



REQUEST FOR QUALIFICATIONS and PROPOSAL

RFQ/P No.: 19-02

Due Date and Time: April 10, 2019 at 2:00 P.M.

Title: AMI Water Meter Replacement Program

Special Instructions:

The following information must appear in the lower left hand corner of the envelope:

RFQ/P No.: 19-02

Not to be opened until April 10, 2019 at 2:00 P.M.

Return Bids to:

East Lyme Water Department
PO Box 519
108 Pennsylvania Ave
Niantic, CT 06357

RETURN THIS FORM IMMEDIATELY

East Lyme Water Department,

Acknowledgement of Receipt of RFQ Documents

RFQ/P No.: 19-02
Title: AMI Water Meter Replacement Program

Please take a moment to acknowledge receipt of the attached documents. Your compliance with this request will help the East Lyme Water department to maintain proper follow-up procedures and will ensure that your firm will receive any addendum that may be issued.

Date Issued: 03/13/2019
Date Documents Received: ____/____/____
Do you plan to submit a response? ____ Yes ____ No

Company Name: _____
Address: _____

Telephone: _____ Fax: _____
E-mail Address: _____
Received by: _____

Note: Faxed or e-mailed acknowledgements are requested.
Fax No.: (860)739-6930
E-mail: mwright@eltownhall.com

Fax or e-mail this sheet only. A cover sheet is not required.

DO NOT FAX OR E-MAIL YOUR RESPONSE TO THIS RFP



Town of East Lyme

Water Department

PO Box 519

Niantic, CT 06357

REQUEST FOR QUALIFICATION/ PROPOSAL (RFQ/P)

The East Lyme Water and Sewer Commission is soliciting proposals for the removal and replacement/installation of residential, commercial, and industrial water revenue meters. The scope of the project and the technical requirements are contained within this Request for Proposal.

The East Lyme Water and Sewer Department will receive and protect sealed qualifications and proposals for the **AMI Water Meter Replacement Program until 2:00 P.M. on April 10, 2019, at which time the qualification portion of the RFQ/P will be publicly opened.** All proposals are to be delivered to the East Lyme Water Department, PO Box 519, 108 Pennsylvania Ave, Niantic, CT 06357.

Bid surety in the form of cash, certified check or bid bond in the amount of five percent (5%) of the total bid is required at the time of bid.

Copies of the RFQ/P Documents may be downloaded from the following websites:

<http://www.eltownhall.com> RFQ/P Section of Public Works

<http://das.ct.gov>

Questions regarding this RFQ/P must be submitted in writing no later than 4:00 P.M. on April 1, 2019, to Bill Scheer at Bscheer@eltownhall.com or by facsimile to (860)739-6930.

The proposer with the highest overall ranking including cost consideration will be considered as the low, responsive and responsible/qualified candidate for this project. (See specifications for details)

No Proposer may withdraw its proposal within 3 days of the proposal opening date. Should there be reasons why the contract cannot be awarded within the specified time, the time may be extended by mutual agreement between the Town of East Lyme and the designated, low, responsive and responsible/qualified proposer

The East Lyme Water and Sewer Department referred to as the "Town" reserves the right to accept or reject any and all proposals, in whole or in part, to waive technical defects, minor irregularities and omissions if, in its judgment, the best interests of the East Lyme Water Department will be served.

All Proposers must submit an original copy of their proposal in (2) sealed envelopes bearing the name and address of the Proposer and the RFQ/P number.

The Town of East Lyme is an Equal opportunity employer. Responding Proposers must ensure that employees and applicants for employment are not discriminated against because of their race, color, religious creed, age, marital status, national origin, ancestry, sex, gender identity or expression, intellectual disability, mental disability or physical disability, including, but not limited to, blindness, unless it is shown by such Proposer that such disability prevents performance of the work involved.

Any contract awarded under this Request for Qualification/Proposal is expected to be funded by a loan from the State of Connecticut Drinking Water State Revolving Fund and will be subject to requirements of Subsections (h), (i), and (o) of Section 22a-482-4 of the RCSA [RCSA Sections 22a-482-4(i)9(A)]. The State of Connecticut will not be party to this RFQ/P or any resulting contract.

This project is subject to Disadvantaged Business Enterprise (DBE) requirements. The requirement for DBE

subcontractor participation, expressed as a percentage of the Total eligible contract amount shall be a minimum of 8.0 percent with the following makeup. (MBE 3.0 percent & WBE 5.0 percent).

The project may be modified prior to proposal opening. Any modifications will be addressed in addenda. Addenda to RFQ/P documents may be issued up to five days prior to proposal opening, posted, and emailed to candidates who have obtained project documents. Proposals may be withdrawn prior to bid opening until 3 days before bid opening, but they may not be resubmitted.

All Proposers must submit an original copy of their proposal in (2) sealed envelopes bearing the name and address of the Proposer and the RFQ/P number:

Envelope #1: Technical Proposal contains Executive Summary, Corporate Overview and Project Team, Project Management Plan, Required Documents (Non-Collusion Affidavit, Non-Discrimination in Employment Form, East Lyme Water and Sewer Safety Guidelines Acknowledgment, Proposer's Company Safety Policies/Procedures, OSHA violations if applicable for previous 5 years, Signed Clean Water Fund Memorandum, DPH DBE subcontractor form, Professional licenses held if applicable, warrantee for labor and installation).

Envelope #2: Cost Proposal form completely filled out and totaled, and Bid Bond.

East Lyme Water Department

PO Box 519

Niantic, Connecticut
06357

Specifications For:

AMI METER REPLACEMENT PROGRAM



RFQ/P No. 19-02

Opens
April 10, 2019

**AMI Meter Replacement Program for
East Lyme Water Department
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BID INSTRUCTIONS AND GENERAL CONDITIONS

1. "Town" refers to the Town of East Lyme Water and Sewer Department. "Utility Engineer" refers to the Utility Engineer or his designated representative. "Contractor" refers to successful bidder (company contracted by Town to perform work under this contract).
2. Bids shall be received at the office of the East Lyme Water and Sewer Department at the East Lyme Town Hall, Niantic, Connecticut, until **2:00 p.m. Thursday April 10, 2019** and then the qualifications portion of the Bid will be publicly opened. The award shall be made at a later date by the Town.
3. Bids must be made out and signed in the name of the person or business entity which shall perform the work, and if a corporation, it must be fully and properly executed by a person authorized to act on behalf of the corporation.
4. Bids received later than the time and date specified shall not be considered.
5. Bids may be withdrawn prior to the time set for opening bids, but bids may not be re-filed after they have been withdrawn.
6. Unbalanced bids shall not be considered in awarding contract.
7. Change orders shall have a maximum of 15% mark-up on labor and material costs, and a maximum of 5% of cost incurred by subcontractors. Material purchased as part of the contract shall have a maximum 15% mark up.
8. The Town reserves the right to reject any or all bids, and to waive informalities or technical defects.
9. Goods and services provided to the Town are exempt from Federal Excise Taxes and the Sale and Use Tax of the State of Connecticut. Tax exempt certificates shall be supplied to the contractor for products and services supplied to the Town as part of this project.
10. Bids must be accompanied by a surety bond in the amount of five percent (5%) of the total bid price payable to the Town of East Lyme. The bond shall be in the form of a certified check or Bid Bond. Said bond shall be returned to the unsuccessful bidders upon award of the contract or, if no award has been made, within ninety (90) days after the opening of bids. If the successful bidder fails to execute the contract and furnish the required bonds including insurance coverage within ten (10) calendar days after he has received notice of the acceptance of the bid, the bond shall be forfeited to the Town. Upon receipt of a payment bond, and a performance bond from the successful bidder, said bid bond shall be returned.
11. The bidder agrees that this bid shall remain open for acceptance for ninety (90) days after the opening and no bidder may withdraw his bid within said time period. Should there be reason why the contract cannot be awarded within the specified time, the time may be extended by mutual agreement between the Town and the designated, low, responsive and responsible/qualified proposer.
12. The successful bidder must furnish a performance bond and a payment bond in the amount of the project costs. The bonds shall be executed by the bidder as principal with a surety satisfactory to the Town.
13. The successful bidder shall secure and maintain such insurance as shall protect him from claims under Workers' Compensation Acts. He shall secure and maintain general liability injury, death or property damage, which may arise from the performance of his service under this contract as detailed below. He shall designate the Town as additional named insured in his general liability policy, and shall furnish the Town with a certificate or other proof of insurance which he, as part of this contract, must carry. The "Hold Harmless" endorsement of the insurance shall include the interest of the Town of

East Lyme. The Contractor and Subcontractors and other interests shall also be so named. This policy shall insure against all risks of physical damage. The provisions of this paragraph shall apply to and be incorporated into any subcontracts regarding this project between the successful bidder and his subcontractors.

INSURANCE REQUIREMENTS

The successful bidder shall secure and maintain general liability injury, death or property damage, which may arise from performance of his service under this contract in the amount of at least:

1. Commercial General Liability:
 - General Aggregate: \$2,000,000
 - Products/Completed Operations Aggregate: \$2,000,000
 - Each Occurrence: \$1,000,000
2. Automobile Liability:
 - Each Accident: \$1,000,000
3. Excess (umbrella Liability) Liability: \$5,000,000
4. Workers' Compensation and Employer's Liability:
 - Statutory Workers Compensation
 - \$1,000,000 each accident / \$1,000,000 disease-policy limit / \$1,000,000 disease-each employee

The successful bidder shall designate the Town of East Lyme as additional named insured in his liability policy. The successful bidder shall furnish the Town with a certificate or other proof of the required insurance and coverage limits. The provisions of these requirements shall apply to and be incorporated into any subcontracts regarding this project between the successful bidder and his subcontractors.

14. The successful bidder shall indemnify and hold harmless the Town against any liability arising out of negligent acts, errors, or omissions of the bidder, his employees or agents.
15. The successful bidder must be prepared to execute the contract within ten (10) calendar days after receipt of notice of the award of the contract.
16. Immediately after execution and delivery of the contract, and prior to commencing work, the Contractor shall provide the Town a construction project schedule showing proposed dates of commencement and completion of each of the various components of work required under this Contract.
17. After determining the amount of the proposed contract, the Town must finalize a bonding resolution and execute a DWFRF funding agreement with the State prior to contract award. This will be accomplished between the bid opening date and the Contract award date. Contract award is subject to the Town successfully completing these items.

