# **Bid Specification**

# Town of Willsboro, NY Water Meters and Cellular Based Advanced Meter Analytics (AMA) Reading System

**Contract No: 18-012** 

Bid date: September 27, 2019

# Town of Willsboro, NY

5 Farrell Road Willsboro, NY 12996

**Supervisor:** Shaun Gillilland

Deputy Supervisor: Charles Lusting, Jr.

## **Councilmembers:**

Steven Benway Lane Sayward Lorilee Sheehan

## **Town Clerk:**

**Bridget Brown** 

## **Water/Sewer Department:**

Robert Murphy, Superintendent

Sept. 10, 2019



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#### NOTICE FOR BIDS

NOTICE IS HEREBY GIVEN, that sealed proposals are sought by

#### The Town OF Willsboro, NY

#### for:

# Furnish and Install Water Meters and Cellular Based Advanced Meter Analytics (AMA) Reading System

Bid Date: September 27,2019 1:00PM

#### **DESCRIPTION:**

The Town of Willsboro is requesting proposals for equipment, materials and installation of water meters with transmitters, meter pits, recording equipment, software and associated equipment necessary for a Water Meters and Cellular Based Advanced Meter Analytics (AMA) Reading System. Bidders' proposals shall include all manpower, equipment and materials, which may be upgraded with optional services and materials which may not be purchased at time of bid award. Bidder shall specify in the bid the delivery schedule for the products and services from time of notification of award of bid.

#### Scope of Work:

#### Base work generally includes, but is not limited to:

- 1. All manpower, equipment and materials for a turn-key, Water Meters and Cellular Based Advanced Meter Analytics (AMA) Reading System for approximately 193 residential customers and 10 commercial customers, and all computer hardware and software.
- 2. The Cellular Based Advanced Meter Analytics (AMA) Reading System will include integrated water meter /register/ transmitter and hardware for the meters.
- 3. Equipment, materials and installation of meter pits with plumbing and cover to accept an integrated water meter that will allow proper signal transmission.
- 4. Included will be one laptop computer with one exterior mobile receiver including all hardware and software. Software must have system mapping capabilities. Maps must be colored.
- 5. The Cellular Based Advanced Meter Analytics (AMA) Reading System will have no less than a 3 months data storage history.
- 6. The water meter radio transmitters will have a 20 year warranty and a 20 year battery life warranty.

- 7. Windows 10.0 or newer cloud based software to be installed in Town's computer that will receive data from laptop and hand held records to produce bills and graph water consumption data.
- 8. Bidders are advised that all equipment and materials in contact with potable drinking water shall be NSF/ANSI 61 certified. Submittals for all equipment and materials shall be submitted for approval by engineer prior to commencement of work.
- 9. The awarded bidder will provide certified training personnel to set up, test, and train Town staff on the operation and maintenance of the system. Remote technical support services shall be available 24/7.
- 10. Bidders are advised that winning contractor will be required to verify cellular signal strength prior to ordering meters.

#### SCHEDULE:

By submitting a Bid, the Contractor agrees to adhere to the following schedule. The following schedule shall only be modified if written approval is given by Owner/Engineer.

- Must commence work within 2 weeks (10 business days) of notice of award. The work shall commence within 2 weeks with activities such as but not limited to: submittals, ordering materials, preconstruction survey.
- Work hours shall be an eight hour work day; Monday through Friday, 8:00 AM to 4:00 PM, unless agreed upon by Town and contractor.

All work is to be completed within 120 calendar days of award of contract unless approved by the Engineer and Owner. The work may be effected by inclement weather. The contractor shall secure site to prevent freezing and erosion. Contract time extensions will be granted as agreed upon by the Contractor and Owner.

- Electronic Bid Documents can be obtained from Cedarwood Engineering, PLLC located at 3903 Main Street, Warrensburg, NY 12885. (518) 623-5500, Contact Jenny Connelly jconnelly@cedarwoodengineering.com. Only the prospective bidders obtaining the bid documents from Cedarwood Engineering will receive any addenda that may be issued.
- Sealed bids are to be submitted on the forms provided, and shall be submitted to Bridget Brown, Town Clerk, at the Town Hall of Willsboro, 5 Farrell Road, Willsboro, NY 12996 by September 27, 2019, before 1:00 PM. Bids will be opened and read aloud at 1:00 PM on September 27, 2019.
- Contractors are responsible for the timely delivery of their bids to the proper person and location as indicated in this Notice for

Bids. Contractors are advised not to rely on the Postal Service or any other mail delivery service for the timely and proper delivery of their quote documents.

- Attention is called to the fact that not less than the minimum salaries and wages set forth in the Prevailing Wage Rates must be paid on this project; that the Contractor must insure that employees and applicants for employment are not discriminated against because of their race, creed, color, religion, sex or national origin. The Contractor comply with all provisions of the State Wage Rates.
- Contractor must comply with all applicable Federal, State, and Local laws, rules, and regulations.
- Contractors are strongly encouraged to conduct a site inspection of the project area prior to submitting a proposal. Contractors should contact the Owner or Owner's Engineer to schedule site visit.
- Bids may be held by the Owner for a period not to exceed forty-five (45) calendar days from the date of receipt of the quotes for the purpose of reviewing the quotes and investigation of the qualifications of the Contractors. The Town may reject any and all quotes at their discretion.

Technical questions should be directed to Tom Suozzo, PE at Cedarwood Engineering Services, PLLC, 3903 Main Street, Warrensburg, NY, 12853, 518-623-5500.

#### Owner:

Town of Willsboro 5 Farrell Road Willsboro, N.Y. 12996 (518)963-8668 (phone) (518)963-7488 (fax)

Contact Person: Bridget Brown, Town Clerk

#### Owner's Engineer:

Cedarwood Engineering Services, PLLC. 3903 Main Street
Warrensburg, NY 12853
518-623-5500 (phone)
518-623-5503 (fax)
Contact Person: Tom Suozzo, PE

# **SECTION I**

# INSTRUCTION TO BIDDERS BID DOCUMENTS

INSTRUCTIONS TO BIDDERS

#### 1. USE OF SEPARATE BID FORMS

These Contract Documents include a complete set of Bid and Contract Forms which are for the convenience of Bidders and can be copied and executed.

#### 2. INTERPRETATIONS OR ADDENDA

No oral interpretation will be made to any Bidder as to the meaning of the Contract Documents or any part thereof. Every request for such an interpretation shall be made in writing to the Owner. Any inquiry received seven or more days prior to the date fixed for opening of Bids will be given consideration. Every interpretation made to a Bidder will be in the form of an Addendum to the Contract Documents, and when issued, will be on file in the office of the Owner and the office of the Engineer at least five days before Bids are opened. addition, all Addenda will be mailed to each person obtaining Contract Documents and whose name and address are on record with the Owner; however, it shall be each Bidder's responsibility to make inquiry as to the Addenda issued and all such Addenda shall become part of the Contract and all Bidders shall be bound by such Addenda, whether or not received by the Bidders.

#### 3. INSPECTION OF SITE

Each Bidder shall visit the site of the proposed work and fully acquaint himself with the existing conditions there relating to the work and labor, and shall fully inform himself as to the facilities involved, the difficulties and restrictions attending the performance of the Contract. The Bidder shall thoroughly examine and familiarize himself with the Drawings, Technical Specifications, and all other Contract Documents. The Contractor by the execution of the Contract shall in no way be relieved of any obligation under it due to his failure to receive or examine any form or legal instrument or to visit the site and acquaint himself with the conditions there existing, and the Owner will be justified in rejecting any claim based on facts regarding which the Contractor should have been on notice as a result thereof.

#### 4. ALTERNATE BIDS

No Alternative or Supplementary Bids will be considered unless such Bids are specifically requested in the Special Conditions and shown on the Bid Proposal Form.

#### 5. BIDS

a. All Bids must be submitted (written) on forms as supplied in these documents and shall be subject to all requirements of the Contract Documents, including the Drawings, and these INSTRUCTIONS TO BIDDERS. All Bids must be regular in every respect and no interlineations, excisions or special conditions shall be made or included in the Bid Forms by the Bidder.

b. The bid package shall be enclosed in envelopes (outer and inner), both of which shall be sealed and clearly labeled with the words "Bid Documents", project number, name of Bidder and date and time of Bid opening in order to guard against premature opening of the Bid.

Bidders are encouraged to submit the bid and required items along with and bound into this specification book.

#### 6. TIME FOR RECEIVING BIDS Bid due date: September 27, 2019

- a. Bids received prior to the advertised hour of opening will be securely kept, sealed. The officer whose duty it is to open them will decide when the specified time has arrived, and no Bid received thereafter will be considered; except that when a Bid arrived by mail after the time fixed for opening, but before the reading of all other Bids is completed, and it is shown to the satisfaction of the Owner that the non-arrival time as due solely to delay in the mails for which the Bidder was not responsible, such Bid will be received and considered.
- b. Bidders are cautioned that, while telegraphic modifications of Bids may be received as provided above, such modifications, if not explicit and if in any sense subject to misinterpretation, shall make the Bid so modified or amended, subject to rejection.

#### 7. OPENING OF BIDS

At the time and place fixed for the opening of Bids, the Owner will cause to be opened and publicly read aloud every Bid received within the time set for receiving Bids, irrespective of any irregularities therein. Bidders and other persons properly interested may be present, in person or by representative.

#### 8. WITHDRAWAL OF BIDS

Bids may be withdrawn on written or telegraphic request dispatched by the Bidder in time for delivery in the normal course of business to the time fixed for opening; provided, that written confirmation of any telegraphic withdrawal over the signature of the Bidder is placed in the mail and postmarked prior to the time set for Bid opening. The Bid Guaranty of any Bidder withdrawing his Bid in accordance with the foregoing conditions will be returned promptly.

#### 9. AWARD OF CONTRACT: REJECTION OF BIDS

- a. If the Contract is awarded, it will be awarded to the responsible Bidder submitting the lowest Bid complying with the conditions of the Invitation for Bids and Instructions to Bidders. The Bidder to whom the award is made will be notified at the earliest possible date. The Owner, however, reserves the right to reject any and all Bids and to waive any informality in Bids received whenever such rejection or waiver is in its interest.
- b. The Owner also reserves the right to consider as not responsible any Bidder who does not habitually perform with his own forces at least fifty percent (50%) of the dollar value of the work involved in this Contract.
- c. Award of the bid is not solely based on the lowest base bid. Evaluation of the contractors qualifications and equipment statement

to complete the work will be factored into the review and subsequent award.

#### 10. EXECUTION OF AGREEMENT:

Subsequent to the award and within ten (10) days after the prescribed forms are presented for signature, the successful Bidder shall execute and deliver to the Owner, an Agreement in the form included in the Contract Documents in such number of copies as the Owner may require.

#### 11. OWNERS GENERAL CONDITIONS

No additional Owner specific conditions are contained in this section.

#### 12. BID ITEM DESCRIPTIONS

See Section V - Technical Provisions for full descriptions.

- 100 Mobilization/Demobilization (Lump Sum) Work included under this item shall include but not be limited to: establishment that adequate signal strength for cellular meter is available throughout Water District, mobilization and demobilization to and from the site; Insurance; bonding; pressure/leak testing; reports and/or logs; coordination with the Owner; progress meetings and preconstruction/pre-equipment ordering site survey to determine actual quantities, location and type of installation.
- 200 5/8"X3/4" integrated water meter, register and AMA transmitter, basement installation (Each) Work included under this item shall include all AMA and miscellaneous material, equipment and manpower to install a complete AMA system in the basement of a residential home or small business.
- 300 5/8"X3/4" integrated water meter, register and AMA transmitter, Mobile home installation (Each) Work included under this item Shall include all AMA and miscellaneous material, insulation, Equipment and manpower to install a complete AMA system in a mobile home.
- 400 5/8"X3/4" integrated water meter, register and AMA transmitter, Meter pit installation (Each) Work included under this item shall include all AMA, meter pit and miscellaneous material, equipment and manpower to install a complete AMA system in an in-ground meter pit, for residential home.
- 500 1" integrated water meter, register and AMA transmitter, isolation and check valves for commercial business. (Each) Work included under this item shall include all AMA, meter pit and miscellaneous material, equipment and manpower to install a complete MUI system in a commercial building.
- 600 1 1/2" integrated water meter, register and AMA transmitter,

isolation and check valves for commercial business. (Each) Work included under this item shall include all AMA, meter pit and miscellaneous material, equipment and manpower to install a complete MUI system in a commercial building.

- 700 2" integrated water meter, register and AMA transmitter, isolation and check valves for commercial business. (Each) Work included under this item shall include all AMA, meter pit and miscellaneous material, equipment and manpower to install a complete MUI system in a commercial building.
- 800 Laptop with mobile receiver and mapping accessories (Each). Work included under this item is to supply a laptop computer install with Windows 10.0 or newer, color mapping system and AMA compatible download from hand-held data reciever.
- 900 Hand held data receiver with accessories (Each) Work included under this item is to provide hand held data recording devices to upload water meter data remotely from AMA meters and download data to the software system.
- 1000 Software (cloud based) provide and install on Towns computer system (Each). Work included under this item is to deliver and integrate web-based network, AMA system that shall integrate with the Towns current "Williamson" billing software.
- 1100 Training and Support Services (Lump Sum) Work included under this item is for manufactures certified training personnel to setup, test and train Town staff on the operation and maintenance of the system. Technical support services shall be available via phone 24 X7.
- 1200 5/8"X3/4" integrated water meter, register and AMA transmitter For stock, (Each) Work included under this item is to deliver to the Towns designated location, spare meter pit and cover for future use.
- 1300 Meter pit with Cover for Stock (Each). Work included under this item is to deliver to the Towns designated location, spare 5/8"X3/4" integrated water meter, register and AMA transmitter meter for future use.

#### BID FORM - Contract No. 18-012

FOR: Town of Willsboro, NY, request for proposals – Water Meters and Cellular Based Advanced Meter Analytics (AMA) Reading System

Having familiarized themselves with the existing conditions of the project area affecting the cost of the work and in compliance your invitation to bid, and the instructions to bidders relating thereto, the undersigned hereby offers to furnish all labor, equipment, services and other facilities necessary to complete the construction thereon and including all trades as required to complete the general construction of the **Town of Willsboro**, **NY**, **Bid Specification** – **Water Meters and Cellular Based Advanced Meter Analytics (AMA) Reading System**, **Contract No. 18-012** as per these specifications.

The following bid sheet has been set up to correspond with the Contract Description Work Items. The grand total base bid (i.e., the sum of all base bid items) will provide the basis for bid comparison and determination of the low bid.

1. The Contractor shall provide quotes for all work items and by doing so, agrees to hold unit prices set forth therein understanding that the **TOWN** reserves the right to deduct work quantities, as they see fit, without subsequent adjustment of the Contractor's stated unit prices. Further note that project compensation will be provided on the basis of the bid prices and actual quantities of work completed.

Contractors are to fill in pricing for all base bid and bid alternate work, if any. Failure to provide pricing for all work will constitute a bid informality.

2. In submitting this Bid, the Bidder understands that the right is reserved by the Owner to reject any or all Bids. If written notice of the acceptance of this Bid is mailed, telegraphed or delivered to the undersigned within the time limit specified for holding of Bids for review in the "Invitation for Bids" after the opening thereof, or at any time thereafter before this Bid is withdrawn, the undersigned agrees to execute and deliver an Agreement in the prescribed form and furnish the required bonds if required, within ten (10) days after the Agreement is presented to him for signature.

Further, the Bidder agrees to hold the Owner harmless, with no responsibility to provide payment of any kind to the Contractor, should funding be deobligated prior to execution of the Notice to Proceed.

#### Bid Documents to be included with the bid:

- 1. Bid Form-contact information
- 2. Bid Form-signed
- 3. Certificate of Non-Segregated Facilities
- 4. Certificate of Anti-Harassment Policy and Mandatory Annual Sexual Harassment Training
- 5. Receipt of Addenda
- 6. Non-Collusion Affidavit
- 7. Certificate of Corporate Principle

- 8. Bidders Qualifications and Questionnaire9. Equal Employment Opportunity
- 10. Debarred Contractors List
- 11. NYS EFC 2015 Bid Packet
- 12. Bid Guaranty (5%)

# BID FORM - Contact Information

# CONTRACT 18-012 Water Meters and Cellular Based Advanced Meter Analytics (AMA) Reading System

Bidder's Name (Company)
Bidder's (Company) Address
Company Phone
Company Fax
Bidder's Project Contact (Project Manager)
Contact's Phone
Contact's Email Address

#### BID FORM

# Town Willsboro, NY, Water Meters and Cellular Based Advanced Meter Analytics (AMA) Reading System Contract No. 18-012

## BASE BID ITEMS

Bid Item	Bid Item Description	Units	Estimated* Quantity	Unit Price	Total Price
100	Mobilization/Demobilization Preconstruction Survey	Lump sum	1		
200	5/8"X3/4" Intergraded water meter , register and AMA transmitter, Residential or small business basement installation	Each	72		
300	5/8"X3/4" Intergraded water meter , register and AMA transmitter, Residential mobile home installation	Each	90		
400	5/8"X3/4" Intergraded water meter , register and AMA transmitter, Residential meter pit installation	Each	20		
500	1" integrated water meter, register And AMA transmitter, isolation and check valves for commercial business.	Each	3		
600	1 1/2" integrated water meter, register and AMA transmitter, isolation and check valves for commercial business.	Each	2		
700	2" integrated water meter, register And AMA transmitter, isolation and check valves for commercial business.	Each	1		
800	Laptop with mobile receiver and mapping accessories	Each	1		
900	Handheld data receiver with accessories	Each	1		
1000	Software, provide and install on Towns computer systems (three users)	Each	3		
1100	Training and Support Services	Lump Sum	1		
1200	5/8"X3/4" Intergraded water meter , register and AMA transmitter, Stock	Each	25		
1300	Meter Pit with cover, stock	Each	5		
			TOTAL BASE B	SID AMOUNT	

TOTAL	BASE	BID	AMOUNT	IN	WORDS	

<sup>\*</sup> Bidders are to bid on listed quantities that are based on the Town of Willsboro's estimates.

BID SUBMITTED BY: (Name of Company)	
SIGNATURE OF BIDDER'S	
REPRESENTATIVE	
BIDDER'S ADDRESS	
DATE:	

#### CERTIFICATION OF NONSEGREGATED FACILITIES

This Bidder certifies that he does not maintain or provide for his employees any segregated facilities at any of his establishments, and that he does not permit his employees to perform their services at any under his control, where segregated facilities location, maintained. The Bidder certifies further that he will not maintain or provide for his employees any segregated facilities at any of his establishments, and that he will not permit his employees to perform their services at any location under his control where segregated facilities are maintained. The Bidder agrees that a breach of his certification will be a violation of the Equal Opportunity clause in any Contract resulting from acceptance of this Bid. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, time clock, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive or are, in fact, segregated on the basis of race, color, religion, or national origin, because of habit, local custom or otherwise. The Bidder agrees that (except he had obtained identical certification from proposed Subcontractors for specific time periods) he will obtain identical certifications from proposed Subcontractors prior to the award of Subcontracts exceeding \$10,000.00 which are not exempt from the provisions of the Equal Opportunity clause, and that he will retain such certifications in his files.

Note: The penalty for making false statements in offers is prescribed in 18 U.S.C. Paragraph 1001.

Date:	<del></del>	
Compai	ny:	
Ву:	(signature of representative)	e:
Offic	ial Address:	

# CERTIFICATION Of Anti-Harassment Policy and Mandatory Annual Sexual Harassment Training

This Bidder certifies that its company has developed and maintains an Anti-Harassment and Mandatory Annual Sexual Harassment Training as per legislation signed on April 12, 2018, by New York Governor Andrew Cuomo. The law budget legislation that includes significant anti-sexual harassment measures that (1) require mandatory sexual harassment training and written anti-harassment policies; (2) expand sexual harassment protections to non-employees; (3) prohibit certain non-disclosure provisions in settlement agreements; (4) prohibit mandatory arbitration of sexual harassment claims; and (5) require bidders on state contracts to certify compliance with policy and training requirements. Beginning October 9, 2018, employers will be required to distribute a written anti-harassment policy and provide annual sexual harassment training to all employees. The New York State Department of Labor and New York State Division of Human Rights will develop a training program and a model sexual harassment policy for employers to use. An employer may develop its own policy and training program as long as they meet all of the requirements of the new law. Policies must include a complaint form for use by employees. Training must include an explanation of harassment; examples of prohibited harassment; supervisor responsibilities; state and federal anti-harassment laws, including the remedies provided by each; an explanation of employees' rights and the forums in which complaints can be made.

