a basis for awarding the Contract.

IB-22 PUBLIC ENTITY CRIMES: In accordance with Florida Statutes Sec. 287.133(2)(a), "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 bid on a contract to provide any goods/services to a public entity, may not submit a bid on a contract with a public entity for construction or repair of a public building or public work, may not submit bids on leases of 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, for a period of 36 months from the date of being placed on the convicted vendor list".

IB-23 TERMINATION OF CONTRACT: It is expressly understood by the County and the Contractor that funding for any successive fiscal years is contingent upon appropriation of monies by the Board of County Commissioners. In the event that funds are not available or not appropriated, the County reserves the right to terminate the Contract. The County will be responsible for any outstanding invoices prior to the termination.

IB-24 CANCELLATION: The County shall have the right to unilaterally cancel, terminate or suspend this Contract, in whole or in part, by providing the Contractor thirty (30) days written notice by certified mail.

IB-25 TAXES: The Contractor shall assume liability for Local, State, or Federal Tax that is applicable to the work.

IB-26 EQUAL EMPLOYMENT OPPORTUNITY: Charlotte County, Florida, in accordance with the provisions of Title VI of The Civil Rights Act of 1964 (78 Stat. 252) and the Regulations of the Department of Commerce (15 CFR, Part 8) issued pursuant to such Act, hereby notifies all bidders that it will affirmatively ensure that in any contract entered into pursuant to this advertisement, minority business enterprises will be afforded full opportunity to submit bids in response to this advertisement and will not be discriminated against on the grounds of race, color or national origin in consideration for an award.

GENERAL PROVISIONS
WASTEWATER COLLECTION SYSTEM REHABILITATION
BID NO. 2000000281

GP-01 SCOPE OF WORK

A. Intent of Contract: Bid Forms shall set forth firm bid unit prices for furnishing all necessary materials and completing all work, including labor, transportation, supervision, equipment, and traffic control incidental to the Project, as described in the Specifications and/or shown on the Plans attached herewith. The County reserves the right to establish the exact limits of work in the field and to add to or delete from the Project as it deems necessary.

B. Definitions:

1. The successful bidder for this Contract will be referred to as the CONTRACTOR; the Board of County Commissioners of Charlotte County, Florida, Director of the applicable County Department or his/her duly authorized representative, acting on behalf of the County will be referred to as COUNTY. For the purposes of this Contract, the word "Project" shall mean the construction limits of **WASTEWATER COLLECTION SYSTEM REHABILITATION**.

2. The Contract Documents consist of the Request for Bids, Instructions to Bidders, Bid Forms, Technical Specifications & Conditions, Special Provisions, General Provisions, Insurance Requirements, Permit Fees, Maintenance of Traffic Policy (M.O.T.), Plans and all other related documents, including all modifications thereof incorporated in the Documents before their execution. These form the Contract.

3. The County and the Contractor are those mentioned as such in the Agreement. They are treated throughout the Contract Documents as if each were of the singular number and masculine gender.

4. Written notice shall be deemed to have been duly served three days after date of postmark, and upon receipt, if delivered to the individual or member of the firm or an officer of the corporation for whom it is intended.

5. The term Subcontractor, as employed herein, includes only those having a direct Contract with the Contractor and it includes one who furnishes material worked to a special design according to the Plans and Specifications of this work, but does not include one who merely furnishes materials not so worked.

6. The term "work" of the Contractor and Subcontractor includes labor or materials or both, equipment, transportation, or other facilities necessary to complete the Contract.

7. All time limits stated in the Contract Documents are of essence to the Contract.

C. Quality of Work: The Contractor agrees to do the work covered under this Contract to the best of his ability and conforming to this Contract and Specifications and of a quality acceptable to the trades. The Contractor further agrees to follow proper and appropriate instructions by the County.

D. Maintenance of Traffic: The Contractor shall abide with the County's current Maintenance of Traffic Policy, a copy of which is attached.

E. Time of Completion: The Contractor shall complete the work within the time set forth in the contract. The Contractor shall complete each portion of the work within such time as set forth in the contract for such portion. The time of completion of the contract shall be expressed in calendar days.

All work for this project shall be performed during regular business hours. A regular work day shall be considered to be a maximum of ten hours duration. The cost for inspection time for work performed on weekends, holidays, or in excess of ten hours, will be billed to the Contractor at the prevailing wage plus overhead costs for those persons involved. The exception would be any work required for the safety or protection of the public.

A working day is any day within the period between the start of the contract time and the date provided in the contract for completion or upon field acceptance by the County of all work provided for in the contract, or as stipulated in the Technical Specifications & Conditions, which ever comes first, other than:

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1. Saturday
2. Sunday
3. Any day designated as a holiday by the County
4. Any day the Contractor is prevented from working during the first five hours of the workday, with at least sixty per cent of the normal work water, due to inclement weather.

Request for planned overtime by the Contractor must be submitted in writing to the County twenty-four hours in advance, and may not proceed without the County's approval.

GP-02 PROSECUTION AND PROGRESS

- A. Subletting or Assigning of Contracts: The Contractor shall not sublet, sell, transfer, assign, or otherwise dispose of the Contract or any portion thereof, or of his right, title, or interest therein, without written consent of the County.
- B. Preconstruction Conference: After the Contract has been awarded, the County will call a pre-construction conference to be held before any work is begun to review the construction aspects of the Project. The meeting will be between the County, the Contractor, and the various utility companies which will be affected by the construction.

Submission of Working Schedule/Order of Completion - At the conference, the successful bidder shall have on hand, a working schedule for the Project, showing in detail the order in which the Contractor proposes to perform the work. He shall indicate the dates on which various major items of work will start and the estimated completion dates of the major items. The schedule shall also show the Contractor's proposed operations for the various items of work which would affect or be affected by utility adjustments.

- C. Provisions for Convenience of Public: The Contractor shall schedule his operations so as to minimize any inconvenience to adjacent businesses or residences. Where necessary, the County may require the Contractor to construct first the work in any areas along the Project where restrictions caused by construction operations would present a more serious handicap, before beginning construction in the less affected areas.

GP-03 CONTROL OF THE WORK AND MATERIALS

- A. Control of Work:
 1. Plans and Contract Documents - The Contractor will be furnished up to four (4) copies of the Plans, Technical Specifications, General and Special Provisions as required for the Project. The Contractor shall have available on the job site at all times copies of the Plans (including relevant Design Standards), Technical Specifications, General and Special Provisions available to the County and/or its representatives.
 2. Detail Drawings and Instructions - The County may furnish, with reasonable promptness, additional instructions by means of drawings or otherwise, necessary for the proper execution of the work. All such drawings and instructions shall be consistent with the Contract Documents, true developments thereof, and reasonably inferable therefrom.
 3. Order of Precedence - These documents are integral parts of the Contract, and a requirement occurring in one is as binding as though occurring in all. They are intended to be complementary and to describe and provide for a complete work.

In cases of discrepancy, the governing order of the documents shall be as follows:

- a. Permits from Agencies as required by law
- b. Change Orders
- c. Contract Documents excluding Construction Plans
- d. Construction Plans
 - 1) Dimensions given in figures govern over scaled dimensions
 - 2) Detail Drawings govern over general Drawings
 - 3) Addenda/Change Order Drawings govern over Contract Drawings
- e. F.D.O.T. Roadway and Traffic Design Standards, January 1994 edition
- f. F.D.O.T. Standard Specifications, For Road & Bridge Construction, 1991 edition, with 1994 Supplemental Specifications

4. Conformity of Work with Plans - All work performed and all materials furnished shall be in reasonably close conformity with lines, grades, cross sections, dimensions, and material requirements, including tolerances, shown on the Plans or indicated in the Technical Specifications or Special Provisions.

5. Authority of the County - All work shall be done under the supervision of the County and performed to its satisfaction. It is agreed by the parties hereto that the County shall decide all questions and disputes which may arise relative to the interpretation of the Plans, construction, prosecution, and fulfillment of the Contract, and as to the character, quality, amount, and value of any work done, and materials furnished, under or by reason of the Contract.

6. County's Status - The County shall examine and inspect the work to assure compliance with the requirements of these Contract Documents. The County shall determine the quality and acceptability of materials and workmanship relative to the requirements of the Plans and Technical Specifications. The County has the authority as follows:

- a. to stop the work whenever such stoppage may be necessary to insure the proper execution of the Contract
- b. to reject all work which does not conform to the Contract
- c. to resolve questions which arise in the execution of the work

7. Suspension of Work - The County may at any time suspend work by giving ten (10) days notice to the Contractor in writing. The County shall reimburse the Contractor for expenses incurred by the Contractor in connection with work under the Contract as a result of such suspension, unless such suspension was caused by actions of the Contractor. However, if the work or any part thereof shall be stopped by a notice in writing aforesaid, and if the County does not give written notice to the Contractor to resume work within thirty (30) days of the date fixed in the written notice to suspend, then the Contractor will be entitled to the estimates and payment for all work done, unless such suspension was caused by actions of the Contractor.

8. The County's Right to do Work - If the Contractor should neglect to prosecute the work properly or fail to perform in accordance with provisions of this Contract, the County, after three days written notice, may without prejudice to any other remedy it may have, make good any deficiencies and deduct the cost from the payment due the Contractor.

9. The County's Right to Terminate Contract - If the Contractor refuses or fails to complete the work within the time specified for this Contract, or any extension thereof, the County may terminate the Contractor's right to proceed. In such event, the County may take over the work and prosecute the same to completion by Contract or otherwise, and the Contractor will be liable for any excess cost occasioned by the County. The County may take possession of and utilize in completing the work such materials and equipment as may be on the site of the work and necessary therefore.

If the Contractor should be adjudged a bankrupt, or should make a general assignment for the benefit of his creditors, or if a receiver should be appointed due to insolvency, or if he should refuse or fail, except in cases which time extension is provided, to supply enough workmen, or if he should fail to make payment to Subcontractors for labor and/or material, or disregard laws, ordinances or the instructions of the County, or be guilty of a violation of a provision of the Contract, then the County, may without prejudice to any other right or remedy and after giving seven days written notice, terminate employment of the Contractor and possess materials, tools, and appliances thereon and finish work by methods it may deem expedient. Expenses incurred by the County and the damage incurred through Contractor's default, shall be certified by the County.

In any circumstance, the County shall have the right to unilaterally cancel, terminate or suspend this Contract, in whole or in part, by providing the Contractor thirty (30) days written notice by certified mail.

In the event of termination, the Contractor shall be entitled to compensation for services rendered and costs incurred through the effective date of termination. All finished or unfinished documents, materials, or work shall become the property of the County and shall be delivered to the County without reservation.

10. County's Decision - The County shall, within a reasonable time after their presentation, make decisions in writing on claims by the Contractor and on all other matters relating to the execution and progress of the work or the interpretation of the Contract Documents.

11. Authority and Duties of County's Inspectors - The County's Inspectors shall be authorized to inspect all work done and all materials furnished. They shall be authorized to call to the attention of the Contractor any failure of the work or materials to conform to the Technical Specifications and Contract, and shall have the authority to reject materials or suspend the work until any questions at issue can be referred to and resolved by the County.

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The presence of the Inspector shall in no way lessen the responsibility of the Contractor.

12. **Inspection of Work** - The County and his representative shall at all times have access to the work wherever it is in preparation or progress and the Contractor shall provide proper facilities for such access and for inspection. If the Specifications/Conditions, the County's instruction, laws, ordinances or any public authority require any work to be specially tested or approved, the Contractor shall give the County timely notice of its readiness for inspection and, if the inspection is by an authority other than the County, the date fixed for such inspection. Inspections by the County shall be promptly made and, where practicable, at the source of supply. If any work should be covered up without approval or consent of the County, it must, if required by the County, be uncovered for examination at the Contractor's expense. Re-examination of questioned work may be ordered and the work must be uncovered by the Contractor.

13. **Contractor's Supervision and Employees** - The Contractor shall supervise, inspect, and direct the work completely and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the work in accordance with the Contract Documents.

The Contractor shall be solely responsible for the means, methods, techniques, sequence, and procedures necessary for the orderly progress of the work, and to maintain all safety precautions and programs incidental thereto. The Contractor shall at all times enforce strict discipline and good order among his employees, and shall not employ any unfit person or anyone unskilled in the work assigned to him. The Contractor shall be responsible to see that the completed work complies fully with the Contract Documents.

As the work progresses, the Contractor shall keep on the job at all times an English speaking Superintendent or designee, technically qualified, who is an employee of the Contractor and who shall not be replaced without written notice and approval from the County. The Superintendent will be the Contractor's representative on the job and shall have authority to act on behalf of the Contractor. The Superintendent or his qualified designee shall be present at the job site and direct the work of sub-contractors, as well as employees of the Contractor. This supervisor will be equipped with a communication device enabling him/her to contact suppliers, sub-contractors or his/her office who in turn can convey necessary communications to others. All communications given to the Superintendent shall be as binding as if given to the Contractor. The Contractor shall issue all communications to the County or his representative.

The Contractor's Superintendent shall be present on the job site at all times while work is in progress, and shall be available by phone for emergencies twenty-four hours per day, seven days per week. Failure to observe this requirement shall be considered suspension of the work by the Contractor until such time as such Superintendent is again present on the job.

If the Contractor, in the course of the work, finds any discrepancy between the Drawings and the physical conditions of the site, or any errors or omissions in Drawings, or in the construction layout points and instructions, he shall immediately inform the County, in writing, and the County shall promptly verify same. Any work done after such discovery will be done at the Contractor's risk.

Neither party shall employ or hire any employee of the other party without the concurrence of each party.

14. **Contractor's Understanding** - It is understood and agreed that the Contractor has, by careful examination, satisfied himself as to the nature and location of the work, the conformation of the ground, the character, quality, and quantity of the materials to be encountered, the character of equipment and facilities needed prior to and during prosecution of the work, the general and local conditions, and other matters which can in affect the work under this Contract. No verbal agreement or conversation with any officer, agent, or employee of the County, either before or after execution of this Contract, shall affect or modify the terms or obligations herein contained.

15. **Permits and Regulations** - Permits and licenses necessary for the prosecution of the work shall be secured and paid for by the Contractor, unless otherwise specified. (A list of permit fees is attached.) The Contractor shall give all notices and comply with all laws, ordinances, rules, and regulations bearing on the conduct of the work as drawn and specified. If the Contractor observes that the Specifications and Drawings are at variance therewith, he shall promptly notify the County in writing, and any necessary changes shall be adjusted as provided in the Contract for changes in the work. If the Contractor performs any work knowing it to be contrary to such laws, ordinances, rules, and regulations, and without such notice to the County, he shall bear all costs arising therefrom.

16. Protection of Work and Property - The Contractor shall continuously maintain protection of all his work from damage and shall protect the County's property from injury or loss arising in connection with this Contract. He shall make good on any such damage, injury or loss, except such as may be directly due to errors in the Contract Documents or caused by agents or employees of the County. He shall adequately protect adjacent property as provided by law and the Contract Documents. He shall provide and maintain all passageways, guard fences, lights, and other facilities for protection required by public authority or local conditions. In an emergency affecting the safety of life or of the work, or of adjoining property, the Contractor, without special instruction or authorization from the County, is hereby permitted to act, at his discretion, to prevent such threatened loss or injury, and he shall so act, without appeal, if so instructed or authorized. Any compensation claimed by the Contractor on account of emergency work shall be determined by agreement between the Contractor and the County.

The Contractor shall not occupy private land outside of any easements or rights of way unless a written authorization has been signed by the property owner. It shall be the Contractor's responsibility to provide these agreements prior to construction, if required. Prior to the use of private lands, the Contractor shall submit a copy of the agreement(s) to the County. In the event the Contractor uses private property for any purpose without first having obtained the necessary approvals from the property owner and provided the necessary agreements to the County, the County will direct the Contractor in writing to immediately cease using such property.

Prior to application for final payment, the Contractor shall provide documentation from the owner of each piece of private property for which an agreement for use was provided, or for which the County has issued written notification to the Contractor, that each owner is satisfied with the manner in which the Contractor has restored the property. Final payment or reduction in retainage shall not be paid until such documentation is received by the County.

17. Changes in the Work - The County, without invalidating the Contract, may order extra work or make changes by altering, adding to or deducting from the work, the Contract sum being adjusted accordingly. Such work shall be executed under the conditions of the original contract. The change and amount of compensation must be agreed upon in writing in a document of equal dignity herewith prior to any deviation from the terms of this Contract.

In giving instructions, the County shall have authority to make minor changes in the work, not involving extra cost; and not inconsistent with the purposes of the work. Except in an emergency endangering life or property, no extra work or change shall be made unless in pursuance of a written order by the County; and no claim for an addition to the Contract sum shall be valid, unless ordered. Value of any such extra work or change shall be determined in one or more of the following ways:

- a. By estimate and acceptance in a lump sum;
- b. By unit prices named in the Contract or subsequently agreed upon;
- c. By cost and percentage or by cost and a fixed fee.

If none of the previous methods are agreed upon, the Contractor, provided he receives an order as above, shall proceed with the work. In such case and also under case (c), he shall keep amendment in such form as the County may direct, a correct account of the net cost of labor and materials, together with vouchers. The County shall certify to the amount, including reasonable allowance for overhead and profit, due to the Contractor. Pending final determination of value, no payment on changes shall be made.

When requiring a change in the scope of services the Contractor shall notify the County by written notice that a change order is requested within five days of any occurrence.

18. Deductions for Uncorrected Work - If the County deems it inexpedient to correct work injured or done not in accordance with the Contract, an equitable deduction from the contract price shall be made thereof.

19. Delays and Extension of Time - If the Contractor should be delayed at any time in the progress of the work by any act of neglect of the County or of his employees, or by any other Contractor employed by the County, or by changes ordered in the work, or by such causes beyond the Contractor's control, or by delay authorized by the County, or by any cause which the County shall decide to justify the delay, then the time of completion shall be extended for such reasonable time as the County may decide. However, no time delay shall be allowed if judged by the County to be caused by the Contractor's negligence. No such extension shall be made for delay occurring more than seven (7) days before claim therefore is made in writing to the County. In the case of a continuing cause of delay only one (1) claim is necessary. This article does not exclude the recovery of damages for delay by either party under other provisions in the Contract Documents.

20. Correction of Work Before Final Payment - All work, all materials, whether incorporated in the work or not, all processes of manufacturer, and all methods of construction shall be at all times and places subject to the inspection of the County who shall be the final judge of the quality and suitability of the work, materials, processes of manufacture, and methods of construction for the purposes for which they are used. Should they fail to meet his approval; they shall be forthwith reconstructed, made good, replaced, and/or corrected, as the case may be, by the Contractor at his own expense. Rejected material shall be immediately removed from the site. If, in the opinion of the County, it is undesirable to replace any defective or damaged materials or to reconstruct or correct any portion of the work injured or not performed in accordance with the Contract Documents, the compensation to be paid to the Contractor hereunder shall be reduced by such amount as in the judgment of the County shall be equitable.

21. Contractor's Right to Stop Work or Terminate Contract - If the work should be stopped under an order of any court or other public authority for a period of three months, through no act or fault of the Contractor or of anyone employed by him, or if the County fails to pay the Contractor within thirty (30) days of maturity and presentation any sum certified by the County, then the Contractor may, upon seven days written notice to the County and County, stop work or terminate this Contract.

22. Removal of Equipment - In the case of annulment of this Contract before completion from any cause whatever, the Contractor, if notified to do so by the County, shall promptly remove any part or all of his equipment and supplies from property of the County and/or site of work, failing which the County has the right to remove such equipment and supplies at the Contractor's expense.

23. Use of Completed Portions - The County has the right to take possession of and use any completed or partially completed portions of the work, notwithstanding the time for completing the entire work of such portions may not have expired, but taking possession and use shall not be deemed an acceptance of any work not completed in accordance with the Contract Documents. If such prior use increases the cost of or delays the work, the Contractor shall be compensated as the County may determine and the County approves.

24. Payments Withheld - The County may withhold payment to the Contractor from loss on account of:

- a. Defective work not remedied.
Reference: F.D.O.T. Section 9-6.3.
- b. Claims filed or evidence indicating probable filing of claims.
Reference: F.D.O.T. Section 5-12 and 9-10.
- c. Failure of the Contractor to make payment properly to Subcontractors or for material/labor.
Reference: F.D.O.T. Section 9-6.7.
- d. A reasonable doubt that the Contract can be completed for the balance then unpaid.
- e. Damage to another Contractor.

When the above grounds are removed, payment shall be made for amounts withheld because of them.

25. Damages - Any claim for damage arising under this Contract shall be made in writing to the party liable within a reasonable time of the first observance of such damage and not later than the time of final payment, except as expressly stipulated otherwise in the case of faulty work.

26. Assignment - Neither party to the Contract shall assign the Contract or sublet it as a whole without the written consent of the other, nor shall the Contractor assign any monies due or to become due to him hereunder without the previous written consent of the County.

27. Rights of Various Interests - Before work being done by the County's waters or by other Contractor's waters, contiguous to work covered by this Contract, the respective rights of the various interests involved shall be established by the County before such commencement, to secure the completion of the various portions of the work in general harmony.

28. Separate Contracts - The County reserves the right to let other Contracts in connection with this work. The Contractor shall afford other Contractors reasonable opportunity for the introduction and storage of their materials and the execution of the work, and shall properly connect and coordinate his work with theirs. If any part of the Contractor's depends on proper execution or results upon the work of any other Contractor, the Contractor shall inspect and promptly report to the County any defects in such work that render it unsuitable for such proper execution and results. His failure to so inspect and report shall constitute an acceptance of the other Contractor's work as fit and proper for the reception of his work, except as to defects which may develop on the other Contractor's work after the execution of his work.

29. Subcontractors - The Contractor shall provide a list of subcontractors with his proposal for approval. The Contractor agrees that he is as fully responsible to the County for the acts and omissions of his Subcontractors and of persons either directly or indirectly employed by them as he is for the acts and omissions of persons directly employed by him. Nothing contained in the Contract Documents shall create any contractual relation between any Subcontractor and the County. Substitutions must be submitted in writing and shall be subject to approval by the County.