18. The successful bidder must be prepared to commence work on **June 17, 2019**. The approximate project schedule is as follows:
Approximate Schedule:
Bid opening: 4/10/19
Tentative Interview Dates April 17th and 18th
Contract award: 6/3/19
Contract signing: / notice to proceed 6/17/19
50% completion: 11/29/19
95% (substantial Completion):4/1/20
19. If the contractor is delayed in the completion of the work by changes ordered in the work, or by weather conditions, strikes, lockouts, fire, unusual delay by common carriers or other causes beyond the contractor's control, he shall make a written request for an extension of time within which the contract may be completed. Such request shall be submitted to the Town not less than ten (10) days before the date on which the work described in the contract is to be completed. Any such extension shall be in writing, and signed by the Town's representative.
20. Liquidated damages will be assessed for each calendar day (Saturdays, Sundays and Holidays included) that the Contractor fails to achieve substantial completion of the project after 30 days from the agreed substantial completion (95%) date. Liquidated damages shall be assessed at the rate of \$100 per calendar day.
21. The contractor may request monthly payments for the value of work performed in accordance with the Contract, calculated at Contract unit prices for work that is complete and accepted in place. Payment to the contractor will be made after approval by the Water and sewer Commission and having received a disbursement of DWSRF funds. Applications for payment should be timed to coincide with the Water and Sewer commission meetings to ensure the shortest possible payment delay. Upon completion of the project, the contractor shall submit all lien waivers and a final statement (minus retainage) for payment, which shall be paid by the same process. Acceptance of the final payment by the contractor shall constitute a release of all claims against the Town arising under or by virtue of this contract.
22. The Town shall retain an amount equal to five percent (5%) of the final contract price during the execution of the contract. This amount shall be reduced to 2% for one year from time of contract substantial (95%) completion. This retainage shall serve as a one-year guarantee on all work associated with this contract to be finished after substantial completion and shall be used as surety to correct any project deficiencies which may arise for one year following substantial completion of this contract.
23. Prior to each payment, the contractor shall provide the Town with lien waivers verifying payment to all subcontractors for amounts due, whether for labor performed or materials furnished, when either is associated with this contract.
24. The General Contractor shall include in each of its subcontracts a provision requiring each subcontractor to pay any amounts due any of its subcontractors, whether for labor performed or materials furnished, within 30 days after such labor performed or for materials furnished.
25. The Utility Engineer or his designee shall perform any inspections. The contractor is to notify the Town of any discrepancies as they arise, and proceed as directed.
26. The Town must be given 24 hours notice to perform inspections. Notice applies to consecutive Town recognized workdays. Inspectors are not available on weekends and Town approved holidays. Activities requiring Town inspections must be accomplished when inspectors are available. **It is the contractor's responsibility to verify holidays and no-inspection coverage ahead of time.**

27. The contractor agrees that the Town may make changes to the plans for the work that may be deemed necessary during the progress of work. The Town may also change the amount of work to be performed under this contract without invalidating this contract. If any such changes are made, they shall be made by written change order signed by the Town's representative. If such changes affect work for which a lump sum price is fixed, the written change order shall specify the amount by which the lump sum shall be increased or decreased. If such changes affect work for which a unit price is set, payment for such work shall be based on measured final quantities and not estimated quantities. Final measured quantities shall be based on pay limits as established by the plans and specifications for this contract. There shall be no adjustment of the *unit prices* if final measured quantities vary from the estimated quantities.
28. The Contractor shall satisfy all the requirements and conditions as listed in the Specifications section of this Invitation to bid.
29. The Contractor shall assume all liability for claims resulting from damage or injury associated with this project.
30. This is a professional services contract and is **NOT** subject to DAS prequalification and is **NOT** subject to prevailing Wages.
31. The Town will provide a location to store conex boxes for material storage and one or two work trailers at 8-12 Roxbury Road with access to electricity.

END OF INSTRUCTIONS AND GENERAL CONDITIONS

AMI Meter Replacement Program for East Lyme Water Department Technical Requirements

1.0 Purpose:

The East Lyme Water Department provides water to approximately 6,586 customers involved in this project. It is municipally-owned and governed by a nine-member Commission. The Town has been working towards implementing an Advanced Metering Infrastructure (AMI) in order to enhance customer services by providing real-time leak detection to homes, identify water pipe breaks in homes when they happen, and provide the customer and the utility with more frequent and accurate water usage readings.

The Town has selected Sensus USA, a division of Xylem Inc to single source supply the meters and AMI technology. Currently there are approximately 300 Sensus iPERL meters installed and approximately 4,675 touch pads compatible with Sensus AMI radios installed in the East Lyme water system. There are approximately 1,200 ORs (outside readers) that are connected to the existing meters with wires. These will need to be replaced with touchpads and new wires. All 6,586 meters will need new Sensus AMI radios.

The East Lyme water Department is soliciting a Request for Proposals (RFP) for the removal and replacement of approximately 6,375 residential, commercial and industrial water revenue meters, the installation of approximately 6,586 Sensus radios (MXUs), and a varying number and configuration of wires and touch pads. These numbers are approximate and shall be verified in the field.

2.0 Project Scope:

The work consists of but is not limited to the following:

- 2.1** Removing and replacing approximately 6,286 watermeters from 5/8" to 1". All required washers shall be provided by the contractor and included in the unit cost. The IPERL and radio specifications are included in Sec 13. All meter replacements are paid for by unit costs per meter by size.
- 2.2** Meters, Sensus radios, touchpads, and remote meter wires will be purchased by the Town. The contractor shall be responsible to arrange for ordering, delivery, returns, and storage of these items until installation. The contractor will be completely responsible to safely secure these items from theft and damage at all times. The contractor will keep ongoing inventory records of all purchases, inventory, and returns of all products so the Town can pay Sensus for the products they have delivered.
- 2.3** Meters that are 1" are technically the property of the home or business owner. The removed meter shall be offered to the owner to keep after replacement. If they do not want the meter, it becomes the property of the contractor. All other replaced meters 5/8" and 3/4" shall become the property of the contractor. Any scrap value to the contractor of these meters shall be reflected in decreased units prices provided in the bid.
- 2.4** Approximately 150 meters that will receive a M510 radio do not have a touchpad or wires installed. A new touchpad will need to be installed by drilling a hole or holes from the meter location to an appropriate radio location on the outside of the house or structure. The new

wires will be run from the meter to the outside and attached to a new touchpad. A M510 radio will then be coupled with the touchpad and attached with two new stainless steel screws in appropriate location. This will be paid for as the “Install M510, wires, and touchpad in building or structure that does not have one installed” unit cost.

- 2.5** Approximately 1200 meters that will receive a M510 have an OR (Outside reader) that is connected from the meter to the outside of the building by wires. A new remote meter wire shall be installed in its place by using the existing wires to pull the new ones through the wall or by using the same hole. A new touchpad shall then be connected to the newly installed remote wires. This shall be paid for as the “Install M510, wires, and touchpad in building or structure to replace OR reader” unit cost. The removed outside reader and wires become the property of the contractor to properly dispose of.
- 2.6** Approximately 4675 customers have an existing Sensus touch pad already wired to the existing meter. The installation of the Sensus radio M510 consists of affixing it to the existing exterior touch pad. The M510 shall be attached to the touchpad by using two new stainless steel screws that go through the M510. The existing touchpad may need to be removed and reattached if the M510 will not fit on it properly. The two new screws can go through the M510 and the touchpad to attach the two as a unit. The cost of the screws shall be included in existing unit costs. This shall be paid for as “Install M510 radio on existing touchpad” unit cost.
- 2.7** There are approximately 561 meter pits. After replacing the meter which is paid for separately, a Sensus Smartpoint M520 and remote meter wire shall be installed by drilling a hole in the meter pit top and installing the M520 per manufacturer’s instructions. If there is dirt or debris in the pit, the contractor shall remove and properly dispose of it until there is 2” clear under and around the meter. If the meter pit is flooded, then the contractor shall pump the water out prior to meter replacement. The wires shall be connected with gel caps for waterproofing in meter pits. This will be paid for as “Install M520 radio and wires in meter pit” unit cost. If this is a larger meter pit that would be better suited to have a touchpad and Sensus Smartpoint M510 installed, then this configuration shall be paid for as a the “Install M510, wires, and touchpad in building or structure that does not have one installed” unit cost.
- 2.8** Almost all meters are a simple meter swap with existing lay length the same as the new meters. If plumbing work is required to change the lay length, pipe size, or replace a valve or other item that leaks during the replacement, the contractor will use a licensed plumber and charge the Town the hourly rate from the approved bid. All other unit work like touchpad or radio installations shall be performed by the installer, not the plumber, and billed at the unit costs. Any work necessary as the result of damage cause by the contractor shall be at the contractors own expense.
- 2.9** If the meter is inside, before replacing the meter, the installer must verify that there is an acceptable permanent ground wire in place on both sides of the meter. For all 5/8”, 3/4”, and 1” meters that are in the house or within 20 feet of the house in a meter pit, a new #4 copper ground conductor with properly sized brass clamps shall be installed by the contractor prior to removing the meter if required. If plastic pipe is on either side or both sides of the meter and adding a jumper would not result in grounding the system, then the jumper shall not be required. The installation of the grounding conductor shall be paid for as the “Install appropriate Electrical jumper” unit cost.
- 2.10** A map depicting meter locations is provided as Attachment 2. The Town reserves the right to adjust quantities. Actual number of meters and Sensus Radios to be deployed will be based on the actual number of meters and radios that are located in the field.
- 2.11** The contractor shall make a determination of water service material type prior to water meter exchange, with results annotated on Attachment 1.

- 2.12 The contractor shall verify post installation water meter communication utilizing Sensus Handheld Data Collection Computer (or equivalent) that is supplied by the contractor. Post installation, the meter must be capable of being received from one of two AMI antennas that will be installed in town.
- 2.13 The contractor shall catalogue, store, and dispose of removed meters.
- 2.14 The customer Scheduling / Notifications is described in Section 3.0 (Deployment Requirements).
- 2.15 Data Collection, Recording and Quality Assurance is described in Section 4.0 (Data Collection, Recording, and Quality Assurance Requirements).
- 2.16 The contractor shall provide performance metrics to the Town per Proposer's plan.
- 2.17 The contractor shall provide status reporting periodically to the Town per Proposer's plan.
- 2.18 For installation Warranty see Section 11.0 (Proposal Requirements).

3.0 Deployment Requirements:

- 3.1 Deployment strategy based on map and meter info.
- 3.2 Meters shall not be replaced within +/- 3 days of meter read date. Meter reads will be coordinated with the Town.
- 3.3 Customer scheduling will consist of a minimum of three attempts. First attempt will be through written notification via the US Postal Service. Second attempt will consist of a telephone call to the customer. Third attempt will consist of a door knock with hanger indicating instructions on scheduling. Scheduling shall be in a 2 hr window unless otherwise agreed by the Town.
- 3.4 All employees shall have in their possession company identification that will be visibly worn. All company vehicles will be marked with an "East Lyme Water Department Contractor" magnetic sign (provided by the proposer).
- 3.5 The contractor shall provide to the Town up to date background checks for all employees that will be in the field or in Town buildings.
- 3.6 Contractor shall provide multiple (2 or more) means for customer scheduling and customer inquiries.
- 3.7 Provide notification letter to each customer at least two weeks prior to meter install date with their confirmed scheduled appointment. Letter shall include, but is not limited to, name of contractor, working on behalf of the Water Department, purpose of work, area affected and time period of visit. Wording of letter shall be approved by the Town.
- 3.8 Provide each customer with a door hanger informing them of work completion (if all work is exterior) or need for a revisit with reason and contact info for rescheduling the revisit. Wording of door hanger shall be approved by the Town.
- 3.9 Provide method of answering customer concerns and scheduling appointments with availability between the hours of 8:00 am to 8:00pm during regularly scheduled work days.
- 3.10 Final communication requirements may be agreed upon at the time of contract negotiation.
- 3.11 It shall be understood that more than one visit may be necessary. (ie. person not home at scheduled time) These shall be included in the contractor's price for meter replacement.

4.0 Data Collection, Recording and Quality Assurance Requirements:

- 4.1 Each related observation \ inspection made at the meter installation site will be carefully documented and delivered electronically at the end of each business day in the format provided by the Town.