Every employer in the State of New York is required to adopt a sexual harassment prevention policy pursuant to Section 201-g of the Labor Law. An employer that does not adopt the model policy must ensure that the policy that they adopt meets or exceeds the minimum standards.

Note: The penalty for making false statements in offers is prescribed in 18 U.S.C. Paragraph 1001.

Date:		
Compar	ny:	
ву:		
Offic	ial Address:	

# FORM OF RECEIPT OF ADDENDA

Addendum	Signature	Date Rec'd
1		
Company Name:		
Address:		<u> </u>
Company Representative:		
	(print name and title)	
Signature:		
Date:		

# NON-COLLUSION AFFIDAVIT OF PRIME BIDDER

State of
County of
(title) of , the Bidder
that has submitted the attached Bid:
He is fully informed respecting the preparation and contents of the attached Bid and of all pertinent circumstances respecting such Bid;
Such Bid is genuine and is not a collusive or sham Bid;
Neither the said Bidder nor any of its officers, partners, Owners, agents, representatives, employees or parties in interest, including this affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly with any other Bidder, firm or person to submit a collusive or sham Bid in connection with the Contract for which the attached Bid has been submitted or to refrain from bidding in connection with such Contract, or has in any manner, directly or indirectly, sought by other Bidder, firm or person to fix the price or prices in the attached Bid or of any other Bidder, or to fix any overhead, profit or cost element of the Bid price or the Bid price of any Bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the Owner or any person interested in the proposed Contract; and the price or prices quoted in the attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of its agents, representatives, Owners, employees, or parties in interest, including this affiant.  Signed:
(name; print and sign)
(title) (date) Subscribed and sworn to before me
this day of,
(title)
My Commission Expires

# CERTIFICATE AS TO CORPORATE PRINCIPAL

I,		_, certify	that I	am the	
Secretary of the Corporation	on named as :	Principal	in the	within	bond;
who signed the bond on behalf	lf of the Prin	ncipal was	then		
Corporation; that I know he genuine; and that said bone for and in behalf of said body.	d was duly si	igned, sea	signatur led, and	d attest	ted to
-	Corpora	ate Seal			
Title					

#### STATEMENT OF BIDDER'S QUALIFICATIONS

(To be submitted with their bid by companies who have not worked for the Town within the last 5 years; those who have worked for the Town within the last 5 years can submit the form with their bid or provide it to the Town within 3 business days of request)

All questions must be answered and the data given must be clear and comprehensive. This statement must be notarized. If necessary, questions may be answered on separate attached sheets. The Bidder may submit any additional information he desires.

- 1. Name of Bidder.
- 2. Permanent main office address.
- 3. When organized.
- 4. If a corporation, where incorporated.
- 5. How many years have you been engaged in the contracting business under your present firm or trade name?
- 6. Contracts on hand: (Schedule these, showing amount of each contract and the appropriate anticipated dates of completion.)
- 7. General character of work performed by your company.
- 8. Have you ever failed to complete any work awarded to you? If so, where and why?
- 9. Have you ever defaulted on a contract? If so, where and why?
- 10. List the more important projects recently completed by your company, stating the approximate cost for each, and the month and year completed.
- 11. List your major equipment available for this Contract.
- 12. List your experience in work similar to this project.
- 13. List the background and experience of the principal members of your organization, including officers.
- 14. List the work to be performed by Subcontractors and summarize the dollar value of each Subcontract.

15.	Credit available: \$	 •
16.	Give Bank reference:	

- 17. Will you, upon request, fill out a detailed financial statement and furnish any other information that may be required by the Owner?
- 18. The following questionnaire sections shall be completed and submitted with the proposal.

Sections include: Minimum Criteria

Technical Responses

Advanced Metering Infrastructure (AMA) Endpoints

LTE Cellular AMA System AMA System Software AMA System Training

Technical Support and Warranty

#### MINIMUM CRITERIA

Any Prospective Bidder submitting a proposal must satisfy the following minimum criteria. Proposals which do not demonstrate compliance with the minimum criteria will not be considered.

Requirement	Comply?	Description/Clarification
The proposed system must	compiy:	best prony cial meason
operate as a two way, point		
to point cellular		
communication. No one way or		
mesh RF type systems will be		
accepted		
The proposed system shall be		
a fully managed system. All		
software and reading hardware		
(excluding endpoints) are		
maintained by the		
manufacturer		
The proposed system must		
provide for leak detection on		
the customer side, and help		
support leak detection		
capabilities on the		
distribution side.		
The proposed system must		
provide powerful analytics		
based software that informs		
the utility of utility		
defined exception conditions		
via email, SMS text or		
through the systems		
interface.		
The Prospective Bidder must		
provide positive/successful		
references for the proposed		
or similar AMA system		
completed within the state of		
New York. System must be		
currently operating		
collecting meter reading and		
other data from installed		
endpoints. References must be		
submitted on the Reference		
sheet.		

## TECHNICAL RESPONSES

#### System Description

description/clarification box.					
REQUIREMENT	COMPLY?	DESCRIPTION/CLARIFICATION			
The system shall be capable					
of remotely collecting					
numeric meter					
identification, 15 minute					
interval readings, premise					
leaks and tamper information					
from the new water meters.					
The AMA system shall					
automatically provide the					
Town with daily metering					
data at the network control					
computer at least once per					
day without having to					
interrogate the endpoint or					
data collector.					
The Prospective Bidder shall					
provide the interface					
between the AMA system					
software and the existing					
billing system (See Utility					
Billing Information for					
details on existing billing					
system). The Town must be able to run the new AMA					
system and the existing					
meter reading and billing					
system in parallel, until					
such time as all of the					
meters are converted to the					
new AMA system. The Town's					
water accounts shall be					
downloaded to the new AMA					
system software, providing					
for a gradual transition					
from existing reading system					
to the new meter reading as					
future AMA endpoints are					
installed.					
The AMA system must comply					
with all applicable Federal					
Communication Commission					
(FCC) Rules & Regulations					
All AMA equipment and system					
components shall be labeled					
in accordance with the FCC.					
The output power of the AMA					
system will be governed by					
the relevant FCC standards					
for the operating					
frequencies used.					

# ADVANCED METERING INFRASTRUCTURE (AMA) ENDPOINTS

REQUIREMENT	COMPLY?	DESCRIPTION/CLARIFICATION
Batteries must be Lithium		
Thionyl Chloride and must be		
fully potted and non-		
replaceable.		
The battery for each AMA		
endpoint must be warranted		
for a minimum period of ten		
years, prorated to 20 years		
when the system provides a		
minimum of reads per day.		
Cellular Endpoints and		
meters must be protected		
against water or moisture.		
Proposals shall detail AMA		
endpoint construction for		
moisture and water		
protection.		
All AMA endpoints equipment		
must be rated to withstand		
noncondensing temperatures		
from -40° F to +140° F.		
The Proposed system must		
have advanced metering		
infrastructure (AMA) modules		
capable of interpreting		
encoded meter reading data		
directly from the new three-		
wire meter registers without		
error.		
Prospective Bidders must		
describe the operation of		
the AMA endpoint, including		
an explanation of the AMA		
endpoint's "broadcast"		
method and the manner in		
which the AMA endpoint		
ransmits. Prospective Bidders must		
provide a field programming		
verification app necessary to completely activate AMA		
endpoints so that they are ready to transmit meter		
ready to transmit meter readings.		
Prospective Bidders must		
provide a description about		
the AMA endpoint's power		
source and how the "broadcast" method affects		
the length of the endpoint		
life.		
IIIe.		

The AMA endpoint shall have capabilities to indicate damage or tampering with the wire connection between the AMA endpoint and the register.	
Long-lasting batteries shall power the AMA endpoints. The batteries in the AMA endpoints shall have a minimum warranted life of ten (10) years full when the system provides readings every 15 minutes. Proposers must include warranted battery life and AMA endpoint life in the proposal.	
The AMA endpoint must have an internal clock that is synchronize daily through the network.	

# LTE CELLULAR AMA SYSTEM

REQUIREMENT	COMPLY?	DESCRIPTION/CLARIFICATION
Transmissions of data between the utility and DCUs		
shall be in a proprietary		
format not easily deciphered		
by outside sources.		
The following information		
shall be transferred via		
cell signal: unique		
transmitter ID/serial		
number, meter reading, leak		
tamper status, wire tamper status, reverse flow status,		
no usage status, low battery		
alarm, and encoder error.		
No sensitive customer		
information such as name,		
address or account number		
shall be sent in the		
transmission.		

## AMA SYSTEM SOFTWARE

The software shall show and retain a minimum of two years of quarter hourly usage history for all utility accounts.  The software shall be provided as a perpetual license to use the software with the supplied system, provided the annual maintenance agreement is upheld.  A minimum of 3 utility user licenses shall be included in the software pricing section.  Ability to generate error reports identify which endpoints and data collectors have been inactive for a certain period of time.  The software must support operator-based security allowing suthorization levels and capabilities. Additionally, all aspects of that operator customization must be available (what screens they have access to, what data they can change, etc)  The software shall be included in the software for the software must be savilable what screens they have access to, what data they can change, etc)  The software shall include the following standard reports: Meter Reading History, Daily Leak Detection, Daily No-Use Meter, Daily Tamper Detection, and Backflow  The software must provide for proactive exception alarms that can notify utility personnel via email or SMS text of desired exception conditions.  Prospective Bidders must describe any unique features that their software provides to assist in Conservation efforts.	description/clarification box.						
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Prospective Bidders must	
describe any unique features	
that their software provides	
to assist in Customer	
Service efforts.	
Prospective Bidders must	
describe any other unique	
features that their software	
provides to Town to improve	
overall utility operational	
efficiency and management of	
the AMA system.	
Prospective Bidders must	
provide a consumer portal so	
that all utility customers	
can have access to their	
usage data.	
Prospective Bidders must	
include a smart phone app so	
that all utility customers	
can have access to their	
usage data free of charge.	

# AMA SYSTEM TRAINING

description/clarification box.						
REQUIREMENT	COMPLY?	DESCRIPTION/CLARIFICATION				
System shall include a						
minimum of twelve hours,						
occurring only Monday						
through Friday, of on-site						
or web instruction on the						
operation procedures for the						
AMA system. Complying with						
the minimum period of time						
specified above will not						
relieve the Prospective						
Bidder of providing						
sufficient service to place						
the AMA system in						
satisfactory operation.						
At a minimum the training						
must cover the use of the						
devices, error coding,						
uploading and downloading						
data from the reading						
devices from the AMA system						
software, and AMA system						
software interfacing with						
the existing billing system.						
The training schedule shall						
be coordinated with the						
Town. The training on						
operation of the AMA system						
shall not occur until after						
the software has been						
installed and the billing						
interface file has been						
written, tested, and is						
working successfully to						
transfer meter reading data						
to the billing system.						

# TECHNICAL SUPPORT REQUIREMENTS AND WARRANTY

REQUIREMENT	COMPLY?	DESCRIPTION/CLARIFICATION
The Prospective Bidder shall	COMPLIE	DESCRIPTION/ CHARTFICATION
_		
provide to the Town on-call assistance services and		
warranty services for a		
period of one (1) year		
following the startup of the		
system.		
A toll-free telephone Help		
Desk shall be available		
24/7. Support after normal		
business hours will		
guarantee a call back to the		
customer within 30 minutes.		
The Help Desk services shall		
include: cellular device		
problems/questions; software		
operations		
problems/questions;		
equipment returns and		
repairs; loaner equipment		
processing; evaluation of		
information for updates or		
revisions; evaluation of		
personnel training needs.		
Prospective Bidders shall		
provide manufacturer's terms		
and conditions of all		
warranties offered. As a		
minimum the AMA system must		
be warranted for a minimum		
period of one (1) year from		
the date of substantial		
completion.		

19. The undersigned hereby authorizes and requests any person, firm or corporation to furnish any information requested by the Owner in verification of the recitals comprising this Statement of Bidder's Qualifications.

	This		day	of				
•								
(Name of	Bidder)							
		By: _						
		Title: _						
State of				-				
County of								
							_ being	duly
sworn dep	oses and	says tha	t he i	.s				
of								
		(Name of	Orgar	nizatio	n)			
and that therein c						stions	and all	statements
		Subscri this					e /	•
				(Notar	y Publi	c)		
		My comm	issior	ı expir	es			

# CERTIFICATION OF PRIME CONTRACTOR REGARDING EQUAL EMPLOYMENT OPPORTUNITY

NAME OF BIDDER	PROJECT NUMBER
II, Section 203 (b), (30 F.R. 123 shall state in his bid proposal previous contract or subcontract	rsuant to Executive Order 11246, Part 19-25). Each prospective contractor whether he has participated in any subject to the Equal Opportunity as filed all compliance reports due ts.
SUBCONTRACTOR'S CERTIFICATION CONTRACTOR'S NAME:	
ADDRESS:	
Subcontractor has participated in subject to the Equal Opportunity C	a previous contract or subcontract lause.  YES NO
2. Compliance reports were requisuch contract or subcontract.	rired to be filed in connection with
	YES NO ere filed and with what agency. all compliance reports due under SF-100. YES NO
side of this certification.  CERTIFICATION - THE INFORMATION AB	please explain in detail on reverse SOVE IS TRUE AND COMPLETE TO THE BEST LLFULLY FALSE STATEMENT IS PUNISHABLE
NAME AND TITLE OF	'SIGNER (PLEASE TYPE)
(SIGNATURE)	(DATE)

# CONTRACTORS CERTIFICATION FROM DEBARRED CONTRACTORS LIST

TO BE COMPLETED BY CONTRACTOR AND ATTACHED TO BID PROPOSAL FORM:

Company Name	
	_ hereby
(Company Representative; print name)	_
certifies that the above listed company is not in Consolidated List of debarred, suspended and ineligible and grantees for this purpose and the Comptro Consolidated List of persons or firms currently violations of various public contracts incorporating provisions.	ole contractors ller General's debarred for
(Company Representative; sign name)	_
(Date signed)	

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#### **BID BOND**

	N BY THESE PR		————————		
as Principal, and					
as Surety are he	eld and firmly bo the	ound unto the (l	nal	er) hereinafter ca sum Dollars,(\$	lled the "Owner",
bind ourselves,		cutors, admini	nent of which	sum well and tru	ily to be made, we
				ereas the Principa	
therein after the Principal, Surety opening, and should find the Sufficient surety fulfillment of surety fulfi	e opening of the y and Owner, or all within the pe the prescribed for e Owner in according or sureties, as and Contract; the nain in full force oly with the aforted damages. HEREOF, the absolute of the and these proverning body. It time or other marties to this Bon	e same, or with if no period be riod specified to come are presented and the same be requested and the same between the above observed and the same between the	nin any extents specified, with herefore, or if ented to him the Bid as acceptically for the obligation shall marties have extent and corpulation to the large and corpulation in the large and corpulation in the large and corpulation in the large and corputation in the large an	ded time period thin thirty (30) of no period be spe for signature, en pted and give bo faithful perform be null and void result in the forfacecuted this instructionate seal of each signed representation.	e period specified agreed to by the agreed to by the lays after the said ecified, within tenter into a written nd with good and nance and proper and of no effect, feiture of this Bid ument under their h corporate party ative, pursuant to nless agreed to in

(Business Address)		
(SEAL)		
(Business Address)		
Attest: By:		
(Corporate Principal)		
By: Affix Corporate Seal	<u></u>	
Attest:		
(Corporate Surety)		
(Business Address)		
By:Affix Corporate Seal		
Countersigned		
By:		
*Attorney-in-Fact, State of		

<sup>\*</sup>Power-of-Attorney for person signing for Surety Company must be attached to Bond.

#### CONTRACT SECURITY STATEMENT

	intends to provide
(Contractor)	•
contract security in the form of:	
O BONDING	
	Contractor Company Name
	Contractor Company Representative Name
	Signature
	Date

## FORM OF SURETY GUARANTY (To Accompany Bid)

KNOW ALL MEN BY THESE PRESENTS, that for and in consideration of the sum of \$1.00, lawful money of the United States, the receipt whereof is hereby acknowledged, paid the undersigned corporation, and for other valuable consideration the

(Name of Surety	Company)							
a corporation	organized	and	U	under licensed _, certifies	to do	busines	s in th	State o e State o
is awarded to undersigned								, the
undersigned	(Name o	of Bidd	or)					
corporation will	`		,	required t	ov the (	Contract	Documer	nts and wil
become surety in								
Contract and for								
thencewith.	r	1	TI J	6		8		
(Surety)								<del></del>

The "OWNER", shall be named as Obligee.

(To be accompanied by the usual proof of authority of officers of surety company to execute the same.)

#### PERFORMANCE BOND

KNOW ALL MEN BY THESE DRESENTS.

That	
as Principal, hereinafter called Contractor, and	<del></del>
	as Surety, herein-
after called Surety are held and firmly bound unto the, as Obligee, h	
the	amount
of	
Dollars, (\$ _	)
for payment whereof Principal and Surety bind themselves administrators, successors and assigns, jointly and severally, firmly by	, their heirs, executors,
WHEREAS, Contractor has by written agreement dated	
, entered into a	Contract with
Owner for, which	

Contract is by reference made a part hereof, and is hereinafter referred to as the Contract. NOW, THEREFORE, the condition of this obligation is such that, if Contractor shall promptly and faithfully perform said Contract, including such remedial work as may be required under the guaranty during the period of guaranty and shall certify in writing that all wages paid under said Contract to any mechanic, laborer or workman were equal to the rates or wages customary or then prevailing for the same trade or occupation in the Project area, then this obligation shall be null and void, otherwise it shall remain in full force and effect.

The Surety hereby waives notice of any alteration or extension of time made by the Owner. Whenever Contractor shall be, and declared by Owner to be in default under the Contract, the Owner having performed Owner's obligations thereunder, the Surety may promptly remedy the default or shall promptly:

- 1) Complete the Contract in accordance with its terms and conditions, by another Contractor acceptable to the Owner, said other Contractor to act as an agent for the Surety, or
- 2) Obtain a Bid or Bids for submission to the Owner for completing the Contract in accordance with its terms and conditions, and upon determination by the Owner and Surety of the lowest responsible Bidder, arrange for a Contract between such Bidder and Owner, and make available as work progresses (even though there should be a default or a succession of defaults under the Contract or Contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the balance of the contract price, but not exceeding, including, other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The terms "balance of the contract price" as used in this paragraph, shall mean the total amount payable by the Owner to the Contractor under the Contract and any amendments thereto, less the amount properly paid by the Owner to the Contractor.

Unless otherwise required by law, any suit under this Bond must be instituted before the expiration of one (1) year from the date on which the guaranty period under the Contract expires.

No right of action shall accrue on this Bond to or for the use of any person or corporation other than the Owner named herein or the heirs, executors, administrators and successors of Owner.

IN WITNESS WHEREOF, the above-bounded parties have executed this instrument under their			
several seals this day of,, the name and corporate seal of each corporate party being hereto affixed and these presents signed by its undersigned representative, pursuant to authority of its governing body.			
in presence of:			
(SEAL) (Individual Principal)			
(Business Address)			
(SEAL)			
(Business Address)			
Attest:	By:		
(Corporate Principal)			
(Business Address)			
	By:(Affix Corporate Seal	1)	
Attest:			

(Corporate Surety)
(Business Address)
By: (Affix Corporate Seal)
(Affix Corporate Seal) Countersigned
By:
*Attorney-in-Fact, State of*Attorney-in-Fact, State of*Power-of-Attorney for person signing for Surety Company must be attached to Bond.

#### BOND NO.\_\_\_\_\_ LABOR AND MATERIAL PAYMENT BOND

Note: This Bond is issued simultaneously with another Bond in favor of the Owner conditioned for the full and faithful performance of the Contract.

KNOW ALL MEN BY THESE PRESENTS:
That
as Principal (hereinafter called Principal) and
as Surety, (hereinafter called Surety) are held and firmly bound unto the, as Obligee, (hereinafter called Owner) for the use and benefit of claimants as herein below defined; in the amount of
Dollars(\$
WHEREAS, Principal has by written agreement, dated
, entered into a Contract with Owner
for <b>Contract No.</b> which Contract is by reference made a part hereof, and is hereinafter referred to as the Contract.
NOW, THEREFORE, the condition of this obligation is such that, if the said Principal shall promptly pay for all materials furnished and labor supplied or performed in the prosecution of

the work included in and under the aforesaid Contract, whether or not the material or labor enters into and becomes a component part of the real asset, then this obligation shall be null and

void; otherwise it shall remain and be in full force and effect.