To insure proper execution of his subsequent work, the Contractor shall measure work already in place and shall at once report to the County any discrepancy between the executed work and the Drawings.

30. Horizontal and Vertical Control - Unless noted otherwise in the Contract Documents, the Contractor shall be responsible for the layout of all Contract work. The Contractor shall employ or retain any/all professional services that are required by the Contract to complete the work. The Contractor shall carefully preserve bench marks, reference points and stakes and, in case of willful or careless destruction, be responsible for any mistakes that may be caused by their unnecessary loss or disturbance.

31. Lands for Work - The County shall provide the lands upon which the work under this Contract is to be done, except that the Contractor shall provide land required for the erection of temporary construction facilities and storage of materials, together with the right of access to same.

32. Cleaning Up - The Contractor shall, at such times as may be required by the County, remove from the County's property and from all public and private property, at his own expense, all temporary structures, used materials and equipment, rubbish and waste materials resulting from his operations. All damaged areas will be restored by the Contractor to their original condition and approved by the County. By submission of a bid, the Contractor assumes full responsibility for the associated expenses. There shall not be an increase in time or price associated with such removal, and payment to Contractor may be withheld until such work is completed.

33. Guarantee - The Contractor shall warrant all equipment furnished and work performed by him for a period of one (1) year from the date of written acceptance of the work by the County or as may be otherwise specified. Any faulty work or equipment will be fully corrected at no cost to the County and restored work will be warranted for one year from the date of acceptance, or as may be otherwise specified.

The making and acceptance of final payment shall not waive any claim for faulty work appearing after final payment or for failure to adhere strictly to the Contract Documents. If any part of the project is guaranteed for a longer period, such longer period shall prevail. Except as otherwise specified, all work shall be guaranteed by the Contractor against defects resulting from use of inferior materials, equipment or workmanship for one (1) year from the date of completion or written acceptance by the County, whichever is later.

34. Responsibility Regarding Existing Utilities and Structures - The existence and location of underground utilities indicated on the Plans are not guaranteed and shall be investigated and verified in the field by the Contractor before submitting a bid. Excavation in the vicinity of existing structures and utilities shall be done by hand. The Contractor shall be responsible for any damage to, and for maintenance and protection of, existing utilities and structures, and from any damages resulting from said excavation. The Contractor is to include within his line item bid prices, the costs to protect, support, relocate, or move (whether shown or not shown on the proposed project set of Plans) all underground utilities which may be in conflict with the construction of the proposed project.

35. Accidents - The Contractor shall provide equipment and medical facilities as necessary to supply first aid to anyone who is injured in connection with the work. The Contractor must promptly report in writing to the County accidents arising out of, or in conjunction with, the performance of the work, whether in, or adjacent to, the site, which cause death, personal injury, or property damages, giving full details and statements of witnesses. If death or serious injuries or serious damages are caused, the accident shall be reported immediately by telephone or messenger to the County.

If a claim is made by anyone against the Contractor or Subcontractor on account of an accident, the Contractor shall promptly report the facts in writing to the County, giving full details of the claim.

36. Stage Plans - Stage plans of structural alterations, cofferdams, dredging, furnished or approved by the County, shall be adhered to unless objected to in writing by the Contractor, but the submission or approval of stage plans by the County shall not relieve the Contractor of full responsibility for the safety of the work.

37. Measurement of Quantities - The quantities of work performed will be computed by the County on the basis of measurements taken by the County and/or its agents, and these measurements shall be final and binding. All work computed under the Contract shall be measured by the County according to the United States Standard Measurements and Weights.

The County does not assume any responsibility that the final quantities will remain in accord with estimated quantities, nor shall the Contractor claim misunderstanding or deception because of such estimate of quantities. The estimated quantities of work to be done and materials to be provided may be increased, decreased, or omitted, as provided herein. Any increase in quantities shall be approved by the County prior to any work.

38. Reference to Other Specifications - Where reference is made to Specifications such as A.S.T.M., A.W.W.A., or A.A.S.H.T.O., or any other reference specifications, the latest edition shall be used.

39. Sanitary Facilities - The Contractor shall provide and maintain, in a sanitary condition, facilities for his employees as are required by local and state boards of health.

40. Quality of Equipment and Materials - To establish standards of quality, the County may, in the specifications, refer to products by name and/or catalog number. This procedure is not to be construed as eliminating from competition other products of equal quality by other manufacturers where fully suitable in design.

a. The Contractor shall furnish a complete list of proposed desired substitutions prior to signing of the Contract together with such engineering and catalog data as the County may require.

b. The Contractor shall abide by the County's judgment when proposed substitute items of equipment are judged unacceptable and shall furnish the specified item of equipment in such case. All proposals for substitutions shall be submitted in writing by the General Contractor. The County will approve or disapprove proposed substitutions in writing within a reasonable time.

41. Codes and Laws - The successful bidder shall comply with all Federal, State, Local Laws, and ordinances that affect the Contract in any way.

42. Traffic Control - The Contractor shall comply with the "Manual on Uniform Traffic Control Devices" and maintain safe conditions at all times.

43. Explorations and Reports - If reference is made to identification of reports of explorations and tests of subsurface conditions at the site that have been used in preparing the Contract Documents, it should be understood that these reports are not part of the Contract Documents. The Contractor shall have full responsibility with respect to subsurface conditions at the site. Technical data, made available only at the Contractor's request, may not be sufficient for construction purposes. Additional investigations may be necessary for the purposes of carrying out the construction project.

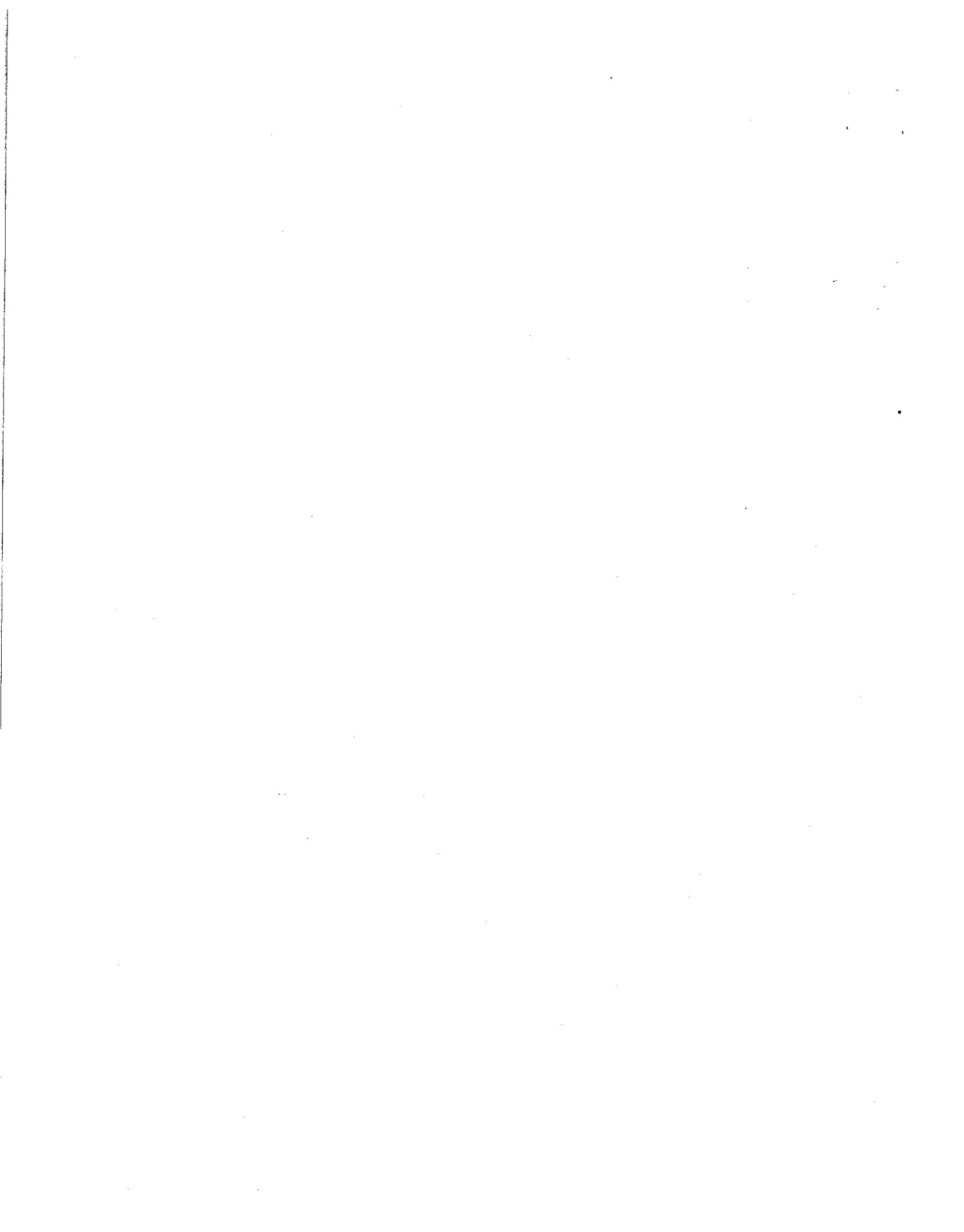
If the Contractor desires subsurface investigation, it will be done at his expense, prior to bidding. If the Contractor has elected not to make subsurface investigation prior to bidding, he shall not be entitled to any extra due to conditions encountered.

44. Existing Structures - Drawings of physical conditions in or relating to existing surface and subsurface structures which are at or contiguous to the site that have been utilized by the Consultant and/or the County in preparation of the Contract Documents. The Contractor may rely upon the accuracy of the technical data contained in such Drawings but not for the completeness thereof for the purposes of preparing or submitting a bid. Except as previously indicated, the Contractor shall have full responsibility with respect to physical conditions in or relating to such structures.

45. Report of Differing Conditions - If the Contractor believes that any technical data on which he relies is inaccurate, or if any physical conditions uncovered or revealed at the site differ materially from that indicated, reflected, or referred to in the Contract Documents, the Contractor shall promptly, after becoming aware and before performing any work in connection therewith (except in emergency situations), notify the County in writing about the inaccuracy or difference.

The County will promptly review the pertinent conditions, determine the necessity of obtaining additional explorations or tests with respect thereto and advise the County in writing (with a copy to the Contractor) of the County's findings and conclusions.

47. Not Shown or Indicated - If an underground facility is uncovered or revealed at or contiguous to the site, which was not shown or indicated and of which the Contractor could not reasonably have been expected to be aware, the Contractor shall promptly, before performing any work (excepting in emergencies), identify the owner of such underground facility and give written notice thereof to that owner and to the County. The Coordinator will review the underground facility to determine the extent to which the Documents should be modified to reflect and substantiate the consequences of the existence of the underground facility. With County approval, the Contract Documents will be amended or supplemented to the extent necessary. During such time, the Contractor shall be responsible for the safety and protection of such underground facility. The Contractor shall be allowed an increase or an extension of time, or both, to the extent that they are attributable.



**TECHNICAL SPECIFICATIONS & CONDITIONS
WASTEWATER COLLECTION SYSTEM REHABILITATION
BID NO. 2000000281**

TS-01 — SUMMARY OF WORK

A. **GENERAL:** The work to be performed under this Contract shall consist of furnishing all tools, equipment, materials, supplies, and manufactured articles and for furnishing all transportation and services, including fuel, power, water, and essential communications. Also included is the performance of all labor, work, materials, and services not expressly shown or called for in the Contract Documents that may be necessary for the complete and proper construction of the work, which in good faith shall be performed, furnished, and installed by the Contractor as though originally so specified or shown, at no increase in cost to the County.

The Contractor shall perform all work required in accordance with the Contract Documents and subject to the terms and conditions of the Contract, complete and ready to use.

B. **SCOPE:** The project consists of furnishing all labor, materials and equipment for performing gravity sewer system pipe rehabilitation.

In order to obtain representative unit prices for various types of sewer system rehabilitation technologies and construction services, four (4) bid packages have been developed. The quantities shown on the Bid Form are approximate for each bid package, and are given only as a basis of calculation for award of the Contract. Interested contractors are requested to submit price proposals for one (1) or more of those bid packages, which they are qualified to perform.

1. Bid Package "A" - Collection line repairs utilizing cured-in-place pipe lining technology. Unit prices include tasks for bypass pumping, surface restoration, and warranty TV inspections.
2. Bid Package "B" - Collection line repairs utilizing PE fold-and-form pipe lining technology. Unit prices include tasks for bypass pumping, surface restoration, and warranty TV inspections.
3. Bid Package "C" - Collection line repairs utilizing chemical grout technology. Unit prices include tasks for surface restoration and warranty TV inspections.
4. Bid Package "D" - Collection line repairs utilizing fold-and-form PVC or PVC alloy pipe lining technology. Fold-and-form products bid under this package must however, conform to TS-15, **Fold And Form Pipe Installation, PVC**. Unit prices include tasks for bypass pumping, surface restoration, and warranty TV inspections. If a purchase order is issued to the low bidder of this package, the initial purchase order shall be limited to 400 lineal feet so as to demonstrate the installation and product. Successive purchase orders may, at the discretion of the County, be for increased quantities dependent on past work performance.

C. **BID PRICES/TERMS OF CONTRACT:** Bidders shall bid unit prices, F.O.B. destination, and shall include all costs for all transportation, labor, materials and equipment used to perform the wastewater collection system rehabilitation within the County's gravity collection system. These prices shall be considered firm from notification of award through and including September 30, 2001. This bid shall be extended/renewed for two additional one (1) year periods, by mutual agreement, provided there are no changes in terms, conditions and prices.

As the results of the ongoing sewer system evaluation survey become available, specific collection system rehabilitation purchase orders will be issued for any one (1) of the technologies and remedial construction services bid in this proposal. The County reserves the right to select the bid package and scope of work for each purchase order issued. Contractor unit prices established under this selection process will determine the total cost of each purchase order.

Prior to the purchase order being executed, the Contractor shall submit to the County, a starting date and a construction schedule for the work being performed.

It is estimated that about \$1,000,000 worth of sewer system rehabilitation services will be generated from this program to be completed over a three (3) year period. With the exception of Bid Package "D", each pipe lining purchase order will be for a minimum 2,000 lineal feet of gravity sewer line unless the Contractor agrees to complete a lesser work order for the unit bid prices given. There is no minimum quantity for grouting as a mobilization fee will be paid for each project a purchase order is issued for. Each purchase order will be for a not-to-exceed dollar amount. If the scope of work defined for any particular purchase order cannot be completed within the not-to-exceed dollar amount, the County will reserve the right to terminate the scope of work before the purchase order dollar amount is exceeded.

D. MATERIALS: All materials, products, or devices incorporated in this project shall be new and unused, unless indicated otherwise in the Contract Documents and shall be the products of reliable manufacturers, which unless otherwise specified, have been regularly engaged in the manufacture of such material or devices. Procedures and additional requirements regarding manufacturer's experience and substitutions are included in TS-05, "Submittals".

E. ITEMS SPECIFIED ON DETAILS: Certain items of material and/or devices, and their installation may be specified on the Drawings and not mentioned in the Specifications. Such items are to be considered as both shown on the Drawings and noted in the Specifications and be provided by the Contractor in accordance with the Specification on the Drawings.

F. PRODUCT/INSTALLER QUALIFICATIONS FOR PIPE LINING: The County encourages competition for all its pipeline reconstruction projects. However, the County must assure that all pipeline reconstruction products installed are of good quality, and that the manufacturers of such products are reputable and financially sound, and that the installers of such products are competent and experienced.

To assure the long-term service of its sewer system, the County must protect itself by limiting exposure to unproven products, weak manufacturers and/or inexperienced installers, while encouraging the establishment and growth of quality new products and competent installers, when warranted. The County, therefore, shall require all bidders to conform to the following standards for product quality, manufacturer soundness and integrity, and installer expertise and experience.

All successful bidders shall demonstrate, prior to Contract award and to the satisfaction of the County, compliance with all of the following requirements:

1. In order to be considered for installation, the product shall be commercial (trade) viable as defined: A material product used in trade between peoples, states, clients and individuals, in such a state of commercial development as to make possible the continuance of its life not requiring changes, tested, confirmed and valid; the word "valid" necessarily possesses an element of legal strength and force, where inconsistent positions and changes have no such force. (Materials exhibiting constant change are commercially (trade) non-viable materials; new materials having validity, defined, consistent and scientifically confirmed are viable and when traded become commercially (trade) viable products, (but not in reverse order, which would mean such issues as fraud, deceit, misrepresentation, and duress).

2. The installer (Contractor) must have had at least three (3) years active experience in the commercial installation of the product and must have installed a minimum of 50,000 linear feet of the product in the State of Florida. Additionally, a minimum of 250,000 linear feet of wastewater collection installation of the product in the U.S.A. must be documented, not necessarily by the same Contractor. Such documentation must include each user's name, address, reference names at the user's location, phone numbers, length and diameter of the product, contract value and acceptance, and project closeout date. This must be documented to assure commercial viability of the product. As an alternative, this requirement may be waived by the County, if the product has been installed within the County sanitary sewer system for a length not less than 1,000 lineal feet and with a service life not less than two (2) years. This requirement shall be waived for bidders responding to Bid Package "D".

3. The product shall have a history of wastewater collection system installations exceeding three (3) years. In the event, changes in the product (material) occurred within the past three (3) years, the Contractor shall disclose in writing, the date each change occurred, what change occurred, the reason for the change, the number of lineal feet installed within each change period, the last date since the change occurred, and the number of lineal feet installed since the last change. The County reserves the right to require additional detailed information on the product (material) in the event changes have occurred.

4. Submittal of test data (from and validated by a university or accredited third party testing facility qualified in these testing procedures) supporting the long-term strength, corrosion resistance and fifty (50) year design life. These tests shall be

performed in accordance with the applicable ASTM standards and materials tested shall be identical to those proposed for installation.

5. Documentation showing the in-place product shall provide flow capacity equal to at least 100% of the existing pipe. Vendor shall provide at least one (1) in-ground flow test verified by an independent third party.

6. The Contractor must submit engineering design guides and quality control procedures for product manufacturer and for product installation, including detailed inspection, testing, of physical properties, retention of product samples, and taking and testing of field samples.

7. The Contractor shall submit evidence of installer training and/or certification of being trained to install the product. The installer shall also hold an active Certified or Registered Underground Utilities Contractor License with the State of Florida Department of Professional Regulations Construction Licensing Board. A copy must be submitted with the bid.

8. The Contractor shall provide detailed installation procedures and detailed procedures for reconstruction of existing laterals or for new service connections.

9. The Contractor shall submit detailed procedures for repairing its product installed in event of failure.

10. The lining manufacturer shall submit to the Engineer for approval, complete design calculations for the liner installed in each line item bid, signed and sealed by a Professional Engineer registered in the State of Florida and certified by the manufacturer as to the compliance of his materials to the values used in the calculations. The criteria for liner design shall be an HS-20 live load and the overburden using a dry soil weight of 120 pounds per cubic foot. The maximum water table elevation is to be considered level with the existing ground elevation and the ground elevation should be the maximum depth specified in the relevant line item. The expected minimum lifetime is fifty (50) years. The liner side support shall be considered as if provided by soil pressure against the liner. The existing pipe shall not be considered as providing any structural support. No liner shall be accepted or installed until the design calculations have been approved by the Engineer. Acceptance of the design calculations shall in no way lessen the responsibility of the Contractor.

11. PVC pipe liners shall be warrantied in writing for three (3) years against deformation of the installed liner due to any tendency to return to its collapsed shape.

If, in the opinion of the County, a bidder has not fulfilled the product/installer qualifications set forth, the bidder shall be disqualified for noncompliance with the bid documents.

TS-02 — MEASUREMENT AND PAYMENT

A. GENERAL: Payments to the Contractor shall be made on the basis of the proposal Bid Form as full and complete payment for furnishing all materials, labor, tools, and equipment, and for performing all operations necessary to complete the work included in the Contract Documents. Such compensation shall also include payments for any loss or damages arising directly or indirectly from the work, or from any discrepancies between the actual quantities of work and those shown in the Contract Documents, or from any unforeseen difficulties which may be encountered during the prosecution of the work until the final acceptance by the County.

The prices stated on the Bid Form include all costs and expenses for taxes, labor, equipment, materials, commissions, transportation charges and expenses, patent fees and royalties, labor for handling materials during inspection, together with any and all other costs and expenses for performing and completing the work as shown on the details and specified herein. The Basis of Payment for an item at the price shown in the Bid Form shall be in accordance with its description of the item in this section and as related to the work specified. Unit prices will be applied to the actual quantities furnished and installed in conformance with the Contract Documents.

The Contractor's attention is called to the fact that the bids for the various items of work are intended to establish a total price for completing the work in its entirety. Should the Contractor feel that the cost for any item of work has not been established in the Bid Form or this section, the cost for that work shall be included in some other applicable Bid Item, so that the bid for the project reflects the total price for completing the work in its entirety.

B. MEASUREMENT: The quantities for payment under this Contract shall be full compensation determined by actual measurement of the completed items, in place, ready for service and accepted by the County unless otherwise specified. The Engineer will witness all field measurements.

The quantities stated in the Bid Form are approximate only and are intended to serve as a basis for the comparison of bids and to fix the approximate amount of the cost of the project. The County does not expressly or impliedly agree that the actual amount of the work to be done in the performance of the contract will correspond with the quantities in the Bid Form; the amount of work to be done may be more or less than the said quantities and may be increased or decreased by the County as circumstances may require. The increase or decrease of any quantity shall not be regarded as grounds for an increase in the unit price or in the time allowed for the completion of the work, except as provided in the Contract Documents.

1. Bid Package "A" Payment Items

a) *General:* The County will not provide any space or place to store materials for this project. No payment will be made for stored materials.