- 4.2 The file format shall be in Microsoft Excel 2010 or acceptable Town agreed upon format containing all of the necessary values. An example of file format is provided as Attachment 1. The final items on the sheet will be determined prior to meter deployment.
- 4.3 The naming convention for these files will be standardized to include date of meter exchange.
- 4.4 Contractor provided data is highlighted in Attachment 1 and will include, at a minimum, replaced meter final reading, new meter number, installation date, new meter initial reading, new meter serial number, and new meter radio remote identification number, East Lyme Parcel GIS-ID, GPS coordinates, and service material type (typ. copper).
- 4.5 A photo file (E.G., *.jpg or *.pdf) of the physical meter face of the replaced and new meter will be required. Naming of each photo file shall include customer address, meter number and date the photo was taken.
- 4.6 All data will need to be entered /uploaded to the Sensus database or Dropbox or similar account, provided by the contractor, to allow the contractor and the Town to access uploaded data simultaneously.

5.0 Safety and Health Requirements:

- 5.1 The proposer if selected, without additional expense to the Town, shall be responsible for obtaining necessary licenses and for complying with any applicable federal, state and municipal laws, codes and regulations in connection with the prosecution of the services.
- 5.2 All work must be performed in compliance with all Local, State, and Federal safety regulations and guidelines.
- 5.3 The proposer if selected is responsible for ensuring OSHA compliance, and this responsibility includes supervising and monitoring work site conditions for OSHA compliance.
- 5.4 If the proposer selected uses subcontractors, the contractor is responsible for ensuring the subcontractor fulfill this obligation with respect to employee safety.
- 5.5 The proposer if selected shall have a supervisor/foreman on the job site at all times. A supervisor/foreman in this context means one who is capable of identifying existing and predictable hazards in the surroundings, or work conditions that may be unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measure to eliminate those conditions.
- 5.6 The proposer if selected must demonstrate compliance with all applicable OSHA, State, and East Lyme Water department standards.

6.0 Drinking Water State Revolving Fund (DWSRF) Requirements

- 6.1 Any contract or contracts awarded under this Request for Proposals are expected to be funded in part by a loan from the DWSRF Program. Neither the State of Connecticut nor any of its Departments, agencies, or employees is or will be a party to this Request for Qualification/Proposal (RFQ/P) or any resulting contract. This procurement will be subject to the requirements contained

in subsections (h), (i) and (o) of Section 22a-482-4 and 22a-482-4(f)(3)(A-L) of the RCSA, . The successful Proposer is required to meet all DWSRF requirements/conditions.

- 6.2 Proposers must comply with all State and Federal equal employment opportunity and affirmative action laws and regulations and Connecticut EO's 3, 16, 17.
- 6.3 This contract will be subject to subcontracting Minority and Women's Business Enterprise (MBE/WBE) goal conditions (3.0 and 5.0 percent, respectively). Please see Attachment 5 for more information.
- 6.4 The proposer if selected will allow full site and document access to CTDPH, CT DEEP or any other State and Federal representatives for the duration of the project.

7.0 Use of American Iron and Steel (AIS) Requirements

- 7.1 The Proposer shall be aware of the requirements of the "Use of American Iron and Steel" (AIS) provision of the Consolidated Appropriations Act (CAA) (H.R. 3547), enacted as Public Law (P.L.) 113-76 on January 17, 2014. This provision requires iron and steel products used in DWSRF-funded projects to be produced in the United States.
- 7.2 Please see Attachment 6 which is the guidance document issued by the United States Environmental Protection Agency (USEPA), dated May 28, 2015. This document and additional information, definitions, requirements, covered iron and steel products and waiver procedures can be found on the CT Department of Public Health Website at: <https://portal.ct.gov/DPH/Drinking-Water/DWS/Use-of-American-Iron-and-Steel>.
- 7.3 De minimis Waiver (Attachment 6) – covers incidental components of eligible infrastructure projects that comprise no more than a total of 5% of the total cost of materials used in and incorporated into a project, and the cost of an individual item cannot exceed 1% of the total cost of materials used in and incorporated into the project.

8.0 DWSRF Project Signage Requirement:

- 8.1 Projects with a total project cost (planning, design and construction) of \$100,000 or more that are receiving funding (wholly or partly) from the Drinking Water State Revolving Fund (DWSRF) are required to have project signage. This requirement is intended to enhance the public awareness of the DWSRF and the positive impacts and benefits of the funding being provided by the State of Connecticut and the United States Environmental Protection Agency (EPA) to Connecticut's communities for public drinking water improvements. These projects have direct and tangible benefits to Connecticut's residents, businesses and visitors that are often taken for granted or go unnoticed. Awareness of the DWSRF funding is important to help gain public support for the DWSRF and communicate the importance of its role in lowering the overall cost to communities of maintaining safe and reliable public drinking water infrastructure.
- 8.2 This project is spread across many locations (i.e. water meter replacements) and does not have a defined location. In this instance rather than posting a sign, the Water Department will post information on our website regarding this project. In addition the proposer must include a single-page pamphlet with the initial scheduling notification that includes the following information at a minimum:
 - Name of facility, project and community
 - State SRF administering the program
 - Project is wholly or partially funded with EPA funding
 - Brief description of the project
 - Brief listing of water quality benefits to be achieved

Below is an example of the information for these pamphlets:

“The East Lyme Water Department Receives Drinking Water State Revolving Fund Loan Construction of upgrades and improvements to the East Lyme water service area were financed in part by the Drinking Water State Revolving Fund (DWSRF) in the amount of [insert amount of DWSRF funding]. The DWSRF program is administered by the Department of Public Health (DPH) with joint funding from the U.S. Environmental Protection Agency and the State of Connecticut. This project will replace water meters with advanced metering infrastructure water meters and will provide water quality benefits such as leak detection and enhanced information for water use reduction initiatives for community residents and businesses in East Lyme. DWSRF programs operate around the country to provide states and communities a low-cost financing alternative to maintain and improve the infrastructure that protects our valuable public drinking water resources nationwide. For more information on the DWSRF please visit the DPH’s DWSRF website (<http://www.ct.gov/dph/cwp/view.asp?a=3139&q=387340>).

9.0 Work on or Near Private Property Requirements:

- 9.1** Every effort shall be made to protect private or public property during installation. All areas damaged by the contractor shall be replaced in kind by the contractor at no additional expense to the Town. All materials not specifically described in other sections, but required for replacement work shall be new, first quality of their respective kinds, and subject to approval by the Town.
- 9.2** All areas affected by the installation outside of the work limits shall be repaired to the complete satisfaction of the Town.
- 9.3** Before, or at the time of installation, the installer shall inspect the existing meter setting, including piping and control valves. If the contractor determines that conditions are such that damage to the existing piping would result, the Installation Manager shall immediately contact the Utility Engineer. The contractor shall not attempt the installation until the site is inspected by an the Town, and shall postpone installation at that site until the Utility Engineer authorizes the contractor to proceed with the work.
- 9.4** The Town, at its option, may authorize the contractor to make any necessary repairs to service lines or piping, order the customer to make such repairs, or undertake such repairs itself. Any and all plumbing work other than the replacement of the meter itself and installation of a grounding jumper must be done by a Connecticut P-1 licensed plumber or someone under the direct supervision of the P1 plumber.
- 9.5** The contractor shall be responsible for correcting any leaks at the valves, couplings or service lines that could reasonably be attributed to the meter installation if reported by the East Lyme Water Department customers within 90 days of installation. The repair shall be made at the cost of the contractor.
- 9.6** The contractor shall survey customer satisfaction once an installation has been completed. The survey may be in the form of an automated telephone call, automated web based survey or other format approved by the Town. Results will be reported with performance standard metrics.
- 9.7** All customer complaints will be escalated to the Utility Engineer.

10.0 Provisions for Reporting and Recovering Archeological Finds:

- 10.1** In accordance with Federal and State laws, all construction contracts must contain a provision for reporting and recovering any archeological finds that may occur during the course of a project.

This requirement is noted on the Pre-Bid Construction Contract Application Checklist, Table II, Item A. xvii. Below is template language that may be used to satisfy this requirement. Additions or minor revisions to this language are acceptable, as long as they do not change the methods of required reporting or nature of the procedures to be followed, and will be reviewed during the pre-bid phase.

- 10.2** Should the Contractor or Engineer discover evidence of remains, such as stone masonry building foundations, bones or other items of archaeological significance, Contractor shall report these findings to (1) Owner, (2) Local Historical Society, (3) State Historic Preservation Office (860) 256-2761, and (4) Resident Project Representative, and shall exercise the utmost care to ensure that these areas remain undisturbed. Contractor shall allow recovery of such finds by the authorities, shall not remove such artifacts under penalty of law, and shall prevent construction or private vehicles from crossing over these areas. In addition, when directed by the Engineer, cover these areas with 1-ft common fill to the limits directed by the Engineer. Be advised that graves and any associated human remains are protected by Connecticut State law (C.G.S. Section 10-388 and 10-390). Any possible human skeletal remains must be reported to the State Archaeologist (860) 486-5248 and the State's Chief Medical Examiner (860) 679-3980 immediately upon discovery. If the State Archaeologist is unavailable, please contact the State Historic Preservation Office at the number above for immediate assistance.

11.0 Proposal Requirements:

The qualified proposer should submit a written proposal to include each of the following sections in two separate sealed envelopes:

Envelope #1: "Request for Proposal AMI Water Meter Deployment for East Lyme Water Department System Technical Proposal"

- A. Section 1 - Executive Summary
Provide a brief overview of your firm's experience with similar AMI installation projects (including any DWSRF funded projects) and why your firm is best suited to provide services for East Lyme Water Department Sensus compatible water meters to support the East Lyme Water Department AMI initiative. Include the number of utility installation projects similar in size scope, and complexity to the East Lyme Water Department AMI initiative as well as endpoints deployed (including percentages of meter sets inside buildings versus outside), project timelines and completion dates.
- B. Section 2 - Corporate Overview and Project Team
Provide general information on your firm, the key employees that will be assigned to this project, and similar background information for any subcontractor(s) that your firm intends to utilize. Assigned project team member information must include years of experience in project management and an overview of successful projects completed. Provide a list of no less than five (5) references in support of RFQ/P criteria requirements, including full contact information and contact person(s). Provide any available audited financial statements, internal financial reports, DUNS number, or other evidence of financial stability.
- C. Section 3 - Project Management Plan
Provide a detailed overview of how your firm intends to manage this project, including ongoing communication with the East Lyme Water Department, customer scheduling and communication plan, progress reporting, public relations, problem resolution, quality assurance, and overall installation plan that addresses all technical requirements as specified in this RFQ/P. A deployment timeline and project schedule must be included. The Town will provide the contractor if selected a detailed listing of all addresses that will require meter replacement.