PROVIDED, that any alterations which may be made in the terms of the Contract or in the work to be done under it, or the giving by the Obligee of any extension of time for the performance of the Contract, or any other forbearance on the part of either the Obligee or the Principal to the other shall not in any way release the Principal and the Surety or either or any of them, their heirs, executors, administrators, successors or assigns from their liability hereunder, notice to the Surety of any such alterations extension or forbearance being hereby waived.

Any party, whether a subcontractor or otherwise, who furnished materials or supplies or performs labor or services in the prosecution of the work under said Contract, and who is not paid therefore, may bring a suit on this bond in the name of the person suing, prosecute the same to a final judgment, and have execution thereon for such sum as may be justly due.

WITNESS WHEREOF, the above-bounded parties have executed this instrument under their veral seals this, the name and				
corporate seal of each corporate party being hereto affixed and these presents signed by its undersigned representative, pursuant to authority of its governing body.				
presence of:				
EAL) ndividual Principal)				
Susiness Address)				
EAL)				
Susiness Address)				
orporate Principal)				
Susiness Address)				
By:(Affix Corporate Seal)				
(Milly Colporate Scal)				

Attest:
(Corporate Surety)
(Business Address)
By:(Affix Corporate Seal)
Countersigned
By:
*Attorney-in-Fact, State of

## **SECTION II**

# AGREEMENT FORMS (TO BE FILLED OUT BY THE SUCCESSFUL LOW BIDDER)

#### **AGREEMENT**

THIS AGREEMENT made this day of	, 2019_,
by and between	
(a corporation organized and existing under the laws  New York  (a partnership consisti  ) * (an individual t  ) * (hereinafter c	ng of rading as
"Contractor") and the <b>TOWN OF WILLSBORO, NY</b> , (hereina "Owner").	
(*Strike out the two terms not applicable.)	
WITNESSETH, that the Contractor and the Owner for the stated herein mutually agree as follows:	e considerations
Article 1. Statement of Work. The Contractor sha supervision, technical personnel, labor, materials, ma appurtenances, equipment and services, including transportation services and perform and complete all we supplemental work for the completion of this Cont accordance with the hereinafter referenced Cont including all Addenda thereto, numbered	achinery, tools, gutility and ork and required tract in strict tract Documents
Article 2. The Contract PRICE. The Owner will pay the the performance of the Contract in current funds, quantities of work performed. Determination of payment on actual work completed by the Contractor and a Engineer. Any payment request shall have complet support information to justify charges to date.	for the total at will be based approved by the
The sum of \$ shall be completion of Contract # 2019-18-012	paid for the
for the	
TOWN of Willsboro, NY, Water Meters and Cellular Based Analytics (AMA) Reading System	Advanced Meter
Analytics (AMA) Reading bystem	
Article 3. COMMENCEMENT & COMPLETION OF WORK	
The CONTRACTOR agrees that the work included in the commence as per wri	
Proceed issued by the Owner.	.cccii Nocice co
The CONTRACTOR further agrees that the entire Contract WORK COMPLETED BY $\_\_\_$ .	shall <b>HAVE ALL</b>
Article 4. INSURANCE	
The CONTRACTOR shall secure and maintain such ins	surance from an

**PAGE 47** 

insurance company authorized to write casualty insurance in the State of New York as will protect himself, his subcontractors, and the OWNER from claims for bodily injury, death, or property damage, which may arise from operations under this Contract. The CONTRACTOR shall not

commence work until he has obtained certificates of all insurance required, and filed said certificates with the OWNER. Each insurance policy shall contain a clause providing that the OWNER shall be notified ten (10) days prior to its cancellation. The amounts of insurance shall not be less than the following:

- A. Workmen's Compensation and Employer's Liability Insurance shall be as outlined in attached contract specifications.
- B. Public Liability, Bodily Injury and Property Damage Insurance amounts to be as required in attached contract specifications.
- C. Automobile and Truck Public Liability, Bodily Injury and Property Damage Insurance amounts to be as required in attached contract specifications.
- D. Public Liability Insurance shall include a rider specifically to insure injury, death or property damage arising from work required by this Contract.

#### Article 5. RETAINAGE

To insure Maintenance Security of the project, five percent (5%) of the Contract price shall be withheld and retained by the Owner until substantial completion AND satisfactory submission of as-built and construction closeout information. At that time the Owner will retain twice the value of any items on the punchlist until those items are completed in accordance with the contract. The 5% retainage will not be released until the punchlist is signed by all parties, all as-built and construction closeout information is submitted and accepted by the Engineer.

#### Article 5.1 BID GUARANTY

- The Bid must be accompanied by a Bid Guaranty which shall not be less than five (5) percent of the amount of the total Bid as stated in the Invitation for Bids. At the option of the Bidder, the guaranty may be a certified check, bank draft, negotiable U.S. Government Bonds (at par value), or a Bid Bond in the form attached, provided such guaranty is accompanied by a Certificate of Surety evidencing sufficient bonding capacity. The Bid Bond shall be secured by a Guaranty or a Surety Company listed in the latest issue of the U.S. Treasury Circular 570. The amount of such Bid Bond shall be within the maximum amount specified for such Company in said Circular 570. (NO BID WILL BE CONSIDERED UNLESS IT IS ACCOMPANIED BY THE REQUIRED GUARANTY.) Certified check or bank draft must be made payable as stated in the Invitation for Bids. Cash deposits will not be The Bid Guaranty shall insure the execution of the accepted. Agreement and the furnishing of the Surety Bond or Bonds by the successful Bidder, all as required by the Contract Documents.
- B. The bid bond must name the Owner as obligee.
- C. Revised Bids submitted before the opening of Bids, whether forwarded by mail or telegram, if representing an increase in excess

of two percent (2%) of the original Bid, must have the Bid Guaranty adjusted accordingly; otherwise, the Bid will not be considered.

D. Certified checks or bank drafts, or the amount thereof, Bid Bonds and negotiable U.S. Government Bonds of unsuccessful Bidders will be returned but in accordance with the Invitation for Bids.

NOTE: A LETTER OF CREDIT IS NOT AN ACCEPTABLE BID GUARANTY.

### Article 5.2 EXECUTION OF AGREEMENT: PERFORMANCE BOND, LABOR AND MATERIAL PAYMENT BOND OR IRREVOCABLE LETTER OF CREDIT

- A. Subsequent to the award and within ten (10) days after the prescribed forms are presented for signature, the successful Bidder shall execute and deliver to the Owner, an Agreement in the form included in the Contract Documents in such number of copies as the Owner may require.
- Having satisfied all conditions of award as set forth elsewhere in these Documents, the successful Bidder shall, within the period specified in paragraph "a" above, furnish a Performance Bond and a Labor and Material Payment Bond, each in a penal sum of not less than one hundred percent (100%) of the Contract as awarded, as security for the faithful performance of the Contract, and for the payment of all persons, firms or corporations to whom the Contractor may become legally indebted for labor, materials, tools, equipment, or services of any nature including utility and transportation services, employed or used by him in performing the work. Such bonds shall be in the same form as that included in the Contract Documents and shall bear the same date as, or a date subsequent to that of the Agreement. current power of attorney for the person who signs for any surety company shall be attached to such bonds. These bonds shall be signed by a Guaranty or Surety Company listed in the latest issue of the U.S. Treasury Circular 570 and the penal sum shall be within the maximum specified for such Company in said Circular 570. Note: All bonds must name Owner as oblige
- C. Only if required by local or state law, the Contractor shall submit a "Contract Bond" in lieu of the "Performance Bond" and "Labor and Material Payment Bond". Said Contract Bond, if required, shall be in the form contained herein.
- D. Notwithstanding the foregoing, all bonds required by law shall be in accordance with the form and substance so required by law.
- E. The failure of the successful Bidder to execute such Agreement and to supply the required bonds within ten (10) days after the prescribed forms are presented for signature, or within such extended period as the Owner may grant based upon reasons determined sufficient by the Owner, shall constitute a default, and the Owner may either award the Contract to the next lowest responsible Bidder or readvertise for Bids. In the event of such default, the Bidder shall be obligated to the Owner in the amount of the Bid Guaranty as liquidated damages for such default.

#### Article 6. CONTRACT DOCUMENTS.

The Contract Documents shall consist of the following (including their attachments and exhibits):

- a. This Agreement
- b. Addenda
- c. Notice for Bids
- d. Instructions to Bidders
- e. Signed copy of Bid, with all attachments required for bidding
- f. Certificates of Insurance
- g. Exhibits not included as part of the documents listed above
- h. NYS EFC Construction Bid Packet
- i. Bid Guaranty
- j. Performance Bond
- k. Labor and Material Payment Bond

This Agreement, together with other Documents enumerated in this Article 7, which said other Documents are as fully a part of the Contract as if hereto attached or herein repeated, forms the Contract between the parties hereto.

IN WITNESS WHEREOF, the parties to this Agreement have hereunto set their hands and seals and have executed this Agreement the day and year first above written.

(Contractor)	
Attest:	
	(Street)
	(City, State, Zip Code)
(Print or type the names underne	ath all signatures)
TOWN of WILLSBORO, NY (Owner)	
By:	
Title:	
	(Street)
	(City, State, Zip Code)

(Print or type the names underneath all signatures)

#### REPRESENTATIVE CERTIFICATION

Ι,	. /	certify	tha	ıt I
am the			of	the
corporation named as Contractor herein.				
Signed by:(name and title)		_		
Signature:	_			
Date:	_			
(Corporate Seal, if available)				

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## ATTACHMENT A

NYS Revolving Fund Program Requirements Bid Packet 10/1/15

#### COMPLIANCE WITH AIR AND WATER ACTS

This Agreement is subject to the requirements of the Clean Air Act, as amended, 42 USC 1856 et seq., the Federal Water Pollution Control Act, as amended 33 USC 1251 et seq. and the regulations of the Environmental Protection Agency with respect thereto, at 40 CFR Part 15, and 40 CFR Part 61, as amended from time to time.

(Company	name)	
(Company	address)	
(Company	Representative;	print name and title)
(Company	Representative;	sign name)
 Date sign	ned	

Contractor agrees to comply with these requirements.

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## **SECTION III**

### **GENERAL CONDITIONS**

#### GENERAL SPECIFICATIONS

Note: The Headings of the articles herein are intended for the convenience of reference only and shall not be considered as having any bearing on their interpretation.

#### GENERAL CONDITIONS

#### PART 1

#### 301. DEFINITIONS

Whenever used in any of the Contract Documents, the following meanings shall be given to the terms herein defined:

- a. The term "Contract" means the Contract executed by the Owner and the Contractor.
- b. The term "Owner" means the entity that is authorized to undertake this Contract.
- c. The term "Contractor" means the person, firm, or corporation entering into the Contract with the Owner to perform and complete the work involved in this Contract.
- d. The term "Subcontractor" means a person, firm, or corporation supplying labor and materials or only labor for work at the site of the project for, and under separate contract or agreement with the Contractor.
- e. The term "Project Area" means the site of construction within which are the specified Contract limits of the work to be performed in whole or in part under this Contract.
- f. The term "Engineer" means the Owner's Engineer or the person or organization engaged to perform these services for the Owner, for the purpose of administrating the work embraced in this Contract, the said Engineer acting directly or indirectly through any Assistant. The "Resident Engineer" is the Engineer who will represent the Owner and personally be present at the job site.
- g. The term "Site" means the <u>Town of Willsboro, NY; Water Meters and Cellular Based Advanced Meter Analytics (AMA) Reading System,</u> within which the Project Area is situated.
- h. The term "Contract Documents" means and shall include the Documents listed in Article 3 of the Agreement.
- i. The term "Drawings" or "Contract Drawings" means the drawings listed in the Schedule of Drawings.
- The term "Technical Specifications" or "Supplemental Technical Specifications" means that part of the Contract Documents which describes, outlines and stipulates the quality of materials to be furnished, the quality of workmanship required; measurement and payment. The term "Addendum" or "Addenda" means any changes, revisions, or clarifications of the Contract Documents which have been duly issued by the Owner to Documents which have been duly issued by the Owner to prospective Bidders prior to the time of receiving Bids.
- k. "Substantial Completion" means the point at which the Contractor has furnished all equipment and has completed all but minor "punch list" items of construction as further described on Page 76 of these General Conditions.
- 1. "Performance Testing" means the testing of the equipment and materials constructed and installed as part of the contract to demonstrate compliance with the requirements of the specifications.

m. The terms "furnish and install" shall be considered the same as "manufacture and supply". In addition, the "manufacturer", "supplier", and "installer" shall all reference a single bidder.

#### 302. SUPERINTENDENCE BY CONTRACTOR

- a. Except where the Contractor is an individual and gives his personal superintendence to the work, the Contractor shall provide a competent superintendent, satisfactory to the Owner and the Engineer, for the work at all times during working hours with full authority to act for him. The Contractor shall also provide an adequate staff for the proper coordination and expediting of his work. Should, in the opinion of the Engineer, any language barrier exists between the superintendent and the Engineer, the Contractor will employ a qualified interpreter.
- b. Unless otherwise specified in the SPECIAL CONDITIONS, the Contractor shall lay out his work including all survey required and he shall be responsible for all work executed by him under the Contract. He shall verify all figures, elevations, etc. before proceeding with the work and will be held responsible for any error resulting from his failure to do so.

#### 303. SUBCONTRACTS

- The Contractor shall not execute an agreement with Subcontractor or permit any Subcontractor to perform any work included in this Contract until he has submitted a Non-Collusive Affidavit from the Subcontractor on the form shown in the "Invitation for Bids, Instructions and Forms" and has received written approval of such Subcontractor from the Owner. Unless specifically permitted otherwise, the Contractor shall perform with his own organization and with the assistance of workmen under his immediate superintendence work amounting to not less than 50 per cent of the original total Contract value for the project, exclusive of specialty items not commonly found in contracts for similar work or which require highly specialized knowledge, craftsmanship or equipment, not ordinarily available to the organization of contractors performing work of the character embraced in this Contract. Specialty items, if any, shall be specified elsewhere.
- b. The Contractor shall not execute an agreement with any Subcontractor or permit any Subcontractor to perform any work included in this Contract until he has submitted a "Certification by Proposed Subcontractor Regarding Equal Employment Opportunity" in the form shown in the "Invitation for Bids, Instructions and Forms".
- c. No proposed Subcontractor shall be disapproved by the Owner except for cause.
- d. The Contractor shall be as fully responsible to the Owner 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.
- e. The Contractor shall cause appropriate provision to be inserted in all Subcontracts relative to the work to require compliance by each

Subcontractor with the applicable provisions of the Contract for the work embraced in this Contract.

f. Nothing contained in the Contract shall create any contractual relation between any Subcontractor and the Owner.

#### 304. OTHER CONTRACTS

- a. The Owner 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 their work, and shall properly connect and/or coordinate his work with theirs.
- b. The Owner may award, or may have awarded other Contracts for additional work, and the Contractor shall cooperate fully with such other Contractors, by scheduling his own work with that to be performed under other Contracts as may be directed by the Owner. The Contractor shall not permit or commit any act which will interfere with the performance of work by any other Contractor as scheduled.
- c. Wherever work being done by the Municipal forces, or other Contractors is contiguous to work covered by this Contract, the respective rights of the various interests involved shall be established by the Owner, to secure the completion of the various portions of the work in general harmony.

#### 305. FITTING AND COORDINATION OF THE WORK

The Contractor shall be responsible for the proper fitting of all work and for the coordination of the operations of all trades, Subcontractors or materialmen engaged upon this Contract. He shall be prepared to guarantee to each of his Subcontractors the locations and measurements which they may require for the fitting of their work to all surrounding work. The Contractor shall, at his own expense, effect all cutting, fitting, or patching of his work required to make the same conform to the Contract Drawings and Specifications and, except with the consent of the Owner, not to cut or otherwise alter the work of any other Contractor.

#### 306. MUTUAL RESPONSIBILITY OF CONTRACTOR

If, through acts of neglect on the part of the Contractor, any other Contractor or Subcontractor shall suffer loss or damage on the work, Contractor shall settle with such other Contractor Subcontractor by agreement or arbitration, if such other Contractor or Subcontractor will so settle. If such other Contractor Subcontractor shall assert any claim against the Owner on account of any damage alleged to have been so sustained, the Owner will notify the Contractor, who shall defend at his own expense, any suit based upon such claim, and, in any judgment or claims against the Owner, shall pay or satisfy such judgment or claim and pay all costs and expenses in connection therewith and will in all other respects, including, but not limited to, attorney's fees and court costs, hold harmless the Owner and Engineer.

#### 307. PROGRESS SCHEDULE

The Contractor shall (unless a Pre-Award Progress Schedule has been submitted and approved) submit within seven (7) calendar days after execution of the Agreement, a carefully prepared realistic Progress Schedule showing the proposed dates of starting and completing of each and every item of work on each and every selection of work in accordance with these Specifications.

#### 308. PAYMENT TO CONTRACTOR

#### 1. Partial Payments

The Contractor shall prepare his requisition for partial payment as of the last day of the month and submit it, with the required number of copies, to the Engineer for his approval. The amount of the payment due the Contractor shall be determined by adding to the total value of work completed to date, the value of materials properly stored on the site and deducting (1) five percent (5%) of the total amount, to be retained until final payment and (2) the amount of all previous payments. The total value of work completed to date shall be based on the estimated quantities of such materials and the invoice prices as evidenced by a supplier's receipt invoice. Copies of all invoices shall be available for inspection of the Engineer.

Monthly or partial payments made by the Owner to the Contractor are monies advanced for the purpose of assisting the Contractor to expedite the work of construction. All material and completed work covered by such monthly or partial payments shall remain the property of the Contractor and he shall be responsible for the care and protection of all materials and work upon which payments have been made. Such payments shall not constitute a waiver of the right of the Owner to require the fulfillment of all terms of the Contract and the delivery of all improvements embraced in this Contract complete and satisfactory to the Owner in all details.

#### 2. Substantial Completion & Final Payment

#### a. Substantial Completion -

When Contractor considers the entire work ready for its intended use, Contractor shall, in writing to Owner and Engineer, certify that the entire work is substantially complete, provide acceptable as-built information and request that Engineer issue a certificate of Substantial Completion. Within a reasonable time thereafter, Owner, Contractor and Engineer shall make an inspection of the work to determine the status of completion and review as-built information to determine its completeness. If Engineer does not consider the work substantially complete or if as-built information is not complete, Engineer will notify Contractor in writing giving his reasons therefore. If Engineer considers the work substantially complete and as-builts acceptable, Engineer will prepare and deliver to Owner a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. Owner shall have seven (7) days after receipt of the tentative certificate during which he may make written

objection to Engineer as to any provisions of the certificate or If, after considering such objections, Engineer attached list. concludes that the work is not substantially complete, Engineer will fourteen (14)days after submission of the tentative certificate to Owner notify Contractor in writing, stating his reasons therefore. If, after consideration of Owner's objections, Engineer considers the work substantially complete, Engineer will within said fourteen days execute and deliver to Owner and Contractor a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as he believes justified after consideration of any objections from Owner. At this time, and contingent upon prior acceptance of as-built information, the Owner shall release the 5% retainage and hold twice the value of the punch list items. items will be paid when completed in accordance with the contract and must all be completed at final payment. At the time of delivery of the tentative certificate of Substantial Completion, Engineer will deliver to Owner and Contractor a written recommendation as to division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, maintenance, utilities and insurance. Unless Owner and Contractor agree otherwise in writing and so inform Engineer prior to his issuing the definitive Substantial certificate of Completion, Engineer's recommendation will be binding on Owner and Contractor until final payment.

Owner shall have the right to exclude Contractor from the work after the date of Substantial Completion, but Owner shall allow Contractor reasonable access to complete or correct items on the tentative list.

#### b. Final Payment -

After final inspection and acceptance by the Owner of under the Contract, the Contractor shall prepare his work requisition for final payment which shall be based upon the carefully measured or computed quantity of each item of work at the applicable unit prices stipulated in the Agreement. The total amount of the final payment due the Contractor under this Contract shall be the amount computed as described above less all previous payment. payment to the Contractor shall be made subject to his furnishing the Owner with a release in satisfactory form of all claims against the Owner arising under and by virtue of his Contract, other than such claims, if any, as may be specifically accepted by the Contractor from the operation of the release as provided elsewhere herein. Along with payment application, the contractor shall Maintenance Bond to be in effect for one (1) year from substantial completion, if required by the project.

c. The Owner, before paying the final estimate, may require the Contractor to furnish releases or receipts from all subcontractors having performed any work and all persons having supplied materials, equipment (installed on the Project) and services to the Contractor, if the Owner deems the same necessary in order to protect its interest. The Owner, however, may if he deems such action

advisable, make payment in part or in full to the Contractor without requiring the furnishing of such releases or receipts and any payments so made shall in no way impair the obligations of any surety or sureties furnished under this Contract.