It is intended that all work required to complete this Contract will be included in the various bid items as described in the following paragraphs.

b) *Items Nos. 1 through 6—Cured-in-Place Pipe Lining:* Each unit price bid shall include: all necessary or required traffic control, sewer pipe cleaning and preparation of the existing sewer, including blocking or plugging incoming lines; removal, transportation and disposal of material generated by cleaning and preparation; television surveys; chemical joint sealing if necessary; pipe liner; cleaning; testing; cleanup; all labor, materials and equipment required to provide a complete and acceptable liner installation, including all appurtenances, in accordance with the Contract Documents, the manufacturer's specifications and compliance with all applicable regulatory requirements.

Also included, if repairs are required due to damage caused by the Contractor's operation, shall be materials for repair, if required, including pipe, fittings and specials, pipe bedding, and materials for surface restoration; transportation and handling costs delivered to the work site; any bypass pumping; providing provisional sewers to maintain service; complying with the State of Florida Trench Safety Act, including shoring; removal, transportation and disposal of existing sewer excavation; supporting and protecting existing utilities as required; dewatering; sheeting and shoring, if necessary; furnishing and installing replacement pipe, fittings and repair couplings; unloading material and placing it in the trench; cutting pipe; furnishing and installing joint materials including lubricant; making all connections within the lines to existing sewers, laterals and structures; placing and compacting bedding and backfill; furnishing and installing additional suitable backfill material, if required; furnishing all materials and equipment required to clean and test the sewer; cleaning and testing the sewer; temporary paving installation and removal; permanent paving replacement; replacement of pavement markings as existed before repair; replacing utilities, catch basins, manholes, trees, grass, shrubs, mail boxes, sprinkler systems, concrete or rock bed driveways, sidewalk and all other similar items, to original locations and to equal or better than original conditions; obtaining and paying for any necessary permits; satisfying all requirements of the permits, and all other appurtenant and miscellaneous items and work including final cleanup.

This item will be measured and paid at the unit price per linear foot of Cured in Place Pipe Lining as delineated by the pipe size and depth in brackets named in the Bid Form. Measurement shall be made based on the horizontal projection of the centerline of the permanently installed liner between manholes, including the laying length of fittings along the run, measured to the nearest foot from inside wall of manhole to inside wall of manhole for each section lined, not including the manhole chamber.

Payment for bypass pumping (for main line only) and service lateral reinstatements, if required (other than because of damage caused by the Contractor) will be paid under a separate item. Payment for bypass to reinstate service laterals shall be included in this line item.

Rear lot easement main line sewers are the sanitary sewer mains located in easements, usually behind residential or commercial properties or within easements through woods. Properties are not easily accessible from at least one (1) manhole in run.

Roadway right-of-way main line sewers are the sanitary sewer mains located in roadway right-of-way. Both manholes are easily accessible.

c) *Item No. 7 - Reinstatement of Service Lateral:* This item is for reconnecting sanitary sewer service laterals, any size, to the new liner and shall include, but not be limited to blocking or plugging incoming line; removal, transportation and disposal of material generated by cleaning and preparation; television surveys, furnishing the equipment necessary to internally cut out the liner to at least 95%, minimum, of the circumference of the lateral, cutting out the coupon; recovering all waste material from the sewer; service pipe cleaning; sealing the lateral connection to the liner; grouting the first five (5) feet of service lateral, testing; locating and exposing clean-outs when necessary; using the clean-out to locate the sewer connection; performing all repairs required due to damage caused by the Contractor, and all appurtenant and miscellaneous items and work. This item of work will be measured and paid at the unit price per each lateral reinstated.

Payment for bypass pumping of service laterals, if required, shall be included with the lining operation.

d) *Items No. 8 through 9 - Bypass Pumping of Sewers:* These pay items provide complete compensation for operations required for sewer and manhole liner installations. The Contractor shall attempt to perform the sewer work without bypass pumping. However, if in the opinion of the Engineer bypass pumping is necessary, it will be identified as a payment item. The pay item is a one (1) time charge for all bypass pumping operations during lining installation, regardless of the number of pumps required or the duration of the pumping period. Bypass pumping of sewers shall be bid on the basis of sewer size which is bypassed.

These items shall include, but are not limited to all necessary or required traffic controls; pumps; piping; gasoline/diesel fuel; maintenance; transportation and storage; temporary bypass and service piping; labor; materials and/or any other costs associated with bypass pumping.

Plugging or blocking a sewer line shall be included in the appropriate bid item for which the flow must be stopped; this is considered incidental work and no additional payment shall be considered for the activities under this item.

Bypass pumping for the reinstatement of service laterals, if required, shall be included with the lining operation.

e) *Item No. 10 and 11 - Root Removal in Sewer Lines:* This item of work will be measured and paid at the unit price per linear foot for each sewer size bracket named in the Bid Form. Measurement of lines shall be made based on the horizontal projection of the centerline of the pipe between manholes, measured to the nearest foot from inside wall of manhole to inside wall of manhole, not including the manhole chamber, in the pipe which root removal/treatment was performed.

Each unit price bid for root removal and chemical root treatment in sewer lines shall include cleaning; all mechanical methods of root removal specified or not; all herbicides or chemical treatment specified or not; and/or all equipment, materials and labor which shall be used to provide an open sewer (no blockage or constrictions due to roots or vegetation) to an acceptable for television inspection and ready for any and all repairs.

Sewer line or manhole cleaning are not a separate bid item. The prices for all cleaning of sewers and manholes; verification of adequate cleaning by pulling double squeegees, hoses, nozzles, water, labor, materials and/or any other work required to clean the sewers to a degree acceptable for television inspection and subsequent repairs shall be included in the bid item in which the rehabilitation occurs.

f) *Items No. 12 - Warranty TV Survey:* Warranty pipe inspection and video recording of the sewer lines shall be paid at the unit price bid per linear foot of each pipe size. Payment shall be made only for the actual feet of pipe inspected as measured from the center of the manholes. All setups, original videotapes and photographs shall be incidental to the bid unit costs for the inspection work.

2. Bid Package "B" Payment Items

a) *General:* The County will not provide any space or place to store materials for this project. No payment will be made for stored materials.

It is intended that all work required to complete this Contract will be included in the various bid items described in the following paragraphs.

b) *Items No. 13 through 18 - Fold and Form Pipe Lining:* Each unit price bid shall include all necessary or required traffic control, sewer pipe cleaning and preparation of the existing sewer, including blocking or plugging incoming lines; removal, transportation and disposal of material generated by cleaning and preparation; television surveys; chemical joint sealing if necessary; pipe liner; cleaning; testing; cleanup; and all labor, materials and equipment required to provide a complete and acceptable liner installation.

Also included, if repairs are required due to damage caused by the Contractor's operation, shall be materials for repair, if required, including pipe, fittings and specials, pipe bedding, and materials for surface restoration; transportation and handling costs delivered to the work site; any bypass pumping; providing provisional sewers to maintain service; complying with the State of Florida Trench Safety Act, including shoring; removal, transportation and disposal of existing sewer excavation; supporting and protecting existing utilities as required; dewatering; sheeting and shoring, if necessary; furnishing and installing replacement pipe, fittings and repair couplings; unloading material and placing it in the trench; cutting pipe; furnishing and installing joint materials including lubricant; making all connections within the lines to existing sewers, laterals and structures; placing and compacting bedding and backfill; furnishing and installing additional suitable backfill material, if required; furnishing all materials and equipment required to clean and test the sewer; cleaning and testing the sewer; temporary paving installation and removal; permanent paving replacement; replacement of pavement markings as existed before repair; replacing utilities, catch basins, manholes, trees, grass, shrubs, mail boxes, sprinkler systems, concrete or rock bed driveways, sidewalk and all other similar items, to original locations and to equal or better than original conditions; obtaining and paying for any necessary permits; satisfying all requirements of the permits; and all other appurtenant and miscellaneous items and work including final cleanup.

This item will be measured and paid at the unit price per linear foot of Fold and Formed Pipe Lining as delineated by the pipe size and depth in brackets named in the Bid Form. Measurement shall be made based on the horizontal projection of the centerline of the permanently installed liner between manholes, including the laying length of fittings along the run, measured to the nearest foot from inside wall of manhole to inside wall of manhole for each section lined.

Payment for bypass pumping (for main line only) and service lateral connections, if required (other than because of damage caused by the Contractor) will be paid under a separate item. Payment for bypass pumping of service laterals, if required, shall be included with the lining operation.

Rear lot easement main line sewers are the sanitary sewer mains located in easements usually behind residential or commercial properties or within easements through woods. Properties are not easily accessible from at least one (1) manhole in run.

Roadway right-of-way main line sewers are the sanitary sewer mains located in roadway right-of-way. Both manholes are easily accessible.

c) *Item No. 19 - Reinstatement of Service Laterals:* This item is for reconnecting sanitary sewer service laterals, any size, to the new liner and shall include, but not be limited to, blocking or plugging incoming line; removal, transportation and disposal of material generated by cleaning and preparation; television surveys; furnishing the equipment necessary to internally cut out and removing the liner to at least 95%, minimum, of the circumference of the lateral, cutting out the coupon; recovering all waste material from the sewer; service pipe cleaning; sealing the lateral connection to the liner; grouting the first five (5) feet of the service lateral; testing; locating and exposing clean-outs when necessary; using the clean-out to locate the sewer connection; performing all repairs required due to damage caused by the Contractor, as listed in Items B1.1 through B1.14 above, and all appurtenant and miscellaneous items and work.

This item of work will be measured and paid at the unit price per each lateral connected. Payment for bypass pumping of service laterals if required, shall be included with the lining operation.

d) *Items No. 20 through 21 - Bypass Pumping of Sewers:* These pay items provide complete compensation for operations required for sewer and manhole liner installations. The Contractor shall attempt to perform the sewer work without bypass pumping. However, if, in the opinion of the Engineer bypass pumping is necessary, it will be identified as a payment item. The pay item is a one- (1) time charge for all bypass pumping operations during a given lining installation, regardless of the number of pumps required or the duration of the pumping periods. Bypass Pumping shall be bid on the basis of sewer size which is bypassed.

These items shall include, but are not limited to: all necessary or required traffic control; pumps; piping; gasoline/diesel fuel; maintenance; transportation and storage; temporary bypass and service piping; labor; materials and/or any other costs associated with bypass pumping.

Plugging or blocking a sewer line shall be included in the appropriate bid item for which the flow must be stopped, this is considered incidental work and no additional payment shall be considered for these activities under this item.

Payment for bypass pumping of service laterals. If required, shall be included with the lining operation.

e) *Item No. 22 and 23 - Root Removal in Sewer Lines:* This item of work will be measured and paid at the unit price per linear foot for each sewer size bracket named in the Bid Form. Measurement of lines shall be made based on the horizontal projection of the centerline of the pipe between manholes, measured to the nearest foot from inside wall of manhole to inside wall of manhole, not including the manhole chamber, in the pipe which root removal/treatment was performed.

Each unit price bid for root removal and chemical root treatment in sewer lines shall include: cleaning; all mechanical methods of root removal specified or not; all herbicides or chemical treatment specified or not and/or all equipment, materials and labor which shall be used to provide an open sewer (no blockages or constructions due to roots or vegetation) to an acceptable condition and ready for any and all repairs.

Sewer line or manhole cleaning is not a separate bid item. The prices for all cleaning of sewers and manholes; verification of adequate cleaning by pulling double squeegees; hoses; nozzles; water; labor; materials and/or any other work required to clean the sewers to a degree acceptable for television inspection and subsequent repairs shall be included in the bid item in which the rehabilitation occurs.

f) *Items No. 24 - Warranty TV Survey:* Warranty pipe inspection and video recording of the sewer lines shall be paid at the unit price bid per linear foot of each pipe size. Payment shall be made only for the actual feet of pipe inspected as measured from the center of the manholes. All setups, original videotapes and photographs shall be incidental to the bid unit costs for the inspection work.

3. Bid Package "C" Payment Items

a) *General:* The County will not provide any space or place to store materials for this project. No payment will be made for stored materials.

It is intended that all work required to complete this Contract will be included in the various bid items described in the following paragraphs.

b) *Items No. 25 - Chemical Grouting:* Each unit price bid shall include transportation and disposal of any debris or hazardous matter generated from grouting operation; television surveys during grouting; cleanup; all labor, materials and equipment required to provide a complete and acceptable grout application.

This item will be measured and paid at the unit price per gallon of grout pumped.

c) *Items No. 26 - Set-up:* Each unit price bid shall include all necessary or required traffic control; all labor, materials and equipment required for locating and setting-up equipment to commence grouting operations.

This item will be measured and paid for each set-up made to commence grouting. A set-up shall be defined as the complete relocation of all equipment and materials to another location of a distance greater than 500 lineal feet away.

d) *Item No. 27 - Mobilization:* Each unit price bid shall include all necessary traffic control; all labor, materials and equipment required for locating and setting-up equipment to commence grouting operations. Payment will be made at the applicable unit price amount and will represent full compensation for mobilization to any location within the Charlotte County Utility system. This item will be paid only once for each purchase order given.

4. Bid Package "D" Payment Items

a) *General:* The County will not provide any space or place to store materials for this project. No payment will be made for stored materials.

It is intended that all work required to complete this Contract will be included in the various bid items described in the following paragraphs.

b) *Items No. 28 through 33 - Pipe Lining:* Each unit price bid shall include all necessary or required traffic control, sewer pipe cleaning and preparation of the existing sewer, including blocking or plugging incoming lines; removal, transportation and disposal of material generated by cleaning and preparation; television surveys; chemical joint sealing if necessary; pipe liner; cleaning; testing; cleanup; all labor, materials and equipment required to provide a complete and acceptable liner installation.

Also included, if repairs are required due to damage caused by the Contractor's operation, shall be materials for repair, if required, including pipe, fittings and specials, pipe bedding, and materials for surface restoration; transportation and handling costs delivered to the work site; any bypass pumping; providing provisional sewers to maintain service; complying with the State of Florida Trench Safety Act, including shoring; removal, transportation and disposal of existing sewer excavation; supporting and protecting existing utilities as required; dewatering; sheeting and shoring, if necessary; furnishing and installing replacement pipe, fittings and repair couplings; unloading material and placing it in the trench; cutting pipe; furnishing and installing joint materials including lubricant; making all connections within the lines to existing sewers, laterals and structures; placing and compacting bedding and backfill; furnishing and installing additional suitable backfill material, if required; furnishing all materials and equipment required to clean and test the sewer; cleaning and testing the sewer; temporary paving installation and removal; permanent paving replacement; replacement of pavement markings as existed before repair; replacing utilities, catch basins, manholes, trees, grass, shrubs, mail boxes, sprinkler systems, concrete or rock bed driveways, sidewalk and all other similar items, to original locations and to equal or better than original conditions; obtaining and paying for any necessary permits; satisfying all requirements of the permits; and all other appurtenant and miscellaneous items and work including final cleanup.

This item will be measured and paid at the unit price per linear foot of Pipe Lining as delineated by the pipe size and depth in brackets named in the Bid Form. Measurement shall be made based on the horizontal projection of the centerline of the permanently installed liner between manholes, including the laying length of fittings along the run, measured to the nearest foot from inside wall of manhole to inside wall of manhole for each section lined.

Payment for bypass pumping (for main line only) and service lateral connections, if required (other than because of damage caused by the Contractor) will be paid under a separate item. Payment for bypass pumping of service laterals, if required, shall be included with the lining operation.

Rear lot easement main line sewers are the sanitary sewer mains located in easements usually behind residential or commercial properties or within easements through woods. Properties are not easily accessible from at least one manhole in run.

Roadway right-of-way main line sewers are the sanitary sewer mains located in roadway right-of-way. Both manholes are easily accessible.

c) *Item No. 34 - Reinstatement of Service Laterals:* This item is for reconnecting sanitary sewer service laterals, any size, to the new liner and shall include, but not be limited to, blocking or plugging incoming line; removal, transportation and disposal of material generated by cleaning and preparation; television surveys; furnishing the equipment necessary to internally cut out and removing the liner to at least 95%, minimum, of the circumference of the lateral, cutting out the coupon; recovering all waste material from the sewer; service pipe cleaning; sealing the lateral connection to the liner; grouting the first five (5) feet of service lateral; testing; locating and exposing clean-outs when necessary; using the clean-out to locate the sewer connection; performing all repairs required due to damage caused by the Contractor, as listed in Items B1.1 through B1.14 above, and all appurtenant and miscellaneous items and work.

This item of work will be measured and paid at the unit price per each lateral connected. Payment for bypass pumping of service laterals, if required, shall be included with the lining operation.

d) *Items No. 35 through 36 - Bypass Pumping of Sewers:* These pay items provide complete compensation for operations required for sewer and manhole liner installations. The Contractor shall attempt to perform the sewer work without bypass pumping. However, if, in the opinion of the Engineer bypass pumping is necessary, it will be identified as a payment item. The pay item is a one-(1) time charge for all bypass pumping operations during a given lining installation, regardless of the number of pumps required or the duration of the pumping periods. Bypass Pumping shall be bid on the basis of sewer size which is bypassed.

These items shall include, but are not limited to all necessary or required traffic control; pumps; piping; gasoline/diesel fuel; maintenance; transportation and storage; temporary bypass and service piping; labor; materials and/or any other costs associated with bypass pumping.

Plugging or blocking a sewer line shall be included in the appropriate bid item for which the flow must be stopped; this is considered incidental work and no additional payment shall be considered for these activities under this item.

Payment for bypass pumping of service laterals, if required, shall be included with the lining operation.

e) *Item No. 37 and 38 - Root Removal in Sewer Lines:* This item of work will be measured and paid at the unit price per linear foot for each sewer size bracket named in the Bid Form. Measurement of lines shall be made based on the horizontal projection of the centerline of the pipe between manholes, measured to the nearest foot from inside wall of manhole to inside wall of manhole, not including the manhole chamber, in the pipe which root removal/treatment was performed.

Each unit price bid for root removal and chemical root treatment in sewer lines shall include cleaning; all mechanical methods of root removal specified or not; all herbicides or chemical treatment specified or not and/or all equipment, materials and labor which shall be used to provide an open sewer (no blockages or constructions due to roots or vegetation) to an acceptable condition and ready for any and all repairs.

Sewer line or manhole cleaning are not a separate bid item. The prices for all cleaning of sewers and manholes; verification of adequate cleaning by pulling double squeegees; hoses; nozzles; water; labor; materials and/or any other work required to clean the sewers to a degree acceptable for television inspection and subsequent repairs shall be included in the bid item in which the rehabilitation occurs.

f) *Items No. 39 - Warranty TV Survey:* Warranty pipe inspection and video recording of the sewer lines shall be paid at the unit price bid per linear foot of each pipe size. Payment shall be made only for the actual feet of pipe inspected as measured from the center of the manholes. All setups, original videotapes and photographs shall be incidental to the bid unit costs for the inspection work.

TS-03 — REFERENCE STANDARDS

A. GENERAL: Wherever reference is made to any published standards, codes, or standard specifications, it shall mean the latest standard code, specification, or tentative specification of the technical society, organization, or body referred to, which is in effect at the date of the opening of bids.

The following is a partial list of typical abbreviations which may be used in the Specifications and the organizations to which they refer:

AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
ACIFS	American Cast Iron Flange Standards
AGA	American Gas Association
AIA	American Institute of Architects
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
ANSI	American National Standard Institute
ASCE	American Society of Civil Engineers
ASME	American Society of Mechanical Engineers
ASTM	American Society of Testing and Materials

AWPA	American Wood Preservers Association
AWS	American Welding Society
AWWA	American Water Works Association
CIPRA	Cast Iron Pipe Research Association
FDOT	Florida Department of Transportation
EEE	Institute of Electrical and Electronic Engineers
NBS	National Bureau of Standards
NCPI	National Clay Pipe Institute
NEC	National Electric Code
NEMA	National Electrical Manufacturers Association
NFPA	National Fire Protection Association
NLMA	National Lumber Manufacturers Administration
OSHA	Occupational Safety and Health Administration
SFBC	South Florida Building Code
SSPC	Steel Structures Painting Council
UL	Underwriters Laboratories, Inc.

Contractor shall, when required, furnish evidence satisfactory to the Engineer that materials and methods are in accordance with such standards where so specified. In the event any questions arise as to the application of these standards or codes, copies shall be supplied on site by the Contractor.

TS-04 — PROJECT MEETINGS

A. GENERAL:

1. Pre-construction - A pre-construction meeting will be held to acquaint representative of the County and various agencies with those in responsible charge of the Contractor's activities for the project. The meeting will cover such subjects as the following: insurance certificates; permits and licenses; affirmative action employment; construction schedules; cost breakdown and application for payments; material deliveries, storage and payments; shop drawings and submittals; job-site review of work by the Engineer; safety and emergency action procedures; operations of the existing collection system; field offices, security and other housekeeping procedures; and other appropriate matters.

2. Progress - If required by the Engineer, progress meetings shall be held once every two (2) weeks for the purpose of coordinating and expediting the work. The Contractor, as a part of his obligations under the Contract, shall attend in person or by an authorized representative to attend and to act on his behalf. The Engineer will conduct such meetings and as necessary, with the Contractor's input, issue an agenda.

The Engineer and Contractor may call for special job site meetings for the purpose of resolving unforeseen problems or conflicts which may impede the construction schedule. The Engineer will prepare a brief summary report of the decisions or understandings concerning each of the items discussed at the meeting.

TS-05 — SUBMITTALS

A. GENERAL:

1. Progress Schedule - The Purchase Order the Contractor is issued by the County shall outline the rehabilitative work. This work will contain a portion of the work required under this Contract. A progress schedule shall be prepared and four (4) copies of said schedule shall be submitted to the Engineer for review and comments within fourteen (14) days of date issue of Purchase Order.

The schedule shall detail the proposed sequence of the work and identify pertinent construction activities of each Bid Item. The schedule shall be time-scaled, identifying the estimated date of starting and completion of each bid item in order to complete the Purchase Order within the time specified in the Purchase Order.