D. Section 4 - Required Documents

The following completed documents must be provided with your proposal:

1. Acknowledgement: Receipt of Proposal Documents
2. Non-Collusion Affidavit (Attachment 10)
3. Non Discrimination in Employment Form (Attachment 11)
4. The East Lyme Safety Guidelines Acknowledgement, Proposer's Company Safety Policies, and Procedures (Attachment 3), OSHA violations (previous 5yrs)
5. DWSRF – Signed Clean Water Fund Memorandum (2016-003) & DPH Disadvantaged Business Enterprise (DBE) Subcontractor Form (Attachment 5)
6. Professional licenses held and/or which could reasonably be required by this project
7. Contractor warrantee for labor and installation related to this contract

Envelope #2: "Request for Proposal Water Meter Deployment for the East Lyme Water Department System Cost Proposal"

E. Section 5 - Proposal Cost

The Proposal Costs shall be fully completed for all items listed. Unit prices are to be all-inclusive of labor, equipment, overhead/profit, and all other associated costs for the item. Meters, radios, touchpads, and remote meter wires will be provided by the Town. Prices quoted must be firm for the duration of the project which is approximately one year. The Town reserves the right to negotiate all pricing with the successful firm and to eliminate any proposal cost item(s) that is/are cost prohibitive to this project.

The bid bond (Attachment 11) will also be included within this envelope.

12.0 Proposal Cost

Water Meters and Transmitter Module

Install 5/8" ID iPERL residential water meter (Qty.: approx. 6206) in building or meter pit	No. 6206	\$ _____ per each	Total per item (\$)
Install 3/4" ID iPERL residential water meter (Qty.: approx. 25) in building or meter pit	25	\$ _____ per each	
Install 1" ID iPERL water meters (Qty.: approx. 55) In building or meter pit	55	\$ _____ per each	
Install M510, wires, and touchpad in building or structure that does not have a touchpad or "OR" reader installed (M510 + Touchpad +wires)	150	\$ _____ per each	
Install M510, wires, and touchpad in building or structure to replace wired "OR" reader. (M510 radio + Touchpad + new wires to Replace "OR")	1200	\$ _____ per each	
Install M510 radio on existing touchpad - Use new screws through M510 to attached (M510 radio)	4675	\$ _____ per each	
Install Sensus M520 radio and wires in <u>meter pit</u> Includes drilling hole through meter pit cover (M520 and wires)	561	\$ _____ per each	
Repairs, modify piping to fit new meter Time & Materials Materials are separate + 15%	150 Hr	\$ _____ per Hr	
Install appropriate Electrical jumper cable and Clamps if one is not already installed for 5/8", 3/4" and 1" plastic meters only.	300	\$ _____ per each	
Total of extended prices:			Extended Total (\$) _____

Extended Total Written in Words:

\$ _____

- If installer cannot isolate water using the inside control valve(s), exterior curb stop, the contractor shall have the option of using a non-Freon-based freezing tool to restrict flow of water in the pipe. At no time shall the contractor use a crimping device to restrict flow. If it is necessary to cycle the curb stop valve, the contractor shall notify the Utility Engineer.
- Copper and lead inspection results will be documented on the daily data file (Attachment 1) as either copper, ferrous, lead.

13.0 Not used

14.0 Selection Criteria:

14.1 QUALIFICATION:

Proposals will be evaluated by the East Lyme's Water Departments RFQ/P proposer selection committee and the most responsive and responsible/qualified proposers will be ranked based on the criteria adopted by the selection committee and listed below. The information identified below shall be highlighted in the proposal:

1. Competence –
Proposers will be scored based upon their demonstrated ability to perform projects of similar scope and complexity , experience with other DWSRF funded projects is a plus, assessed through Section 1 (Executive Summary) of the Technical Proposal Requirements.
2. Conformance to Requirements –
Proposers will be scored based upon the extent to which the proposer's project management plan addresses the specified scope requirements from Section 2.0 (Scope) of the RFP, assessed through Section 3 (Project Management Plan) of the Technical Proposal Requirements.
3. Strength of Respondent –
Proposers will be scored based upon an assessment of financial stability, as evidenced by submitted financial documents in Section 2 (Corporate Overview and Project Team) of the Technical Proposal Requirements.
4. Ability –
Proposers will be scored based upon the extent to which the proposer's project management plan addresses their ability to obtain qualified resources, facilities, and equipment necessary to complete this project in a timely manner, assessed through Section 3 (Project Management Plan) of the Technical Proposal Requirements.
5. Past Performance –
Proposers will be scored based upon an evaluation of the references provided with respect to factors such to quality of work, size and nature of projects, and ability to meet deadlines, assessed through Section 2 (Corporate Overview and Project Team) of the Technical Proposal Requirements.
6. Project Plan –
Proposers will be scored based upon an evaluation of the project management plan to include (but not limited to) the proposers approach to communications with the East Lyme Water Department and the Water Department customers, scheduling, progress reporting, problem resolution, quality assurance, data collection/transfer plan, material acquisition and disposal plan, and overall installation plan.
7. Project Manager Experience –
Proposers will be scored based upon evidence of the Project Manager's experience managing projects of similar scope and complexity, experience with previous DWSRF funded projects a plus, assessed through Section 2 (Corporate Overview and Project

Team) of the Technical Proposal Requirements.

8. Warranty –

Proposers will be scored based upon an evaluation of the submitted warranty coverage of materials and labor, assessed through Section 4 (Required Documents) of the Technical Proposal Requirements.

The qualification submittals will be individually scored based on the criteria and the results will be tabulated. A minimum cutoff score will be determined based on the recommendation by the proposer selection committee.

Those proposers that scored above the cutoff score will be called for interviews. Interview scores will be given for these proposers based on the results of the interview process. The results of the interviews will be tabulated to show the overall scores.

15.0 COST:

The Proposal Cost envelope will then be opened and a final selection criteria, cost, will be applied to the rankings developed during the interview process. (Any proposer that was not selected for the interview process through Section 14.1. of the Selection Criteria shall not have the Cost envelope opened).

East Lyme intends to award a single contract for this project. The most responsible and qualified proposer will be the contractor who submits a proposal that received the highest score and whose proposal will be most the advantageous to East Lyme based on the price and the other factors considers in the evaluation.

The work shall be awarded to the low, responsive and responsible/qualified proposer. The East Lyme Water Department reserves the right to reject any or all proposals or part thereof; to waive any informality in same, or accept any proposal, including acceptance of other than the lowest cost proposal, as is deemed to be in the best interest of the Town.

Draft Contract:

AIA[®] Document A105[™] – 2017

Standard Short Form of Agreement Between Owner and Contractor

AGREEMENT made as of the 4 day of Oct in the year 2019
(In words, indicate day, month and year.)

BETWEEN the Owner:
(Name, legal status, address and other information)

Town of East Lyme, Connecticut acting through the Town of East Lyme Water
Department
P.O. Box 519
108 Pennsylvania Avenue
Niantic, CT 06357

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

and the Contractor:
(Name, legal status, address and other information)

[Redacted Contractor Information]

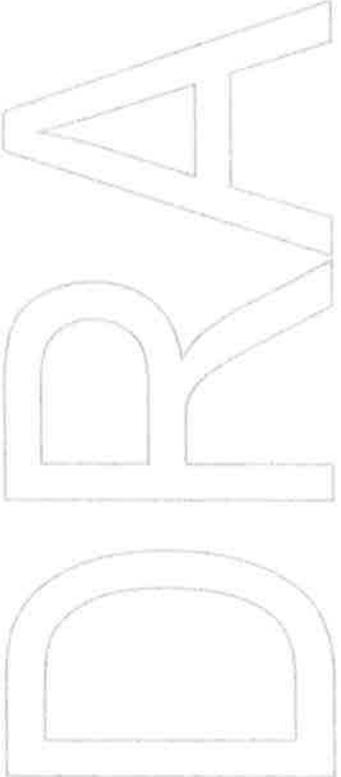
for the following Project:
(Name, location and detailed description)

AMI Water Meter Replacement program

The Architect:
(Name, legal status, address and other information)

Non Applicable

The Owner and Contractor agree as follows.



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TABLE OF ARTICLES

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ARTICLE 1 THE CONTRACT DOCUMENTS

The Contractor shall complete the Work described in the Contract Documents for the Project. The Contract Documents consist of

- .1 this Agreement signed by the Owner and Contractor;
- .2 the drawings and specifications prepared by the Architect, dated [redacted], and enumerated as follows:

Drawings:

Number	Title	Date
[redacted]	[redacted]	[redacted]

Specifications:

Section	Title	Pages
[redacted]	[redacted]	[redacted]

- .3 addenda prepared by the Architect as follows:

Number	Date	Pages
[redacted]	[redacted]	[redacted]

- .4 written orders for changes in the Work, pursuant to Article 10, issued after execution of this Agreement; and

.5 other documents, if any, identified as follows:

Owner's Request for Qualifications and Proposal No. 19-02, attached hereto as Exhibit A.

ARTICLE 2 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

§ 2.1 The Contract Time is the number of calendar days available to the Contractor to substantially complete the Work.

§ 2.2 Date of Commencement:

Unless otherwise set forth below, the date of commencement shall be the date of this Agreement.
(Insert the date of commencement if other than the date of this Agreement.)

June 17, 2019

§ 2.3 Substantial Completion:

Subject to adjustments of the Contract Time as provided in the Contract Documents, the Contractor shall achieve Substantial Completion, as defined in Section 12.5, of the entire Work:
(Check the appropriate box and complete the necessary information.)

Not later than () calendar days from the date of commencement.

By the following date: Fifty Percent (50%) of the Project shall be completed by November 29, 2019. The entirety of the Project must substantially complete by April 1, 2020.

§2.4 Liquidated Damages. If the Contractor shall neglect, fail or refuse to substantially complete the Work within the time herein specified, or any proper extension thereof granted by the terms of this Agreement then the Contractor does hereby agree, as part consideration for the awarding of this Contract, to pay the Owner the amount specified in the Contract, not as a penalty but as liquidated damages for such breach of Contract as hereinafter set forth, for each and every calendar day that the Contractor shall be in default after the time stipulated in the Contract for completing the Work the sum of One Hundred Dollars (\$100.00) per calendar day. Liquidated damages will be assessed as follows:

The first thirty (30) days after the Substantial Completion date – Zero Dollars (\$0.00) per calendar day.

The thirty-first day after the Substantial Completion date and after One Hundred Dollars (\$100.00) per calendar day.

The said amount is fixed and agreed upon by and between the Contractor and the Owner because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages the Owner would in such event sustain, the said amount is agreed to be the amount of damages which the Owner would sustain and said amount shall be retained from time to time by the Owner from current periodical estimates.

ARTICLE 3 CONTRACT SUM

§ 3.1 The Contract Sum shall include all items and services necessary for the proper execution and completion of the Work. Subject to additions and deductions in accordance with Article 10, the Contract Sum is:

(\$)

§ 3.2 For purposes of payment, the Contract Sum includes the following values related to portions of the Work:
(Itemize the Contract Sum among the major portions of the Work.)

Portion of the Work

Value

Not Applicable

§ 3.3 The Contract Sum is based upon the following alternates, if any, which are described in the Contract Documents and hereby accepted by the Owner:

(Identify the accepted alternates. If the bidding or proposal documents permit the Owner to accept other alternates subsequent to the execution of this Agreement, attach a schedule of such other alternates showing the amount for each and the date when that amount expires.)

§ 3.4 Allowances, if any, included in the Contract Sum are as follows:
(Identify each allowance.)

Item	Price

§ 3.4.1 The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents.

§ 3.4.2 Unless otherwise provided in the Contract Documents,

- .1 allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;**
- .2 Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit and other expenses contemplated for stated allowance amounts shall be included in the allowances; and**
- .3 whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the allowance.**

§ 3.4.3 Materials and equipment under an allowance shall be selected by the Owner with reasonable promptness.