- d. Withholding of any amount due the Owner under the Section entitled "LIQUIDATED DAMAGES" under SPECIAL CONDITIONS, shall be deducted from the final payment due the Contractor.
  - 3. Withholding Payments -

The Owner will withhold five percent (5%), or at the discretion of the Owner, the Contractor may have the option to submit a Maintenance Bond, to be in effect for the period of one (1) year from final acceptance to protect the Owner, and if it so elects, may also withhold any amounts due from the Contractor to any Subcontractor or material dealers, for work performed or material furnished by them. The foregoing provisions shall be construed solely for the benefit of the Owner and will not require the Owner to determine or adjust any claims or disputes between the Contractor and his Subcontractors or material dealers, or to withhold any monies for their protection unless the Owner elects to do so. The failure or refusal of the Owner to withhold any monies from the Contractor shall in no way impair the obligations of any surety or sureties under any bond or bonds furnished under this Contract.

4. Payments Subject to Submission of Certificates

Each payment to the Contractor by the Owner shall be made subject to submission by the Contractor of all written certifications required of him and his Subcontractors by the Section entitled CONTRACTOR'S CERTIFICATES under the GENERAL CONDITIONS.

#### 309. CHANGES IN THE WORK

- 1. The Owner may make changes in the work required to be performed by the Contractor under the Contract by making additions thereto, or by omitting work therefrom, without invalidating the Contract.
- 2. Except for the purpose of affording protection against any emergency endangering life or property, the Contractor shall make no change in the materials used or in the specified manner of constructing and/or installing the improvements or supply additional labor, services or materials beyond that actually required for the execution of the Contract, unless in pursuance of written order from the Owner authorizing the Contractor to proceed with the change. No claim for an adjustment of the Contract price will be valid unless so ordered.
- 3. The Contractor agrees to perform any of the aforementioned changed work, along with all other required work found under the Contract, without delay and in accordance with good construction practices.
- 4. These changes outlined above may be made without relieving or releasing the Contractor from any of his obligations under the Contract provisions, and without affecting the validity of the guaranty bonds, and without relieving or releasing the surety or

sureties of said bonds. All such work shall be executed under the terms of the original Contract unless it is provided otherwise.

- 5. All adjustments to the Contract payment provisions will be made in accordance with the following paragraphs.
- 6. If applicable unit prices are contained in the Agreement (established as a result of either a Unit Price Bid or a Supplemental Schedule of Unit Prices), the Owner may order the Contractor to proceed with desired changes in the work, the value of such changes to be determined by the measured quantities involved and the applicable unit prices specified in the Contract.
- 7. If applicable unit prices are not contained in the Agreement, the Owner shall, before ordering the Contractor to proceed with desired changes, request an itemized proposal from him covering the work involved in the change after which the procedure shall be as follows:
- a. If the change in the work involves additional work, the procedure shall be as follows:
- 1) If the proposal is acceptable, the Owner will prepare the Change Order in accordance therewith for acceptance by the Contractor; or
- If the proposal is not acceptable and prompt agreement between the two parties cannot be reached, the Owner may order the Contractor to proceed with the work on Cost-Plus-Limited Basis. A Cost-Plus-Limited Basis is defined as the net cost of the work to the Contractor plus an allowance to cover overhead and profit, as stipulated below, the total cost not to exceed a specified amount. The following allowances for overhead and profit are hereby established reasonable and shall apply:
- a) Fifteen percent (15%) of the net cost of all labor furnished by the Contractor. For all labor the Contractor shall receive the rate of wage actually paid as shown by his certified payroll, which shall be at least the minimum rate established by the Contract Documents. For all foremen in direct charge of the work, the Contractor shall receive the actual wage paid the foremen, as shown on his certified payroll. No part of the salary or expense of anyone above the grade of foreman and having general supervision of the work will be included in the labor item.
- b) For the cost of all insurance and taxes imposed by law on labor employed on the work, the Contractor shall receive the actual amount paid.
- c) Fifteen percent (15%) of the net cost of all materials used by the Contractor, less any allowable cash discounts, delivered on the work including delivery charges as shown by original receipted bills.
- d) Five percent (5%) on all subcontracts or subcontractors used to complete the changes in work.
- e) Rental rates for any power operated machinery, trucks or equipment, which it may be found necessary to use on Cost-Plus-Limited work shall be negotiated between the Engineer and the Contractor. These rates shall be reasonable and shall be based on those rental rates prevailing in the area where such work is to be done, and they shall be agreed upon in writing before the work is begun. In no case shall the rental rates exceed the rates set up in the current edition of the "Associated Equipment Distributors Compilation of Rental Rates

for Construction Equipment". Those rates shall include all repairs, fuel, lubricants, taxes, insurance, depreciation, storage and all attachments complete, ready to operate, but excluding operators. Operators and oilers (tenders) shall be paid as states hereinabove for labor. No percentage for overhead and profit shall be added to the amounts of equipment rental prices agreed upon, but the price agreed upon shall be the total compensation allowed for use of such equipment.

- b. If the change in the work requires a reduction in the work involved, the procedure shall be as follows:
- 1) If the proposal is acceptable, the Owner will prepare the Change Order in accordance therewith for acceptance by the Contractor; or
- 2) If the proposal is not acceptable and prompt agreement between the two parties cannot be reached, the Engineer shall fix the cost value of the credit. The Owner may then order the Contractor to proceed with the work. Should the Contractor disagree with the cost value of the credit fixed by the Engineer, he may appeal the same in accordance with the procedures outlined in the GENERAL CONDITIONS, ARBITRATION AND LITIGATION.
- 8. Each Change Order shall include in its final form:
- a. A detailed description of the change in the work.
- b. The Contractor's proposal (if any) or a confirmed copy thereof.
- c. A definite statement as to the resulting change in the Contract price and/or time.
- d. The statement that all work involved in the change shall be performed in accordance with Contract requirements except as modified by the Change Order.
- 9. Contractor shall not take advantage of any obvious error in the specifications or any such error in the drawings or other Contract Documents. Any obvious error or discrepancy in or between any of the Contract Documents will be immediately reported to the Engineer who shall make such corrections and interpretations as may be deemed necessary for the completion of the work in a satisfactory and acceptable manner.

#### 310. CHANGES IN SUBSURFACE CONDITIONS

In the event the Contractor shall, during the process of the work, encounter subsurface conditions (other than seasonal variations) such as rock, unstable/unsuitable ground, etc., but excluding utilities, which materially differ from those shown on or implied by the Contract Drawings or Specifications, and if said conditions could not reasonably have been foreseen by an inspection of the site prior to the Bid, and, further, if these changed subsurface conditions cause a loss to the Contractor, the Contractor shall be entitled to submit a request for additional compensation in accordance with "Claims for Extra Cost" of the General Conditions. The Contractor shall not be entitled to submit a request for additional compensation for changed subsurface conditions which vary seasonally including, but not limited to, groundwater rise and fall, freezing/frost, etc.

Changed existing utility locations from those shown or implied by the Contract Drawings shall not be the basis of a claim except as provided

under "EXISTING UTILITIES, STRUCTURES AND FIXTURES" of the GENERAL CONDITIONS.

Notice of the changed condition must be given the Engineer and Owner as soon as the event occurs, so that the Engineer and Owner will have an opportunity to investigate the same and make any alteration which, in the sole discretion of the Engineer or Owner may be necessary. Such notice is a material condition which must be adhered to by the Contractor.

Prior to the Engineer or Owner giving any consideration to the Contractor's request for additional compensation, the Contractor shall be obligated to submit a detailed description of the change.

The Engineer shall investigate the facts and shall notify the Owner whether the conditions are or are not materially different from those shown or implied by the Contract Drawings or Specifications. The Owner shall then notify the Contractor of his decision.

In the event of a favorable decision by the Owner, the Contractor shall be entitled to additional compensation and the amount of the additional compensation shall be determined in accordance with the provisions of the GENERAL CONDITIONS, CHANGES IN THE WORK.

In the event of an unfavorable decision by the Owner, the Contractor shall have the right to contest said decision as provided for under the provisions of this Contract.

#### 311. CLAIMS FOR EXTRA COST

- All claims between the parties, including all claims additional compensation and/or additional time, arising out of, or in any way related to this Contract and/or the performance of the same, or its interpretation, except those disputes covered by Federal Labor Standards Provisions under GENERAL CONDITIONS, PART II, shall within ten (10) days of the event or action giving rise to the claim be presented to the Engineer. All papers pertaining to claims shall be filed in quadruplicate. Such notice need not detail the amount of the claim but shall state the facts surrounding the claim in sufficient detail to identify the claim, together with its character and scope. In the meantime, the Contractor shall proceed with the work as Any claim not presented within the time limit specified in this paragraph shall be deemed to have been waived, except that if the claim is of a continuing character and notice of the claim is not given within ten (10) days of its commencement, the claim will be considered only for a period commencing ten (10) days prior to the receipt by the Engineer of notice thereof. The Contractor shall in no case allow any claim or dispute delay the work.
- b. Within ten (10) days after the initial notice of a claim as described above, the Contractor shall prepare and submit the claim in its final form complete with costs and all supporting data. Should the claim be of a continuing nature, it shall be submitted in final form as of the last day of each month during its continuance.
- c. As soon as practicable after the final submission of all information, the Owner shall make a determination of any claim. Said decision of the Owner shall be a condition precedent to any further action on the claim. However, upon certification in writing by the

claimant that the claim has been submitted in its final form, the Owner shall be obliged to render a decision on said claim within sixty (60) days of the date of said certification. Should the Owner fail to render his decision within the aforementioned sixty (60) day period, his decision will not be a condition precedent to any further action on the part of the claimant.

- d. There shall be no added compensation paid for delay to the Contractor unless the Owner causes said delay by a material breach of this Contract and compliance with the foregoing notice provisions shall be a condition precedent to the prosecution of any such claim. In any claim for delay except for "Excusable Delays and Extension of Time" as defined in the GENERAL CONDITIONS, SECTION "TERMINATION", "DELAYS AND EXTENSIONS", "LIQUIDATED DAMAGES" wherein it is alleged that the Contractor's equipment was caused to remain idle, only one half of the prevailing rental rates for use of said equipment will be considered as damages for idled equipment in order to allow for the absence of fair wear and tear, which is allowed for in prevailing rental rates for equipment usage.
- e. Claims for additional compensation for extra work, due to alleged errors in ground elevations, contour lines, or bench marks, will not be considered unless accompanied by certified survey data, made prior to the time the original ground was disturbed, clearly showing that errors exist which resulted, or would result, in handling more material, or performing more work, than would be reasonably estimated from the Drawings and maps issued.
- f. If, on the basis of the available evidence, the Owner determines that an adjustment of the Contract Price and/or Time is justifiable, the procedure shall be as provided in Sections "CHANGES IN THE WORK" or "TERMINATIONS, DELAYS AND EXTENSIONS, LIQUIDATED DAMAGES" of the GENERAL CONDITIONS, PART I.
- g. In the event of an unfavorable decision by the Owner, the Contractor shall have the right to contest said decision as provided for under the provisions of the Contract.

#### 312. TERMINATION; DELAYS AND EXTENSION; LIQUIDATED DAMAGES

- a. Termination of contract. For its own convenience, the Owner may, at any time prior to the issuance of a Notice to Proceed, void the Contract by giving unequivocal and unconditional written notice of such avoidance to the Contractor and in the event of such avoidance, the Owner will not be liable to the Contractor for any claims or losses, including anticipated loss of profit and monies expended in anticipation of performance under the Contract.
- At any time subsequent to the Notice to Proceed the Owner may, at its own convenience, terminate the Contract by giving unequivocal and unconditional written notice of such termination to the Contractor. In the event of such termination by the Owner, the Owner shall be responsible to the Contractor for the following monies only, which monies shall be subject to legitimate charges of the Owner against the Contractor:
- 1. All reasonable costs incurred by the Contractor in performance of or in anticipation of performance of the Contract provided the

Contractor shall take all reasonable steps to mitigate such damages including the return and/or resale of materials ordered; and

2. A mark-up of 10% for profit and 10% for overhead on the reasonable cost of the work completed and in place, in accordance with the Contract Drawings and Specifications, to the date of termination. The Contractor shall remain responsible for the work completed, in accordance with the Contract provisions.

Should any work under this Contract be subject to, or terminated by the action of any third party, governmental unit or court due to any ecological or other reason, the rights of the Contractor to recover from the Owner shall be determined as set forth above.

The Owner may give notice in writing to the Contractor and his Surety of any material breach of the Contract by the Contractor to include but not be limited to any of the following:

- a) Failure to begin work under the Contract within the time specified.
- b) Failure to perform the work with sufficient workmen, equipment or materials to insure the prompt completion of said work.
- c) Unsuitable performance of the work or failure to perform anew such work as shall be rejected as defective and unsuitable.
- d) Neglecting or refusing to remove material rejected as defective and unsuitable.
- e) Discontinuing the suitable prosecution of the work for a period of 72 hours, excluding Sundays and Bergs without written authorization of the Engineer.
- f) Failure to commence discontinued work within 48 hours after notice to resume (excluding Sundays and Bergs).
- g) Becoming insolvent or declared bankrupt, or commits any act of bankruptcy or insolvency.
- h) Allowing any final judgment to stand against him unsatisfied for a period of ten (10) calendar days.
- i) Making an assignment for the benefit of creditors.
- j) Violating any covenants contained in the Contract Documents.

The Contractor or Surety within a period of ten (10) calendar days after such notice shall take all practical action to correct said material breach. Should said action fail to meet with the approval of the Owner, the Owner may, at its discretion, order the Surety to complete the work or, without violating the Contract, take the prosecution of the work out of the hands of said Contractor and Surety.

The Owner may appropriate or use any or all materials and equipment on the ground as may be suitable and acceptable and may enter into an agreement, either by negotiation or public letting, for the completion of said Contract according to the terms and provisions thereof, or use such other methods or combinations thereof, as in its opinion shall be required or desirable for the completion of said Contract in an acceptable manner. All costs and charges incurred by the Owner together with the cost of completing the work under Contract, shall be deducted from any monies due to which may become due said Contractor. In case such expense shall exceed the sum which would have been

payable under the Contract, then the Contractor and the Surety shall be liable and shall pay to the Owner the amount of said excess.

- b. Excusable Delays and Extensions of Time. The right of the Contractor to proceed shall not be terminated nor shall the Contractor be charged with liquidated damages for any delays in the completion of the work due:
- 1. To any acts of the Government, including controls or requisitioning of materials, equipment, tools, or by labor by reason of war, National Defense, or any other national emergency.
- 2. To any acts of the Owner, its Engineer or Agents; or injunction or litigation against said Owner.
- 3. To causes not reasonably foreseeable by the parties to this Contract at the time of the execution of the Contract which are beyond the control and without the fault or negligence of the Contractor, including, but not restricted to, acts of God or of the public enemy, act of another Contractor in the performance of some other Contract with the Owner, fires, floods, epidemics, quarantine, restrictions, strikes, freight embargoes, and weather of unusual severity such as hurricanes, tornadoes, cyclones and other extreme weather conditions; and
- 4. To any delay of any Subcontractor occasioned by any of the causes specified in subparagraphs 1, 2 and 3 of this paragraph "b".
- Provided, however, that the Contractor promptly notify the Owner within ten (10) days in writing of the cause of the delay. Upon receipt of such notification, the Owner shall ascertain the facts and the cause and extent of delay. If, upon the basis of the facts and the terms of this Contract, the delay is properly excusable, the Owner shall extend the time for completing the work for a period of time commensurate with the period of excusable delay.
- No claim for damages or any claim other than for an extension of time as herein provided shall be made or asserted against the Owner by reason of any delay.
- c. Liquidated Damages for Delay. If the work be not completed within the time stipulated in Section TIME FOR COMPLETION/NOTICE TO PROCEED under SPECIAL CONDITIONS, including any extensions of time for excusable delays as herein provided, the Contractor shall pay to the Owner as fixed, agreed, and liquidated damages (it being impossible to determine the actual damages occasioned by the delay) for each calendar day of delay, until the work is completed, the amount as set forth in Section LIQUIDATED DAMAGES under SPECIAL CONDITIONS and the Contractor and his sureties shall be liable to the Owner for the amount thereof.

#### 313. ASSIGNMENT OR NOVATION.

The Contractor shall not assign or transfer, whether by an assignment or novation, any of its rights, duties, benefits, obligations, liabilities or responsibilities under this Contract without the written consent of the Owner; provided, however, that assignments to banks, trust companies, or other financial institutions may be made without the consent of the Owner. No assignment or novation of this Contract shall be valid unless the assignment or novation expressly

provides that the assignment of any of the Contractor's rights or benefits under the Contract is subject to a prior lien for labor performed, services rendered and materials, tools and equipment supplied for the performance of the work under this Contract in favor of all persons, firms or corporations rendering such labor or services or supplying such materials, tools or equipment.

#### 314. ENGINEER'S AUTHORITY

The Engineer will decide all questions which may arise in relation to the work and the construction thereof. The Engineer's estimates and decisions shall be final and conclusive, except as herein otherwise expressly provided. In case any question shall arise between the parties hereto relative to said Contract, the determination or decision of the Engineer shall be a condition precedent to the right of the Contractor to receive any money or payment for work under this Contract affected in any manner or to any extent by such question.

#### 315. TECHNICAL SPECIFICATIONS AND CONTRACT DRAWINGS

Anything mentioned in the Technical Specifications and not shown on the Contract Drawings or shown on the Contract Drawings and not mentioned in the Technical Specifications shall be of like effect as if shown on or mentioned in both. In case of difference between the Contract Drawings and Technical Specifications, the Contract Drawings shall govern. In case of any discrepancy in the Contract Drawings or Technical Specifications, the matter shall be immediately submitted to the Owner and Engineer without whose decision said discrepancy shall not be adjusted by the Contractor, save only at his own risk and expense.

#### 316. SHOP DRAWINGS

- All required shop drawings, machinery details, layout drawings, working drawings, material and equipment descriptions, etc., shall be submitted to the Engineer in six (6) copies for review sufficiently in advance of requirements to afford ample time for checking, including time for correcting, resubmitting and rechecking if necessary. (1) week should be allowed for checking from the date of receipt by The Contractor, with the approval of the Engineer, may the Engineer. submit manufacturer's literature as a substitute for, or supplement to, the shop drawings, etc. The minimum size for any submission shall be 8 - 1/2" x 11" and the maximum size shall be the size of the Contract Drawings. All shop drawings, etc. and/or printed matter submitted shall be properly identified by project and specific Contract with reference Drawing application to number specification items.
- b. No construction, purchase, delivery, installation or work shall be done or made on any part or feature of this Contract which is dependent upon shop drawing review, until such review has been received from the Engineer. If the Contractor proceeds without reviewed shop drawings, it shall be at his own risk. No claim by the Contractor, for extension of the Contract time will be granted by

reason of his failure in this respect. See also "Shop Drawing Schedule" if one is listed in the Special Conditions.

- c. Shop drawings, etc., or printed matter shall give all dimensions, sizes, etc. to enable the Engineer to determine the suitability of the construction, installation, material or layout for the purposes intended. Where needed for clarity, the drawings shall include outline, sectional views and detailed working dimensions and designations of the kind of material, machine work, finish, etc., required. The drawings to be submitted shall be reviewed, with the design and function of any equipment or structure and the Contract Drawings.
- d. Any shop drawings, etc., submitted without the Contractor's stamp of approval will not be considered and will be returned to the Contractor for proper resubmission. By approving and submitting shop drawings, etc., the Contractor thereby represents that he has determined and verified all field measurements, field construction criteria, materials, catalog numbers and similar data, or will do so and that he has checked and coordinated each shop drawing, etc. with the requirements of the work and of the Contract Documents.
- e. If any drawings show variations from the requirements of the Contract because of standard shop practice and/or other reasons, the Contractor shall make specific mention of such variation in his letter of transmittal in order that, if acceptable, suitable action may be taken for proper adjustment of the contract price and/or time; otherwise, the Contractor will not be relieved of the responsibility for executing the work in accordance with the Contract even though the drawings have been reviewed.
- f. After review, the submittals will be stamped "no Exceptions Taken", "Make Corrections Noted", "Amend and Resubmit" or "Rejected See Remarks". One (1) print of "No Exceptions Taken" or "Make Corrections Noted" drawings will be returned to the Contractor for his use and distribution to his suppliers and/or Subcontractors. In the case of those stamped "Amend and Resubmit" or "Rejected See Remarks", two (2) prints will be returned to the Contractor who shall make all indicated corrections and resubmit three (3) prints.
- g. In any submission which is noted as "No Exceptions Taken" or "Make Corrections Noted", the review shall not extend to details or dimensions and shall not relieve the Contractor from his responsibility for compliance with the Contract Drawings and Specifications.
- h. When the Contractor proposes a revision to a previously submitted shop drawing, etc., three (3) copies shall state the reasons for the revision.
- i. The Contractor shall furnish as many copies of the submittals as is necessary for the proper coordination of the work, and shall maintain a complete set of the reviewed submissions at the site of the work at all times.
- j. Upon the final acceptance of the project, the Contractor shall, on request, furnish the Owner with a complete set of shop drawing tracings or reproducible cloth reproductions of the shop drawing tracings.

k. There will be no direct payment made for any of the above submittals, or reproducible drawings if required, but the cost thereof shall be considered as included in the general cost of the work.