Subsequent changes to the schedule shall be accompanied by a letter of explanation with appropriate reference and revision date on the schedule.

Review of schedule by Engineer does not relieve the Contractor of any errors or omissions.

2. Shop Drawings

- a) The Contractor shall furnish for review, four (4) copies of shop drawings; project data, samples, and other submittal items required by the Contract Documents. Two (2) copies shall be returned to the Contractor stamped "Furnish as Submitted" or "Furnish as Corrected". Where major corrections are indicated, two (2) copies will be returned stamped "Revise and Resubmit" and a new submittal is required (four (4) copies).
- b) The review of the Contractor's submissions shall in no way relieve the Contractor of any of his responsibilities under the Contract. A submission marked "Furnish as Submitted" shall be interpreted to mean that there are no specific objections to the submitted material, subject to conformance with the Contract Documents and Purchase Order.
- c) All submissions shall be dated and properly referenced to the Specifications section.
- d) All submissions shall bear the Contractor's stamp certifying that they have been checked for conformance and accuracy. Submissions without the Contractor's stamp of approval will not be reviewed by the Engineer and will be returned to the Contractor.
- e) For any submission containing any departure from the Contract Documents, the Contractor shall include proper explanation in his letter of submittal.
- f) Work on fabricated or special items shall not be commenced until the required submission information has been reviewed and marked "Furnish and Submitted" or "Furnish as Corrected".
- g) Standard items shall not be assembled or shipped to the job site until the required submission information has been reviewed and marked "Furnish as Submitted" or "Furnish as Corrected".
- h) Prior review actions shall not relieve the Contractor of the responsibility for correction errors, deviations, and/or omissions discovered at a later date.
- i) When so specified, or if considered by the Engineer to be acceptable, the manufacturer's specifications, catalog data, descriptive matter, illustrations, and other items may be submitted for review in place of shop drawings. In such case, the requirements shall be as specified for shop drawings, insofar as applicable.
- j) The Contractor shall be responsible for the prompt submittal of all shop drawings so that there shall be no delay to the work due to the absence of such drawings. The Engineer will review the shop drawings within fourteen (14) calendar days of the receipt of such drawings. Reviewed shop drawings will be returned to the Contractor by regular mail, posted no later than fourteen (14) calendar days after receipt.
- k) Time delays caused by rejection of submittals are not cause for extra charges to the County or time extensions.
- l) Shop drawings include, but are not limited to, layout drawings, installation drawings, and construction drawings. The Contractor shall be responsible for securing all items such as information, details, dimension, and drawings necessary to prepare submission drawings required and necessary under this Contract and to fulfill all other requirements of his Contract. The Contractor shall secure such information, details, drawings, and other items from all possible sources including, but not limited to, the drawings prepared by subcontractors, engineers, manufacturers, and suppliers.

Submission drawings shall accurately and clearly present the following:

- all work and installation dimensions.
- arrangement and sectional views.

Where manufacturer's publications in the form of catalogs, brochures, illustrations, or other data sheets are submitted in lieu of prepared shop drawings, such submissions shall specifically indicate the particular item offered. Identification of such items and relative pertinent information shall be made with indelible ink. Submissions showing only general information will not be accepted.

3. Samples - Contractor shall furnish for review all samples as required by the Contract Documents or requested by the Engineer. A minimum of two (2) samples shall be submitted. Samples shall be of sufficient size or quantity to clearly illustrate the quality, type, range of color, finish or texture and shall be properly labeled to show the nature of the work where the material represented by the sample will be used.

4. Schedule of Payment Values - The Contractor shall submit a separate Schedule of Payment Values for the work in accordance with Section TS-02 "Measurement and Payment", for all items in the bid that are to be paid for on unit bid item basis. The schedule shall contain the installed value of the component parts of work for the purpose of making progress payments during the construction period.

The schedule shall be given in sufficient detail for the proper identification of work accomplished. Each item shall include a complete installation with all construction costs, the Contractor's overhead, contingencies and profit. The sum of all unit bid items multiplied by their respective quantities shall equal the total value of the Contract.

TS-06 — QUALITY CONTROL

A. GENERAL:

1. Review at Place of Manufacture - Unless otherwise specified, all products, materials, and time and equipment may be subject to review by the Engineer at the place of manufacture.

The presence of the Engineer at the place of manufacture, however, shall not relieve the Contractor of the responsibility for furnishing products, materials, and equipment which comply with all requirements of the Contract Documents, and said duty shall not be avoided by any act or omission on the part of the Engineer.

2. Sampling and Testing - Unless otherwise specified, all sampling and testing shall be in accordance with the methods prescribed in the current standards of the ASTM, as applicable to the class and nature of the article or materials considered.

Any waiver by the County of any specified testing or other quality assurance measures, whether or not waiver is accompanied by a guarantee of substantial performance as a relief from the specified testing or other quality assurance requirements as originally specified, and whether or not such guarantee is accompanied by a performance bond to assure execution of any necessary corrective or remedial work, shall not be construed as a waiver of any requirements of the Contract Documents.

Notwithstanding the existence of such waiver, the Engineer reserves the right to make independent investigations and tests and failure of any portion of the work to meet any of the requirements of the Contract Documents, shall be reasonable cause for the Engineer to require the removal or correction and reconstruction of any such work in accordance with the General Conditions.

3. Site Investigation and Control - The Contractor shall verify all dimensions in the field and shall check field conditions continuously during construction. The Contractor shall be solely responsible for any inaccuracies built into the work due to his failure to comply with this requirement.

The Contractor shall inspect related and appurtenant work and shall report in writing to the Engineer any conditions which will prevent proper completion of the work. Failure to report any such conditions shall constitute acceptance of all site conditions, and any required removal, repair, or replacement caused by unsuitable conditions shall be performed by the Contractor within the scope of the project.

4. Review and Testing - The County reserves the right to employ and pay for the services of an independent testing laboratory for specified testing.

The work or actions of the testing laboratory shall in no way relieve the Contractor of his obligations under the Contract. The laboratory testing work will include such review and testing required by the Contract Documents, existing laws, codes, and

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ordinances. The testing laboratory will have no authority to change the requirements of the Contract Documents, nor perform, accept, or approve any of the Contractor's work.

The Contractor shall allow the Engineer ample time and opportunity for review and testing materials to be used in the work. The Contractor shall advise the Engineer promptly upon placing orders for materials so that arrangements may be made, if desired, for review before shipment from the place of manufacture. The Contractor shall at all times furnish the Engineer and his representatives, facilities including labor, and allow proper time for reviewing and testing materials, equipment, and workmanship. The Contractor must anticipate that possible delays may occur in the execution of its work due to the necessity of materials and equipment being reviewed and accepted for use. The Contractor shall furnish, at his own expense, all samples of materials required by the Engineer for testing, and shall make his own arrangements for providing water, electric power, or fuel for the various reviews and tests of lines and manholes.

The County will bear the costs of all tests, reviews, or investigations undertaken by the order of the Engineer for the purpose of determining conformance with the Contract Documents if such tests, reviews, or investigations are not specifically required by the Contract Documents, and if conformance is ascertained thereby. Whenever non-conformance is determined by the Engineer as a result of such tests, reviews, or investigations, the Contractor shall bear the full costs of any additional tests and investigations, which are ordered by the Engineer to ascertain subsequent conformance with the Contract Documents.

5. Right of Rejection - The County or its representative shall have the right, at all times and places, to reject any articles or materials to be furnished hereunder which, in any respect, fail to meet the requirements of the Contract Documents, regardless of whether the defects in such articles or materials are detected at the point of manufacture or after completion of the work at the site. If the County or its representative, through an oversight or otherwise, has accepted materials or work which is defective or which is contrary to the Contract Documents, such materials, no matter in what stage or condition of manufacture, delivery, or erection, may be subsequently rejected by the County or its representative.

The Contractor shall promptly remove rejected articles or materials from the site of the work after notification or rejection. All costs of removal and replacement of rejected articles or materials as specified herein shall be borne by the Contractor.

6. Weather Conditions - Work that may be affected by inclement weather shall be suspended until proper conditions prevail. In the event of impending storms, the Contractor shall take necessary precautions to protect all work, materials and equipment from exposure.

7. Fire Protection - The Contractor shall take all necessary precautions to prevent fires at or adjacent to the work, including his own equipment and trailers. Adequate fire extinguisher stations shall be provided throughout the work area.

TS-07 — TEMPORARY UTILITIES

A. GENERAL: The Contractor shall provide for utilities and services for his own operations. These shall include electrical power, water, ventilation, sanitary facilities and telephone service. The Contractor shall furnish, install and maintain all temporary utilities during the Contract period including removal upon completion of the work. Such facilities shall comply with regulations and requirements of the national Electrical Code, OSHA, Florida Power and Light, and applicable Federal, State, and Local codes, rules and regulations.

1. Temporary Water - The Contractor shall supply all water used for construction, flushing, testing, and temporary sanitary facilities. The Contractor shall provide and maintain all piping, fittings, adapters, and valving required. It is the Contractor's responsibility to arrange through the water department for a water meter. A deposit to be paid by the Contractor is required for meter rental and all water shall be purchased by the Contractor at the prevailing rate.

2. Temporary Ventilation - The Contractor shall provide and maintain adequate ventilation for a safe working environment. In addition, forced air ventilation shall be provided for the curing of installed materials, humidity control, and the prevention of hazardous accumulations of dust, gases, or vapors.

3. Temporary Sanitary Facilities - The Contractor shall provide and maintain adequate and clean sanitary facilities for the construction work force and visitors. The facilities shall comply with Local codes and regulations and be situated at approved locations.

TS-08 — TEMPORARY ENVIRONMENTAL CONTROLS

A. GENERAL:

1. Chemicals - All chemicals used during project construction or furnished for testing of project operations, whether herbicide, pesticide, disinfectant, polymer, reactant of other classifications, will be required to show approval of either EPA or HUD. The handling, use, storage and disposal of such materials, containers or residues shall be in strict conformance with manufacturer and/or supplier's secured storage. Copies of antidotes shall be kept at the storage site and at the job site. The Contractor shall be responsible for any leaked chemical that has permeated into the soil. Costs incurred for cleanup of any such contamination shall be borne by the Contractor.

2. Dust - During all work for this Contract, the Contractor shall be the application of water and/or calcium chloride or other means, acceptable to the Engineer, eliminate dust annoyance to adjacent property owners and business establishments. The Contractor shall take all protective measures, to the satisfaction of the Engineer, necessary to ensure that dust and debris does not enter any of the mechanical or electrical equipment. The Contractor shall be responsible for the cleanup of existing buildings and property which have become soiled due to the lack of proper dust control as determined by the Engineer.

3. Rubbish Control - During the progress of the work, the Contractor shall keep the site of the work and other areas used by it in a neat and clean condition, and free from any accumulation of rubbish. The Contractor shall dispose of all rubbish and waste materials of any nature occurring at the work site, and shall establish regular intervals of collection and disposal of such materials and waste. The Contractor shall also keep its haul roads free from dirt, rubbish, and unnecessary obstructions resulting from its operations. Disposal of all rubbish and surplus materials shall be off the site of construction in accordance with Local codes and ordinances governing locations and methods of disposal, and in conformance with all applicable safety laws, and to the particular requirements of Part 1926 of the OSHA Safety and Health Standards for Construction.

4. Toilet Facilities - Fixed or portable chemical toilets shall be provided wherever needed for the use of employees. Toilets at construction job sites shall conform to the requirements of Part 1926 of the OSHA Standards for Construction.

Such facilities shall be made available when the first employees arrive on the work, shall be properly secluded from public observation, and shall be constructed and maintained in suitable numbers and at such points and in such manner as may be required.

The Contractor shall maintain the sanitary facilities in a satisfactory and sanitary condition at all times and shall enforce their use. He shall rigorously prohibit the committing of nuisances on the site of the work, on the lands of the County, or an adjacent property.

The County and the Engineer shall have the right to review any building or other facility erected, maintained, or used by the Contractor, to determine whether or not the sanitary regulations have been complied with.

5. Sanitary and Other Organic Wastes - The Contractor shall establish a regular daily collection of all sanitary and organic wastes. All wastes and refuse from sanitary facilities provided by the Contractor or organic material wastes from any other source related to the Contractor's operations shall be disposed of away from the site in a manner satisfactory to the Engineer and in accordance with all laws and regulations pertaining thereto.

6. Noise - Noise resulting from the Contractor's work shall not violate the local noise ordinances or exceed the noise levels and other requirements relating to noise abatement. The Contractor shall be responsible for curtailing noise resulting from his operation. He shall, upon written notification from the Engineer or the noise control officers, make any repairs, replacements, adjustments, additions, and furnish mufflers when necessary to fulfill requirements.

7. Erosion Abatement and Water Pollution - It is imperative that the Contractor's dewatering operations not contaminate or disturb properties adjacent to the work sites in accordance with the regulatory agencies having jurisdiction. The Contractor shall, therefore, schedule and control his operations to confine all runoff water from disturbed surfaces, water from dewatering and/or from excavation below the ground water table operations that becomes contaminated with lime silt, mulch, and other deleterious matter, fuels, oils, bituminous, calcium chloride, chemicals and other polluting materials.

The Contractor shall construct temporary stilling basin(s) of adequate size and provide all necessary temporary materials, operations and controls including, but not limited to, filters, coagulants, screens and other means necessary to attain the required discharge water quality.

The Contractor shall be responsible for providing, operating, and maintaining materials and equipment used for conveying the clear water to the point of discharge. All pollution prevention procedures, materials, equipment, and related items shall be operated and maintained until such time as the dewatering operation is discontinued. Upon the removal of the materials, equipment, and related items, the Contractor shall restore the area to the condition prior to his commencing work.

9. Precautions During Adverse Weather - During adverse weather, and against the possibility thereof, the Contractor shall take all necessary precautions so that the work may be properly done and satisfactory in all respects. When required, protection shall be provided by use of tarpaulins, wood and building paper, shelters, or other acceptable means. The Contractor shall be responsible for all changes caused by adverse weather.

10. Hurricane and Storm Warnings - The Contractor shall be required to remove from and/or secure all loose construction materials and equipment and protect structures under construction at the job site in the event of a hurricane watch. The Contractor shall also remove all bulkheads and plugs in pipelines that would impede drainage in case of flooding. Structures that may be in danger of floatation shall be flooded.

11. Pests and Rodents - The Contractor shall be responsible for maintaining the job site free from litter, rubbish, and garbage. He shall provide containers for the disposal of garbage and other materials that attract and are breeding places for pests and rodents. The Contractor shall provide the services of an exterminator to inspect the job site if pest and rodents are suspected and shall provide service.

12. Periodic Cleanup: Basic Site Restoration - During construction, the Contractor shall regularly remove from the site all accumulated debris and surplus materials of any kind which result from his operations. Unused equipment and tools shall be stored at the Contractor's yard or base of operations for the project.

When the work involves installation of sewers, drains, water mains, manholes, underground structures, or other disturbance of existing features in or across streets, rights-of-ways, easements, or private property, the Contractor shall (as the work progresses) promptly backfill, compact, grade, and otherwise restore the disturbed area to a basic condition which will permit resumption of pedestrian or vehicular traffic and any other critical activity or function consistent with the original use of the land. Unsightly mounds of earth, large stones, boulders, and debris shall be removed so that the site presents a neat appearance.

The Contractor shall perform the cleanup work on a regular basis and as frequently as requested by the Engineer. Basic site restoration in a particular area shall be accomplished immediately following the installation or completion of the required facilities in that area. Furthermore, such work shall also be accomplished, when ordered by the Engineer, if partially completed facilities must remain incomplete for some time period due to unforeseen circumstances.

Upon failure of the Contractor to perform period clean-up and basic restoration of the site to the Engineer's satisfaction, the County may, upon five (5) days prior written notice to the Contractor, employ such labor and equipment as he deems necessary for the purpose, and all costs resulting therefrom shall be charged to the Contractor and deducted from the amounts of money that may be due him.

TS-09 — TRAFFIC REGULATIONS AND MAINTENANCE OF TRAFFIC

A. GENERAL: Contractor shall comply with all traffic laws and comply with the requirements, rules, and regulations of the Florida State Department of Transportation and shall comply with the Maintenance of Traffic policy Charlotte County Public Works, to maintain adequate such items as warning signs, lights, and barriers, for the protection of traffic on public roadways.

The Contractor shall maintain traffic and protect from all damage to persons and property in accordance with the Contract Documents and all applicable State and Local regulations. He shall conduct his operations so as to maintain and protect access, for vehicular and pedestrian traffic, to and from all properties and business establishments adjoining or adjacent to those streets affected by his operations, and to subject the public to a minimum of delay and inconvenience. Items such as suitable signs, barricades, and railing shall be erected and the work outlined by adequate lighting at night. Danger lights shall be provided as required. Traffic shall be detoured as required. Watchmen and flagmen shall be provided as may be necessary for the protection of traffic.

The Contractor and his personnel are cautioned against parking vehicles in locations that affect vehicular and pedestrian traffic or hinder business establishments for any extended period of time. If necessary, the Contractor shall obtain parking areas for his personnel.

All dirt spilled from the Contractor's trucks on existing pavements shall be removed by the Contractor whenever in the opinion of the Engineer the accumulation is sufficient to cause the formation of mud, dust, interference with traffic or create a traffic hazard.

TS-10 — MATERIALS

A. GENERAL: All materials or devices incorporated in this project shall be new and unused, unless indicated otherwise in the Contract Documents.

Materials to be incorporated in the work shall be delivered sufficiently in advance of their installation and use to prevent delay in the execution of the work, and they shall be delivered as nearly as feasible in the order required for executing the work.

The Contractor shall protect all devices and materials from deterioration and damage. The materials shall be handled and stored by the manufacturer, fabricator supplier and Contractor before, during, and after shipment to prevent warping, twisting, bending, breaking, chipping, rusting, and any injury, damage or theft of any kind whatsoever. Any material exhibiting any of the above, shall be removed and replaced at the Contractor's expense for both labor and materials.

1. Storage - The Contractor shall store his equipment and materials at the Contractor's base of operations in accordance with the manufacturer's recommendations. No storage facility is provided by The County.

2. Liner Material Certification - Only materials that meet the applicable American Society of Testing and Materials (ASTM) material standards are acceptable for this work. These standards are as follows:

a) CURED IN PLACE LINING - ASTM F-1216 latest revision - Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the Inversion and Curing of a Resin Impregnated Tube.

b) POLYETHYLENE PIPE LINING - ASTM F-1533 and D-3350 - Specification for Deformed Polyethylene P.E. Liner.

c) PVC OR PVC ALLOY LINING - ASTM F-1071-98, F-1504-97, and D-1784-99A - Standard Specification, for rigid poly-vinyl chloride (PVC) pipe and rigid poly-compounds.

d) PVC PIPE LINING - Contractors must clearly identify the applicable cell designation that corresponds to its pipe.

The pipe liner producer's certification, in accordance with ASTM specifications, shall be furnished with the liner materials. The Contractor shall turn the pipe liner producer's certification over the County prior to installation.

The Contractor shall submit with this bid, the manufacturer's material certification that the material complies with the ASTM requirements as stated above. Bids containing exceptions to the material requirements shall be considered non-responsive.

3. Chemical Grouts - As referenced in Section TS-13

TS-11 — CONCRETE AND GROUT (EXCLUDING CHEMICAL GROUTING FOR BID PACKAGE "C")

A. GENERAL:

1. Scope - The Contractor shall furnish all materials for concrete in accordance with the provision of this section and shall form, mix, place, cure, repair, finish, and do all other work as required to produce finished concrete, all in accordance with the requirements of the Contract Documents.

The following types of concrete shall be covered in this section:

- a) *Structural Concrete*: Concrete to be used in all cases except where noted otherwise in the Contract Documents.
- b) *Sitework Concrete*: Concrete to be used for sidewalks.

The following types of grout are covered in this section:

- a) *Nonshrink Grout*: This type of grout shall be used wherever grout or cementitious grout is called for in the Contract Documents, unless another type is specifically referenced.
- b) *Epoxy Grout*: This type of grout shall be used wherever epoxy grout is called for.

Without limiting the generality of other requirements of these specifications, all work specified herein shall conform to, or exceed, the requirements of the South Florida Building Code and the applicable requirements of the following documents to the extent that the provisions of such documents are not in conflict with the requirements of this Section.

- a) *ACI 318*: Building Code Requirements of Reinforced Concrete.
- b) *CRSI*: Manual of Standard Practice.

2. Contractor Submittals - Prior to beginning the work, the Contractor shall submit to the Engineer, for review, proposed concrete mix designs which shall show the proportions and gradations of all materials proposed for each class and type of concrete specified herein in accordance with Section 05 - "Submittals".

3. Certified Delivery Tickets - Where ready-mix concrete is used, the Contractor shall provide delivery tickets at the time of delivery of each load of concrete. Each certificate shall show by the mix number, truck number, total yield in cubic yard, and the time of day, to the nearest minute, corresponding to when the batch was dispatched, when it left the plant, when it arrived at the job, the time that unloading began, the time that unloading was finished and any admixtures.

B. QUALITY ASSURANCE:

1. General - Tests on component materials and for compressive strength and shrinkage of concrete will be performed as specified herein. Tests for determining slump will be in accordance with the requirements of ASTM C143.

The cost of all laboratory tests on cement, aggregates, and concrete, will be borne by the County. However, the Contractor shall be charged for the cost of any additional tests and investigation on work performed which does not meet the specifications.

Concrete for testing shall be supplied by the Contractor at no cost to the County, and the Contractor shall provide assistance to the Engineer in obtaining samples. The Contractor shall dispose of and clean up all excess material.

2. Field Compression Tests - Compression test specimens shall be taken during construction from the first placement of each class of concrete specified herein and at intervals thereafter as selected by the Engineer to insure continued compliance with these specifications. At least one (1) set of test specimens shall be made for each fifty (50) yards of concrete placed. Each set of test specimens shall be a minimum of four (4) cylinders.