§ 3.5 Unit prices, if any, are as follows:
(Identify the item and state the unit price and quantity limitations, if any, to which the unit price will be applicable.)

Item	Units and Limitations	Price per Unit (\$0.00)

ARTICLE 4 PAYMENTS

§ 4.1 Based on Contractor's Applications for Payment certified by the Architect, the Owner Payment, the Owner, who may in its sole discretion consult with the Architect, if any, concerning the Contractor's Application for Payment shall pay the Contractor, in accordance with Article 12, as follows:
(Insert below timing for payments and provisions for withholding retainage, if any.)

§ 4.1.1 The Owner shall make payment of the amount approved by Owner and the Town of East Lyme Water and Sewer Commission to the Contractor not later than thirty (30) calendar days after the date upon which the Owner and the Town of East Lyme Water and Sewer Commission approves all or part of the Contractor's Application for Payment and the Owner receives its disbursement for the Project from DWSRF. The Owner is under no obligation to pay the Contractor unless and until it receives its corresponding disbursement from DWSRF.

§ 4.1.2 Each Application for Payment shall be based on the most recent schedule of values or unit prices submitted by the Contractor in accordance with the Contract Documents. The schedule of values or unit prices shall allocate the entire Contract Sum among the various portions of the Work. The schedule of values or unit prices shall be prepared in such form and supported by such data to substantiate its accuracy as the Owner may require. This schedule of values, or unit prices unless objected to by the Owner shall be used as a basis for reviewing the Contractor's Applications for Payment.

§ 4.1.3 Applications for Payment shall show the percentage of completion or actual quantity of each portion of the Work as of the end of the period covered by the Application for Payment.

§ 4.1.4 Subject to other provisions of the Contract Documents, the amount of each progress payment for amounts designated as lump sums shall be computed as follows:

- .1 Take that portion of the Contract Sum properly allocable to completed Work as determined by multiplying the percentage completion of each portion of the Work by the share of the Contract Sum set forth in the schedule of values for items designated as lump sums in the Agreement; or multiplying the actual in place quantity of Work by the applicable unit price. All payments based upon either a lump sum or unit price shall be subject to retainage of five percent (5.0%).
- .2 If applicable, add that portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction (or, if approved in advance by the Owner, suitable stored off the site at a location agreed upon in writing), less retainage of five percent (5.0%) on the Work;
- .3 Subtract the aggregate of previous payments made by the Owner; and,
- .4 Subtract amounts, if any, for which the Owner or Architect, if any, has withheld or nullified a Certificate for Payment

§ 4.2 Payments due and unpaid under the Contract Documents shall bear interest from the date payment is due at the rate below, or in the absence thereof, at the legal rate prevailing at the place of the Project.
(Insert rate of interest agreed upon, if any.)

Not Applicable. No interest shall apply or be paid under this Agreement or at law. %

§ 4.3.1 Retainage of 5% shall be held by the Owner until Substantial Completion and reduced to 2%, provided there are no Owner offsets to the Contractor, including but not limited to the assessment of liquidated damages or actual damages. 2% of the Contract Sum shall be held by the Owner for one year from the date of Substantial Completion.

§ 4.3.2 The Owner's final payment to the Contractor shall be made no later than 30 days after the one-year anniversary of the date of Substantial Completion, provided all of the Work for the Project is fully and finally **ARTICLE completed.**

ARTICLE 5 INSURANCE

§ 5.1 The Contractor shall maintain the following types and limits of insurance until the expiration of the period for correction of Work as set forth in Section 14.2, subject to the terms and conditions set forth in this Section 5.1:

§ 5.1.1 Commercial General Liability insurance for the Project, General Liability	Each Occurrence General Aggregate Products/Completed Operations Aggregate Contractual Liability	\$1,000,000 \$2,000,000 \$2,000,000
Auto Liability	Combined Single Limit Each Accident	\$1,000,000
Umbrella (Excess Liability)	Each Occurrence Aggregate	\$5,000,000 \$5,000,000

written on an occurrence form, with policy limits of not less than (\$) each occurrence, (\$) general aggregate, and (\$) aggregate for products-completed operations hazard. If any policy is written on a "Claims Made" basis, the policy must be continually renewed for a minimum of two (2) years from the completion date of this contract. If

the policy is replaced and/or the retroactive date is changed, then the expiring policy must be endorsed to extend the reporting period for claims for the policy in effect during the contract for two (2) years from the completion date.

Workers' Compensation: Statutory Limits

§ 5.1.2 Automobile Liability— covering vehicles owned, and non-owned vehicles used, by Employers' Liability EL Each Accident \$1,000,000
EL Disease Each Employee \$1,000,000
EL Disease Policy Limit \$1,000,000

the Contractor, with policy limits of not less than ~~(\$)~~ per accident, for bodily injury, death of any person, and property damage arising out of the ownership, maintenance, and use of those motor vehicles along with any other statutorily required automobile coverage. Original, completed Certificates of Insurance must be presented to the Owner prior to Contract issuance. Contractor agrees to provide replacement/renewal certificates at least 60 days prior to the expiration date of the policies.

§ 5.1.3 The Contractor may achieve the required limits and coverage for Commercial General Liability and Automobile Liability through a combination of primary and excess or umbrella liability insurance, provided that such primary and excess or umbrella insurance policies result in the same or greater coverage as those required under Section 5.1.1 and 5.1.2, and in no event shall any excess or umbrella liability insurance provide narrower coverage than the primary policy. The excess policy shall not require exhaustion of the underlying limits only through the actual payment by the underlying insurers. The Owner, the Town of East Lyme and their respective departments, boards, commissions, agents, employees, officers, members, volunteers and affiliated entities (collectively, the "Additional Insureds") shall be named as an additional insured on the Contractor's insurance policy(ies). The Contractor shall include a provision in its agreements with its Subcontractors requiring that the Additional Insureds be named as additional insureds on the Subcontractor's insurance policies. The insurance of the Contractor and the insurance of the Contractor's Subcontractors shall be primary to any insurance available to the Additional Insureds, which insurance shall be secondary and non-contributory. The Contractor shall, before commencement of its Work, and prior to the commencement of the Work of any of its Subcontractors, submit to the Owner evidence of the aforementioned insurance requirements from itself and its Subcontractors in the form of a certificate of insurance and additional insured endorsements or actual insurance policies containing a blanket additional insured clause acceptable to the Owner. Failure by the Contractor to provide the endorsements required in this section shall entitle the Owner to withhold payment from any Application for Payment then due or to become due until such time as the endorsements are provided.

§ 5.1.4 Workers' Compensation at statutory limits.

§ 5.1.5 Employers' Liability with policy limits not less than ~~(\$)~~ each accident, ~~(\$)~~ each employee, and ~~(\$)~~ policy limit.

§ 5.1.6 The Contractor shall provide builder's risk insurance to cover the total value of the entire Project on a replacement cost basis.

§ 5.1.7 Other Insurance Provided by the Contractor

(List below any other insurance coverage to be provided by the Contractor and any applicable limits.)

Coverage	Limits

§ 5.2 The Owner shall be responsible for purchasing and maintaining the Owner's usual liability insurance and shall provide property insurance to cover the value of the Owner's property. The Contractor is entitled to receive an increase in the Contract Sum equal to the insurance proceeds related to a loss for damage to the Work covered by the Owner's property insurance.

§ 5.3 The Contractor shall obtain an endorsement to its Commercial General Liability insurance policy to provide coverage for the Contractor's obligations under Section 8.12.

§ 5.4 Prior to commencement of the Work, in addition to the proof for the additional insured requirements set forth above, each party shall provide certificates of insurance showing their respective coverages.

§ 5.5 ~~Unless specifically precluded by the Owner's property insurance policy, the Owner and Contractor waive all rights against (1) each other and any of their subcontractors, suppliers, agents, and employees, each of the other; and (2) The Contractor and the Contractor's Subcontractors and Suppliers waive all rights of subrogation against the Owner and the Town of East Lyme and their respective insurers, departments, boards, commissions, agents, employees, officers, members, volunteers and affiliated entities. The Owner, the Town of East Lyme and their insurers shall retain all rights of subrogation.~~

~~the Architect, Architect's consultants, and any of their agents and employees, for damages caused by fire or other causes of loss to the extent those losses are covered by property insurance or other insurance applicable to the Project, except such rights as they have to the proceeds.~~ § 5.6 The Contractor shall provide to the Owner a 100% Performance and Labor and Materials Payment Bond in a form acceptable to the Owner from a Surety licensed to do business in the State of Connecticut and acceptable to the Owner.

~~of such insurance.~~ § 5.7 The insurance provisions of this Agreement shall survive termination and/or full or partial performance of the Agreement.

ARTICLE 6 GENERAL PROVISIONS

§ 6.1 The Contract

The Contract represents the entire and integrated agreement between the parties and supersedes prior negotiations, representations or agreements, either written or oral. The Contract may be amended or modified only by a written modification in accordance with Article 10.

§ 6.2 The Work

The term "Work" means the construction and services required by the Contract Documents, and includes all other labor, materials, equipment, and services provided, or to be provided, by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project. The Work shall be deemed to include, in the reasonable opinion of the Owner, who may consult with the Architect, if any, all items reasonably inferable from the Contract Documents.

§ 6.3 Intent

The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all.

§ 6.4 Ownership and Use of Architect's Drawings, Specifications and Other Documents

Documents prepared by the ~~Architect~~ Architect, if any, are instruments of the Architect's service for use solely with respect to this Project. The ~~Architect~~ Architect, unless stated otherwise in the contract between Owner and Architect, if any, shall retain all common law, statutory, and other reserved rights, including the copyright. The Contractor, subcontractors, sub-subcontractors, and suppliers are authorized to use and reproduce the instruments of service solely and exclusively for execution of the Work. The instruments of service may not be used for other Projects or for additions to this Project outside the scope of the Work without the specific written consent of the ~~Architect~~ Architect, if any or the Owner, as the case may be.

§ 6.5 Electronic Notice

Written notice under this Agreement may be given by one party to the other by email as set forth below.
(Insert requirements for delivering written notice by email such as name, title, and email address of the recipient, and whether and how the system will be required to generate a read receipt for the transmission.)

To be determined

ARTICLE 7 OWNER

§ 7.1 Information and Services Required of the Owner

§ 7.1.1 If requested by the Contractor, the Owner shall furnish all necessary surveys and a legal description of the site.

§ 7.1.2 Except for permits and fees under Section 8.7.1 that are the responsibility of the Contractor, the Owner shall obtain and pay for other necessary approvals, easements, assessments, and charges.

~~§ 7.1.3 Prior to commencement of the Work, at the written request of the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract. The Contractor shall have no obligation to commence the Work until the Owner provides such evidence.~~Intentionally Omitted.

§ 7.2 Owner's Right to Stop the Work

If the Contractor fails to correct Work which is not in accordance with the Contract Documents, the Owner may direct the Contractor in writing to stop the Work until the correction is made.

§ 7.3 Owner's Right to Carry Out the Work

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a ~~seven~~three day period after receipt of written notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies, correct such deficiencies. In such case, the ~~Architect-Owner or Architect, if any,~~ may withhold or nullify a Certificate for Payment in whole or in part, to the extent reasonably necessary to reimburse the Owner for the cost of ~~correction, provided the actions of the Owner and amounts charged to the Contractor were approved by the Architect.~~correction.