#### 317. REQUESTS FOR SUPPLEMENTARY INFORMATION

It shall be the responsibility of the Contractor to make timely requests of the Owner for any additional information not already in his possession which should be furnished by the Owner under the terms of this Contract, and which he will require in the planning and execution of the work. Such requests may be submitted from time to time as the need is approached, but each shall be filed in ample time to permit appropriate action to be taken by all parties involved so as to avoid delay. Each request shall be in writing, and list the various items and latest date by which each will be required by the The first list shall be submitted within two (2) weeks after Contract award and shall be as complete as possible at that The Contractor shall, if requested, furnish promptly any assistance and information the Engineer may require in responding to these requests of the Contractor. The Contractor shall be fully responsible for any delay in his work or to others arising from his failure to comply fully with the provisions of this Section.

# 318. MATERIALS AND WORKMANSHIP

- a. Unless otherwise specifically provided for in the Technical Specifications, all workmanship, equipment, materials and articles incorporated in the work shall be new and the best grade of the respective kinds for the purpose. Where equipment, materials, articles or workmanship are referred to in the Technical Specifications as "equal to" any particular standard, the Engineer shall decide the question of equality.
- b. All work performed and all materials furnished shall be in conformity with the lines, graces, cross sections, dimensions and material requirements, including tolerances shown on the Contract Drawings or indicated in the Specifications.
- c. The Contractor shall furnish to the Owner for approval the manufacturer's detailed specifications for all machinery, mechanical and other special equipment, which he contemplates installing together with full information as to type, performance characteristics and all other pertinent information as required, and shall likewise submit for approval as required full information concerning all other materials or articles which he proposes to incorporate in the work. (See Section SAMPLES, CERTIFICATES AND TESTS under GENERAL CONDITIONS, PART I.)
- d. Machinery, mechanical and other equipment, materials or articles installed or used without such prior approval shall be at the risk of subsequent rejection.
- e. Materials specified by reference to the number or symbol of a specific standard, such as an ASTM Standard, a Federal Specification or other similar standard, shall comply with requirements in the latest revision thereof and any amendment or supplement thereto in effect on the date of the Invitation for Bids, except as limited to

type, class or grade, or modified in such reference. The standards referred to, except as modified in the Technical Specifications, shall have full force and effect as though printed therein.

- f. The Contractor shall employ only competent and skillful men to do the work and whenever the Engineer shall notify the Contractor, in writing, that any man on the work is, in his opinion, incompetent or disorderly, the Contractor shall forthwith remove such person and shall not again employ him on any part of the work without the written consent of the Engineer.
- g. The Owner may stop any work or any part of the work under the Contract if the methods or conditions are such that unsatisfactory work might result, if improper materials or workmanship are being used, or unsafe conditions exist.
- In the event the materials furnished or the work performed the requirements from of the Contract Drawings Specifications, but, in the opinion of the Owner, constitutes substantial performance, the Owner may accept the same. Should the deviation in question result in a savings to the Contractor, the Owner will be entitled to a credit in the full amount of said savings. Should the deviation in question result in an additional cost to the Contractor, the Owner will not be liable to the Contractor for such additional cost.

If the materials or the finished product in which the materials are used or the work performed are not in conformity with the Contract Drawings and Specifications and have resulted in an inferior or unsatisfactory product, the work and materials shall be removed and replaced or otherwise corrected by and at the expense of the Contractor.

# 319. SAMPLES, CERTIFICATIONS, AND TESTS

- The Contractor shall submit all samples, materials, certified test reports, materials certificates, certificates of compliance, affidavits, etc., as called for in the Contract Documents or required by the Engineer, promptly after award of the Contract and acceptance of the Contractor's bonds. No such materials and/or equipment, etc., shall be manufactured or delivered to the site, except at the Contractor's risk, own until the required samples/certificates/tests/etc., have been approved in writing by the Engineer. Any delay in the work caused by late or improper submission of the above for approval shall not be considered just cause for an extension of the Contract time.
- b. Samples. Unless otherwise specified, the Contractor shall furnish the required samples without charge, and shall provide every facility for the securing of material samples. He shall provide means and assist in the verification of all scales, measures and other devices which he operates. Samples to be submitted shall be taken by the Engineer or a laboratory approved by the Owner, unless otherwise specified. All materials being used shall be subject to resampling and testing at any time during their preparation and/or use.

All samples submitted by the Contractor shall be properly identified to include, but not be limited to, the project name, project number,

item number and description of material, name of the producer, place of origin, and other detailed information which will assist the Engineer passing judgment upon the acceptability of the sample. Certified test reports, materials certificates and/or certificates of compliance required to be submitted with the samples or if permitted, in lieu of samples, shall conform to the requirements stated hereafter.

- c. Certified Test Report. A certified test report shall be a document containing a list of the dimensional, chemical, metallurgical, electrical and physical results obtained from an actual test of the materials involved, and shall certify that the materials meet the requirements of the Contract Drawings and specifications, and shall also include the following information:
- 1. Item number and description of material.
- 2. Date of manufacture.
- 3. Date of testing.
- 4. Name of organization to whom the material is consigned.
- 5. Quantity of material represented, such as batch, lot, group, etc.
- 6. Means of identifying the consignment, such as label, marking, lot number, etc.
- 7. Date and method of shipment.
- 8. Name of organization performing tests.
- 9. The certified test report shall be signed by an authorized and responsible agent for the organization manufacturing the material, and it shall be notarized.
- d. Materials Certificate. A materials certificate shall be a document certifying that the materials, components and equipment furnished, conform to all requirements of the Contract Drawings and Specifications. The document shall also include the following information:
- 1. Project to which the material is consigned.
- 2. Name of Contractor to whom material is supplied.
- 3. Item number and description of material.
- 4. Quantity of material represented by the certificate.
- 5. Means of identifying the consignment, such as label, marking, lot numbers, etc.
- 6. Date and method of shipment.
- 7. The materials certificate shall be signed by an authorized and responsible agent for the organization supplying the material, and it shall be notarized.
- e. Certificate of Compliance. A certificate of compliance shall be a document certifying that the materials, components and equipment covered by the previously submitted certified test report and materials certificate, have been installed in the work and that they conform to all the requirements of the Contract Drawings and Specifications. The following information shall also be required on the document:
- 1. Project number.
- 2. Item number and description of material.
- 3. Quantity represented by the certificate.
- 4. Name of manufacturer.

- 5. The certificate of compliance shall be signed by an authorized and responsible agent for the prime Contractor, and shall be notarized.
- f. Tests. Tests as required by the Specifications will be made in accordance with the latest revision to the standard method of American Association of State Highway Officials or the American Society for Testing and Materials in effect at the time of bidding, unless otherwise specified on the Contract Drawings or Special Conditions. Representative preliminary samples of the material proposed for use shall be submitted, without charge, by the Contractor or producer for examination and tested in accordance with specified methods. All materials being used are subject to test or rejection at any time during their preparation and use.

Materials will be rejected by the Engineer whenever, in his judgment, they fail to meet the requirements of the specifications.

The Owner reserves the right to retest all materials which have been tested and accepted at the source of supply, after the same have been delivered, and to reject all materials which, when retested, do not meet the requirements of the specifications.

g. Approval/Acceptance. Approval of any materials shall be general only and shall not constitute a waiver of the Owner's right to demand full compliance with Contract requirements. After actual deliveries, the Engineer will have such check tests made as he deems necessary in each instance and may reject materials and equipment and accessories for cause, even though such materials and articles have been given general approval. If materials, equipment or accessories which fail to meet check tests have been incorporated in the work, the Engineer will have the right to cause their removal and replacement by proper materials or to demand and secure such reparation by the Contractor as is equitable.

The Engineer may accept a material or combination of materials and therefore waive non-complying test results provided that all of the following conditions are met:

- 1. Results of prior and subsequent series of tests of the material or materials from the same source or sources are found satisfactory.
- 2. The incidence and degree of nonconformance with the specification requirements are, in the Engineer's judgment, within reasonable and practical limits.
- 3. The Contractor has diligently exercised material controls consistent with good practices in the Engineer's judgment.
- 4. No adverse effect on the value or serviceability of the completed work could result.

The Engineer may at his discretion waive testing of extremely minor quantities of material when such material is obtained from sources that are prevalently on test.

- h. Costs. Except as otherwise specifically stated in the Contract, the costs of sampling and testing will be divided as follows:
- 1. The Contractor shall furnish without extra cost, including packing and delivery charges, all samples required for testing purposes, except those samples taken on the project by the Engineer and the Owner shall pay all other testing costs of said samples.

- 2. The Contractor shall assume all costs of retesting materials which fail to meet Contract requirements.
- 3. The Contractor shall assume all costs of testing materials offered in substitution for those found deficient or for those specified.

#### 320. PERMITS AND CODES

a. The Contractor shall give all notices required by and shall observe and comply with all Federal and State laws and Local by-laws, ordinances and regulations in any manner affecting the conduct of the work, and all such orders or decrees as may exist at present and those which may be enacted later, or bodies or tribunals having any jurisdiction or authority over the work. The Contractor shall indemnify and save harmless the Owner and Engineer and all of its officers, agents and servants against any claim or liability arising from or based on the violation of any such law, by-law, ordinance, regulation, order or decree, whether by himself or his employees. All construction work and/or utility installations shall comply with all applicable ordinances and/or codes including any and all written waivers thereto.

Before commencing any work, the Contractor shall examine the Contract Drawings and Specifications for compliance with applicable ordinances, codes, etc., and shall immediately report any discrepancy to the Owner. Where the requirements of the Contract Drawings and Specifications fail to comply with such applicable ordinances, codes, etc., the Owner will adjust the Contract by Change Order to conform to such ordinances, codes, etc., (unless waivers in writing covering the differences have been granted by the governing body or department) and make appropriate adjustment in the Contract Price or stipulated unit prices.

Should the Contractor fail to observe the foregoing provisions and proceed with the construction or work and/or install any utility at variance with any applicable ordinance, code, etc., including any written waivers (notwithstanding the fact that such installation is in compliance with the Contract Drawings and Specifications), the Contractor shall remove such work without cost to the Owner, but a Change Order will be issued to cover only the excess cost the Contractor would have been entitled to receive if the change had been made before the Contractor commenced work on the items involved.

- b. Unless otherwise specified, the Contractor shall at his own expense, secure and pay to the appropriate department of the Local/State/Federal Government the fees or charges for all permits including but not limited to those required for street pavements, sidewalks, sheds, removal of abandoned water taps, sealing of house connection drains, pavement cuts, buildings, electrical, plumbing, water, gas and sewer permits, etc., required by the regulatory body or any of its agencies.
- c. The Contractor shall comply with applicable Local/State/ Federal laws, ordinances, codes, etc., governing the disposal of surplus excavation, materials, debris and rubbish on or off the Project Area

and commit no trespass on any public or private property in any operation due to or connected with the work under this Contract.

#### 321. CARE OF WORK

a. The Contractor shall be responsible for the proper care and protection of all materials delivered and work performed until completion and final acceptance, whether or not the same has been covered in whole or in part by payments made by the Owner.

Materials shall be stored so as to insure the preservation of their quality and fitness for the work and shall be located so as to facilitate prompt inspection. When considered necessary, they shall be placed on wooden platforms or other hard, clean surfaces and not on the ground, and when directed, shall be placed in weatherproof buildings.

Stored materials, even though approved before storage, shall be inspected prior to their use in the work and shall meet the requirements of the specifications at the time it is proposed to use them.

- b. The Contractor shall at his sole expense and without any additional cost to the Owner provide watchmen and/or other security measures as may be required to properly protect and care for materials and work completed, and to otherwise prevent property damage and/or personal injury.
- c. In an emergency affecting the safety of life or property, including adjoining property, the Contractor, without special instructions or authorization from the Owner, is authorized to act at his discretion to prevent such threatened loss or injury, and he shall so act. He shall likewise act if instructed to do so by the Owner. Any compensation claimed by the Contractor on account of such emergency work will be determined by the Owner as provided in the Section CHANGES IN THE WORK under GENERAL CONDITIONS.
- d. The Contractor shall avoid damage as a result of his operations to existing sidewalks, streets, curbs, pavements, utilities (except those which are to be replaced or removed), adjoining property, etc., and he shall at his own expense completely repair any damage thereto caused by his operations.
- e. The Contractor shall shore up, brace, underpin, secure, and protect as may be necessary, all foundations and other parts of existing structures adjacent to, adjoining, and in the vicinity of the site, which may be in any way affected by the excavations or other operations connected with the construction of this Contract. The Contractor shall be responsible for the giving of any and all required notices to any adjoining or adjacent property owner or other party before the commencement of any work. The Contractor shall indemnify and save harmless the Owner, and the Engineer, from any damages on account of settlements or the loss of lateral support of adjoining property and from all loss or expense and all damages for which the Owner, and the Engineer, may become liable in consequence of such injury or damage to the work or adjoining and adjacent structures and/or their premises.

#### 322. ACCIDENT PREVENTION

a. The Contractor shall exercise proper precautions and safety measures at all times for the protection of persons and/or property and shall be responsible for all injuries and/or damages to all persons and/or property, either on or off the site, which occur as a result of his prosecution of the work under this Contract. The safety provisions of all applicable Local/State/Federal laws and building and construction codes shall be observed and the Contractor shall take or cause to be taken such additional safety and health measures as the Owner may determine to be reasonably necessary.

Machinery, equipment and trucks shall be properly guarded, and operational hazards shall be eliminated in accordance with the provisions and intent of the latest revised edition of the Manual of Accident Prevention in Construction, published by the Associated General Contractors of America, to the extent that such provisions are not in contravention of applicable law. A copy of this manual shall be available for reference at all times in the Contractor's field office. The Contractor's attention is also called to the Section - SAFETY PROVISIONS of the GENERAL CONDITIONS.

- b. The Contractor shall maintain an accurate record of all cases of death, occupational disease, and injury requiring medical attention or causing loss of time from work, arising out of and in the course of employment on the work under this Contract in accordance with the requirements of the applicable State/Local/Federal regulations. The Contractor shall promptly furnish the Owner with reports concerning these matters.
- c. The Contractor shall indemnify and save harmless the Owner and the Engineer from any and all claims for damages resulting from personal injury, death and/or property damage suffered or alleged to have been suffered, by any person as a result of any work conducted under this Contract. See also the Section INDEMNITY CLAUSE of the GENERAL CONDITIONS.

#### 323. SANITARY FACILITIES

The Contractor shall furnish, install, and maintain ample sanitary facilities for the workmen. As the needs arise, a sufficient number of enclosed temporary toilets shall be conveniently placed as required by the Health/Sanitary Codes of the Local/State/Federal Government. Drinking water shall also be provided from an approved source, so piped or transported as to keep it safe and fresh and served from single service containers or satisfactory types of sanitary drinking stands or fountains. All such facilities and services shall be accordance furnished in strict with existing and health/sanitary regulations.

# 324. USE OF PREMISES

a. The Contractor shall confine his equipment, storage of materials and construction operations to the Contract Limits as shown on the Drawings and as prescribed by ordinances or permits, or as may be desired by the Owner, and shall not unreasonably encumber the site or public rights-of-way with his materials and construction equipment.

- b. The Contractor shall comply with all instructions of the Owner, Engineer and the ordinances, codes, etc. of the Local/State/Federal Government, regarding signs, advertising, traffic, fires, explosives, danger signals, barricades, etc.
- c. See also PARTIAL USE OF IMPROVEMENTS of the SPECIAL CONDITIONS.

# 325. REMOVAL OF DEBRIS, CLEANING, ETC.

The Contractor shall, periodically or as directed during the progress of the work, remove and legally dispose of all surplus excavated material and debris, and keep the Project Area and public rights-of-way reasonably clear. Upon completion of the work prior to final inspection, he shall remove all temporary construction facilities, debris and unused materials provided for the work, and put the whole site of the work and public rights-of-way in a neat and clean condition. Trash burning on the site of the work will be subject to prior approval of existing Local/State/Federal regulations

The cost of all required clean-up shall be included in the various prices bid under this Contract.

# 326. INSPECTION/ACCEPTANCE OF THE WORK

- All materials and workmanship shall be subject to inspection, examination or test by the Owner and the Engineer to determine the acceptability of the work at any and all times during manufacture or construction and at any and all places where such manufacture or construction is carried on and the Contractor shall provide proper facilities for such access and inspection. The Owner or Engineer shall have the right to reject defective material and workmanship or require its correction. Unacceptable workmanship satisfactorily corrected. Rejected material shall be promptly segregated and removed from the Project Area and replaced with material of specified quantity without charge therefore. Contractor fails to proceed at once with the correction of rejected workmanship or defective material, the Owner may contract or otherwise have the defects remedied or rejected materials removed from the Project Area and charge the cost of the same against any monies which are due or may become due the Contractor, without prejudice to any rights or remedies of the Owner.
- b. The Contractor shall furnish promptly all materials reasonably necessary for any tests which may be required. (See Section SAMPLE, CERTIFICATES AND TESTS, under the GENERAL CONDITIONS, PART I.) All tests by the Owner or Engineer will be performed in such manner as not to delay the work unnecessarily and shall be made as required by the Technical Specifications.
- c. If the specifications, the Owner's Engineer's instructions, laws, ordinances, or any public authority require any work to be specifically tested or approved, the Contractor shall give the Engineer timely notice of its readiness for inspection, and if the inspection is by an authority other than the Engineer (such as a testing organization designated by the Owner), of the date fixed for such inspection. If any work should be covered up without approval or consent of the Engineer, it must, if required by the Engineer, be

uncovered for examination and properly restored at the Contractor's expense.

The Contractor shall notify the Engineer sufficiently in advance of backfilling or concealing any facilities to permit proper inspection. If any facilities are concealed without approval or consent of the Engineer or Owner, the Contractor shall uncover for inspection and recover such facilities all at his own expense, when so requested by the Owner or Engineer.

Should it be considered necessary or advisable by the Engineer or Owner at any time before final acceptance of the entire work to make an examination of work already completed, by uncovering the same, the Contractor shall on request promptly furnish all necessary facilities, labor and material. If such work is found to be defective due to the fault of the Contractor or his Subcontractors, he shall defray all the expenses of such examination and of satisfactory reconstruction. If, however, such work is found to meet the requirements of the Contract, payment under the provisions of the GENERAL SPECIFICATIONS, CHANGES IN THE WORK, shall be allowed the Contractor and he shall, in addition, if completion of the work of the entire Contract has been delayed thereby, be granted suitable extension of time on account of the additional work involved.

- d. Inspection of materials and appurtenances to be incorporated in the improvements embraced in this Contract may be made at the place of production, manufacture or shipment, whenever the quantity justifies it, and such inspection and acceptance, unless otherwise stated in the Technical Specifications, shall be final, except as regards (1) latent defects, (2) departures from specific requirements of the Contract, (3) damage or loss in transit, or (4) fraud or such gross mistakes as amount to fraud. Subject to the requirements contained in the preceding sentence, the inspection of materials as a whole or in part will be made at the Project Site.
- e. Neither inspection, testing, approval nor acceptance of the work in whole or in part by the Owner or his agents shall relieve the Contractor or his sureties of the full responsibility for materials furnished or work performed not in strict accordance with the Contract.

#### 327. REVIEW BY OWNER

The Owner, his authorized representatives (as defined under GENERAL CONDITIONS, PART II) shall, at all times have access to and be permitted to observe and review all work, materials, equipment, payrolls, personnel records, employment conditions, material invoices and other relevant data and records pertaining to this Contract, provided, however, that all instructions and approval with respect to the work will be given to the Contractor only by the Owner through his authorized representatives or agents.