Compression test specimens for concrete shall be made in accordance with ASTM C31. Specimens shall be 6-inch diameter by 12-inch high cylinders.

Compression tests shall be performed in accordance with ASTM C39. One (1) test cylinder will be tested at seven (7) days and two (2) at twenty-eight (28) days. The remainder cylinder will be held to verify test results, if needed.

C. PRODUCTS:

1. Concrete Materials - Materials shall be delivered, stored, and handled so as to prevent damage by water or breakage. Only one (1) brand of cement shall be used. Cement reclaimed from cleaning bags or leaking containers shall not be used. All cement shall be used in the sequence of receipt of shipments.

All materials furnished for the work shall comply with the requirements of ACI 301, as applicable.

Storage of materials shall conform to the requirements of ACI 301.

Materials for concrete shall conform to the following requirements:

- a) Cement: shall be standard brand Portland cement conforming to ASTM C150, Type 11.
- b) Water: shall be potable, clean, and free from objectionable quantities of silty organic matter, alkali, salts, and other impurities.
- c) Aggregates: shall be obtained from pits acceptable to the Engineer, shall be non-reactive, and shall conform to the SFBC and ASTM C33. Maximum size of coarse aggregate shall be as specified in Paragraph 2.05B.
- d) Ready-Mix Concrete: shall conform to the requirements of ASTM C94.
- e) Air-Entraining Agent: meeting the requirements of ASTM C260 shall be used. Sufficient air-entraining agent shall be used to provide a total air content of 3% to 5%. The County reserves the right, at any time, to sample and test the air-entraining agent received on the job by the Contractor. The air-entraining agent shall be added to the batch in a portion of the mixing water. The solution shall be batched by means of a mechanical batcher capable of accurate measurement.
- f) Admixtures: water reducing and retarding admixture shall be added and measured as recommended by the manufacturer. The addition of the admixture shall be separate from the air entraining mixture. The addition of the admixture shall be completed within one (1) minute after addition of the water to the cement has been completed; or prior to the beginning of the last three quarters (3/4) of the required mixing, whichever occurs first. Water reducing and set retarding admixtures shall be in conformance with ASTM C494, Type D.

2. Concrete Design Requirements - Concrete shall be composed of cement, admixtures, aggregates and water. These materials shall be of the qualities specified. The exact proportions in which these materials are to be used for different parts of the work will be determined during the trial batch. In general, the mix shall be designed to produce a concrete capable of being deposited so as to obtain maximum density and minimum shrinkage and, where deposited in forms, to have good consolidation properties and maximum smoothness of surface. Mix designs with more than 41% of sand of the total weight of fine and coarse aggregate shall not be used. The aggregate gradations shall be formulated to provide fresh concrete that will not promote rock pockets around reinforcing steel or embedded items. The proportions shall be changed whenever necessary or desirable to meet the required result at no additional cost to the County. All changes shall be subject to review by the Engineer.

The minimum compressive strength and cement content of concrete shall be not less than that specified in the following tabulation:

<u>Type of Work</u>	<u>Min. 28-Day Compressive Strength (psi)</u>	<u>Max. Size Aggregate (in.)</u>	<u>Min. Cement per cu.yd. (sacks)</u>	<u>Max. W/C Ratio (by wt.)</u>
<u>Structural Concrete</u> : All reinforced concrete unless noted otherwise below.	4,000 (Class A)	1	6.0	0.45
<u>Sitework Concrete</u> : Sidewalks	3,000 (Class B)	1	5.0	0.50

Note: one sack of cement equals 94 lbs.

The mixes used shall be changed whenever such change is necessary or desirable to secure the required strength, density, workability, and surface finish and the Contractor shall be entitled to no additional compensation because of such changes.

4. Ready-Mixed Concrete - Ready-mixed concrete shall conform to meeting the requirements as to materials, batching, mixing, transporting, and placing as specified herein and in accordance with ASTM C94. Ready-mixed concrete shall be delivered to the site of the work, and discharge shall be completed within 1½ hours after the addition of the cement to the aggregates or before the drum has been revolved 250 revolutions, whichever is first. In hot weather, or under conditions contributing to quick stiffening of the concrete, or when the temperature of the concrete is 85° F or above, the time between the introduction of the cement to the aggregates and discharge shall not exceed sixty (60) minutes.

4. NonShrink Grout - Nonshrink grout shall be a prepackaged, inorganic, non-gas liberating, nonmetallic, cement-based grout requiring only the addition of water. Manufacturer's instructions shall be printed on each bag or other container in which the materials are packaged. The specific formulation for each class of non-shrink grout specified herein shall be that recommended by the manufacturer for the particular application.

5. Epoxy Grout - Epoxy grout shall be a pourable, non-shrink, 100% solids system. The epoxy grout system shall have three (3) components: resin, hardener, and specially blended aggregate, all pre-measured and prepackaged. The resin component shall not contain any non-reactive diluents. Resins containing butyl glycidyl ether (BGE) or other highly volatile and hazardous reactive diluents are not acceptable. Variation of component ratios is not permitted unless specifically recommended by the manufacturer. Manufacturer's instructions shall be printed on each container in which the materials are packaged.

The chemical formulation of epoxy grout shall be that recommended by the manufacturer for the particular application.

The mixed epoxy grout system shall have a minimum working life of forty-five (45) minutes at 75° F.

The epoxy grout shall develop a compressive strength of 5000 psi in twenty-four (24) hours and 10,000 psi in seven (7) days when tested in accordance with ASTM C579, Method B. There shall be no shrinkage (0.0%) and a maximum 4.0% expansion when tested in accordance with ASTM C827.

D. EXECUTION:

1. Proportioning and Mixing

a) *Proportioning*: Proportioning of the concrete mix shall conform to the requirements of Chapter 3 "Proportioning" of ACI 301.

b) *Mixing*: Mixing of concrete shall conform to the requirements of Chapter 7 of said ACI 301 Specifications.

c) *Slump*: Maximum slumps shall be four inches (4"), plus or minus one inch (1").

d) *Retempering*: Retempering of concrete or mortar which has partially hardened will not be permitted.

2. Preparation of Surfaces for Concreting - Earth surfaces shall be free from standing water, mud, and debris at the time of placing concrete.

No concrete shall be placed until the reinforcement steel and form work have been erected in a manner acceptable to the Engineer.

Existing concrete surfaces upon or against which concrete is to be placed shall be given a roughened surface for good bond. Joint surfaces shall be cleaned of all loose or defective concrete, and foreign material. Such cleaning shall be accomplished by sandblasting followed by thorough washing. All pools of water shall be removed from the surface of construction joints before the new concrete is placed.

Pipe conduit, dowels, and other ferrous items required to be embedded in concrete construction shall be so positioned and supported prior to placement of concrete that there will be a minimum of two inches (2") clearance between said items and any part of the concrete reinforcement. Securing such items in position by wiring or welding them to the reinforcement will not be permitted.

Anchor bolts shall be accurately set, and shall be maintained in position by templates while being embedded in concrete.

The surfaces of all metalwork to be in contact with concrete shall be thoroughly cleaned of all dirt, grease, loose scale and rust, grout, mortar, and other foreign substances immediately before the concrete is placed.

3. Handling, Transportation, and Placing - Placing of concrete shall conform to the applicable requirements of Chapter 8 of ACI 301 and the requirements of this section.

Concrete which upon or before placing is found not to conform to the requirements specified herein shall be rejected and immediately removed from the work. Concrete which is not placed in accordance with these Specifications, or which is of inferior quality, shall be removed and replaced by and at the expense of the Contractor.

No concrete shall be placed except in the presence of duly authorized representative of the Engineer. The Contractor shall notify the Engineer in writing at least twenty-four (24) hours in advance of placement of any concrete.

Concrete placed in sloping slabs shall proceed uniformly from the bottom of the slab to the top, for the full width of the pour. As the work progresses, the concrete shall be vibrated and carefully worked around the slab reinforcement, and the surface of the slab shall be screened in an up-slope direction.

4. Finishing Concrete Surfaces - Surfaces shall be free from fins, bulges, ridges, offsets, honeycombing, or roughness of any kind, and shall present a finished, smooth, continuous hard surface. Allowable deviations from plumb or level and from the alignment, profiles, and dimensions shown on the drawing are defined as tolerances and are specified herein. These tolerances are to be distinguished from irregularities in finish as described herein. Aluminum finishing tools shall not be used.

After proper and adequate vibration and tamping, all unformed top surfaces of slabs, floors, walls, and curbs shall be brought to a uniform surface with suitable tools.

a) Sidewalks: shall be given a light hairbroom finish with brooming perpendicular to drainage unless otherwise shown. The resulting surface shall be rough enough to provide a nonskid finish.

5. Protection - The Contractor shall protect all concrete against injury until final acceptance by the County. Fresh concrete shall be protected from damage due to rain. The Contractor shall provide such protection while the concrete is still plastic and whenever such precipitation is imminent or occurring.

6. Treatment of Surface Defects - As soon as forms are removed, all exposed surfaces shall be carefully examined and any irregularities shall be immediately rubbed or ground in a satisfactory manner in order to secure a smooth, uniform, and continuous surface. Plastering or coating of surfaces to be smoothed will not be permitted. No repairs shall be made until after review by the Engineer. In no case will extensive patching of honeycombed concrete be permitted. Concrete containing minor voids, holes, honeycombing, or similar depression defects shall be repaired as specified herein. Concrete containing extensive voids, holes, honeycombing, or similar depression defects, shall be completely removed and replaced. All repairs and replacements herein specified shall be promptly executed by the Contractor at his own expense.

7. Care and Repair of Concrete - The Contractor shall protect all concrete against injury or damage from excessive heat, lack of moisture, overstress, or any other cause until final acceptance by the County. Particular care shall be taken to prevent the drying of concrete and to avoid roughening or otherwise damaging the surface. Any concrete found to be damaged, or which may have been originally defective, or which becomes defective any time prior to the final acceptance of the completed work, or which departs from the established line or grade, or which, for any other reason, does not conform to the requirements of the Contract Documents, shall be satisfactorily repaired or removed and replaced with acceptable concrete at the Contractor's expense.

8. Grouting - All mixing, surface preparation, handling, placing, consolidation, and other means of execution for prepackaged grouts shall be done according to the instructions and recommendations of the manufacturer.

Grout shall be placed in such a manner, for the consistency necessary for each application, so as to assure that the space to be grouted is completely filled.

S-12 — SANITARY SEWER LINE GROUTING

1. GENERAL:

1. Scope - The work specified in this section includes all labor, materials, accessories, equipment, and tools necessary for chemical grouting for sealing and air testing sanitary sewer pipe joints.

2. Submittals - The Contractor shall submit to the County the following:

- a) Schedule for sanitary sewer grouting in Construction Progress Schedule.
- b) Test data and records.
- c) Pump calibration.
- d) Television inspection reports/cleaning reports.
- e) Certification of pressure sensing/monitoring system equipment.
- f) Chemicals
 - Provide list of chemicals to be used together with information on toxicity and hazardous nature of chemicals (MSDS sheets).
 - Information shall also be provided on recommended or required safe storage and handling of each chemical.
 - Provide evidence that chemicals are approved by OSHA and U.S. Environmental Protection Agency.
- g) Sealing field records.
- h) Submit three (3) copies of manufacturer's storage and handling information to County fifteen (15) calendar days prior to start of work.
- i) Submit in accordance with Section TS-05.

3. Product and Installer Acceptability - The chemical sealant shall have documented service of successful performance in similar usage, with "in-place" locations of over five (5) years. The sealing repair work shall be performed by operators familiar with handling of chemicals involved and equipment employed. The Contractor shall have a minimum of five (5) years experience in chemical grouting of sewer lines.

B. PRODUCTS:

1. General - All chemical grout shall be a chemical sealant solution containing principal chemical sealant constituent, initiator (trigger) and catalyst specifically recommended for purpose of sealing leaks in sanitary sewer lines and manholes. The chemical sealant constituent, initiator (trigger) and catalyst shall be compatible when mixed. The solution shall have ability to tolerate dilution and react in moving water. After final reaction, it shall be a stiff, impermeable, yet flexible gel. The chemical sealant shall be designed to be a soil stabilizing grout.

2. Material Composition - Intimate mixtures in such proportions that dilute aqueous solutions, when properly catalyzed, will form a firm but flexible gel. Grout shall make true solution at concentrations as high as three (3) pounds per gallon of water. Solution shall have ability to accept dilution by groundwater of at least 50% by volume, without significantly changing sealing ability of gel when at rest or in motion. Solutions shall gel in predetermined time when exposed to normal groundwater pH ranges, and be capable of formula adjustments to compensate for changing conditions. Solution as mixed shall have viscosity of less than two (2) centipoise. Reaction time shall be controllable from ten (10) seconds to sixty (60) minutes at temperatures from 32° F to 140° F. Viscosity shall remain constant throughout induction period. The minimum concentration of chemicals mixed in tank, (computed as liquid or dry weight percentage of total solution weight) shall be 10%. Higher concentration may

be used, when desirable, to increase strength or offset dilution during the induction period. Final reaction shall produce continuous, irreversible, impermeable stiff gel at chemical concentrations as low as 0.4 pounds per gallon of water. Gel shall not be rigid or brittle. Gel shall have negligible corrosion rate on mild steel plates. Only the following chemical grout alternatives will be accepted:

- a) AV-100 as manufactured by Avanti International, 822 Bay Star Boulevard, Webster, Texas 77589.
 - b) AV-118 as manufactured by Avanti International, 822 Bay Star Boulevard, Webster, Texas 77589.
 - c) 5610 (GEL) as manufactured by 3M Contractor Products, St. Paul, Minnesota 55144.
 - d) AV-254 as manufactured by Avanti International, 822 Bay Star Boulevard, Webster, Texas 77589.
3. Chemical Root Inhibitor - In those lines which had root removal performed, a chemical root inhibitor shall be added to the grout prior to sealing the joints. Contractor shall submit the chemical to be used for Engineer's approval prior to utilization.
 4. Initiator (Trigger) - Initiator shall be in accordance with the manufacturer's recommendations.
 5. Catalyst - Catalyst will be in accordance with the manufacturer's recommendations.
 6. Insoluble (particulate) Additives - Inactive solids such as diatomaceous earth may be mixed with grout as filler only upon written approval of the Engineer.
 7. Other Additives - The Contractor must justify the use of other additives. The effects of additives shall be determined by test on project site, prior to approval for use.
 8. Delivery, Storage, and Handling - Deliver materials to job site in undamaged, unopened containers bearing manufacturer's original labels.

Materials used as chemical grout shall be transported, stored, and placed in manner prescribed by manufacturer of those materials, as detailed in published data provided by manufacturer.

C. EXECUTION:

1. Joint Sealing Equipment - The basic equipment shall consist of a closed circuit television system, necessary chemical sealant containers, pumps, regulators, valves, hoses, all other necessary appurtenances, and joint sealing packers for the various sizes of sewer pipe. The packer shall be a cylinder case of a size less than pipe size, with the cables at either end used to pull it through the line. The packer device shall be constructed in such a manner as to allow a restricted amount of sewage to flow at all times. Generally, the equipment shall be capable of performing the specified operations in lines where flows do not exceed the maximum line flows as defined in "Wastewater Flow Controls." When the packer is inflated, two (2) widely spaced annular bladders shall be formed, each having an elongated shape and producing an annular void around the center portion of the packer.
2. Joint Sealing Procedure - In the preparation and application of the sealing grout, the recommendations of the manufacturer of the grout materials shall be followed.

Joint sealing shall be accomplished by forcing chemical sealing materials into or through infiltration points by a system of pumps, hoses, and sealing packers. Jetting or driving pipes from the surface that could damage or cause undermining of the pipe lines, will not be allowed. Excavating the pipe, which would disrupt traffic, undermine adjacent utilities and structures will not be allowed. The packer shall be positioned over the area of infiltration by means of a metering device and the closed circuit television in the line. It is important that the procedure used by the Contractor for positioning the packer be accurate to avoid over-pulling the packer and thus not effectively sealing the point of infiltration. The packer sleeves shall then be expanded using precisely controlled pressures. The pneumatically expanded sleeve or elements shall seal against the inside periphery of the pipe to form a void area at the point of infiltration, now completely isolated from the remainder of the pipe line. Into this isolated area, sealant materials shall be pumped through the hose system at controlled pressures which are in excess of groundwater pressures. The pumping, metering, and packer device shall be integrated so that the proportions and quantities of materials can be regulated in accordance with the type and size of the leak being sealed.

Upon completing the sealing of each individual joint, the packer shall be deflated; with the void pressure meter reading zero pressure, then reinflated and tested as specified. Should the void pressure meter not read zero, the Contractor shall clean his equipment of residual grout material or make the necessary equipment repairs or provide for an accurate void pressure reading. Joints that fail to meet the specified test criteria shall be resealed and retested until the test criteria can be met in order to receive payment.

All testing shall be performed by the Contractor in the presence of the County or its representative. It shall be the responsibility of the Contractor to completely seal every leak authorized for sealing to the extent determined by the County or its representative. If, in the Engineer's opinion, it is not necessary to continue with a particular leak, the crew shall move to the next joint or leak. The Contractor shall remove any small excess sealing grout inside the sewer line. Contractor shall operate his equipment with care and shall be responsible for any damage to the sewer system or other facilities caused by his operations, and shall repair such damage at his expense and without delay as instructed by the County or its representative.

3. Leak Testing Equipment - The basic equipment used shall consist of a television camera, joint testing device such as a packer, and test monitoring equipment. In combination, the equipment shall be constructed in such a way as to provide means for introducing air under pressure, into the void area created by the expanding ends of the joint testing device. The testing equipment shall also have the means for regulating the flow rate of the air into the void area in conjunction with the means for continuously measuring the actual static pressure of the air at and within the void area only.

Void pressure data shall be transmitted electrically and without the use of the test medium or hoses. All test monitoring shall be above ground and in a location to allow for simultaneous continued observation of the television monitor and testing monitoring equipment by the Contractor. The Engineer shall witness the testing operation.

Sewer line joint testing shall be accomplished before and after the grouting operation by applying a positive air pressure to each sewer joint and monitoring the pressure in the void. The intent of joint testing is to identify defective joints prior to the joint sealing process and determine the effectiveness of the seal repaired.

4. Joint Testing Procedure - Sewer line joints shall be individually, air tested at a test pressure equal to ½ pound per vertical foot of pipe depth, but in no case exceeding a pressure of 10 psi and in accordance with the following procedures:

- a) The packer or testing device shall be positioned within the line in such manner as to straddle the joint to be tested.
- b) The packer ends or testing device ends shall be expanded so as to isolate the joint from the remainder of the line and create a void area between the packer or testing device and the pipe joint. The ends of the testing device shall be expanded against the pipe with the sufficient inflation pressure to contain the test medium within the void without leakage past the expanded end.
- c) Air shall be introduced into the void area until a pressure equal or greater than the required test pressure is observed with the void pressure monitoring equipment. After the void pressure is observed to be equal to or greater than the required test pressure, the air flow shall be stopped. Record the pressure drop in 10-second intervals for one minute. In general, if the test pressure cannot be developed or if the void pressure decays by more than 2 psi within 20 seconds (due to joint leakage), the sewer line joint will have failed the test.

5. Control Test Procedure - Prior to starting the joint testing phases of the work, a two-(2) part control test shall be performed as follows:

- a) To insure the accuracy, integrity, and performance capabilities of the testing equipment, a demonstration test will be performed in a test cylinder above ground. The test cylinder shall be constructed in such a manner that a minimum of two (2) known leak sizes can be simulated. This technique will establish the test equipment performance capability in relation to the test criteria and ensure that there is no leakage of air from the system or other equipment defects that could affect the joint testing results. If this test cannot be performed successfully, the Contractor shall be instructed to repair or otherwise modify his equipment and perform the test again until the results are satisfactory to the Engineer. This test may be required at any other time during the joint testing procedure if the Engineer suspects the testing equipment is not functioning properly.

b) After entering each manhole section with the testing equipment, but prior to the commencement of joint testing, the test equipment shall be positioned on a section of the sound sewer pipe between pipe joints, and a test performed as specified. This procedure will demonstrate the reality of the test requirement, as no joint will test in excess of the pipe capability. Should it be found that the barrel of the pipe will not meet the joint test requirements, then the requirements will be modified to within the pipe integrity limits.

6. Test Records - During the joint testing procedure, complete records shall be kept, recording the location of the manhole reach in which the testing is being done, the location of each joint tested, the test pressures used and the test results. A specific statement shall be included to indicate if the referenced joint passed or failed the test.

Joints which in the opinion of the Engineer fail shall be considered for sealing in accordance with this section. The Engineer shall make a determination as to the need for sealing a joint that fails immediately following that joint test.

7. Television Survey - Television survey, including pre-construction survey and post construction survey as indicated in Section TS-19, "Television Survey", is required for all grouted lines. The County will perform the warranty survey.

8. Field Records - Keep field records for each sewer line section prior to, during, and after completion of chemical grouting operation. Records shall include information such as accurate locations, gel times, grout volumes, grout pressures, air temperatures, and joints not sealed due to close proximity to building service connections and sanitary sewer manholes. VHS tapes of the sealing shall be furnished to the County. The cost of tape shall be included in the unit price bid.

TS-13 — CURED-IN-PLACE PIPE LINING

A. GENERAL:

1. Scope - The work specified in this section includes all labor, materials, accessories, equipment and tools necessary to install and test cured-in-place pipe lining in main lines and in service laterals.

2. General - The finished pipe in place shall be fabricated from materials which when cured will be chemically resistant to withstand internal exposure to domestic sewage.

3. Submittals - The Contractor shall submit shop drawings and other information to the Engineer for review in accordance with Section TS-05, "Submittals". Included shall be all materials as well as design calculations for the work being completed.