§ 7.4 Owner's Right to Perform Construction and to Award Separate Contracts

§ 7.4.1 The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and to award separate contracts in connection with other portions of the Project.

§ 7.4.2 The Contractor shall coordinate and cooperate with the Owner's own forces and separate contractors employed by the Owner.

ARTICLE 8 CONTRACTOR

§ 8.1 Review of Contract Documents and Field Conditions by Contractor

§ 8.1.1 Execution of the Contract by the Contractor is a representation that the Contractor has visited the ~~site, site or sites,~~ become familiar with local conditions under which the Work is to be performed, and correlated personal observations with requirements of the Contract Documents.

§ 8.1.2 The Contractor shall carefully study and compare the Contract Documents with each other and with information furnished by the Owner. Before commencing activities, the Contractor shall (1) take field measurements and verify field conditions; (2) carefully compare this and other information known to the Contractor with the Contract Documents; and (3) promptly report errors, inconsistencies, or omissions discovered to the ~~Architect.~~ Architect, if any and the Owner. The Contractor's obligations herein are for the purpose of discovering errors and omissions or adverse field conditions. In the event the contractor fails to promptly report any known error, omission or adverse field condition and commences the Work, the Contractor shall be responsible for all costs associated with any re-work or correction.

§ 8.2 Contractor's Construction Schedule

The Contractor, promptly after being awarded the Contract, shall prepare and submit for the Owner's and ~~Architect's~~ Architect's, if any, information a Contractor's construction schedule for the ~~Work.~~ Work in critical path method format. The Contractor shall update and submit for the Owner's information an updated schedule at least once every thirty (30) days with each of the Contractor's Application for Payment, or sooner if required by Project conditions as may be reasonably requested by the Owner. Failure of the Contractor to submit an updated schedule as provided herein shall entitle the Owner to suspend all payment obligations to the Contractor until the Contractor complies with the provisions herein.

§ 8.3 Supervision and Construction Procedures

§ 8.3.1 The Contractor shall supervise and direct the Work using the Contractor's best skill and attention. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences, and procedures, and for coordinating all portions of the Work.

§ 8.3.2 The Contractor, as soon as practicable after award of the Contract, shall furnish in writing to the Owner, through the Architect, if any, the names of subcontractors or suppliers for each portion of the Work. The Contractor shall not contract with any subcontractor or supplier to whom the Owner or ~~Architect~~ Architect, if any, have made a timely and reasonable objection.

§ 8.4 Labor and Materials

§ 8.4.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work.

§ 8.4.2 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Contract Work. The Contractor shall not permit employment of unfit persons or persons not skilled in tasks assigned to them.

§ 8.5 Warranty

The Contractor warrants to the Owner and ~~Architect~~ Architect, if any, that: (1) materials and equipment furnished under the Contract will be new and of good quality unless otherwise required or permitted by the Contract Documents; (2) the Work will be free from defects not inherent in the quality required or permitted; and (3) the Work will conform to the requirements of the Contract Documents. Any material or equipment warranties required by the Contract Documents shall be issued in the name of the Owner, or shall be transferable to the Owner, and shall commence in accordance with Section 12.5.

§ 8.5.1 The Contractor shall provide copies of all fully executed warranties and guarantees required by the Contract Documents within ten (10) days of the date of Substantial Completion or as otherwise provided for Work accepted before or after such date.

§ 8.5.2 All warranties shall commence as of the date of Substantial Completion of the Work, and shall continue for a period of one (1) year or longer as required by the Contract Documents. In no event shall the commencement of the use of building systems be deemed to commence the term of any warranty unless the Owner has, at that time, actually commenced beneficial use of the Project.

§ 8.5.3 Substitutions not properly approved and authorized by the Owner, who may consult with the Architect, if any, shall be considered defective.

§ 8.5.4 Work, materials or equipment which fails to perform under the proper use and normal wear for intended purposes for a period of one year after the date of Substantial Completion, except where warranties for longer durations are called for by the Contract Documents, shall be considered defective.

§ 8.5.5 Longer term or extended warranties required by the Contract Documents shall be provided by the relevant Subcontractor, vendor or manufacturer directly to the Owner, and the Contractor shall obtain documentation of such warranties and transmit such documentation to the Owner for review and approval.

§ 8.6 Taxes

The Contractor shall pay sales, consumer, use, and similar taxes that are legally required when the Contract is executed.

§ 8.7 Permits, Fees and Notices

§ 8.7.1 The Contractor shall obtain and pay for the building permit and other permits and governmental fees, licenses, and inspections necessary for proper execution and completion of the Work.

§ 8.7.2 The Contractor shall comply with and give notices required by agencies having jurisdiction over the Work. If the Contractor performs Work knowing it to be contrary to applicable laws, statutes, ordinances, codes, rules and

regulations, or lawful orders of public authorities, the Contractor shall assume full responsibility for such Work and shall bear the attributable costs. The Contractor shall promptly notify the ~~Architect-Owner and Architect, if any,~~ in writing of any known inconsistencies in the Contract Documents with such governmental laws, rules, and regulations.

§ 8.8 Submittals

The Contractor shall promptly review, approve in writing, and submit to the ~~Architect-Architect, if any,~~ and Owner shop drawings, product data, samples, and similar submittals required by the Contract Documents. Shop drawings, product data, samples, and similar submittals are not Contract Documents.

§ 8.9 Use of Site

The Contractor shall confine operations at the site to areas permitted by law, ordinances, permits, the Contract Documents, and the Owner.

§ 8.10 Cutting and Patching

The Contractor shall be responsible for cutting, fitting, or patching required to complete the Work or to make its parts fit together properly.

§ 8.11 Cleaning Up

The Contractor shall keep the premises and surrounding area free from accumulation of debris and trash related to the Work. At the completion of the Work, the Contractor shall remove its tools, construction equipment, machinery, and surplus material; and shall properly dispose of waste materials. If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and the cost thereof shall be charged to the Contractor and withheld from any payment then due or that may become due.

§ 8.12 Indemnification

To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the ~~Owner, Architect, Architect's consultants, and agents and employees of any of them,~~ Owner the Town of East Lyme and their respective departments, boards, commissions, agents, employees, officers, members, volunteers and affiliated entities from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by the negligent acts or omissions of the Contractor, a subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder.

§ 8.12.1 The Contractor shall defend, indemnify and hold harmless the Owner, the Town of East Lyme and their respective departments, boards, commissions, agents, employees, officers, members, volunteers and affiliated entities from any and all losses, costs and expenses, including fines and reasonable attorneys' fees incurred by the Owner, the Town of East Lyme and their respective departments, boards, commissions, agents, employees, officers, members, volunteers and affiliated entities by reason of the violation of such laws, ordinances, regulations and directives, federal, state and local, which are currently in effect or which become effective in the future and caused by the negligence of the Contractor, its Subcontractors or anyone either directly or indirectly employed by any of them.

§ 8.12.2 To the fullest extent permitted by law, the Contractor shall provide a defense to the Owner, the Town of East Lyme and their respective departments, boards, commissions, agents, employees, officers, members, volunteers and affiliated entities for any claims concerning, arising out of, or relating to the Contractor's or the Contractor's Subcontractor's operations concerning, the Project whether or not such claim has in part its origin in a claim that the Owner's, the Town of East Lyme's and their respective departments, boards, commissions, agents, employees, officers, members, volunteers and affiliated entities conduct was in part responsible for said damage, loss or expense. The duty to defend the Owner, the Town of East Lyme and their respective departments, boards, commissions, agents, employees, officers, members, volunteers and affiliated entities extends to situations where there is no duty to indemnify or save the Owner, the Town of East Lyme and their respective departments, boards, commissions, agents, employees, officers, members, volunteers and affiliated entities harmless for that portion of the

claim, loss or damage attributable to the Owner's, the Town of East Lyme and their respective departments, boards, commissions, agents, employees, officers, members, volunteers and affiliated entities' conduct.

§ 8.12.3. The defense and indemnification provisions of this Agreement shall survive termination or full or partial performance of the Agreement.

ARTICLE 9 ARCHITECT

§ 9.0 The term "Architect" is used for convenience in the Agreement. If applicable, the Project will be designed and administered in accordance with the terms of this Agreement by either an architect duly licensed to practice architecture in the state of Connecticut or a registered professional engineer duly licensed to practice engineering in the state of Connecticut. Notwithstanding the foregoing, the Owner is under no duty or obligation to retain an architect or engineer if the Project can be designed and/or administered without doing so in accordance with applicable law.

§ 9.1 The Architect-Architect, if any, and/or Owner or the Owner's Utility Engineer will provide administration of the Contract as described in the Contract Documents. The Architect-Architect, if any, will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents.

§ 9.2 The Architect-Architect, if any, and if requested by the Owner, will visit the site at intervals appropriate to the stage of construction to become generally familiar with the progress and quality of the Work.

§ 9.3 The Architect-Architect, if any, or Owner will not have control over or charge of, and will not be responsible for, construction means, methods, techniques, sequences, or procedures, or for safety precautions and programs in connection with the Work, since these are solely the Contractor's responsibility. The Architect-Architect, if any, or Owner will not be responsible for the Contractor's failure to carry out the Work in accordance with the Contract Documents.

§ 9.4 Based on the Architect's observations and evaluations of the Contractor's Applications for Payment, the Architect will review and certify the amounts due the Contractor. The Architect, if any, may be consulted by the Owner to review the Contractor's Applications for Payment.

§ 9.5 The Architect-Architect, if any, or Owner has authority to reject Work that does not conform to the Contract Documents.

§ 9.6 The Architect-Architect, if any, or Owner will promptly review and approve or take appropriate action upon Contractor's submittals, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents.

§ 9.7 On written request from either the Owner or Contractor, the Architect will promptly. The Architect, if any, at the Owner's election, may interpret and decide matters concerning performance under, and requirements of, the Contract Documents. Otherwise, the Owner or the Utility Engineer shall decide such matters

§ 9.8 Interpretations and decisions of the Architect. If the Owner elects to consult with the Architect, if any, as provided in Section 9.7, the Architect's interpretation will be consistent with the intent of, and reasonably inferable from the Contract Documents, and will be in writing or in the form of drawings. When making such interpretations and decisions, the Architect will endeavor to secure faithful performance by both Owner and Contractor, will not show partiality to either and will not be liable for results of interpretations or decisions rendered in good faith.

§ 9.9 The Architect's duties, responsibilities, and limits of authority as described in the Contract Documents shall not be changed without written consent of the Owner, Contractor, and Architect. Consent shall not be unreasonably withheld. If the Owner in its sole discretion elects not to consult with the Architect or if there is no Architect, the Owner's decision shall be final and binding on the Contractor and the Contractor shall continue diligent performance of the Work without interruption subject to the Contractor's rights to dispute resolution.

§ 9.9 Intentionally Omitted.

ARTICLE 10 CHANGES IN THE WORK

§ 10.1 The Owner, without invalidating the Contract, may order changes in the Work within the general scope of the Contract, consisting of additions, deletions or other revisions, and the Contract Sum and Contract Time ~~shall~~ may be adjusted accordingly, in writing. ~~If~~

§ 10.1 GENERAL

§ 10.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, Construction Change Directive or order for a minor change in the Work, subject to the limitations stated in this Article 10 and elsewhere in the Contract Documents.