#### 328. FINAL INSPECTION

When the improvements embraced in this Contract are substantially completed, the Contractor shall notify the Owner in writing that the work will be ready for final inspection on a definite date which shall

be stated in the notice. The notice will be given at least ten (10) days prior to the date stated for final inspection, and bear the signed concurrence of the representative of the Owner having charge of inspection. If the Owner determines that the status of the improvements is as represented, he will make the arrangements necessary to have final inspection commenced on the date stated in the notice, or as soon thereafter as is practicable. The inspection party may also include the representative of the Federal Agency, other Governmental Agencies, and representative of each department of the Local Government having in charge improvements of like character when such improvements are later to be accepted by the Local Government.

#### 329. DEDUCTIONS FOR UNCORRECTED WORK

If the Owner deems it not expedient to require the Contractor to correct work not done in accordance with the Contract Documents, an equitable deduction from the Contract Price will be made by agreement between the Contractor and the Owner and subject to settlement, in case of dispute, as herein provided.

#### 330. INSURANCE

Within this Article where the terms "Personal Injury" or "Injury" are used, they shall mean both Bodily Injury and Personal Injury as defined hereafter:

"Bodily Injury" means bodily injury, sickness or disease including death at any time resulting therefrom.

"Personal Injury" means false arrest, detention or imprisonment, or malicious prosecution; libel, slander, defamation or violation of right of privacy; wrongful entry or eviction or other invasion of right of private occupancy.

- a. Workmen's Compensation.
- The Contractor shall carry or require that there be carried Workmen's Compensation Insurance and Employer's Liability Insurance for all his employees and those of his Subcontractors engaged in work on the site, in accordance with State or Territorial Workmen's Compensation Laws.
- b. Manufacturers' and Contractors' Liability.The Contractor shall carry or require that there be carried Manufacturers' and Contractors' Liability Insurance with limits as

Manufacturers' and Contractors' Liability Insurance with limits as specified in the "SCHEDULE OF INSURANCE" under "INSURANCE" of the Special Conditions for:

1. Personal Injury: This shall protect the Contractor and his Subcontractors and their heirs and assigns against all claims for injury to or death of one, or more than one person, because of accidents which may occur as a result from operations under this Contract; such insurance shall cover the use of all equipment, including but not limited to excavation machinery, trenching machines, cranes, hoists, rollers, concrete mixers, motor vehicles, and other equipment as may be specified elsewhere which may be used in the construction of the improvements embraced in this Contract. This Personal Injury Liability Insurance will be carried from commencement of work to final acceptance of the work under this Contract and will

be extended to include insurance for completed operations. The completed operations portion of the Personal Injury Liability Insurance shall be extended for the entire period of the guarantee unless otherwise specified. This insurance shall cover owned, hired, and non-owned equipment.

2. Property Damage: This shall protect the Contractor and his Subcontractors and their heirs and assigns from all claims for property damage which might arise from operations under this Contract.

Property Damage Liability shall be extended to include insurance for completed operations. The completed operations portion of the Property Damage Liability Insurance shall be extended for the entire period of the guarantee unless otherwise specified.

3. Manufacturers' and Contractors' Liability shall not exclude liability for personal injury or damages to property as a result of blasting, explosion, collapse of buildings or structures, and damage to underground installations.

# c. Automotive Liability

The Contractor shall carry or require that there be carried Automotive Liability Insurance for personal injury and property damage with the limits as specified in the "SCHEDULE OF INSURANCE" under "INSURANCE" of the Special Conditions to protect the Contractor and his Subcontractors and their heirs and assigns from all claims for any personal injury or property damage caused by an occurrence and arising out of the ownership maintenance or use, including loading and unloading, of any vehicles during the operations under this Contract. This coverage shall include coverage for owned, hired and non-owned vehicles.

### d. Other Insurance

The Contractor shall carry or require that there be carried any other insurance as required in the Special Conditions under "INSURANCE".

#### e. Endorsements

1. Each Contractor's policy shall include a Contractual "HOLD HARMLESS" endorsement and coverage as follows:

The Contractor shall at all times indemnify and save harmless the Owner, the Engineer and their agents and employees, from and against all loss and expense (including attorney's fees) by reason of liability imposed by law upon the Owner or Engineer for damages because of bodily injury, including death at any time resulting therefrom, sustained by any person or persons or on account of damage to property, including loss of use thereof, arising out of or in consequence of the performance of this work, whether such injuries to persons or damage to property is due or claimed to be due to the negligence of the Contractor, his Subcontractors, the Owner or Engineer, their agents or employees, except only such injury or damage as shall be determined by a court of law to have been caused by the sole negligence of the Owner or Engineer.

2. Manufacturers' and Contractors' Liability shall further include an endorsement stating:

"This policy shall cover owned, hired and non-owned equipment."

"Coverage for completed operations for both personal injury and property damage extended for the period of guaranty shall be covered under this policy. Manufacturers' and Contractors' Liability coverage includes liability for personal injury or damages as a result of blasting, explosion, collapse of buildings or structures, and damage to underground installations."

3. Automotive Liability Insurance shall include an endorsement as follows:

"This policy shall cover owned, hired and non-owned vehicles".

4. Owner's Protective Liability shall include an endorsement as follows:

"The Contractor and the Insurance Company waive governmental immunity as a defense and will not use the defense of governmental immunity in the adjustment of claims or the defense of any suit, action or claim brought against the Owner or Local Government."

5. ALL POLICIES shall include: (a) endorsement of the work description, contract name, number and location; (b) an endorsement that the Insurance Company will give at least thirty (30) days written notice to the Owner and Engineer prior to any modification or cancellation of any such policy; (c) an endorsement that the Contractor will be responsible for the payment of all premiums and/or charges; (d) an endorsement as follows: "This policy is issued in compliance with the Insurance Requirements of the Contract Documents for the Project and the issuing Company/Agent is fully cognizant of the requirements as stated therein."

# f. Proof of Insurance

Before commencing any work under this Contract, the Contractor shall submit copies of the Certificate/Certificates of Insurance or binders to the Owner, Engineer and any others as may be specified in the Special Conditions under "INSURANCE", evidencing that all insurance as required herein is in force. The policies shall be identified by title, policy number, effective date, expiration date, coverages and limits of liability. Required or verbatim quotes of endorsements as required above or by the Special Conditions and non-standard exclusion endorsements for any required policies shall be attached to or be a part of the Certificate/Certificates of Insurance.

The Contractor must either include coverage for his Subcontractors in his policy or submit similar Certificates of Insurance from each of his Subcontractors before their work commences. Each Subcontractor must be covered by insurance of the same character and in the same amounts as the Contractor unless the Contractor and the Engineer agree that a reduced coverage is adequate because of the nature of the particular subcontract work.

During the course of construction under this Contract, whenever there is a lapse in the insurance requirements as stated herein, through cancellation, expiration, failure to renew, or any other cause, the Owner shall order the cessation of all construction activities until such time as the insurance requirements are complied with.

# g. Approval/Disapproval of Insurance

Upon receipt of the Certificate(s) of Insurance or binders, the Owner will, in writing, identify the policies and indicate his approval or disapproval. New policies from other companies shall be provided in place of those disapproved. Such insurance shall only be carried with financially responsible insurance companies, licensed in the State and approved by the Owner. All policies shall be kept in force until the Contractor's work is accepted by the Owner (unless otherwise specified). Insurance policies (covering all operations under this Contract or, if so noted, for extended operations) which expire before the Contractor's work is accepted by the Owner (or where noted for extended operations, through the period of guaranty) shall be renewed and evidence of same submitted to the Owner for his approval.

#### 331. PATENTS

The Contractor shall hold and save the Owner and Engineer, their officers and employees, harmless from liability of any nature or kind, including but not limited to court costs and attorneys' fees, for or on account of, any patented or unpatented invention, process, article or appliance manufactured or used in the performance of the Contract, including its use by the Owner, unless otherwise specifically stipulated in the Technical Specifications.

#### 332. WARRANTY OF TITLE

No material, supplies or equipment incorporated or to be incorporated in the work shall be purchased subject to any chattel mortgage or under a conditional sale or other agreement by which an interest therein or in any part thereof is retained by the seller or supplier. The Contractor shall warrant good title to all materials, supplies and equipment installed or incorporated in the work and, upon completion of all work, shall deliver the same together with all improvements and appurtenances constructed or placed thereon by him to the Owner free from any claims, liens or charges. Neither the Contractor nor any person, firm or corporation furnishing any material or labor for any work covered by the Contract shall have any right to a lien upon any improvement or appurtenance thereon. Nothing contained in this paragraph, however, shall defeat or impair the right of person furnishing materials or labor to recover under any law permitting such persons to look to funds due the Contractor in the hands of the Owner. The provisions of this paragraph shall be inserted in all subcontracts and material contracts and notice of its provisions shall be given to all persons furnishing materials for the work when no formal contract is entered into for such materials.

# 333. GENERAL GUARANTY

Neither the final certificate of payment nor any provision in the Contract nor partial or entire use of the improvements embraced in this Contract by the Owner or the public shall constitute an acceptance of work not done in accordance with the Contract or relieve the Contractor of liability in respect to any express warranties or responsibility for faulty materials or workmanship. The Contractor shall promptly remedy any defects in the work and pay for any damage to other work resulting therefrom which shall appear within a period of twenty-four (24) months from the date of final acceptance of the work. The Owner will give notice of defective materials and work with reasonable promptness.

#### 334. ARBITRATION AND LITIGATION

Any controversy or claim arising out of or relating to this Contract or the breach thereof shall, at the option of the Owner be settled by arbitration in accordance with the Rules of the American Arbitration Association, and judgment upon the award rendered by the Arbitrator(s) may be entered in any Court having jurisdiction thereof. The Owner shall exercise his option to arbitrate concurrent with the rendering of its final decision on the claim. Should it fail to render a final decision within the prescribed time or fail to exercise its option, the claim will be determined in accordance with the Rules of the American Arbitration Association as herein before stated.

#### 335. RISK OF LOSS

The Owner assumes no responsibility for the condition of existing buildings and structures and other property on the Project Area nor for their continuance in the condition existing at the time of issuance of the Invitation for Bids or thereafter. No adjustment of Contract Price or allowance for any change in conditions which may occur after the Invitation for Bids has been issued will be made except as provided for herein.

# 336. REQUIRED PROVISIONS DEEMED INSERTED

Each and every provision of law and clause required by law to be inserted in this Contract shall be deemed to be inserted herein and the Contract shall be read and enforced as though it were included herein, and if through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon the application of either party the Contract shall forthwith be physically amended to make such insertion or correction.

# 337. CORRECTIONS

The Engineer shall have the right to correct any errors or omissions in the Contract, Specifications or Contract Drawings when such corrections are necessary for the proper expression of their intent. Such corrections shall take effect from the time that the Engineer gives notice thereof, and any alterations in the work rendered necessary thereby shall be made as corrected. Any conflict between the approved Contract Drawings and Specifications, or any disagreement

in measurements upon the Contract Drawings must be submitted to the Engineer before construction of the work.

#### 338. SAFETY PROVISIONS

The safety provisions of applicable laws, building and construction codes and the safety codes approved by the State Labor Commissioner shall be observed.

The provisions of the Federal Occupational Safety and Health Administration's "Occupational Safety and Health Standards" and "Safety and Health Regulations for Construction" shall be observed.

Should at any time during the work under this Contract any Local /State /Federal safety inspector visit the site for the purpose of a safety inspection, the Contractor shall immediately notify the Engineer's representative on the job site.

The Contractor shall employ watchmen on the work as necessary and shall erect and maintain such strong and suitable barriers and such lights as will effectually prevent the happening of any accident to health, limb or property. Lights shall be maintained between the hours of sunset and sunrise, and during periods of low visibility.

If at any time in the opinion of the Engineer, the work is not properly lighted, barricaded and in all respects safe, both in respect to public travel or adjacent property, public or private, and if under such circumstances the Contractor does not or cannot immediately put the same into proper and approved condition, or if the Contractor or representative is not upon the ground so that he can be immediately notified of the insufficiency of safety precautions, then the Engineer may put the work into such a condition that it shall be, in his opinion, in all respects safe and the Contractor shall pay all expenses of such labor and materials as may have been used for this purpose by him or by the Engineer. Such action of the Engineer, or his failure to take such action, shall in no way relieve the Contractor of the entire responsibility for any cost, loss or damage by any party sustained on account of the insufficiency of the safety precautions taken by him or by the Engineer acting under authority of this section.

# 339. NIGHT WORK, SUNDAYS AND HOLIDAYS

Only with the prior approval of the Owner shall night work or work on Sundays or legal Holidays requiring the presence of the Engineer or Owner be permitted except for emergencies or as specified elsewhere. Should night work be permitted or required, the lighting and other facilities which are necessary for performing such work must be provided by the Contractor and comply with the applicable safety codes.

#### 340. OBSTRUCTIONS ENCOUNTERED

In addition to showing the construction under this Contract, the drawings show certain information obtained by the Owner regarding conditions and features which exist at the site of the work, both at and below the surface of the ground. The Owner and the Engineer expressly disclaim any responsibility for the accuracy or completeness

of the information given on the drawings with regard to the existing conditions and features and the Contractor will not be entitled to any extra compensation on account of inaccuracy or incompleteness of such information except as provided under the Sections "CHANGES CONDITIONS" "EXISTING UTILITIES, STRUCTURES and FIXTURES" of the GENERAL CONDITIONS. It is specifically called to the Contractor's attention that all services, laterals, etc., are not shown on the Contract Drawings and it shall be his responsibility to locate and protect the same. The information which is shown is only convenience of the Contractor, who must verify information to his own satisfaction. The giving of this information upon the Contract Drawings will not relieve the Contractor of his obligations to support and protect all existing utilities, structures and fixtures which may be encountered during the construction of the except as provided in the Section "EXISTING UTILITIES, STRUCTURES AND FIXTURES" of the GENERAL CONDITIONS, and to make good all damages done to such existing utilities, structures and fixtures, as provided within the specifications.

#### 341. EXISTING UTILITIES, STRUCTURES AND FIXTURES

The Contractor will be required, at his own expense, to do everything necessary to support, protect and sustain all sewer, water, gas or service pipes, electric light, power poles, telephone or telegraph poles, manholes, valve boxes, conduits and any and all utilities, structures or fixtures laid across or along the site of the work. The Engineer, as well as the company or the corporation owning said utilities, structures or fixtures must be notified of the same by the Contractor before any such utilities, structures or fixtures are removed or relocated. In case any of the said utilities, structures or fixtures are damaged by the Contractor, they shall be repaired by the Contractor at his own expense, or by the authorities having control of the same and the expense of said repairs shall be deducted from the monies due or to become due the Contractor under this Contract.

Should it become necessary for the Contractor to remove or relocate any utilities, structures or other fixtures, due to a grade and alignment conflict which would require the proposed utility, structure or fixture (not trench excavation, sheeting or other construction features) to occupy the same space as the existing pipe, pole, conduit and/or other fixture, such removal or relocation will be paid for in accordance with the provisions for "CHANGES IN THE WORK" of the GENERAL CONDITIONS. Should said utilities, structures or other fixtures be removed or relocated by the Owner or the respective utility companies at no cost to the Contractor, no payment will be made therefore.

Prior to any removal or relocation of existing facilities, structures or fixtures, the Contractor shall notify the Engineer of the location and the circumstances and shall cease work (which might prove detrimental to the utility, structure or fixture encountered) if necessary until satisfactory arrangements have been made with the Owners of the same to properly care for them.

Should it be necessary to cease work and a delay is caused thereby, the Contractor shall have no claim for damages or any claim other than for an extension of time. See GENERAL CONDITIONS, CLAIMS FOR EXTRA COST.

If the Contractor desires temporary changes of location for his convenience, for any reason whatsoever, of water lines, gas lines, sewer lines, wire lines, service connections, water and gas meter boxes, valve boxes, light standards, cableways, signals and any other utilities, structures or fixtures, he shall satisfy the Engineer and the Owner that the proposed relocation does not interfere with his or other Contractor's operations, or the requirement of the Contract Drawings and does not cause an obstruction or a hazard to traffic. The Contractor shall make his own request to the utility companies, pipe owners or other parties affected for such relocation work. Such relocation work for the convenience of the Contractor shall be made solely at the Contractor's expense.

The Contractor shall not remove or relocate any utility, structure or fixture without the written approval of the Owner of that utility, structure or fixture unless otherwise shown on the Contract Drawings, Specifications or ordered by the Engineer.

IT WILL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE LOCATION AND TYPE OF UNDERGROUND UTILITY PRESENT ON THE SITE. THE FIGURES AND DRAWINGS ARE A GUIDE ONLY OF WHAT MAY BE ON SITE AND AT WHAT LOCATION. THE CONTRACTOR SHALL INVESTIGATE AND VERIFY ALL UTILITIES.

#### 342. CONTROL OF EXISTING FLOWS

During the construction of all proposed work, the Contractor shall take every precaution and do the necessary work to maintain the flow of storm drainage, sanitary sewage and natural flows through the working area. The Contractor is solely responsible for providing his flow control system and there shall be no separate payment for the required work. The Contractor shall be responsible for any flooding or sanitary backup on his work and to the property owners affected by such flooding or backup. The Contractor shall make such provisions as may be required by the Local, State or Federal Health officers or any other public bodies with jurisdiction over the flow of storm drainage, sanitary seepage and natural flows.

In the event the Contractor uses water from natural water sources for his operations, intake method shall be such as to create no harmful effects; and where water is taken from a stream, reasonable flow downstream from the intake shall be maintained.

# 343. SEWAGE, SURFACE WATER, GROUNDWATER AND FLOOD FLOWS

The Contractor shall furnish all the necessary equipment, shall take all necessary precautions, and shall assume the entire cost of handling any sewage, seepage, storm groundwater, surface water and flood flows which may be encountered at any time during the construction of the work. The manner of providing for these flows shall meet the approval of the Engineer and the entire cost of said

work shall be included in the unit or lump sum prices bid for the various items of the work to be done under this Contract.

The Contractor shall employ such feasible and practical methods in his operations as will prevent pollution, sedimentation or the introduction of impurities or other objectionable materials that may become suspended or dissolved in waters reaching streams, ponds, lakes, water supplies or other water bodies.

Water shall not be disposed of by discharging it into any street gutter, drainage channel, existing drainage system, natural stream, waterway, lake, pond or BOD, etc. without the prior approval of the Authority having jurisdiction thereof. Should such approval be obtained, the Contractor shall insure that no solids, debris, suspended soil particles, impurities or pollutants are allowed to enter the drainage system. The Contractor shall be fully responsible for any damage to these systems resulting from his disposal methods and any necessary measures (such as but not limited to cleanup) required to return the system to preconstruction conditions. In addition to the above, disposal on private property shall be only with the prior written permission of the property owner.

Any water used for any purpose by the Contractor shall not be discharged in such a way as to create pollution, sedimentation or other adverse effects upon the aforementioned streams or waters.

#### 344. CONNECTING TO EXISTING WORK

The Contractor shall remove such existing masonry, concrete, equipment and piping as is necessary in order to make the proper connections to the existing work at the locations shown. Also he shall make the necessary pipe line, roadway and other connections at the several points in order that on completion of this Contract water, sewage, or storm water, as the case may be, will flow through the several pipe lines and structures. Unless otherwise specified herein, no extra payment will be made for this work, but the entire cost of the same shall be included in the unit or lump sum prices bid for the various items of the work to be done under this Contract.

#### 345. EXISTING IMPROVEMENTS

The Contractor shall conduct his work so as to minimize damage to existing improvements, except where specifically stated otherwise in the Specifications or Drawings; it will be the responsibility of the Contractor to restore, as nearly as practical, to their original conditions all improvements on public or private property damaged by his operations.

The utility mains, ducts, poles and services in the construction area, where shown on the Contract Drawings, are at the approximate locations furnished by various utilities concerned. These locations are subject to possible errors in the source of the information; also, errors in transcription. The Contractor shall make certain of the exact location of mains ducts, poles and services prior to excavation or construction near the same.

The various utility companies have been made aware of the pending construction and are generally familiar with the locations of

conflicts in the case of the proposed construction. The various utility companies will make all adjustments to their own lines except where otherwise shown on the Contract Drawings or specifications. The Contractor shall give ample notice to the various utilities so that existing lines can be marked in the field and adjustments made. The Contractor shall cooperate fully with the various utilities and shall plan his work so that least interference is caused for all parties concerned. No additional payments shall be made to the Contractor for delays caused by utility interference due to negligence on the part of the Contractor. The Contractor shall support all utility lines uncovered during excavation.

#### 346. ACCESS TO SITE

The Contractor shall make every effort to minimize damage to all access routes, and he shall be required to restore them to their original condition. The Contractor shall acquire all necessary permits for working in, on or from public streets or rights-of-way and for securing additional access rights thereto.