4. Product and Installer Acceptability - To be acceptable, a minimum of 250,000 L.F. of wastewater collection system installation of the product in the U.S. must be documented. To be acceptable, the installer must have had at least three (3) years active experience in the commercial installation of the product, and must have installed at least 50,000 L.F. of the product in wastewater collection system installations in the State of Florida. This requirements may be waived by the County for products that have been installed in the Charlotte County Utility system for a period not less than two (2) years and a length not less than 1,000 lineal feet.

B. PRODUCTS:

1. Materials for Main Lines - The polyester fiber felt tubing and resin material shall be in accordance with the requirements with ASTM F1216 and be fabricated to a size that when installed will neatly fit the interior of the host pipe. Allowance shall be made for circumferential stretching during inversion. The minimum tube length shall be that deemed necessary by the Contractor to effectively span the distance between the access points. Unless otherwise specified, the Contractor will use a polyester filter felt tube and an epoxy vinyl ester and catalyst system compatible with the inversion process and having the following physical properties for the cured pipe:

Tensile Strength	ASTM D638	3,000 psi
Flexural Stress	#101 (Modified ASTM D790)	4,500 psi
Flexural Modulus of Elasticity	#101 (Modified ASTM D790)	300,000 psi
Minimum Long-Term (50 Year)	Modulus of Elasticity	150,000 psi

The lining manufacturer shall submit to the Engineer for review complete design calculations for the liner, signed and sealed by a Professional Engineer registered in the State of Florida and certified by the manufacturer as to the compliance of his

materials to the values used in the calculations. The liner shall be designed to withstand a live load equivalent to two (2) H-20 passing trucks plus all pertinent dead loads, hydrostatic pressure and grout pressure (if any). For design purposes, the water table shall be considered at grade elevation. The liner shall be designed in accordance with ASTM F1216 and resist buckling in accordance with AWWA C950. The buckling analysis shall account for the combination of dead load, live load, hydrostatic pressure and grout pressure against the liner. Modulus of soil reaction shall not be taken higher than 1000, corresponding to a moderate degree of compaction of bedding (85% to 95% Proctor) and a fine-grained soil as shown on Table A4 of AWWA C940.

As part of the design calculation submittal, the liner manufacturer shall submit a tabulation of time versus temperature. This tabulation shall show the lengths of time that exposed portions of the liner will endure without self-initiated cure or other deterioration beginning. This tabulation shall be at 5° F. increments ranging from 70° F. to 100° F. The manufacturer shall also submit his analysis of the progressive effects of such "pre-cure" on the insertion and cured properties of the liner. This information shall be submitted in a timely fashion prior to the pre-construction conference so that the Engineer may set procedures for dealing with such an instance caused by construction delays. The minimum liner thickness is for materials with characteristics as shown. Bidders with materials with other characteristics must supply complete information on their bids of the values as listed for ascertaining minimum thickness.

Liner shall be neither accepted nor installed until design calculations are acceptable to the Engineer. Liner shall be as manufactured by Institutform of North America, Inc., 3315 Democrat Road, Post Office Box 181071, Memphis, Tennessee 38118, or equal.

C. WORKMANSHIP:

1. Cleaning/Surface Preparation - It shall be the responsibility of the Contractor to clean the pipeline with a high-pressure water jet and to remove all internal debris out of the pipeline in accordance with Section TS-18, "Cleaning and Root Removal."
2. Sewer Repairs - If conditions such as broken pipe and major blockages are found that will prevent proper cleaning or liner installation, the Contractor, with the concurrence of the Engineer, shall perform the necessary point repair(s). All point repairs and costs thereof shall be defined in writing prior to initiating. All estimated costs for point repairs shall be lump sum costs for all labor, time, equipment and material necessary to complete the repair. The County reserves the right to complete point repairs in-house or by alternative contractor.
3. Flow Control - Flow control shall be exercised as required to ensure that no flowing sewage comes into contact with sections of the sewer under repair. See Section 18, "Wastewater Flow Control" for additional information.
4. Liner Installation for Main Lines - The prepared pipe shall be reviewed and be acceptable to the Engineer for cleanliness and smoothness before the Contractor begins to line the pipe.

The Contractor shall present to the Engineer, for review, a description of his methods for avoiding liner stoppage due to conflict and friction with such points as the manhole entrance and the bend into the pipe entrance. He shall also present plans for dealing with a liner stopped by snagging within the pipe. This information shall be rendered to the Engineer in a timely fashion prior to the pre-construction conference.

The Contractor shall have on hand at all times, for use by his personnel and the Engineer, a digital thermometer or other means of accurately and quickly checking the temperature of exposed portions of the liner.

The Contractor shall immediately notify the Engineer of any construction delays taking place during the insertion operation. Such delays shall possibly require sampling and testing by an independent laboratory of portions of the cured liner at the Engineer's discretion. The cost of such test shall be born by the Contractor and no extra compensation will be allowed. Any failure of sample tests or a lack of immediate notification of delay shall be automatic cause for rejection of that part of the work at the Engineer's discretion.

The Contractor shall designate a location where the tube will be vacuum impregnated prior to installation. The Contractor shall allow the County to inspect the materials and the "wet-out" procedure.

A scaffold or elevated platform shall be erected at the upstream or downstream access point. The tube shall be inverted using an "inversion elbow" at the bottom of the manhole or an "inversion ring" above ground. The tube shall be pulled and/or inverted into the sewer main in accordance with manufacturer's recommendations.

With the tube in place, the Contractor shall supply a suitable heat source and water recirculation equipment. The equipment shall be capable of uniformly raising the water temperature to a level required to effectively cure the resin.

The heat source shall be fitted with suitable monitors to gauge the temperature of the incoming and outgoing water supply. Another such gage shall be placed between the tube and the host pipe in the downstream manhole at or near the bottom to determine the temperatures during the cure. Water temperatures at both ends shall be recorded either electronically, or at 15-minute intervals for supply to the Engineer. Water temperature in the pipe during the cure period shall be as recommended by the resin manufacturer.

Initial cure shall be deemed complete when the exposed portions of the tube appear to be hard and sound and the temperature sensor indicates that the temperature is of a magnitude to realize an exotherm. The cure period shall be of a duration recommended by the resin manufacturer and may require continuous recirculation of the water to maintain the temperature.

The Contractor shall cool the hardened pipe to a temperature below 100° F before relieving the hydrostatic head. Cool down may be accomplished by the introduction of cool water to replace water being pumped out of the manhole.

The new pipe shall be cut off in the manhole at a suitable location. The finished product shall be continuous over the length of pipe reconstructed and be free from dry spots, delamination and lifts. Should the liner not make a tight seal at the inside manhole wall, a seal shall be made by use of extra polyester fiber felt and epoxy resin. Pipe entries and exits shall be smooth, free of irregularities, and watertight. No visible leaks shall be present and the Contractor shall be responsible for grouting to remove leaks or fill voids between the host pipe and the liner. During the warranty period, any defects which will affect the integrity or strength of the product shall be repaired at the Contractor's expense, in a manner mutually agreed upon by the Engineer and the Contractor.

After the pipe has been cured in place, the Contractor shall reconnect the existing service connections. This shall be done from the interior of the pipeline without excavation using a robotic cutter. Where holes are cut through the liner, they shall be neat and smooth in order to prevent blockage at the service connections. Cut-in service connections shall be opened to a minimum of 95% of the flow capacity of the building sewer. All coupons shall be recovered at the downstream manhole and removed. The Contractor shall stop all visible leaks, and grout all service connections. Active leaks at reinstated service lateral connections (between the liner and the existing pipe) shall be grouted. The reinstatement of the service connections shall be a separate pay item.

The Contractor should not reactivate any line sections until accepted by the Engineer.

D. MANHOLE RECONNECTION SEALING:

1. Manhole Reconnection - Manhole reconnections shall be sealed with the use of equipment which shall consist of a standard packer device along with all necessary materials, including but not limited to chemical sealant containers, pumps, controls, regulators, valves, and hoses. A controlled hole not less than ½-inch diameter and not more than ¾-inch diameter shall be drilled or punched in the invert of the mainline liner pipe. The controlled hole shall be installed not less than one foot (1') from the inside wall of the manhole. The standard packer device shall be properly positioned to straddle the controlled hole and the end elements inflated, thereby isolating a portion of the mainline pipe liner. The controlling unit for the standard packer device shall have provisions for accurately controlling the packer functions in addition to monitoring the inflatable pressure and the void pressure in the isolated area to be sealed.
2. All manhole reconnections shall be sealed by the use of the standard packer device. After the packer device has been properly positioned in the mainline, the connection shall be sealed by the injection of chemical sealant. The chemical sealant shall be injected through the packer device, through the controlled hole and into the annular space between the liner pipe material and the mainline host pipe. The injection of chemical sealant shall continue until the chemical fluid back pressure is sufficient to insure the complete sealing of all the defects.

TS-14 — DEFORMED AND REFORMED (PE) PIPE LINING

A. GENERAL:

1. Scope of Work - The work specified in this section includes all labor, accessories, equipment, and tools necessary to install and test the deformed and reformed pipe lining.
2. General - The finished pipe in place shall be fabricated from materials which, when installed, will be chemical resistant to withstand internal exposure to domestic sewage.
3. Submittals - The Contractor shall submit shop drawings and other information to the Engineer for review in accordance with Section 5, "Submittals." Included shall be all materials as well as design calculations for the work being completed.
4. Product and Installer Acceptability - To be acceptable, a minimum of 250,000 L.F. of wastewater collection system installation of the product in the U.S. must be documented.

To be acceptable, the installed must have had at least three (3) years active experience in the commercial installation of the product, and must have installed at least 50,000 L.F. of the product in wastewater collection installations in the State of Florida. This requirement may be waived by the County for products that have been installed in the Charlotte County Utility system for a period not less than two (2) years and a length exceeding 1,000 lineal feet.

B. PRODUCTS:

1. General - Deformed polyethylene pipe introduced into sanitary sewers in order to rehabilitate the existing pipeline system without excavation, shall comply with ASTM F1533 and D3350. This method applies to the rehabilitation of 8-inch through 12-inch diameter pipe in terms of material and installation. Unless otherwise required by installation depth, liner shall have an SDR of 32.5, minimum. The polyethylene pipe liner shall be completely factory manufactured, jointless, seamless, deformed and/or folded under factory controlled temperature conditions, coiled, and packaged. The pipe liner producer's certification, in accordance with ASTM specifications, shall be furnished with the liner coils. The Contractor shall turn the pipe liner producer's certification and warranty over to the County prior to installation. The deformed and reformed pipe lining shall be U-Liner pipe or equal.
2. Material Composition - Pipe shall be made from P.E. 3408 polyethylene resins complying with ASTM D3350, cell classification: P.E. 345434 D for High Density. It shall be Type 3, Grade 4, Class D, according to ASTM D1248. The Contractor shall provide certified test results for review by the Engineer, from the manufacturer, that the material conforms with the applicable requirements.
3. Material and Equipment Acceptance - At the time of manufacture, each lot of liner shall be reviewed for defects and tested in accordance with ASTM D2837 and D1693. At the time of delivery, the liner shall be homogeneous throughout; uniform in color, free of cracks, holes, foreign materials, blisters, or deleterious faults.

The Contractor shall provide certified test results for review by the Engineer, from the manufacturer, that the material conforms with the applicable requirements.

For testing purposes, a production lot shall consist of all liner having the same marking number. It shall include any and all items produced during any given work shift and must be so identified as opposed to previous or ensuing production.

4. Marking - Liner shall be marked at five foot (5') intervals or less with a coded number which identifies the manufacturer, SDR, size, material, date, and shift on which the liner was extruded.

At the end of the production shift during which a production lot has been extruded, the marking code on the liner shall be changed to indicate that said time intervals have elapsed and then a new production shift has begun.

5. Chemical and Physical Testing - The Engineer may, at any time, direct the manufacturer to obtain compound samples and to prepare test specimens in accordance with ASTM D1928. These specimens shall comply with the minimum property values as follows with the applicable ASTM F1533 and ASTM D3350 requirements for P.E. 3408.

ASTM D3350 Cell Classification Values

<i>Physical Properties</i>	<i>ASTM Test Method</i>	<i>Cell Class</i>	<i>Cell Class Limits</i>	<i>Typical Values</i>
Density	D1505	3	0.941 to 0.955	.0947
Melt Index	D1238	4	<0.15	<0.1
Flexural Modulus	D790	5	110,000 to <160,000 psi	120,000 psi
Tensile Strength at Yield	D638	4	3000 to <3500	3300 psi
Environmental Stress Crack Resistance	D1693	3	Condition C 192 hrs, F_{20}	>5000 hrs
Hydrostatic Design Basis at 23 C	D2837	4	1600 psi	1600 psi
Color and Stabilizer		D	Natural with UV Stabilizer	

C. WORKMANSHIP:

1. Flow Control - Flow control shall be exercised as required to ensure that no flowing sewage comes into contact with sections of the sewer under repair.

A sewer line plug shall be inserted into the sewer upstream from the section to be repaired. The plug shall be so designed that all or any portion of the sewage flows can be released. During the review, testing and installation portion of the operation, flows shall be shut off in order to properly install the deformed and reformed pipe lining. The upstream manholes shall be constantly monitored for degree of surcharging. After the installation is complete, flows shall be restored to normal level. See Section 18, "Wastewater Flow Control" for additional information.

2. Pumping and Bypassing of Flow - Wherever lines are blocked off and the possibility of backing up the sewage and causing harm to public and private property is foreseen, it shall be the Contractor's responsibility to bypass flow from manhole to manhole. All bypass pumping shall require authorization of the Engineer.

Bypassing shall be accomplished using sewer plugs with pump connections, by pumping down surcharged manholes, or by other methods acceptable to the Engineer. All bypassed flow must be discharged to a sanitary sewer. Bypassed flow shall not be allowed to enter any storm line, drainage ditch, or street gutter. See Section 18, "Wastewater Flow Control" for additional information.

During a bypass operation, the pump shall be manned continuously, the Contractor shall maintain the pump and bypass equipment, and shall be responsible for any damages to public or private property due to malfunction of same. See Section 17, "Wastewater Flow Control" for additional information.

3. Installation - The existing pipeline shall be cleaned of any obstructions, in accordance with Section 18, "Cleaning and Root Removal" and televised in accordance with Section 19, "Television Survey."

A cable shall be strung through the existing pipe to be rehabilitated and attached to the liner through an existing manhole or access point. The liner shall be pulled through the existing conduit by this cable. Care shall be taken not to damage the deformed pipe during installation. Appropriate sleeves and rollers shall be used to protect the liner.

When the deformed and reformed pipe is in place, it shall be cut and the processing manifolds (pipe end closing assembly used for heat and pressure control within liner) shall be attached in and secured at both pipe ends. The temperature and pressure measuring instruments shall be attached to the deformed and reformed pipe at both ends.

Through the use of steam and air pressure, the deformed pipe shall be progressively reformed to conform to the existing pipe wall. The deformed pipe shall be pressurized up to 14.5 psig maximum, while the termination point valves are kept open to provide heat flow. The pressure shall then be increased in increments up to a maximum of 26 psi depending upon material cell classification and Standard Dimensional Ratio (SDR).

The Contractor shall cool the reformed pipe to the manufacturer's recommendations.

When the temperature reduces to 100° F, the Contractor shall then slowly raise the pressure to a maximum of 33 psig. (pressure to be determined as per an existing pipe condition) while applying air or water for continued cooling. The equipment shall be disconnected after ambient temperature is attained.

Temperature and pressures shall be monitored and recorded throughout the installation process to ensure that each phase of the process is achieved at the manufacturer's recommended temperature and pressure levels. Copies of these records shall be given to the Engineer at the completion of each installation.

The beginning and end of the new polyethylene pipe shall be seated to the rehabilitated pipeline. The sealing material shall be compatible with the polyethylene pipe and shall provide a watertight seal.

After the liner has been installed, the Contractor shall reconnect the existing service connections. This shall be done from the interior or the pipeline without excavation using a robotic cutter. Where holes are cut through the liner, they shall be neat and smooth in order to prevent blockage at the service connections. Cut-in service connections shall be opened to a 100% of the sewer service pipe inside diameter. All coupons shall be recovered at the downstream manhole and removed. The Contractor shall stop all visible leaks and grout all service connections. The reinstatement of the service connections shall be a separate pay item. The Contractor should not reactivate any line sections until accepted by the Engineer.

D. MANHOLE RECONNECTION SEALING:

1. Manhole Reconnection - Manhole reconnections shall be sealed with the use of equipment which shall consist of a standard packer device along with all necessary materials including but not limited to chemical sealant containers, pumps, controls, regulators, valves, and hoses. A controlled hole not less than ½-inch diameter and not more than ¾-inch diameter shall be drilled or punched in the invert of the mainline liner pipe. The controlled hole shall be installed not less than one foot (1') from the inside wall of the manhole. The standard packer device shall be properly positioned to straddle the controlled hole and the end elements inflated, thereby isolating a portion of the mainline pipe liner. The controlling unit for the standard packer device shall have provisions for accurately controlling the packer functions in addition to monitoring the inflatable pressure and the void pressure in the isolated area to be sealed.

All manhole reconnections shall be sealed by the use of the standard packer device. After the packer device has been properly positioned in the mainline, the connection shall be sealed by the injection of chemical sealant. The chemical sealant shall be injected through the packer device, through the controlled hole and into the annular space between the liner pipe material and the mainline host pipe. The injection of chemical sealant shall continue until the chemical fluid back pressure is sufficient to insure the complete sealing of all the defects.

All manhole reconnections shall have fused PE blocks applied to the protruding liner to resist pipe shrinking.

TS-15 — FOLD AND FORM PIPE INSTALLATION, PVC

A. GENERAL:

1. Scope - This section specifies the method and process for furnishing all labor, materials, tools, equipment, and incidentals necessary to provide for the complete rehabilitation of deteriorated gravity and force main sewer lines by the use of a Fold and Form PVC pipeliner.

2. Definition - The Fold and Form Pipeliner process is defined as the reconstruction of gravity and force main sanitary sewers by insertion of a folded PVC pipeliner into the existing sewer and the reformation of the pipeliner into a circular pipeliner. The liner shall be reformed into its original extruded configuration by a combination of steam and pressurization, which biaxially reorients the molecules of the PVC and allows the liner to conform to the shape of the existing pipe which locking at each joint

and expanding into each service to form a concave dimple. Thus the PVC pipeliner's new configuration is its new memory and is a continuous, tight fitting liner that allows no migration of water between the existing pipe and the pipeliner.

3. Reference Specifications - This specification References American Society For Testing And Materials (ASTM) standard specifications, which are made a part hereof by such reference and shall be the latest edition and revision thereof.

F1504-97 – Standard Specification for Folded Poly (Vinyl Chloride) (PVC) Pipe for Existing Sewer and Conduit Rehabilitation.

F1871-98 – Standard Specification for Folder/Formed Poly (Vinyl Chlorine) Pipe Type A for Existing Sewer and Conduit Rehabilitation.

4. Submittals - The Contractor shall furnish engineering data covering design and installation. Submittal shall be made in a timely manner so that the project schedule can be met. The data to be submitted shall include the following;

- a) Before beginning work, the Contractor shall submit to the Engineer for approval, the vendor's specific technical data with complete physical properties of the liner and dimensions pertinent to this job.
- b) A certificate of "Compliance with Specification" shall be furnished for all materials supplied.
- c) Before commencement of installation, the Contractor shall submit to the Engineer for approval, the standard reforming temperature/pressure/cool-down schedule.
- d) The Contractor shall submit a work plan to the Engineer for acceptance. The work plan will address preparation steps required for pre-installation.
- e) The Contractor shall submit information to the Engineer for approval of the procedure and the steps to be followed for the installation of the Fold and Form Pipeliner method selected, even if the process is named in the specification. Any proposed changes in installation procedures shall require submittal of revised procedures for acceptance by the Engineer.
- f) The Contractor shall submit to the Engineer for approval, full details about component materials and their properties, except those protected by trade secrets which may harm their claim to the product.
- g) The Contractor shall submit all post television tapes in VHS format to the Engineer for acceptance prior to payment.

B. PRODUCTS:

1. Markings - The pipeliner shall be marked at maximum five-foot (5') intervals with coded number system to indicate manufacturer, size (diameter and SDR), material, extrusion date, and production shift that fabricated the pipeliner. The marking code shall be changed with each production shift change.

2. Dimensions - The outside diameter and minimum wall thickness shall be manufactured to a size that when installed will fit the internal circumference of the conduit specified (without annular space). Allowance shall be made for misaligned and missing conduit.

Standard Dimension Ration (SDR) of the pipe liner shall be as selected from the following table:

<i>Liner Nominal Outside Diameter, Inches</i>	<i>Existing Pipe Inside Diameter Range, Inches</i>		<i>Resulting SDR Over Diameter</i>		
	<i>Minimum</i>	<i>Maximum</i>	<i>SDR35</i>	<i>SDR41</i>	<i>SDR59</i>
4	3.70	4.20	33-42	39-50	48-61
6	5.60	6.30	33-42	39-50	48-61
8	7.40	8.40	33-42	39-50	48-61
9	8.30	9.40	33-42	39-50	48-61
10	9.30	10.50	33-42	39-50	48-61
12	11.30	12.80	33-42	39-50	48-61
15	13.90	15.70	33-42	39-50	48-61
18	17.50	19.50	33-42	39-50	48-61

ne minimum length shall be that deemed necessary by the Contractor to effectively span the distance from the inlet to the outlet of the respective manholes unless otherwise specified. The Contractor shall verify the lengths in the field before manufacturing. Individual insertion runs can be made over one (1) or more manhole sections as determined in the field by the contractor and approved by the Engineer.

. Material Testing - Each production lot of pipeliner shall be inspected and tested at the time of manufacture for defects in accordance with ASTM D-2444, ASTM D-2152, and ASTM D-2122. All pipeliner shall be homogeneous, uniform in color, free of cracks, holes, foreign material, blisters and deleterious faults. Production lot of pipeliner shall include unique markings to clearly discern from other production lots.