§ 10.1.2 A Change Order shall be based upon agreement among the Owner, who may consult with the Architect, if any, and Contractor. A Construction Change Directive requires agreement by the Owner and may or may not be agreed to by the Contractor.

§ 10.1.3 Changes in the Work shall be performed under applicable provisions of the Contract Documents, and the Contractor shall proceed promptly, unless otherwise provided in the Change Order.

§ 10.1.4 The Owner reserves the sole and exclusive right to reduce or remove certain portions of the Contractor's Work after the execution of this Agreement by Change Order or Construction Change Directive.

§ 10.2 CHANGE ORDERS

~~the Owner and Contractor cannot agree~~ § 10.2.1 A Change Order is a written instrument prepared by and signed by the Owner and Contractor stating their agreement upon all of the following:

- .1 The change in the Work;
- .2 The amount of the adjustment, if any, in the Contract Sum; and
- .3 The extent of the adjustment, if any, in the Contract Time.

§ 10.2.2 Methods used in determining adjustments to the Contract Sum will include those listed in Section 10.3.3 below.

§ 10.3 CONSTRUCTION CHANGE DIRECTIVES

§ 10.3.1 A Construction Change Directive is a written order prepared by and signed by the Owner directing a change in the Work prior to agreement on adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions or other revisions, the Contract Sum and Contract Time being adjusted accordingly.

§ 10.3.2 A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order.

§ 10.3.3 If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:

- .1 Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
 - .2 Unit prices stated in the Contract Documents or subsequently agreed upon;
 - .3 Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee;
- or
- .4 As provided in Section 10.3.7.

The amount of allowable overhead and profit to the Contractor for an increase in the Cost of the Work shall be 15% of the Contractor's net cost for labor and materials and all other items included in the change, unless the same is governed by a unit price and if so the unit price shall include all overhead and profit. The Contractor shall be allowed a maximum mark-up of 5% of changes in the Work performed by the Contractor's subcontractors. The Contractor shall have a maximum mark-up of 15% on changes in the Work involving only materials.

§ 10.3.4 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed in a proposed Change Order or Construction Change Directive so that application of such unit prices to quantities of Work proposed will cause substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.

~~shall pay-~~ § 10.3.5 Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Owner of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.

§ 10.3.6 A Construction Change Directive signed by the Contractor indicates the Contractor's agreement therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.

§ 10.3.7 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the Owner, who may consult with the Architect, if any, shall determine the method and the adjustment on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, an amount for overhead and profit as set forth in the Agreement, or if no such amount is set forth in the Agreement, a reasonable amount. In such case, and also under Section 10.3.3.3, the Contractor shall keep and present, in such form as the Owner, who may consult with the Architect, if any, may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 10.3.7 shall be limited to the following:

- .1 Costs of labor, including social security, old age and unemployment insurance, fringe benefits required by agreement or custom, and workers' compensation insurance;
- .2 Costs of materials, supplies and equipment, including cost of transportation, whether incorporated or consumed;
- .3 Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;
- .4 Costs of premiums for all bonds and insurance, permit fees, and sales, use or similar taxes related to the Work;
- and
- .5 Additional costs of supervision and field office personnel directly attributable to the change.

~~the Contractor its actual cost plus-~~ § 10.3.8 The amount of credit to be allowed by the Contractor to the Owner for a deletion or change that results in a net decrease in the Contract Sum shall be actual net cost as confirmed by the Owner who may consult with the Architect, if any. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.

~~reasonable overhead and profit-~~ § 10.3.9 Pending final determination of the total cost of a Construction Change Directive to the Owner, the Contractor may request payment for Work completed under the Construction Change Directive in Applications for Payment. The Owner, who may consult with the Architect, if any, will make an interim determination for purposes of monthly payments for those costs in the Owner's reasonable and good faith judgment, to be reasonably justified.

§ 10.3.10 When the Owner and Contractor agree with a determination made by the Owner who may consult with the Architect concerning the adjustments in the Contract Sum and Contract Time, or otherwise reach agreement upon the adjustments, such agreement shall be effective immediately and the Owner will prepare a Change Order. Change Orders may be issued for all or any part of a Construction Change Directive.

§ 10.2 The Architect-Owner or Architect, if any, may authorize or order minor changes in the Work that are consistent with the intent of the Contract Documents and do not involve an adjustment in the Contract Sum or an extension of the Contract Time. Such authorization or order shall be in writing and shall be binding on the Owner and Contractor. The Contractor shall proceed with such minor changes promptly.

~~§ 10.3 If concealed or unknown physical conditions are encountered at the site-~~ the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or from those conditions ordinarily found to exist, the Contract Sum and Contract Time shall be subject to equitable adjustment, (2) unknown physical conditions of an unusual nature, that

differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall promptly provide notice to the Owner before conditions are disturbed and in no event later than 5 days after first observance of the conditions. The Owner will promptly investigate such conditions and, if the Owner who may consult with the Architect, if any, determines that they differ materially and cause an increase or decrease in the Contractor's cost or time required for, performance of any part of the Work, will consider in good faith an equitable adjustment in the Contract Sum or Contract Time, or both. If the Owner who may consult with the Architect, if any, determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Owner shall promptly notify the Contractor in writing, stating the reasons. If the Contractor disputes the Owner's determination the Contractor shall nevertheless diligently proceed with the Work subject to the Contractor's right to dispute resolution as provided herein.

ARTICLE 11 TIME

§ 11.1 Time limits stated in the Contract Documents are of the essence of the Contract.

§ 11.2 If the Contractor is delayed at any time in progress of the Work by changes ordered in the Work, or by labor disputes, fire, unusual delay in deliveries, unavoidable casualties, or other causes beyond the Contractor's control, the Contract Time shall be subject to equitable adjustment the commencement or progress of the Work by an act or neglect of the Owner, or of an employee of either, or of a separate contractor employed by the Owner, or if and to the extent caused by the negligence of the Owner; or by changes ordered in the Work pursuant to Article 10; or by delays associated with the delivery of materials ordered by the Owner for which the Contractor is not responsible and which impact the critical path of the construction schedule; or acts of God (such as tornado, hurricane, flood, etc.), or unusual delays by relevant governmental authorities in performing inspections and/or issuing governmental approvals which are a condition precedent to the issuance of a certificate of occupancy (temporary or permanent) or failure or unusual delay by any local utility (i.e., electricity, water, sewer) providing services to the Project that impact the critical path of the construction schedule or is necessary to obtain a certificate of occupancy (temporary or permanent), then the Contract Time shall be extended by Change Order or Constructive Change Directive for such reasonable time as the Owner, who may consult with the Architect, if any, may determine and the construction schedule shall be revised accordingly. In order for the Contractor to obtain an extension of time, the Contractor must prove to the Owner that the cause of the delay will extend the critical path of the construction schedule leading to the occupancy or use of the Project. Such extensions of Contract Time shall apply only to delays for which the Contractor has no responsibility. If a delay is attributable to both the Contractor and the Owner (including parties for which each is responsible), then entitlement to an extension of Contract Time shall apply proportionately

§ 11.3 Costs caused by delays or by improperly timed activities or defective construction shall be borne by the responsible party. Notwithstanding anything to the contrary in the Contract Documents, an extension of Contract Time, to the extent permitted herein, shall be the sole remedy of the Contractor for any (1) delay in the start, prosecution, or completion of the Work, (2) hindrance or obstruction in the performance of the Work, (3) loss of productivity, or (4) other similar claims, whether or not such claims are foreseeable, contemplated, or unanticipated. In no event is the Contractor entitled to any compensation or recovery of any damages, in connection with any claim, including without limitation, consequential damages, lost opportunity costs, impact damages or other similar remuneration. The Owner's exercise of any of its rights or remedies under the Contract Documents, including without limitation, ordering changes in the Work, or directing the suspension, rescheduling or correction of the Work, regardless of the extent or frequency of the Owner's exercise of such rights or remedies, are not to be construed as active interference with the Contractor's performance of the Work.

ARTICLE 12 PAYMENTS AND COMPLETION

§ 12.1 Contract Sum

The Contract Sum stated in this Agreement, including authorized adjustments, is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents. If applicable, prior to the Commencement Date, the Contractor and the Owner shall agree on a schedule of values allocating the entire Contract Sum to the various portions of the Work, which shall be used as the basis for reviewing the Contractor's Applications for Payment. This schedule shall not be amended, unless agreed to by the Owner and the Contractor in writing.

§ 12.2 Applications for Payment

§ 12.2.1 At least ten days before the date established for each progress payment, the Contractor shall submit to the ~~Architect Owner, who may consult with the Architect, if any,~~ an itemized Application for Payment for Work completed in accordance with the values or unit prices stated in this Agreement. The Application shall be supported by data substantiating the Contractor's right to payment as the Owner or ~~Architect Architect, if any,~~ may reasonably require, such as evidence of payments made to, and waivers of liens from, subcontractors and suppliers. Payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment stored, and protected from damage, off the site at a location agreed upon in writing.

§ 12.2.2 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment, all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, ~~to the best of the Contractor's knowledge, information, and belief,~~ be free and clear of liens, claims, security interests, or other encumbrances adverse to the Owner's interests.

§ 12.3 Certificates **12.2.3** The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment.

~~The Architect will, within seven days after receipt of the Contractor's Application for Payment, either (1) issue to the Owner a Certificate for Payment in the full amount of the Application for Payment, with a copy to the Contractor; (2) issue to the Owner a Certificate for Payment for such amount as the Architect determines is properly due, and notify the Contractor and Owner in writing of the Architect's reasons for withholding certification~~ Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall be free and clear of liens, claims, security interests or encumbrances in favor of the Contractor, Subcontractors, material suppliers, or other persons or entities making a claim by reason of having provided labor, materials and equipment relating to the Work. Provided that the Owner shall have paid the Contractor all amounts properly due and owing under the Contract Documents, the Contractor shall defend, indemnify and hold the Owner harmless from any liens, claims, security interests or encumbrances filed by the Contractor, any Subcontractor, Sub-subcontractor or anyone claiming by, through or under them. As a condition of Payment, the Contractor and the Contractor's Subcontractors shall provide a fully executed waiver of liens and claims with respect to all Work for which payment has been requested in the Contractor's current Application for Payment. Such lien and claim waivers shall be conditional and effective upon payment.

~~in part; or (3) withhold certification of the entire~~ **§ 12.2.4** The Contractor agrees that it shall take whatever action is reasonably necessary to remove or discharge any lien, claim, security interest or encumbrance placed on the Project in favor of any Subcontractor, material supplier, or other person or entity making a claim by reason of having provided labor, materials and equipment related to the Work for which the Contractor is responsible, including without limitation, discharging by substitution of a bond. The Contractor agrees that it shall take such action within twenty (20) days of written receipt of notice and evidence of such lien, claim, security interest or encumbrance from the Owner.