All costs of the removal and restoration to original condition of walls, fences, structures, utility lines, poles, guy wires or anchors, and other improvements required for passage of the Contractor's equipment shall be borne by the Contractor. The Contractor shall notify the proper authorities of the Local Government and all utilities of any intended modification or disruption to their property prior to the start of construction and shall cooperate with them in the scheduling and performance of his operation.

If the Contractor, by direct negotiation and bargain with any land owner, lessee or tenant, has secured for himself any right to use more space or greater privileges than the space provided by the Owner for purposes incidental to the performance of the Contract, he shall, upon request of the Engineer, furnish to the Engineer proper evidence that such additional rights have been properly secured and assurance that no damage to or claim upon the Owner will arise therefrom. The Owner shall not be liable in any way for any expense incurred by the Contractor in securing any such right to use additional property.

The Contractor shall be responsible for and reimburse the Owner and others for any and all losses, damage or expense which the Owner or those others may suffer, either directly or indirectly or through any claims of any person or party, for any trespass outside the spaces and rights-of-way provided by the Owner to the Contractor or any violation or disregard of the terms and conditions established for the use or occupancy of those rights or for negligence in the exercise of those rights.

The Owner may retain or deduct from any sum or sums due or to become due to the Contractor such amount or amounts as may be proper to insure the Owner against loss or expense by reason of the failure of the Contractor to observe the limits and conditions of the rights-of-way, rights-of-access, etc. provided by the Owner.

#### 347. ACCESS TO ADJACENT PROPERTIES

The Contractor shall at all times maintain vehicular and pedestrian access to all properties abutting or adjacent to construction under this Contract, all at the Contractor's sole expense. In the event that normal access is cut off to a particular property due to operations or proposed work called for under the Contract, the Contractor shall, at his sole expense, make other arrangements for access to said property satisfactory to the property owner, tenant and the Engineer.

# 348. USE OF ROADWAYS

During the progress of the work, the Contractor shall make ample provision for both vehicular and foot traffic on any public road, and indemnify and save harmless the Owner from any expense whatsoever due to his operations on/over said roadways. Contractor shall also provide free access to all fire hydrants, water and gas valves located along the line or in the vicinity of his work. Gutters and waterways must be kept open or other provisions made for the removal of storm water. Roadway intersections may be blocked but one-half at a time and the Contractor shall lay and maintain temporary driveways, bridges and crossings, such as in the opinion of the Engineer are necessary to reasonably accommodate the public and to provide access to private driveways. In the event of the Contractor's failure to comply with these provisions, the Owner may cause the same to be done, and will deduct the cost of such work from any monies due to become due the Contractor under this Contract, but the performance of such work by the Owner or at his insistence shall serve in no way to release the Contractor from his general or particular liability for the safety of the public or the work.

#### 349. SNOW REMOVAL

If the Contractor's operations or occupancy of any public street or highway or the rough surfaces over any trench or area being maintained by the Contractor shall interfere with the removal or plowing of snow or ice by the public authorities or land owners, or sanding of icy surfaces in the ordinary manner with regular highway equipment, then the Contractor shall perform such services for the said public authorities or owners without charge; or failing to do so, shall reimburse the said authorities or owners for any additional cost to them for doing such work occasioned by the conditions arising from the Contractor's operations, occupancy or trench surfaces, together with any damage to the equipment of said parties by those conditions, or claims of any party for damage or injury or loss by reason of failure to remove snow or ice or to sand the icy spots under those conditions.

# 350. WEATHER CONDITIONS/WORK IN FREEZING WEATHER

In the event of temporary suspension of work, or during inclement weather, or whenever the Engineer shall direct, the Contractor will, and will cause his Subcontractors to protect carefully his and their work and materials against damage or injury from the weather. If, in the opinion of the Engineer, any work or materials shall have been damaged or injured by reason of failure on the part of the Contractor

or any of his Subcontractors so to protect his and their work, such materials shall be removed and replaced at the expense of the Contractor.

Unless written permission be given, work liable to be affected by frost or freezing shall be suspended during freezing weather. When work proceeds under such a condition, the Contractor shall provide approved facilities for heating the materials and for protecting the finished work.

## 351. INTOXICATING LIQUORS

The Contractor shall neither permit nor suffer the introduction or use of intoxicating liquors upon or about the work specified in this Contract or upon any of the grounds occupied by him or by his employees.

#### 352. BLASTING

If explosives are used, all requirements for transportation, use and storage of Local, State and Federal laws and regulations must be complied with and all necessary permits and licenses obtained by the Contractor at his expense. Permits and licenses must be shown to the Explosives must be carefully transported, Engineer on request. stored, handled and used. The Contractor will keep on the job only such quantities of explosives as may be needed for the work underway and only during such time as they are being used. Explosives shall be stored in a secure manner in locked containers and separate from all Caps and detonators shall be stored separately from other When the need for explosives is ended, all such material explosives. remaining on the job shall be promptly removed from the premises. Care must be taken that no explosives, caps or detonators are stolen or get into the hands of unauthorized persons or left unguarded where they may cause accidents.

An accurate blasting log must be maintained continuously for the duration of the Contract. The log shall record, for each shot, the location, amount of holes, depth, spacing, amount of explosive per hole, number of caps used and the exact date and time of the blast. In addition, a sketch showing displacement of direct and delay caps for each shot shall be recorded.

Explosives shall be of such power and placed and used in such quantities and positions as will not make the excavation unduly large, nor shatter unnecessarily the rock upon or against which the main or structure is to be built, nor injure adjacent persons or property, those portions of the new work or structure as may already be in place or other adjacent pipes, ducts or other structures. The quantity of explosives fired at one blast must be small enough and the time for blasting selected to avoid undue annoyance to persons owning or occupying premises near the work.

The rock must be completely matted when blasts are fired to prevent damage or injury to persons or property or the scattering of broken fragments on the adjacent ground. Adequate warning shall be given all persons in the vicinity before any blast is discharged.

When blasting is required, the operation shall be conducted with such care as not to cause damage to any of the existing underground utilities. Should such occur, the cost of repairs shall be the sole responsibility of the Contractor.

When blasting for trench excavation, each shot sequence shall begin sufficiently ahead of completed work to prevent damage to the completed work which must be properly protected prior to each shot.

The provisions herein shall apply where soil formation resembles rock, whether in trench, structure or general excavation, even if it is of such a nature that it is not classified and paid for as rock excavation, and if so ordered by the Engineer, will apply to openings cut through masonry, nested boulders or other materials not herein classed as rock.

In areas where the proposed construction is built against the face of rock excavation, all loosened or shattered portions of the rock must be completely removed by barring, wedging or other approved means so the masonry can be built firmly in contact with solid rock.

The Contractor shall notify each public utility or others having structures in proximity to the site, and others who may be affected, of his intention to use explosives. Said notice shall be given in accordance with the applicable regulations therefore and sufficiently in advance to enable the involved agencies/companies/persons and the Contractor to take such steps as may be necessary to protect life and property. Such notice shall not in any way relieve the Contractor of responsibility for any damage resulting from his blasting operations.

When in sufficiently close proximity to existing gas, water, sanitary, storm, subway or other utilities and structures and all services connected thereto, the Contractor shall remove the rock by methods other than blasting, if necessary, in order to protect said utilities and their services from damage. Approved methods other than blasting are barring and wedging, jack hammer, drilling, rock jacks or other such hand or machinery methods which will not damage the adjacent utility.

No explosives shall be brought into, stored or used on the site of any job by the Contractor unless and until he shall have furnished the Engineer with a satisfactory certificate of insurance showing that the risks arising from the presence of any use of explosives and from blasting are included within the insurance provided by the Contractor to secure his obligations to the Owner. Insurance should also cover damage to any underground utilities or other underground facilities.

#### 353. INDEMNITY CLAUSE

The Contractor shall at all times indemnify and save harmless the Owner, the Engineer and their agents and employees from and against all loss and expense (including attorney's fees) by reason of liability imposed by law upon the Owner or Engineer for damages because of bodily injury, including death at any time resulting therefrom, sustained by any person or persons or on account of damage to property, including loss of use thereof, arising out of or in consequence of the performance of this work, whether such injuries to persons or damage to property is due or claimed to be due to the

negligence of the Contractor, his Subcontractors, the Owner or Engineer, their agents or employees, except only such injury or damage as shall be determined by a court of law to have been caused by the sole negligence of the Owner or Engineer.

#### 354. DISPUTES

- All disputes between the parties arising out of, or in any way related to this Contract and/or the performance of the same, or its except those disputes covered by Federal interpretation, Standards Provisions under GENERAL CONDITIONS, PART II, shall within ten (10) days of the event or action giving rise to the dispute be presented to the Engineer. All papers pertaining to the dispute shall Such notice shall state the facts be filed in quadruplicate. surrounding the dispute in sufficient detail to identify the dispute, together with its character and scope. In the meantime, Contractor shall proceed with the work under this Contract directed. Any dispute not presented within the time limit specified in this paragraph shall be deemed to have been waived, except that if the dispute is of a continuing character and notice of the dispute is not given within ten (10) days of its commencement, the dispute will be considered only for a period commencing ten (10) days prior to the receipt by the Engineer of notice thereof. The Contractor shall in no case allow any dispute to delay the work under this Contract.
- b. As soon as practicable after the final submission of all information, the Owner shall make a determination of the dispute. Said decision of the Owner shall be a condition precedent to any further action on the dispute. However, upon certification in writing by the claimant that the dispute has been submitted in its final form, the Owner shall be obliged to render a decision on said dispute within sixty (60) days of the date of said certification. Should the Owner fail to render his decision within the aforementioned sixty (60) day period, his decision will not be a condition precedent to any further action on the part of the claimant.
- c. Each decision by the Owner will be in writing and will be mailed to the Contractor by registered or certified mail, return receipt requested, directed to his last known address.
- d. In the event of an unfavorable decision by the Owner, the Contractor shall have the right to contest said decision as provided for under the provision of this Contract. The Contractor shall in no case allow the dispute or decision to delay any work, but shall notify the Owner promptly that he is proceeding with the work under protest and he may then except the matter in question from the final release.

# **SECTION IV**

# SPECIAL CONDITIONS

#### 401. PROJECT SITE

The project is being undertaken to install Water Meters and Cellular Based Advanced Meter Analytics Reading System in the Town of Willsboro Water District. The Town Hall is located at 5 Farrell Road the Town of Willsboro, Essex County, NY.

#### 402. TIME FOR COMPLETION/NOTICE TO PROCEED

The work which the Contractor is required to perform under this Contract shall be commenced at the time stipulated by the Owner in the Notice to Proceed. All work to be completed within 120 days unless otherwise modified in accordance with the GENERAL CONDITIONS.

The Contractor will be bound to the performance of the Contract when given a Notice To Proceed with the work on or before (weather permitting) 10 days of that notice.

When the Contractor is not given a Notice to Proceed with the work on or before the aforementioned date, the Contractor may elect to void the Contract by giving unequivocal and unconditional written notice of such avoidance to the Owner. Such avoidance shall be effective upon actual receipt by the Owner, prior to the mailing or actual delivery of any Notice to Proceed. In the event of the Owner's failure to issue a Notice to Proceed, the Contractor's sole remedy shall be the avoidance of the Contract as set forth and the Owner will not be liable to the Contractor and monies expended in anticipation of performance under the Contract.

#### 403. LIQUIDATED DAMAGES

As actual damages for any delay in completion of the work which the Contractor is required to perform under this Contract are impossible of determination, the Contractor and his sureties shall be liable for and shall pay to the Owner the sum of ZERO Dollars (\$00.00) per day, as fixed, agreed and liquidated damages for each calendar day of delay from the above stipulated completion, or as modified in accordance with the GENERAL CONDITIONS, PART I, until such work is satisfactorily completed and accepted.

# 404. RESPONSIBILITIES OF CONTRACTOR

Except as otherwise specifically stated in the Contract Documents, the Contractor shall provide and pay for all materials, labor, tools, equipment, water, light, heat, power, transportation, superintendence, temporary construction of every nature, charges, levies, fees or other expenses and all other services and facilities of every nature whatsoever necessary for the performance of the Contract and to complete this Contract in every respect within the specified time.

### 405. COMMUNICATIONS

- a. All notices, demands, requests, instructions, approvals, proposals and claims must be in writing.
- b. Any notice to or demand upon the Contractor shall be sufficiently given if delivered at the office of the Contractor stated on the

signature page of the Agreement (or at such other office as the Contractor may from time to time designate) in a sealed, postage-prepaid envelope or delivered with charges prepaid to any telegraph company for transmission, in each case addressed to such office.

- c. All papers required to be delivered to the Owner shall, unless otherwise specified in writing to the Contractor, be delivered to the Engineer's office, and any notice to or demand upon the Owner shall be sufficiently given if so delivered, or if deposited in the United States mail in a sealed, postage-prepaid envelope, or delivered with charges prepaid to any telegraph company for transmission to said Owner at such address, or to such other representatives of the Owner or to such other address as the Owner may subsequently specify in writing to the Contractor for such purpose.
- d. Any such notice shall be deemed to have been given as of the time of actual delivery or (in case of mailing) when the same should have been received in due course of post, or in the case of telegrams, at the time of actual receipt, as the case may be.

#### 406. SIGNS

- a. Project signs will not be required unless the Item "Project Signs" appears in the Technical Specifications.
- b. Subject to prior approval of the Owner as to size, design, type and location and to local regulations, the Contractor and his Subcontractors may erect temporary signs for purpose of identification and controlling traffic. The Contractor shall furnish, erect and maintain such other signs as may be required by Safety Regulations or are necessary to safeguard life and property.

#### 407. CONTRACT DOCUMENTS AND DRAWINGS

The Owner will furnish the Contractor without charge <u>three (3)</u> copies of the Contract Documents, including Technical Specifications and Drawings. Additional copies requested by the Contractor will be furnished at cost.

#### 408. PARTIAL USE OF IMPROVEMENTS

The Owner, at his election, may give notice to the Contractor, and place in use those sections of the work which may have been completed, inspected and can be accepted as complying with the Contract Documents and, if in his opinion, each such section is safe, fit and convenient for the use and accommodation for which it was intended, provided:

- a. The use of such sections of the work shall not materially impede the completion of the remainder of the work by the Contractor.
- b. The Contractor shall not be responsible for any damages or maintenance costs due directly to the use of such sections.
- c. The use of such sections shall in no way relieve the Contractor of his liability due to having used defective materials or to poor workmanship.
- d. The period of guarantee stipulated in the Section GENERAL GUARANTY under GENERAL CONDITIONS, PART I, shall not begin to run

until the date of the final acceptance of all work which the Contractor is required to construct under this Contract.

#### 409. PROJECT PHOTOGRAPHS

a. Progress Photographs

The Contractor shall arrange to take daily photographs of work progress on this project. Photographs shall be taken with a digital camera of at least 3 mega pixel resolution.

Computer files of project photographs shall be identified by the Project name, and date taken, and also uniquely numbered. Copies of files of all photographs shall be furnished to the Engineer on compact disk.

All cost of furnishing these photos shall be considered included in the various prices bid for other work under this Contract.

b. Preconstruction Photographs:

Prior to start of construction, the contractor shall thoroughly record by digital photograph of the entire existing site. Photographs shall be taken with a digital camera of at least 3 mega pixel resolution. These preconstruction photographs shall show existing conditions clearly.

The Contractor can utilize their employees or can/shall arrange to furnish the services of a professional commercial photographer to provide Project Photographs for this Contract.

#### 410. INSURANCE

SCHEDULE OF INSURANCE: The following will be the limits of coverage required for this Contract:

All coverage must be placed with Carriers rated at least "A" by AM Best and a Admitted in the State of N.Y.

- 1. Broad Form Comprehensive General Liability:
  - \$1,000,000 Combined Single limit per occurrence.
  - \$3,000,000 per occurrence.
  - A) Limits will apply to each location individually
  - B) Blanket contractual products and completed operation Included.
  - C) XCU-coverage to be included.
  - D) All certificate holders to be shown as additional insured and on a primary and non-contributory basis.
  - E) Waiver of subrogation in favor of the certificate holder/additional insured.
- 2. Umbrella:
  - \$2,000,000 to be follow form with General Liability \$2,000,000 aggregate
- 3. Auto Liability:
  - \$1,000,000 Combined Single Limit

Including non-owned and hired auto

- 4. Compensation: As required by N.Y. State
- 5. Contractors pollution liability coverage:
  - \$1,000,000 limit per job site

-Stand alone coverage or included with General Liability

- 6. All sub0contractors to comply with the above
- 7. 30 written day notice of cancellation or non-renewal to each certificate holder and 10 days for non-payment.
- 8. All certificates to be submitted for approval before work begins.

#### 411. LAYOUT OF WORK

The Contractor shall perform all layout work necessary for the satisfactory execution of the construction as shown on the Contract Drawings and all costs in connection therewith shall be included in the Contract Price(s).

The Contractor shall employ competent personnel to establish line and grade every fifty (50) feet using a hub and tack and a witness stake, or A.O.B.E. This layout will be done prior to any construction and subject to approval of the Engineer.

The Contractor shall be held responsible for the protecting and safeguarding of all control points and bench marks set by the Engineer and his own forces. Any replacement or re-establishment of control points or bench marks by the Engineer shall be at the expense of the Contractor.

The horizontal and vertical control necessary to perform this work are shown on the Contract Drawings.

#### 412. WORK BY OTHERS

Private utilities, Contractors, or other parties may be expected to be working within the Contract Area during this Contract. It shall be the responsibility of the Contractor to coordinate his work under this Contract with the work being done by others in order that the construction may proceed in an efficient and logical manner. The Contractor shall have no claim or claims whatever against the Owner, Engineer, or other parties due to delays or other reasons caused by the work by others or his failure to coordinate such work; nor will the Owner or Engineer certify to or guarantee the completion time of work being done by others.

The Contractor shall notify pertinent utility companies 72 hours in advance of doing any work at or adjacent to said utilities.

#### 413. SUBSURFACE INFORMATION (NO BORINGS WERE TAKEN)

The Owner has had test borings taken in the vicinity of the work proposed under this Contract. These borings are approximately located on the Contract Drawing Site Plan and are attached to an exhibit to these specifications. The data obtained from these borings is not part of the specifications, but is for information only. The Engineer and Owner in no way certify the accuracy or guarantee the completeness of any subsurface information.

Each Bidder shall be responsible for obtaining such additional data or information as he deems necessary for the preparation of his bid to complete the work required. The Contractor shall have no claim unless actual subsurface conditions, excluding groundwater levels, differ

greatly from those represented by the boring logs. The data shown on the boring logs is for the specific locations indicated only and no assurance is given that these conditions are representative of conditions between borings or areas adjacent thereto.

#### 414. RECORD DRAWINGS

Contractor shall maintain on site, 2 sets of the following documents to record actual revisions to the Work as it progresses:

- a. Contract Drawings
- b. Project Manual, addenda, change orders and other contract modifications
- c. Reviewed submittals, shop drawings, product data, and samples
- d. daily log of all construction completed
  The documents shall be kept separate from the documents used for
  construction. Submittals shall be maintained in a file in the order
  of their respective specification section number.
  Legibly mark each item to record actual construction including:
  - a. Measured depths of foundations in relation to finish ground floor datum.
  - b. Measured horizontal and vertical locations of underground utilities and appurtenances, with a at least three tying measurements referenced to permanent surface improvements.
  - c. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
  - d. Field changes of dimension and detail.
  - e. Details not shown on the original Contract Drawings.
  - f. Type and location of penetrations through the roof.

Upon completion of the work contractor shall submit these records to the engineer, from which the as-built drawings will be created. The record documents will be turned over to the Owner.

Applications for progress payments will not be approved if the record documents are not kept current. Application for final payment will not be approved until the project record documents are approved.

# 415. TEMPORARY SHUTDOWN (not in this contract)

All work which requires any existing equipment or process to be shut down temporarily shall be coordinated with the WWTP operators. Work shall be scheduled and executed to keep inconvenience to an absolute minimum. The Contractor is hereby alerted to the fact that this shall require some work to be performed during unusual hours. Also, once an process is shut down, work shall continue diligently, without interruption, until the existing main can be returned to service. There shall be no separate payment for performing the above work, but all costs incidental thereto are considered to be included in the various prices bid under this Contract.