. Pre-Installation Preparations - The Contractor's work plan shall address the following minimum preparation/steps, unless approved otherwise by the Engineer:

a) Safety: The Contractor shall carry out operations under this section in strict accordance with all applicable OSHA Standards. Particular attention is drawn to those safety requirements involving work on an elevated platform and entry into a confined space. It shall be the Contractor's responsibility to comply with OSHA Standard and Regulations pertaining to all aspects of the work.

b) Cleaning: It shall be the responsibility of the Contractor to clean the existing sewer to be rehabilitated and to remove all internal debris out of the sewer immediately before the television inspection.

c) Pre-Installation Television Inspection: It shall be the responsibility of the Contractor to video (TV) inspect the sewer pipe immediately before the PVC pipeliner installation to assure that the existing pipe conditions are acceptable for pipeliner installation.

d) Diversion Pumping: When required for acceptable completion of the PVC pipeliner process, the Contractor shall provide for continuous sewage flow around the section(s) of pipe designated for the installation of pipeliner by use of a diversion pump. The pump and bypass lines shall be of adequate capacity and size to handle the flow.

e) Sewer Obstructions: If pre-installation video (TV) inspection reveals an obstruction in the existing sewer (heavy solids, dropped joints, protruding service taps or collapsed pipe) which will prevent completion of the PVC pipeliner installation, then an Obstruction Removal (by remote device) or Point Repair shall be made by the Contractor with the approval of the Engineer.

f) Offset Joints: If pre-installation video (TV) inspection reveals an offset joint with less than 90% clearance, the Contractor shall take the necessary steps to eliminate the offset joint. The cost to do this elimination is incidental to the cost of the lines. If pre-installation video (TV) inspection reveals an offset joint with less than 80% clearance, the Contractor shall notify the Engineer. The Engineer may elect to correct the offset joint by use of a point repair. The Engineer shall be the individual to determine the percent of clearance.

C. WORKMANSHIP:

1. Installation Procedures - All approved installation instructions and procedures submitted shall be carefully followed during installation. Any proposed changes in installation procedures shall require submittal of revised procedures and acceptance by the Engineer.

2. Liner Insertion - The pipeliner shall be inserted into the existing sewer with a power winch and steel cable connected to the end of the liner by use of an appropriate pulling head. The pipe to be lined, shall be of equal O.D. or greater than the liner, so that the liner can be fed into the existing sewer. Length of the pipeliner to be inserted at any time shall be governed by the winch drum capacity and winching power available, with consideration of the size and condition of the sewer.

During insertion, precautions such as some type of cover shall be provided on the leading edge of the pipeliner to prevent the ragged edges of the existing pipe from scarring the outside of the liner as it is pulled into the pipe. Once insertion is initiated, it is desirable to continue the pull at a rate of no greater than fifteen feet (15') to twenty feet (20') per minute to completion.

3. Liner Reformation and Processing - It is appropriate to check temperature and pressure while reforming and processing and may be accomplished through suitable temperature and pressure gauges placed at the insertion and termination points. Through the use of heat and pressure the PVC pipeliner should unfold and expand sufficiently to press against the wall of the existing sewer pipe, lock into the joints, and form dimples at the services. Processing temperatures range from 225° to 235° F. and pressures in the range of 5 to 10 psi, but may vary based on field conditions.

The Contractor shall maintain pressure on the liner, the heat should be discontinued, and cool air in sufficient volume should be injected to reduce the temperature to below 100° F. before relieving the pressure. The pipeliner shall be continuous over the entire length of the insertion and be as free as commercially practical from visual defects such as foreign inclusions. Pressure testing should be completed prior to reestablishing services.

4. Service Reconnection by Excavation or Remote - After the pipe has been cured in place, the Contractor shall reconnect the existing service connections. This shall be done from the interior of the pipeline without excavation using a robotic cutter. Where holes are cut through the liner, they shall be neat and smooth in order to prevent blockage at the service connections. Cut-in service connections shall be opened to a minimum of 95% of the flow capacity of the building sewer. All coupons shall be recovered at the downstream manhole and removed. The Contractor shall stop all visible leaks, and grout all service connections. Active leaks at reinstated service lateral connections (between the liner and the existing pipe) shall be grouted. The reinstatement of the service connections shall be a separate pay item.

5. Finished Pipe - The installed pipeliner shall be continuous over the entire length of each pipe segment from manhole to manhole and shall be free from visual defects such as foreign inclusions, concentrated ridges, discoloration, pitting, varying wall thickness (within the bounds of the existing sewer pipe having different I.D. as indicated in Table 1) and other deformities. Pipeliner with gashes, nicks, abrasions, or any such physical damage which may have occurred during storage and/or handling, which are larger/deeper than 10% of the wall thickness shall not be used and shall be removed from the construction site. The pipeliner passing through or terminating in a manhole shall be carefully cut out in a shape and manner approved by the Engineer. The invert and benches shall be streamlined and improved for smooth flow. The installed pipeliner shall meet the leakage requirements of the pressure test as specified.

6. Process Limitations - Though the installation process may be licensed or proprietary in nature, the Contractor SHALL NOT change any material, thickness, design values or procedural matters stated or approved in the submittals, without the Engineer's prior knowledge and pre-approval.

7. Manhole Sealing and Benches - The liner within the manhole shall be neatly cut off at least a minimum of four inches (4") away from the manhole wall. The invert in the manhole shall be a smooth continuation of the pipe(s) and shall be merged with other lines, if any. Channel cross section shall be U-shaped with a minimum height of half pipe diameter to three-fourths (3/4) of the pipe diameter for fifteen inch (15") and larger. The side channels shall be built up with mortar/concrete to provide benches at a maximum of 1 in 12 pitch towards the channel.

All manholes shall be individually inspected for water migration, cut-offs, benches, and invert works.

8. Post Televising of Completed Sections - The Contractor shall provide the City a color video tape showing the completed work, including the condition of the restored service connection. The video tape shall be taken by a pan and tilt radial viewing pipe inspection camera, that pans more or less 275 and rotates 360°. The camera shall have an accurate footage counter which shall display on the monitor the exact distance of the camera from the center line of the starting manhole.

Upon completion of the installation work, testing, and televising, the Contractor shall restore/clear and project area affected by his operations. No trash, rubbish, or any other debris, shall be stored at any site, whether the work is in progress or not.

TS-16 — SEWER SERVICE RECONNECTION SEALING AND INSPECTION

A. GENERAL:

1. Sewer Service Reconnection Sealing and Inspection - Sewer service reconnections shall be sealed with the use of equipment which shall consist of a closed circuit television system and a special sealing packer device along with any necessary materials including but not limited to chemical sealant containers, pumps, controls, regulators, valves, and hoses. The special sealing packer shall be so constructed that it can straddle four-inch (4") to six-inch (6") diameter service

connections in eight inches (8") or larger main sewer lines. When properly positioned and with the end elements inflated, a special inflatable sealing tube shall be extended up the service connection a minimum five feet (5') thereby isolating a portion of the service connection containing one (1) or more pipe joints for sealing. The controlling unit for the device shall have provisions for accurately controlling the packer functions in addition to monitoring the inflatable pressure and the void pressure in the isolated area to be sealed.

All sewer service reconnections shall be sealed by use of the special packer device. After the packer device has been properly positioned in the main line with the inflatable tube extended into the service connection, the connection shall be sealed by the injection of the chemical sealant. The chemical sealant shall be injected through the special packer device into the annular space between the inflatable tube and the service connection. The injection of the chemical sealant shall continue until the chemical fluid back pressure is sufficient to insure the complete sealing of all the defects along the length of the inflatable tube.

After the service connection has been successfully sealed, the following procedures shall be performed to insure that the sealing operation did not block the service connection.

- a) The inflatable tube shall be removed from the connection.
- b) The packer and elements shall be deflated.
- c) The special packer shall be moved forward and the closed circuit 360° camera shall be positioned in the center of the service connection and rotated to look up the service connection to insure that the chemical sealant did not cause blockage.

If blockage is observed, the chemical sealant shall be removed to insure the service connection is free flowing. The Contractor shall orient the camera in such a position to assure that blockage is not present.

The chemical sealant used shall be in accordance with the requirements set forth in specifications or as approved.

TS-17 — WASTEWATER FLOW CONTROL

A. GENERAL:

1. Scope of Work - The work specified in this section includes all labor, materials, accessories, equipment, and tools for performing all operations required to bypass pump sewage around a manhole or sewer section in which work is to be performed. The Contractor shall be prepared to bypass pump sewage as a part of his operations.

The Contractor shall provide all pumps, piping, and other equipment to accomplish this task; perform all construction; obtain all permits; pay all costs; and perform complete restoration of all existing facilities or equal or better condition to the satisfaction of the Engineer.

2. General - When sewer line flows at the upstream manhole of the manhole section being repaired are above the maximum allowable requirements for television survey, or do not allow the proper sewer or manhole repair, the flows shall be reduced to the levels indicated by one (1) of the following methods: manual operation of pumping stations by County forces, by the Contractor plugging/blocking of the flows, or by the Contractor pumping/bypassing of the flows as acceptable to the Engineer.

In some applications, the wastewater flow may be plugged and contained within the capacity of the collections system. This shall only be done when it has been determined the system can accommodate the surcharging without any adverse impact.

For the initial television survey, before and after a lining is installed, the sewer line shall be blocked completely. No flow, except infiltration/inflow, will be allowed through the respective sewer line being televised on the pre-repair television survey.

For all other television surveys, including warranty surveys and joint testing and sealing, the depth of flow within the sewer shall not exceed that shown below for the respective pipe sizes as measured in the manhole.

a.	Maximum Depth of Flow	Television Survey
	6" - 10" Pipe	20% of pipe diameter
	12" - 24" Pipe	25% of pipe diameter
	Above 24" Pipe	30% of pipe diameter

b.	Maximum Depth of Flow	Joint Testing/Sealing
	6" - 12" Pipe	25% of pipe diameter
	15" - 24" Pipe	30% of pipe diameter
	Above 24" Pipe	35% of pipe diameter

When sewer line flows at the upstream manhole of the line being repaired, in the opinion of the Engineer, are too excessive to plug while the rehabilitation is being performed; the Contractor shall submit a written plan and pump/bypass the flow as acceptable to the Engineer.

3. Submittals - The Contractor shall submit complete, detailed plans for this aspect of the work to the work to the Engineer for review.

B. WORKMANSHIP:

1. Plugging and Blocking - A sewer line plug shall be inserted into the line at a manhole upstream from the section being surveyed or repaired. The plug shall be so designed that all or any portion of the operation flows can be released. During the survey portion of the operation, flows shall be shut off or reduced to within the maximum flow limits specified. During repairs, the flows shall be shut off or pumped/bypassed, as acceptable to the Engineer. After the work tasks have been completed, flows shall be restored to normal.

2. Pumping and Bypassing - When pumping/bypassing is required, as determined by the Engineer, the Contractor will supply the necessary pumps, conduits, and other equipment to divert the flow of sewage around the manhole section in which work is to be performed. The bypass system shall be of sufficient capacity to handle existing flows plus additional flow that may occur during periods of rain storms. The Contractor will be responsible for furnishing the necessary labor and supervision to set up and operate the pumping and bypassing system. A "setup" consists of the necessary pumps, conduits and other equipment to divert the flow of sewage around a manhole section, from the start to finish of work performed in the manhole section.

Pumps and equipment shall be continuously monitored by a maintenance person capable of starting, stopping, refueling and maintaining these pumps during the rehabilitation. If pumping is required on a 24-hour basis, engines shall be equipped in a manner to keep noise to a minimum.

3. Surcharging Sewers - Where the raw sewage flow is blocked or plugged, sufficient precautions must be taken to protect the public health. The sewer lines shall also be protected from damage. The following occurrences shall not be allowed:

- a) No sewage shall be allowed to back up into any homes or buildings.
- b) No sewage shall overflow any manholes, clean-outs, or any other access to the sewers.
- c) Users upstream of the repair area shall be able to use all their water and sewer utilities without interruption.

If any of the above occur or are expected to occur, the Contractor shall bypass pump to alleviate one (1) or all of the conditions. Additionally, the Contractor is required to observe the conditions upstream of the plug and be prepared to immediately start bypassing pumping, if needed.

4. Pumps - Any sump pumps, bypass pumps, trash pumps, or any other type pump which pulls sewage/water or any type of material out of the manhole or sewer shall discharge this material into another manhole, or appropriate vehicle or container acceptable to the Engineer. Under no circumstances shall this material be discharged, stored, or deposited on the ground, swale, or open environment.

5. Traffic Control - The Contractor shall take appropriate steps to ensure that all pumps, piping, and hoses that carry raw sewage are protected from traffic. Traffic control shall be performed in accordance with Section TS-09, "Traffic Regulation and Maintenance of Traffic."

6. Sewage Spills - In the event, during any form of "Sewage Flow Control," that raw sewage is spilled, discharged, leaked, or otherwise deposited in the open environment, due to the Contractor's work, the Contractor is responsible for any clean up of solids and disinfection of the area affected. This work will be performed at the Contractor's expense with no additional cost

to the County. The Contractor is also responsible for notifying the sewer system maintenance personnel and complying with any and all regulatory requirements in regards to the size spill with no additional cost to the owner.

S-18 — PREPARATORY CLEANING & ROOT REMOVAL

A. GENERAL:

1. Scope - This section covers the preparatory cleaning of sewer lines and manholes as needed prior to the internal survey of the sewer lines and the cleaning of manholes prior to rehabilitation. The Contractor shall furnish all necessary material, labor, equipment, and services required for cleaning the specific sewer lines.

2. General - The intent of sewer line cleaning is to remove foreign materials from the lines and restore the sewer to a minimum of 95% of the original carrying capacity or as required for proper seating of internal pipe joint sealing packers. Since the success of other phases of work depends a great deal on the cleanliness of the lines, the importance of this phase of the operation is emphasized. It is recognized that there are some conditions such as broken pipe and major blockages that prevent cleaning from being accomplished or where additional damage would result if cleaning were attempted or continued. Should such conditions be encountered, the Contractor will not be required to clean those specific sewer sections. If, in the course of normal cleaning operations, damage does result from pre-existing and unforeseen conditions such as broken pipe, the Contractor will not be held responsible.

3. Hydraulically Propelled Equipment - The equipment used shall be of a movable dam-type and be constructed in such a way that a portion of the dam may be collapsed at any time during the cleaning operation to protect against flooding of the sewer. The movable dam shall be equal in diameter to the pipe being cleaned and shall provide a flexible scraper around the outer periphery to insure removal of grease. If sewer cleaning balls or other equipment which cannot be collapsed is used, special precautions to prevent flooding of the sewers and public or private property shall be taken.

4. High Velocity Jet (Hydrocleaning) Equipment - All high-velocity sewer cleaning equipment shall be constructed for ease and safety of operation. The equipment shall have a selection of two (2) or more high-velocity nozzles. The nozzles shall be capable of producing a scouring action from 15° to 45° in all size lines designated to be cleaned. Equipment shall also include a high-velocity gun for washing and scouring manhole walls and floor. The gun shall be capable of producing flows from a fine spray to a solid stream. The equipment shall carry its own water tank, auxiliary engines, pumps, and hydraulically driven hose reel.

5. Mechanically Powered Equipment - Bucket machines shall be in pairs with sufficient power to perform the work in an efficient manner. Machines shall be belt operated or have an overload device. Machines with direct drive that could cause damage to the pipe will not be allowed. A power rodding machine shall be either a sectional or continuous rod-type capable of holding a minimum of 750 feet of rod. The rod shall be specifically heat-treated steel. To insure safe operation, the machine shall be fully enclosed and have an automatic safety clutch or relief valve.

B. WORKMANSHIP:

1. General - The designated sewer manhole sections shall be cleaned using hydraulically propelled, high-velocity jet, or mechanically powered equipment. The equipment shall be capable of removing dirt, grease, rocks, sand, and other materials and obstructions from the sewer lines and manholes. If cleaning of an entire sewer section cannot be successfully performed from one manhole, the equipment shall be set up on the other manhole and cleaning again attempted. If, again, successful cleaning cannot be performed or the equipment fails to traverse the entire manhole section, it will be assumed that a major blockage exists and the cleaning effort shall be abandoned.

2. Cleaning Precautions - During all cleaning and preparation operations, all necessary precautions shall be taken to protect the sewer from damage. During these operations, precautions shall also be taken to insure that no damage is caused to public or private property adjacent to or served by the sewer or its branches.

Satisfactory precautions shall be taken in the use of cleaning equipment. When hydraulically propelled cleaning tools (which depend upon water pressure to provide their cleaning force) or tools which retard the flow in the sewer line are used, precautions shall be taken to insure that the water pressure created does not damage or cause flooding of public or private property being served by the sewer. When possible, the flow of sewage in the sewer shall be utilized to provide the necessary pressure for hydraulic cleaning devices. When additional water from fire hydrants is necessary to avoid delay in normal work

BID 200000281

procedures, the water shall be conserved and not used unnecessarily. No fire hydrant shall be obstructed in case of a fire in the area served by the hydrant.

3. Material Removal - All sludge, dirt, sand, rocks, grease, roots, and other solid or semisolid material resulting from the cleaning operation shall be removed at the downstream manhole of the section being cleaned. Passing material from manhole section to manhole section, which could cause line stoppages, accumulation of sand in wet wells, or damage pumping equipment, shall not be permitted.

Under no circumstances shall sludge or other debris removed during these operations be dumped or spilled into the streets, ditches, storm drains, or other sanitary sewers.

The Contractor is advised that he shall not dispose of this material by legal or illegal dumping on private or public property, by sale of others, or any means other than those given above. All sludge or other debris removed during these operations shall become the property of the Contractor and as such, any load of material, or any portion thereof, disposed of in a non-permitted fashion shall become the sole responsibility of the Contractor. Any fines or clean-up costs associated with such dumping shall be paid by the Contractor; if necessary, monies shall be withheld from any monies due the Contractor until restitution is made.

4. Disposal of Materials - All solids or semisolids resulting from the cleaning operations shall be removed from the site and disposed of by the Contractor in a legal and sanitary manner as approved by appropriate authorities, at the Contractor's cost. Copies of records of all disposal shall be furnished to the County, indicating disposal site, date, amount and a brief description of material disposed. All materials shall be removed from the site no less often than at the end of each work day. Under no circumstances will the Contractor be allowed to accumulate any type of debris on the site of work beyond the stated time, except in totally enclosed containers and as acceptable to the Engineer.

5. Root Removal - Roots shall be removed in the designated sections and manholes where root intrusion is indicated on the work order. Special attention should be used during the cleaning operation to assure almost complete removal of roots from the joints. Any roots which could prevent the seating of the packer or could prevent the proper application of chemical sealants, or could prevent the proper seating and application of cured-in-place, fold-and-formed, or sectional cured-in-place liners, shall be removed. Procedures may include the use of mechanical equipment such as rodding machines, bucket machines and winches using root cutters and porcupines, and equipment such as high-velocity jet cleaners. Chemical root treatment shall be used before or at the completion of the root removal operation, depending on the manufacturer's recommendation, and grouting will take place to remove infiltration. Contractor shall capture and remove all roots from the line.

6. Chemical Root Treatment - To aid in the removal of roots, manhole sections that have root intrusion shall be treated with an acceptable herbicide. The application of the herbicide to the roots shall be done in accordance with the manufacturer's recommendations and specifications in such a manner to preclude damage to surrounding vegetation. Any damaged vegetation so designated by the Engineer shall be replaced by the Contractor at no additional cost to the County. All safety precautions as recommended by the manufacturer shall be adhered to concerning handling and application of the herbicide.

7. Acceptance of Cleaning Operation - Acceptance of sewer line cleaning shall be made upon the successful completion of the television survey and shall be to the satisfaction of the Engineer. If television survey shows the cleaning to be unsatisfactory, the Contractor shall be required to reclean and reinspect the sewer line until the cleaning is shown to be satisfactory. In areas where television survey is not performed, the Engineer may require the Contractor to pull a double squeegee (with each squeegee the same diameter as the sewer) through each manhole section as evidence of adequate cleaning. If internal sealing is to follow the television survey, particular attention should be given to the adequacy of the cleaning to insure that proper seating of the sealing packer can be achieved.

In addition, on all those lines which have sags or dips, to an extent that the television camera lens becomes submerged for three (3) or more feet during the television inspection, the Contractor shall pull double squeegee and/or sponges through the line in order to remove the water from those dips or sags. Water removal through the squeegees and/or sponges shall be performed until the television camera lens will no longer be submerged. This requirement may be waived by the Engineer if the water in which the camera lens is submerged, is clean enough to allow the identification of pipe defects, cracks, holes, and location of service taps.

S-19 — TELEVISION SURVEY

GENERAL:

Scope - The work consists of furnishing all labor, materials, accessories, equipment tools, transportation services, and technical competence for performing all operations required to execute the internal closed circuit television survey of sewers up to forty-eight inches (48") in diameter.

General - After cleaning as specified in Section 18, "Cleaning and Root Removal," and before and after rehabilitation work, the manhole sections shall be visually surveyed by means of closed-circuit television in the presence of The County or its representative. The survey shall be performed one manhole section at a time and the flow in the section being surveyed shall be suitably controlled as described in Section 17, "Wastewater Flow Control."

Equipment - The television camera used for the survey shall be one specifically designed and constructed for such survey. Lighting for the camera shall be suitable to allow a clear picture of the entire periphery of the pipe. The camera shall be operative in 100% humidity conditions. The camera, television monitor, and other components of the video system shall be capable of producing a minimum 700-line resolution color video picture. Picture quality and definition shall be to the satisfaction of the Engineer; and if unsatisfactory, equipment shall be removed and replaced with adequate equipment.

The video camera shall include a title feature capable of showing on the tape the following information:

- a) City and State
- b) Date
- c) Contractor's name
- d) Line size
- e) Manhole identification (both manholes)
- f) On-going footage counter

4. Submittals - The Contractor shall submit shop drawings and other information in accordance with Section TS-05, Submittals. The Contractor's submittals shall include video tape and a sample of the video titles to be used.