# 416. "OR EQUAL" CLAUSE

UNLESS OTHERWISE SPECIFIED:

Whenever a material, article or piece of equipment is identified on the Contract Drawings or in the Specifications by reference to manufacturers' or vendors' names, trade names, catalogue numbers, etc., the intent is to establish a standard. Any material, article, or equipment of other manufacturers and vendors of equally high quality (particularly with regard to points specified in the Specifications) which will perform equivalently within the design ranges specified will be equally acceptable provided that the material, article or equipment so proposed is, in the opinion of the Engineer, of equal substance and function. Further, the manufacturer must agree to comply fully with the warranty requirements of the Specifications.

The Contractor may not assume that substitute equipment will be approved by the Engineer and non-approval of said equipment will form no basis for a claim for additional compensation by the Contractor. No substitute equipment will be purchased or installed by the Contractor without the Engineer's written approval. If the Engineer's approval is obtained for alternate equipment, the Contractor shall, at his own expense, make any changes in the structures, building, piping or electrical necessary to accommodate the equipment and if engineering is required due to substitution of other material, the Contractor shall reimburse the Owner for the engineering service.

## 417. USE OF MANUFACTURED EQUIPMENT

In order to make the maintenance of the equipment items compatible with the Owner's stock on hand, items have been specified by manufacturer name in accordance with their preference. Only upon written approval by the Owner may the Contractor substitute equal equipment in lieu of those specified under the items: Fire Alarm Boxes, Corporation Stops/Water Service, Hydrants, Shutoff Valves, Curb Boxes and Lids, and Tapping Sleeves and Valves.

#### 418. AVAILABILITY OF SITE

As the construction proceeds, if the work need be suspended or delayed by reason of or by any act or omission of the Owner, or because the Owner does not own or has not obtained possession of or has not the right to enter upon land upon which the work is to be performed hereunder, or because of any act or omission of any employee or agent of the Owner or of any other Contractor performing work for the Owner and by reason of the foregoing, the Contractor is not able to complete the work under this Contract within the time specified, and he is not at fault, an extension of time for completion will be granted by the Owner upon proper application for such extension by the Contractor to the Owner in accordance with the provisions relating thereto contained None of the foregoing shall constitute a breach of in this Contract. the Contract on the part of the Owner. No right to charges or claims for damages, or additional compensation, shall inure to or be made by the Contractor against the Owner or any other Contractor for any delays or hindrances for any cause whatever, during the progress of the work or any portion thereof embraced in this Contract, such delays

or hindrances being compensated for by an extension of time as above provided.

# 419. CONSTRUCTION, EXCAVATION AND DEMOLITION OPERATIONS AT OR NEAR UNDERGROUND FACILITIES

The Contractor's attention is directed to the State of New York, Department of Labor, Board of Standards and Appeals Industrial Code Rule 53 - "Construction, Excavation, and Demolition Operations at or near Underground Facilities", effective April 1, 1975.

The Contractor will be required to comply with all applicable requirements of Industrial Code Rule 53.

Requests for copies by mail should be directed to State of New York, Department of Labor, Office of Public Information, State Office Building Campus, Albany, New York, 12201; or single copies may be obtained by applying in person at the Department's office in Albany.

# 420. SHOP DRAWING SCHEDULE

Whenever the article or piece of equipment is identified on the Contract Drawings or in the Specifications by reference to manufacturer's or vendor's name and/or catalog number or as listed below, the Contractor shall furnish complete shop drawings and manufacturer's latest printed instructions for installation within thirty (30) days of Contract award for review in accordance with the General Conditions.

#### 421. PERMITS

The Town or Engineer shall obtain all necessary permits as required in "Permits and Codes" of the General Conditions.

#### 422. RESIDENT ENGINEER

The Resident Engineer will be the Owners or his representative who is on the job on a daily basis inspecting all work.

The Contractor must direct all correspondence, payment requisitions, requests, questions or any other communications through the Resident Engineer whether these communications are to the "Owner", the "Engineer" or others.

If the Contractor submits a request to use a different material or products than called for in these Plans and Specifications, the Resident Engineer shall provide the Contractor with a determination as to whether said material or product is "equal".

All results of material tests, certificates, or product samples shall be directed to the Resident Engineer and the Contractor shall closely coordinate such tests with his construction schedule and the Resident Engineer so that test results/samples/certificates are available for evaluation at least two weeks prior to using such material and/or products in construction.

All shop drawings shall be submitted to the Resident Engineer. The Resident Engineer shall distribute said drawings for review and return the results of such review to the Contractor.

The Resident Engineer will himself perform or request the Engineer to perform the duties required of the Engineer.

#### 423. SEQUENCE OF CONSTRUCTION / SCHEDULE

work within the allotted time.

The Contractor, prior to the start of construction shall submit to the Engineer for approval a detailed schedule for his Sequence of Construction (also see Technical Specification 01520 Proposed Sequence of Construction and "Progress Schedule" of the General Conditions). The Sequence of Construction prepared by the Contractor shall show the schedule of work for each item on the Bid Proposal forms as well as all of the various operations which must be performed to complete this

It is emphasized that the Contractor must address those portions of the Contract Documents which will have an impact on the sequence of construction, e.g. "Time of Completion/Notice to Proceed", "Work by Others" and "Availability of Site" of the Special Conditions; and Items "Maintenance and Protection of Traffic", "Excavation for Surface Improvement" and "Test Pits" of these Specifications.

# 424. TEMPORARY SERVICES, AND SANITARY FACILITIES

Each contractor will have to supply their own temporary power, sanitary facilities, water, and phone service.

#### 425. SITE RESTRICTIONS

The project site is adjacent to a State, County and local roads that are a main travel route through the Town. One travel lane must be maintained during construction. If a full shutdown is required, the Contractor must coordinate with the Town Highway Superintendent.

Contractor's (or subcontractor's) operations shall minimize impact to property owner's utilization of their property during the work and shall not impede Property owner's or Operator's, or their supplier's access to their property or facilities.

Contractor shall coordinate his activities with the Owner to maintain access on all Town and county roadways impacted by the work.

Job trailers, if required, shall be placed in an area agreed to with the Owner.

Onsite material storage space will be limited. Contractors shall store only those materials that are for immediate use and in areas agreed to in advance with the Owner. Storage locations must be coordinated with the Owner and can be arranged for on other locations of the contractors choosing with the understanding that actions on non-Town property remain the exclusive responsibility of the contractor and that the cost of off -site storage shall be included in the Contractor's base bid.

#### 426. PAYMENT APPLICATIONS AND CERTIFIED PAYROLL

Contractor shall submit weekly certified payrolls demonstrating and certifying that all employees have been paid in accordance with all Federal and State wage rate requirements by indicating labor rates, fringes, etc., for each employee by labor category and hours worked each day. Payroll shall be certified by a duly authorized representative of the company and shall be submitted to the Engineer along with the payment application for the covered period. No payment applications will be processed until acceptable certified payroll has been received.

Payment applications can be made on not less than a monthly basis. Contractor shall submit notarized payment requisitions on Standard AIA forms or similar format to Cedarwood Engineering Services PLLC., 3903 Main St., Warrensburg, NY 12885 Attention: Mark Bombard. Electronic versions are acceptable.

#### 427.PROJECT SECURITY IN LIEU OF BONDS

If the Contractor does not have the ability to secure bonds, the Town will require the Contractor to furnish an irrevocable letter of credit from a USA-based, federally-insured bank or security institution stating that the Contractor has the ability to and shall produce to the Town funds in the amount of 100% of the contract price within 7 calendar days if requested by the Town. The Town prefers bonding but understands that some qualified local contractors are not currently bonded but have the requisite equipment, expertise and financial wherewithall to successfully complete the work. As such, the Town is willing to consider this alternative form of project security for this project. However, the Town reserves to right to reject the contractor's bid if the Town is not fully satisfied with the letter of credit.

# 428. NYSDOT PROVISIONS (not in this contract)

The Contractor shall fully comply with NYSDOT requirements.

#### 429. CONFINED SPACE ENTRY

The Contractor is advised that work of this contract may entail entry into confined spaces. The Contractor shall be responsible for compliance with all confined space entry requirements and shall include costs related to this in appropriate base bid work items.

#### 430. STORMWATER COMPLIANCE (not in this contract)

Since more than one acre will be disturbed by the project, compliance with NYSDEC SPDES General Permit #GP-02-01 for Construction Activities will be required. This will include compliance with the project Stormwater Pollution Prevention Plan (SWPPP) (bound separately) requirements (e.g., providing and maintaining stormwater pollution controls, etc.) during

construction and providing permanent stormwater collection and treatment facilities.

Contractor shall review and comply with SWPPP requirements, and NYCDEP or NYSDEC directives, and adhere to the Contract Documents for construction of permanent facilities.

#### 431. Preconstruction Survey

Prior to ordering the materials, the contractor shall complete a preconstruction survey to determine the actual type, size and quantities of each item. With the assistance of the Town or Engineer, door hangers shall be placed at all residences with a brief description, contact name and number and date of proposed survey.

END OF SECTION

# **SECTION V**

**TECHNICAL PROVISIONS** 

# 500. Acronyms or Industry Terms Used in Document

	AMA - Advanced Metering Analytics
	AMA - Advanced Metering Infrastructure
	AMR - Automatic Meter Reading
	Endpoint - Meter Interface Unit (MIU) or Transmitter
	FCC - Federal Communications Commission
	RF - Radio Frequency
	<pre>IR - Infrared □ Cellular (GPRS) - Cellular General Packet Radio</pre>
	Service
	LAN - Local Area Network
	ADE®- Absolute Digital Encoder
	HRE - High Resolution Encoder
	HRE-LCD - High Resolution Encoder with Liquid Crystal Display
٦	SMS - Short Message Service

# 502. Advanced Metering Analytics Specifications

Under this specification the proposer shall furnish a metering system manufactured by a single entity that is engaged in the business of managing the Advanced Metering Analytics (AMA) software, software hosting, training and support as specified by the Town. While a primary function shall be to provide accurate and timely meter reading data for billing purposes, the system shall also furnish quarter hourly (15 minute) meter consumption information and meter-based analytical alarms to facilitate enhanced utility operation and management of the total water distribution system.

#### 504. System Description

The Advanced Metering Analytics (AMA) System shall be engineered by manufacturer to utilize the LTE cellular network with endpoints located at each water meter. The cellular endpoints must operate in two-way mode with 15 minute data packets being sent to the software on a daily basis.

The endpoints will operate on FCC regulated cellular frequencies. The system will utilize an existing Cellular network backhaul as a means of gathering the data into the hosted/managed utility software portal. All endpoints must operate with two-way capabilities from the endpoint to the AMA software.

The AMA software will provide metering data to the utility's billing system in a compatible file format. In addition, system information, and other service tools will be provided to assist the utility in serving their customers. The AMA software will also be used to monitor and control system performance all the way down to the endpoint. The AMA software shall also provide a consumer engagement module that includes online access and a smart phone application to allow the utility customer access to their usage information.

The endpoint deployment design will be engineered by the manufacturer to optimize the utility's existing radio frequency propagation factors, environmental settings, topography, and available infrastructure installation locations. The use of repeaters is not allowed in the system.

## 506. Managed Solution Requirements

Under a managed solutions contract, manufacture must provide the
following:
 Engineered deployment design
 Hosted and managed AMA software under a long-term contract
 o All AMA software upgrades and updates
 o Periodic web-based training of AMA software
 o Consumer engagement tools
 Installation, monitoring and repair of network infrastructure
 24/7 Technical support for all supplied software and hardware
 Future-proof technology
 o Upon contract renewal, manufacturer will supply endpoints
 with the most current technology
 o All software and server updates are included by manufacturer

# 508. Endpoint Performance Requirements

ENDPOINT TYPES - The manufacturer must provide an engineered deployment design that includes cellular endpoints for use in commercial and residential applications.

CONFIGURATIONS-Manufacturer shall provide a fully potted endpoint that can be deployed in an indoor, outdoor or submersible (pit) application. The endpoint shall be programmed in the factory and available for connectivity to a compatible absolute encoder register. The endpoint shall also be available in an endpoint-only configuration for field splicing, or with a submersible inline connector. Endpoint must be designed to be installed underneath a plastic or composite pit lid or through a standard 2" hole in a plastic or composite pit lid.

ENDPOINT TRANSMISSION - The endpoint radio frequency operation shall be a two-way bubble-up radio frequency transmission of the metering data, requiring no auxiliary communication necessary to trigger the transmission of the standard metering data. Endpoint must store a minimum of 120 days of time-synchronized hourly reading data. In the unforeseen event that the communication system in unavailable for a period of time, readings continue to be captured and stored and returned to the utility upon system restoration. The endpoint must be capable of being remotely programmed for reading intervals of 1 hour or 15 minutes.

ENVIRONMENTAL - The endpoint shall, at a minimum, be able to withstand temperatures between  $-40^{\circ}$  F to  $+140^{\circ}$ F. In addition the endpoint shall be fully potted to withstand harsh environments. Endpoints with

replaceable batteries are not acceptable due to the rapid changes in endpoint technology.

WIRE TAMPER DETECTION - The endpoint must utilize a three-wire conductor cable, allowing monitoring of the integrity of its connection to the meter encoder. It will also indicate a tamper alert status within the endpoint transmission signal if either a short or open-circuit condition is sensed in the three-wire connection.

LEAK DETECTION - The AMA system will feature a potential leak detection algorithm. The alert notification will automatically be removed when a two-hour period with no water consumption is detected.

INTERVAL DATA - The endpoint must have the ability to transmit and store the top of the hour meter reading data at least once per day. IR PROGRAMMING - The endpoint will have infrared communication connection to aide in installation and troubleshooting.

RF PROGRAMMING - The endpoint will be capable of two-way communications with the AMA system, which allows for endpoint firmware upgrades and endpoint clock synchronization.

ENCODER COMPATIBILITY - A single endpoint shall be available which is fully programmed and capable of being used in conjunction with the Badger Meter ADE®, HRE, HRE-LCD, Sensus® ECR II or ICETM, Neptune® ProRead®, ARB®-V and Ecoder®, Hersey® Translator and the Elster AMCo InVISIONTM or ScancoderTM encoders, the Metron-Farnier Hawkeye, or equal.

#### 510. Distribution Leak Detection

The system must offer an integrated acoustic leak monitoring system that monitors the distribution system for leaks and reports status back to connected endpoint.

FUNCTIONALITY - The standard AMA endpoint must be wired to an acoustic leak detection sensor and magnetically attached to the valve keys of the distribution system water mains. System sensors located at or near the home are not acceptable.

# 512. AMA Software - Performance Requirements

The software shall be compatible with the Towns billing system. Integration with "Williamson" Billing Software is required. The manufacturer will fully host and manage the AMA software. The AMA software will be hosted on a web-based network platform where any PC connected to the internet, using a compatible web-browser with user's assigned credentials, will be able to access the system. This software provides twelve (12) easy-to-use dashboard "widgets" to enable users to perform the following functions, including:

□ Customer notice - allows the utility to send data out to users, □ Endpoint health - percentage of successful transmissions within
past 24 hours, plus alarms
$\square$ Gateway health - percentage of gateways successfully transmitting
data
$\square$ Top accounts by usage - displays top water users in system
$\square$ Favorites - defined by individual utility user, displays those
favorite accounts they want to track
$\square$ What's new - describes new features added since last software update
$\hfill\Box$ Technical support - provides contact information and web-ex link for technical support
□ Customer outreach monitoring - reports the number of customers using the consumer engagement tools
□ Account groups - defined by individual utility user, allows comparison of user-defined groups of accounts
☐ System water usage - allows historical view of daily total system Consumption
$\square$ Flow health - compares daily total system consumption by user type $\square$ Billing reads - transfers data to and from billing
514. ADVANCED METERING ANALYTICS
The AMA software platform shall allow the utility to define metering
or asset based exception analytics that affect utility operations such
as:
Metering Based Configurations
☐ Hourly / Daily Consumption
☐ Consumption Percentages
☐ Exceptions (Continual Usage Leaks, Cut-Wire Tamper, No Usage,
Reverse Flow, Encoder Error)
Asset Based Configurations
☐ Endpoint and Network Operational Status
The AMA software shall continually monitor the incoming data to alert utility personnel when an exception condition exists, thus allowing
the utility to make better and faster business decisions.
516. CONSUMER ENGAGEMENT
The AMA software shall provide a consumer engagement module that
includes online access and a smart phone application to allow the
utility customer access to their usage information.
The AMA Software suite shall deliver four distinct ways to engage
utility customers:
□ An online consumer engagement platform that enables customers to
view and understand their usage profile through easy-to-understand
consumption graphs, and provides a simple method to establish alerts and water budgets to better manage their usage. Through this

platform the utility shall be able to communicate with their

customers by posting utility notifications and alerts that will be visible upon login by the customer.

□ A Smartphone that brings the power of the online consumer engagement platform to the customer's iPhone or Android device.

□ An eSummary electronic information delivery service, providing the customer usage information, alerting, reporting, billing to the customer's e-mail inbox. □ A paper-based Summary of the customer's usage information that the utility may provide with the customer's billing statement.

REPORTING CAPABILITIES - Reports and tables generated by the software will have the ability to easily select and compile particular data for printing or exporting via csv format. The software will allow a utility to search the database to easily locate specific customer information and readings. Historic customer reading information will be converted to consumption and allow graphical display for printing or exporting via csv format.

#### 518. Software/Endpoint Installation and Training

The manufacturer's certified training personnel shall setup and test the AMA software for the utility. Upon successful completion of the set-up, the manufacturer's certified training personnel shall provide training on the operation and maintenance of the system, and endpoint installation. Follow up customized training will be available. To support a community of users, manufacturer will provide periodic webbased training on the different features of the AMA software to ensure the user can enjoy all the benefits the system provides. The manufacturer must offer its own line of positive displacement disc meters for residential and commercial applications, as well as its own full line of large commercial meters, offering turbine, compound, and fire service meters. The manufacturer must also offer battery powered and line powered (where appropriate) electronic (static) meters for both residential and commercial applications.

#### 520. Technical Support

The manufacturer must have a staff of technical support personnel trained in all aspects of the metering and AMA system. Technical support must be available via the phone 24 X 7. After-hours return calls must be guaranteed within 30 minutes.

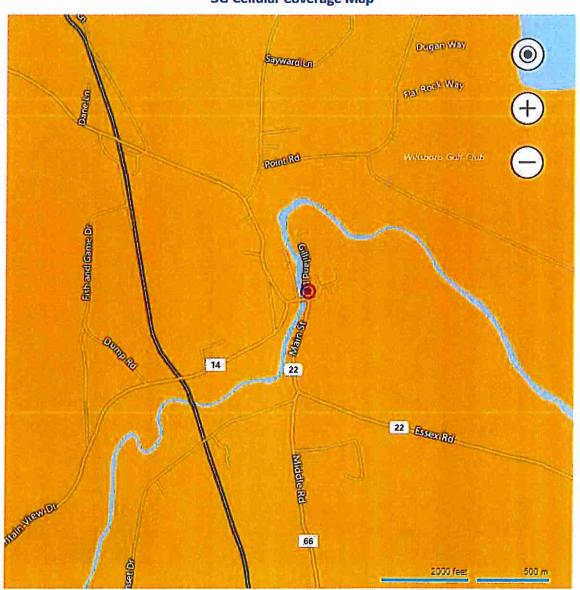
# 522. Experience

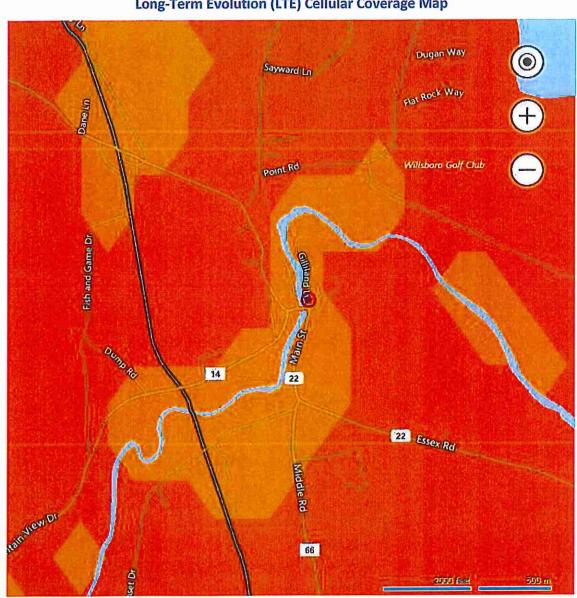
The manufacturer shall have a minimum of twenty years of product experience in the field of water AMR / AMA and should have sold a knowledge of AMR or AMA endpoints (touch-read not included) into water utilities over the past fifteen years.

# **SECTION VI**

# **APPENDIX**

**3G Cellular Coverage Map** 





Long-Term Evolution (LTE) Cellular Coverage Map