B. PRODUCTS:

1. Video Tape - Extra High Grade T-120 VHS video tape shall be supplied for all television surveys. All taping shall be performed at SP (Standard Play, 2hrs/tape). All video tapes shall be submitted to the Engineer and will become the property of the County.

C. EXECUTION:

1. Pre-construction Survey - Prior to any repair work, the entire sewer line (from manhole to manhole) shall be televised. The camera shall be moved through the line in either direction at a moderate rate, stopping when necessary to permit proper documentation of the sewer's condition. In no case shall the television camera be pulled at a speed greater than thirty feet (30') per minute. Manual winches, power winches, TV cable, and powered rewinds or other devices that do not obstruct the camera view or interfere with proper documentation of the sewer conditions shall be used to move the camera through the sewer line. The camera shall not be pulled through the sewer line by a hydraulic cleaning unit hose. If, during the survey operation, the television camera will not pass through the entire manhole section, the Contractor shall set up his equipment so that the survey can be performed from the opposite manhole.

Whenever nonremote-powered and controlled winches are used to pull the television camera through the line, telephones, or other suitable means of communication shall be set up between the two (2) manholes of the section being surveyed to ensure good communications between members of the crew.

Measurement for location of defects shall be above ground by means of a meter device. Marking on the cable, or the like, which would require interpolation for depth of manhole, will not be allowed. Measurement meters shall be accurate to tenths of a foot over the length of the section being surveyed. Accuracy of the distance meter shall be checked by use of a walking meter, roll-a-tape, or other suitable device.

Movement of the television camera shall be temporarily halted at each visible point source of infiltration and/or inflow until the leakage rate from that source is quantified. The camera shall also be stopped at active service connections where flow is discharging. If the discharge persists, the property involved shall be checked to determine whether or not the discharge is sewage. If no flows are being discharged from the building, it shall be considered that the observed flow in infiltration/inflow. If the estimated flow from the service connection is greater than the total wastewater discharge from the fixture from the building, then the infiltration/inflow can be determined by calculating the difference of the two (2) flows.

2. Post Construction Survey - Upon completion of the sewer line rehabilitation, the entire sewer line (from manhole to manhole) shall be televised. The camera shall be moved through the line in either direction at a moderate rate, stopping when necessary to permit proper documentation of the sewer repair. In no case shall the television camera be pulled at a speed greater than thirty feet (30') per minute. Manual winches, power winches, TV cable, and powered rewinds or other devices that do not obstruct the camera view or interfere with proper documentation of the sewer conditions shall be used to move the camera through the sewer line. The camera shall not be pulled through the sewer line by a hydraulic cleaning unit hose. If, during the survey operation, the television camera will not pass through the entire manhole section, the Contractor shall set up his equipment so that the survey can be performed from the opposite manhole.

Whenever nonremote-powered and controlled winches are used to pull the television camera through the line, telephones or other suitable means of communication shall be set up between the two (2) manholes of the section being surveyed to insure good communications between members of the crew.

Measurement for location of repairs shall be above-ground by means of meter device. Marking on the cable, or the like, which would require interpolation for depth of manhole, will not be allowed. Measurement meters shall be accurate to tenths of a foot over the length of the section being surveyed. Accuracy of the distance meter shall be checked by use of a walking meter, roll-a-tape, or other suitable device.

Movement of the television camera shall be temporarily halted at each repair. The camera shall also be stopped at any unnoticed or nonrepaired point source of infiltration and/or inflow until the leakage rate from that source is quantified.

3. Field Documentation

a) *Television Survey Logs*: Printed location records shall be kept by the Contractor and will clearly show the location in relation to an adjacent manhole of each repair point observed during survey. In addition, other points of significance such as locations of building sewers, unusual conditions and other discernible features will be recorded and a copy of such records will be supplied to the County.

b) *Videotape Recordings*: The purpose of tape recording shall be to supply a visual and audio record of repaired sections of the line. Videotape recording playback shall be at the same speed that was recorded. Slow motion or stop motion playback features shall be supplied by the Contractor. Once videotaped, the tapes become property of the County.

The Contractor shall have all videotapes and necessary playback equipment readily accessible for review by the County representative during the project.

c) *Photographs*: Instant developing, 35 mm, or other standard-size photographs of the television picture of problems shall be taken by the Contractor upon request of the County or its representative.

4. Warranty Survey - All collection line repairs, replacement, lining or point repairs shall be resurveyed by the Contractor in the presence of the Engineer within one (1) year of acceptance by the County. Failure of the Contractor to televise the repair during the warranty period shall not relieve him of his warranty responsibilities. The Contractor shall schedule his work to conduct surveys of collection line repairs, linings, point repairs or main line replacement to include a Television Survey in the 11th month after acceptance and tapes are to be turned over to the Engineer (this will be the third television survey). Procedures and documentation required are to be identical to those required under the post construction survey requirements herein.

S-20 CRITERIA FOR AWARD: The award of this bid will be to the lowest responsive, responsible bidder(s) meeting or exceeding all of the above requirements specified. Other considerations of award will be qualifications, technologies and ability to complete projects within the stipulated period. The County reserves the right to award this bid in whole or in part (by package), whichever is in its best interest.

The quantities shown on the Bid Form are approximate for each bid package, and are given only as a basis of calculation for award of the Contract. The actual quantities for each purchase order issued may vary substantially from the estimated amount. Unit prices on the Bid Form will be used for each purchase order issued.

The County reserves the right to reject the bid of any bidder who has previously failed to perform properly, or on time, contracts of similar nature; or who is not in a position to satisfactorily perform the contract. If, after the due date and time, the lowest bidder is deemed non-responsible by the County, such bidder shall receive written notice from the County of this determination. The bidder shall have five (5) business days from the date of this notice to dispute the determination and to provide to the County any additional information it deems relevant regarding the bidder's responsibility. The County shall make a final determination regarding the bidder's responsibility at the time of award of the contract.

**INSURANCE REQUIREMENTS
WASTEWATER COLLECTION SYSTEM REHABILITATION
BID NO 2000000281**

- A. WORKERS' COMPENSATION:** Coverage to apply to all employees for Statutory Limits in compliance with the applicable state and federal laws. The policy must include Employer's Liability with a minimum limit of \$300,000 each accident.
- B. COMPREHENSIVE GENERAL LIABILITY:** Shall have minimum limits of \$1,000,000 Per Occurrence Combined Single Limit for Bodily Injury Liability and Property Damage Liability. This shall include Premises and/or Operations, Independent Contractors, Products and/or Completed Operations, Broad Form Property Damage and SCU Coverage, and a Contractual Liability Endorsement.
- C. BUSINESS AUTO POLICY:** Shall have minimum limits of \$300,000 Per Occurrence Combined Single Limit for Bodily Injury Liability and Property Damage Liability. This shall include owned vehicles, hired and non-owned vehicles and employee non-ownership.
- D. SPECIAL REQUIREMENTS:**
1. Charlotte County, a political subdivision of the State of Florida, its officers, agents, employees, and volunteers are to be included as an additional Insured on both the Comprehensive General Liability and Business Auto Liability Policies. Charlotte County to be named insured as: **Charlotte County Board of County Commissioners.**
 2. An appropriate Hold Harmless Clause shall be included.
 3. Insurance policies meeting the requirements herein identified shall be maintained during the duration of the named project. Renewal certificates shall be sent to the County 30 days prior to any expiration date. There shall also be a 30 day notification to the County in the event of a cancellation or modification of any stipulated insurance coverage.
 4. It shall be the responsibility of the contractor to insure that all subcontractors comply with the same insurance requirements that he is required to meet.
 5. Certificates of insurance meeting the required insurance provisions shall be forwarded to the Purchasing Department upon notice of award, prior to commencement. **For the purpose of identification, when submitting insurance, the bid name and number must be included on the certificate.**

COUNTY PERMIT FEES

This listing is provided as a convenient service (in accordance with F.S. 218.80) to assist you in determining whether permits are needed in order to perform work under this bid.

THE FOLLOWING PERMITS CAN BE OBTAINED AT THE COMMUNITY DEVELOPMENT DEPARTMENT, DEVELOPMENT REVIEW DIVISION, 18500 MURDOCK BUILDING "B", SUITE 107, PORT CHARLOTTE.

Building Valuation Misc. Permits shall be based on bona fide contract price which is substantiated by submittal of a signed, notarized contract with the permit application.

1.	Swimming Pool (water surface area)	\$27.00 per sq ft
2.	Screened Cage Area of deck (Cage only)	\$ 4.20 per sq ft
3.	Concrete slabs/footing	\$ 4.20 per sq ft
4.	Seawalls	\$42.00 per lin ft
5.	Boat Docks	\$12.00 per sq ft
6.	Utility Sheds (Conventional Construc/PreEngineered)	
1.	No Slab	\$16.00 per sq ft
2.	With Slab	\$20.00 per sq ft
I.	Based on valuation: (Notarized contract SBCCI Valuations Tables)	
a.	\$200.00-5,000	\$26.00
b.	\$5,001.00-50,000	\$26.00 plus \$3.15 per thousand over \$5000.00
c.	\$50,001.00 - 1 \$50,000.00 or portion thereof	\$168.00 plus \$1.85 per thousand over
d.	Work started w/o a permit	Quadruple Fee
e.	Stop Work Order Fee	\$26.00
f.	Reinspect Fee	\$26.00
g.	Personalized Inspection (1 type) \$15.00 for additional types	\$53.00
h.	Duplicate permit card	\$16.00
III.	MISCELLANEOUS: (Flat Fee)	
a.	Change in Contractor or Owner on existing permit	\$53.00
b.	Commercial Name Change (Includes fire)	\$68.00
c.	Commercial Kitchen Hood	\$63.00
d.	Demolition	\$26.00
e.	Dry Hydrant	\$79.00
f.	Fences (wood or chain link only)	\$26.00
g.	Lawn Sprinkler (elec. not included)	\$26.00
h.	Moving Permit (if staying in County)	\$53.00
i.	Pre-moving Permit (In and out of County)	\$53.00
j.	Tank (excludes septic or gas tanks)	\$32.00
k.	Fire Alarm (\$2,000 and under)	\$68.00
l.	Fire Alarm (over \$2,000.)	\$147.00
m.	Fire Hydrant Flow Test	\$56.00
n.	Fire Sprinkler Systems (20 heads or less)	\$68.00
o.	Fire Sprinkler Systems (21 heads or more)	\$194.00
p.	Fuel tank removal (per tank including piping)	\$53.00
q.	Fuel tank installation (per tank including piping)	\$79.00
r.	LP or Fuel tank piping only	\$37.00
s.	LP tanks/piping (up to 420 lbs. or 100 gallons)	\$26.00

- t. LP tanks/piping (over 420 lbs. or 100 gallons) \$79.00
- u. Sign - Up to 50 sq ft of sign area \$26.00
- v. Sign - Over 50 sq ft of sign area \$26.00 plus \$.16 sq ft.
- w. Spray Booth \$79.00
- x. Suppression System \$47.00
- y. Preliminary Commercial or Multifamily Residential Plan Review (to be paid at time of submittal) 35% of the permit fee based on valuation
- z. Commercial and Plan Review 25% of the permit fee
- aa. Duplicate Plans Fee
 - 1-4 pages \$10.00
 - 5 or more pages \$10.00 + \$1.05 each Addt'l page
- bb. Commercial Plans Change (based on signed & notarized estimate of costs of plans change. Fee equal to 75% of permit fee based on the estimated value. In no case less than \$42.00)

IV. ELECTRICAL:

- a. Swimming Pools and Spas \$26.00
- b. Commercial- Min. \$68.00 or \$.32/amp (whichever is greater)
- c. Commercial- Add & alter (no increase in service) \$42.00
(If service is increased, they will be charged as a new construction)

V. PLUMBING:

- a. Solar Water Heating (Domestic or Pool) \$26.00
- b. Lawn Sprinkler System \$26.00
- c. Minimum Fee \$26.00

All other permits not covered by flat fee:

- Fee for issuing the permit (new construction, repair, modeling or additions) \$21.00
- Plus \$5.25 for each plumbing fixture, plumbing appurtenance, floor drain, sewer, water service, water piping, drainage or vent piping

Vacuum breakers or backflow prevention devices which are retrofitted shall be charged by the unit at \$5.25 for each for the first five and \$2.65 for each additional unit.

VI. MECHANICAL:

LABOR AND MATERIALS VALUATION

- a. Base Fee- alterations, repairs, replacements, additions, or new installations of any mechanical system \$26.00
- b. Additional Fee-\$5.25 per thousand (or fraction thereof) of contract value exceeding \$2,000 for any job not covered by the "flat fee"

VII. ROOFING:

LABOR AND MATERIALS VALUATION

- a. Minor repairs of one square or less (no inspection) \$5.25
Inspection Requested--\$11.00 per inspection
- b. All other installations- a mini. fee of 26.00 plus \$6.00 per thousand dollars (or fraction thereof) of contract value exceeding \$2,000.00 (A signed contract or proposal will be required as proof of contract value)

Stormwater (10 acres or less)	\$ 404.00
Stormwater (more than 10 acres) each acre over 10	\$404.00 + \$6.70 per acre or part thereof for
R.O.W. Line and Grade	\$ 80.00
R.O.W. Re-inspection	\$ 29.00
R.O.W. Pool & Misc.	\$ 29.00
Excavation Commercial	\$1,233.00
Excavation Non-Commercial	\$ 673.00
Excavation Inspection (Annual Fee)	\$ 29.00

Tree Permit	\$10.00
Tree Removal Authorization	\$10.00 + \$1.00 per caliper inch
Open Space Preservation Trust Fund	\$100.00/acre or fraction thereof
DRI	\$15,963.00
Plan Amendments - Large	\$ 1,625.00
Plan Amendments - Small	\$ 1,389.00
Plat Review	\$ 1,771.00
Street Vacation	\$ 902.00
Subdivision Variance	\$ 829.00
Continuance (P/Z Board)	\$ 430.00
Continuance (BCC)	\$ 430.00
Rezoning > 3 acres	\$1,104.00
Rezoning = / < acres	\$1,104.00 w/ plan amendment
\$1,401.00 w/o plan amendment	
Rezoning with Planned Development	\$1,350.00

a. Special Exception	\$843.00
b. Variance	\$843.00
c. Flood Plain Variance	\$891.00
d. Administrative Setback Variance	\$544.00
e. Administrative Number Variance	\$326.00
f. Administrative Parking Variance	\$326.00
g. Administrative Appeal	\$571.00
h. Administrative Renewal of Temporary Mobile Home	\$ 54.00
i. Commercial Name Change	\$ 22.00
j. Sign Pre Application	\$ 27.00
k. Temporary Sign Permit	\$ 54.00
l. Commercial Building Permit	\$ 92.00
m. Misc. Building Permit	\$ 22.00
n. Special Event Permit	\$ 87.00
o. Wellfield Protection Agreements	\$408.00
p. Landscape Inspection	\$100.00
q. Tree Inspection (triplex and commercial)	\$ 75.00

The Development Review Committee reviews all commercial development proposals 6,000 square feet and greater, and other miscellaneous developments as required. While not a "permit", this is absolutely mandatory prior to obtaining a building permit. The fees for the Development Review Committee are as follows:

DRC - SITE PLAN REVIEW		(Cost assessed per preliminary and per final site plan or per modification request)
Minor Modification		\$245.00
Time Extension		\$245.00

MISCELLANEOUS, COMMERCIAL, INDUSTRIAL

<u>New Application</u>	<u>Major Modification</u>		
<u>Fee</u>	<u>Fee</u>		
0 - 9,999 sq ft.		\$ 695.00	\$ 592.00
10,000 - 49,999 sq ft.		\$1029.00	\$ 889.00
50,000 - 100,000 sq ft.		\$1577.00	\$1382.00
100,000 sq ft. and up		\$2665.00	\$2481.00

PLANNED DEVELOPMENTS

<u>New Application</u>	<u>Major Modification</u>		
<u>Fee</u>	<u>Fee</u>		
Commercial/Industrial (No Structure) per lot or unit		\$1037. + \$11.	\$1037

MISCELLANEOUS, COMMERCIAL, INDUSTRIAL

<u>New Application</u>	<u>Major Modification</u>		
<u>Fee</u>	<u>Fee</u>		
0 - 9,999 sq ft.		\$ 788.00	\$1040.00
10,000 - 49,999 sq ft.		\$1155.00	\$1549.00
50,000 - 100,000 sq ft.		\$1772.00	\$2458.00
100,000 sq ft. and up		\$3111.00	\$4299.00

DIVISION OF PUBLIC WORKS
CHARLOTTE COUNTY, FLORIDA

MAINTENANCE OF TRAFFIC (MOT) POLICY

This Policy shall apply to all work in the right-of-way including that performed by contractors working for the County, contractors working for developers, utility companies (including work performed by their personnel or contractors), County work waters such as the Road Operations and Maintenance Department and the Charlotte County Utilities Department, and anyone else conducting any activities within public rights-of-way.

1. The contractor shall submit a maintenance of traffic plan for any construction project involving work or activity that may affect traffic on any County street, roadway, bike path, or sidewalk, and obtain approval prior to the start of the project.
2. The MOT plan shall consist of one or more engineering drawing(s) signed and dated by either a Professional Engineer, or person certified by the International Municipal Signal Association (IMSA) in work zone safety, qualified and knowledgeable in the field of traffic engineering, detailing traffic control for any road construction, detours or road closures. Should any changes to the MOT occur during any phase of the project, a revised MOT shall be immediately submitted.
3. All signs shown on the MOT shall comply with the current Manual on Uniform Traffic Control Devices (MUTCD - Part VI) or the Florida Department of Transportation Design Standards.
4. All signs and barricades requiring lights shall have them attached and in good working order.
5. Every attempt shall be made to avoid road closures. Where it is not possible to completely avoid road closures, the following procedures shall be followed:
 - a. Road closure shall be limited, if possible, to single lane closures with traffic controlled by flagmen.
 - b. If the work cannot be performed without closing all traffic lanes, but the closures can be limited to intervals no longer than five-minute durations (e.g., to accommodate necessary equipment operations), flagmen shall be used to control traffic as necessary.
 - c. If the work cannot be performed without closing all traffic lanes for periods longer than five (5) minutes at a time, provisions shall be made to maintain access to all developed properties. Access may be by properly signed and/or marked detours or other approved methods.
 - d. A detailed Maintenance of Traffic Plan shall be prepared by the contractor or other responsible entity for all situations where any lane closures are proposed. The detailed MOT Plans shall show the limits of the road closure, detour routes and/or other means of maintaining access, temporary signing and marking that will be used, and any other information deemed necessary by the County Engineer. The MOT Plan for road closures shall be submitted to the Engineering Department at least two weeks prior to each road closure. **No road closures, other than emergencies, are authorized without the prior approval of the County Engineer.**
 - e. If the road closure is authorized by the County Engineer, the following organizations shall be notified seven days prior to the closure and again 24 hours prior to the closure. If the closure will extend for more than one (1) day, notifications shall be made each day to inform these organizations of the road closures that will be in effect the following day:

• Charlotte County Public Works: Transportation Engineering Section (941) 575-3600

• All Emergency Services:

<u>EMS</u>	<u>Fire</u>	<u>Sheriff</u>
(941) 629-9996	(941) 625-4203	(941) 639-2101

• Charlotte County School Board: Transportation Division (941) 639-2121

• The Media: Newspaper/Radio Stations (Notify applicable one(s))

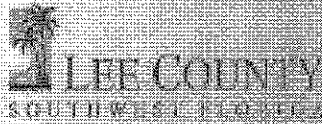
<u>Charlotte Sun Herald</u>	(941) 629-2855
<u>Englewood Sun Herald</u>	(941) 474-5115
<u>Sarasota Herald Tribune</u>	(941) 627-7500
<u>Venice/AM Sarasota Herald Tribune</u>	(941) 486-3050
<u>Venice Gondolier</u>	(941) 484-2611
<u>Radio - WKII 1070AM</u>	(800) 377-1070

• All property owners, residents and tenants of the affected properties (continuing notification not required).

f. If immediate road closure is necessary to safeguard life and/or public or private property, prior approval shall NOT be required. However, the notifications required under e. above shall be made as soon as practicable provided that the notification effort does not compromise the efforts to safeguard life and/or property.

6. All initial MOT plans (not involving road closures) and proposed changes shall be submitted to the to the County Transportation Engineer, or designee, for approval, at least one week prior to the start/effective date.

County Engineer
Public Works Division



Board of County Commissioners
Meeting Agenda

District #1 Bob Janes Chairman	District #2 Douglas St. Cerny	District #3 Ray Judah Vice Chairman	District #4 Andrew W. Coy	District #5 John E. Albion
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Donald D. Stilwell,
County Manager

James G. Yaeger,
County Attorney

May 7, 2002

Please fill out a "Request to Comment" card if you plan to address the Board and return it to the Clerk at the left of the podium prior to the start of the meeting.

All back up for this agenda is available in the **Public Resources Office**, 1st Floor, Administration Building

Additional information is available on the Internet at <http://www.lee-county.com>

PLEASE NOTE: The Board may take action in its capacity as the Port Authority or Government Leasing Corporation.

COMMISSION CHAMBERS, 2120 MAIN STREET, FORT MYERS, FLORIDA

May 7, 2002

9:30 AM Invocation: Brother George Henderson First Baptist Church of Alva

Pledge of Allegiance

Presentation:

- Letter Carriers National Food Drive Day Resolution
(Commissioner Janes-#20020441)
- CFIDS Awareness Day Resolution
(Commissioner Albion-#20020442)
- National Safe Boating Week Resolution
(Commissioner Judah-#20020443)

Recap

Public Comment on the Consent and Administrative Agenda

Consent Agenda:

- Items to be pulled for discussion by the Board
- Motion to approve balance of items
- Consideration of items pulled for discussion

Administrative Agenda

Walk-ons and Carry-overs

Commissioners' Items/Committee Appointments

County Manager Items

County Attorney Items

Adjourn