§ 12.3 Certificates for Payment

~~Application for Payment, and notify the Contractor and Owner of the Architect's reason for withholding certification in whole. If certification or notification is not made within such seven day period, the Contractor may, upon seven additional days' written notice to the Owner and Architect, stop the Work until payment of the amount owing has been received. The Contract Time and the Contract Sum shall be equitably adjusted due to the delay.~~ The Owner, who may consult with the Architect, if any, will review the Contractor's Application for Payment. The Contractor is advised that the Town of East Lyme Water and Sewer Commission must also review and approve the Contractor's Application for Payment. As a result, the Contractor is advised to submit its Application for Payment so that such application coincides with the Water and Sewer Commission meeting. The Owner and the Town of East Lyme Water and Sewer Commission will either approve the Application for Payment in its entirety or in part or disapprove all or part of the Contractor's Application for Payment. The Owner shall provide to the Contractor in writing the reasons for such disapproval of all or part of the Contractor's Application for Payment. The Owner, in all events, shall pay approved amounts in the Contractor's Application for Payment pursuant to the terms of this Agreement, which shall be after the Owner receives its disbursement from DWSRF. The Owner, who may consult

with the Architect, if any, may withhold payments then due or that may become due in the future for defective work or other damages caused by the Contractor.

§ 12.4 Progress Payments

§ 12.4.1 After the Architect has issued a Certificate for Payment, the Owner shall make payment in the manner provided in the Contract Documents. The Owner shall make payments to the Contractor as provided herein.

§ 12.4.2 The Contractor shall promptly pay each subcontractor and supplier, upon receipt of payment from the Owner, an amount determined in accordance with the terms of the applicable subcontracts and purchase orders, orders and in accordance with applicable prompt payment law of the state of Connecticut.

§ 12.4.3 Neither the Owner nor the Architect Architect, if any, shall have responsibility for payments to a subcontractor or supplier.

§ 12.4.4 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the requirements of the Contract Documents.

§ 12.5 Substantial Completion

§ 12.5.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so the Owner can occupy or utilize the Work for its intended use. use as reasonably determined by the Owner who may consult with the Architect, if any.

§ 12.5.2 When the Contractor believes that the Work or designated portion thereof is substantially complete, it will notify the Architect and the Architect Owner, and Architect, if any, and the Owner, who may consult the Architect, if any, will make an inspection to determine whether the Work is substantially complete. When the Architect Owner, who may consult the Architect, if any, determines that the Work is substantially complete, the Architect Owner or Architect, if any, shall prepare a Certificate of Substantial Completion or other document addressing Substantial Completion that shall establish the date of Substantial Completion, establish the responsibilities of the Owner and Contractor, and fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

§ 12.5.3 The Owner reserves the right to take possession and occupy any portion of the Project prior to the completion of the entire Project provided that a temporary certificate of occupancy has been obtained with respect to such portion of the Project. Such completion and occupancy, however, shall not interfere with the Work.

§ 12.6 Final Completion and Final Payment

§ 12.6.1 Upon receipt of a final Application for Payment, the Architect Owner, who may consult the Architect, if any will inspect the Work. When the Architect Owner, who may consult with the Architect, if any, finds the Work acceptable and the Contract fully performed, the Architect Owner or Architect, if any, will promptly issue a final Certificate for Payment. Payment or other document addressing final payment.

§ 12.6.2 Final payment shall not become due until the Contractor submits to the Architect Owner releases and waivers of liens, liens and claims, and data establishing payment or satisfaction of obligations, such as receipts, claims, security interests, or encumbrances arising out of the Contract. In addition, final payment shall not occur before the one-year anniversary of the date of Substantial Completion as provided in this Agreement.

§ 12.6.3 Acceptance of final payment by the Contractor, a subcontractor or supplier shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment. payee..

ARTICLE 13 PROTECTION OF PERSONS AND PROPERTY

The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs, including all those required by law in connection with performance of the Contract. The Contractor shall take reasonable precautions to prevent damage, injury, or loss to employees on the Work and other persons who may be affected thereby, the Work and materials and equipment to be incorporated therein, and other property at the site or

adjacent thereto. The Contractor shall promptly remedy damage and loss to property caused in whole or in part by the Contractor, or by anyone for whose acts the Contractor may be liable.

ARTICLE 14 CORRECTION OF WORK

§ 14.1 The Contractor shall promptly correct Work rejected by the ~~Architect-Owner or Architect, if any,~~ as failing to conform to the requirements of the Contract Documents. The Contractor shall bear the cost of correcting such rejected Work, including the costs of uncovering, replacement, and additional testing.

§ 14.2 In addition to the Contractor's other obligations including warranties under the Contract, the Contractor shall, for a period of one year after Substantial Completion, correct work not conforming to the requirements of the Contract Documents.

§ 14.3 If the Contractor fails to correct nonconforming Work within a reasonable time, the Owner may correct it in accordance with Section 7.3.

ARTICLE 15 MISCELLANEOUS PROVISIONS

§ 15.1 Assignment of Contract

~~Neither party to the Contract shall assign the Contract as a whole without written consent of the other. The Contractor shall not assign the Contract without the written consent of the Owner. Any such assignment shall be null and void. The Owner may, without the Contractor's prior written consent, assign its rights hereunder, provided that such assignee agrees to comply with all applicable provisions of the agreement and the Contractor is given written notice of such agreement signed by both the Owner and the assignee.~~

§ 15.2 Tests and Inspections

§ 15.2.1 At the appropriate times, the Contractor shall arrange and bear cost of tests, inspections, and approvals of portions of the Work required by the Contract Documents or by laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities.

§ 15.2.2 ~~If the Architect-Owner, who may consult with the Architect, if any,~~ requires additional testing, the Contractor shall perform those tests.

§ 15.2.3 The Owner shall bear cost of tests, inspections, or approvals that do not become requirements until after the Contract is executed. The Owner shall directly arrange and pay for tests, inspections, or approvals where building codes or applicable laws or regulations so require.

§ 15.3 Governing Law

The Contract shall be governed by the law of the ~~place where the Project is located, excluding that jurisdiction's choice of law rules.~~ state of Connecticut.

ARTICLE 16 TERMINATION OF THE CONTRACT

§ 16.1 Termination by the Contractor

~~If the Work is stopped under Section 12.3 for a period of 14 days-Owner fails to make payment to the Contractor then due and owing in accordance with the terms of this Agreement for a period of 30 days past the date such payment is due and owing through no fault of the Contractor, the Contractor may, upon seven additional days' written notice to the Owner and Architect, if any, terminate the Contract and recover from the Owner payment for Work executed including reasonable overhead and profit, and accepted by the Owner and the reasonable and documented costs incurred by reason of such termination. In no event shall the Contractor be entitled to anticipated overhead and profits on Work not performed.~~

§ 16.2 Termination by the Owner for Cause

§ 16.2.1 The Owner may terminate the Contract if the Contractor

- .1 repeatedly refuses or fails to supply enough properly skilled workers or proper materials;
- .2 fails to make payment to subcontractors for materials or labor in accordance with the respective agreements between the Contractor and the subcontractors;
- .3 repeatedly disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority; or
- .4 is otherwise guilty of substantial breach of a provision of the Contract Documents.

§ 16.2.2 When any of the above reasons exist, the Owner, ~~after consultation with the Architect, who may consult with the Architect, if any,~~ may without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven days' written notice, terminate employment of the Contractor and may

- .1 take possession of the site and of all materials thereon owned by the Contractor, and
- .2 finish the Work by whatever reasonable method the Owner may deem expedient.

§ 16.2.3 When the Owner terminates the Contract for one of the reasons stated in Section 16.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

§ 16.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, such excess shall be paid to the Contractor. If such costs exceed the unpaid balance, the Contractor shall pay the difference to the Owner. This obligation for payment shall survive termination of the Contract.

§ 16.3 Termination by the Owner for Convenience

The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause. The Contractor shall be entitled to receive payment for Work ~~executed, and executed and accepted by the Owner, and reasonable and documented~~ costs incurred by reason of such ~~termination, along with reasonable overhead and profit on the Work not executed.~~ termination. In no event shall the Contractor be entitled to anticipated overhead and profits on Work not performed.

ARTICLE 17 OTHER TERMS AND CONDITIONS

(Insert any other terms or conditions below.)

§ 17.1 Any deviation from the Contract Documents must be completely detailed in writing by the Contractor and approved in writing by the Owner prior to the performance of said Work.

§17.2 The Contractor agrees that all persons working on behalf of the Contractor shall obey the rules and regulations established by the Owner and shall obey the reasonable directions of the Owner's employees. The Contractor shall be responsible for the acts and conduct of its employees, subcontractors and agents while on the Owner's premises. The Contractor shall take all necessary measures to prevent injury and loss to persons and property located on the Owner's premises. The Contractor shall be responsible for all damages to persons or property caused by the Contractor, its employees, subcontractors and agents. The Contractor must give the Owner written assurance that no employees of the Contractor or its subcontractors have criminal records of such nature that would place at risk students and staff of the Owner, if applicable. The Owner reserves the right to approve and /or reject any personnel assigned to any phase of the Project for any reason the Owner deems appropriate in its sole discretion.

§ 17.3 If the Contract entails any exposure to a regulated material, including, but not limited to, asbestos or lead, the Contractor certifies that it and each of its subcontractors and their employees shall be certified and trained under all OSHA and other relevant regulations for such Work.

§ 17.4 State, federal or other grant programs may fund some or the entire Contract. The Contractor is advised that such funding programs may include contractual provisions binding on contractors and which may, for example, require audits or certifications under oath that the Contractor has not been debarred, suspended or excluded from any publicly funded project or programs.

§ 17.5 The Contractor is required to comply with all provisions of the Civil Rights Act of 1964, the Equal Employment Opportunity Act of 1972, Executive Orders 11246, 11375, 11478 and, if applicable, the Connecticut Fair Employment Practice Law. Pursuant to Conn. Gen. Stat. Sect. 4a-60, the Contractor agrees and warrants that, in the performance of the Contract, the Contractor will not discriminate or permit discrimination against any person or group of persons on the grounds of race, color, religious creed, age, marital status, national origin, ancestry, sex, mental retardation or physical disability, including, but not limited to, blindness, unless it is shown by the Contractor that such disability prevents performance of the Work involved, in any manner prohibited by the laws of the United States or the State of Connecticut.

§ 17.6 If the Contractor is a non-resident Contractor then the Contractor and Owner shall comply with all laws established by the state of Connecticut for such non-resident contractors.

§ 17.7 See also the Owner's Request for Qualifications and Proposal No. 19-01, attached hereto as Exhibit A for additional requirements.

§ 18.1 RESOLUTION OF CLAIMS AND DISPUTES

Unless another method of dispute resolution is agreed to by the Owner and the Contractor, all claims and disputes shall be resolved by trial in a court of competent jurisdiction. The term "Claim" is demand or assertion by one of the parties seeking, as a matter of right, payment of money, or other relief with respect to the terms of the Contract. It also includes other disputes and matters in question between the Owner and the Contractor arising out of or relating to the Contract. The responsibility to substantiate claims shall rest with the party making the claim.

§ 18.2 CONTINUING CONTRACT PERFORMANCE

Pending final resolution of a Claim, except as otherwise agreed to in writing, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments when due in accordance with the Contract Documents that are not the subject of a good faith dispute.

§ 18.3 NO DAMAGE FOR DELAY. In all events, the Contractor shall have no Claim for damages or costs of any kind resulting from a delay in the Work as demonstrated by the Contractor's schedule of critical path activities, regardless of whether all or part of such delay may be in any way attributable to the acts, the failure to act, or the omissions of the Owner, the Owner's agents or representatives, the Owner's consultants, if any, the Architect or the Architect's consultants, if any. The parties agree that their sole remedy for such delay shall be an extension of time, which may be granted or denied in accordance with the terms of this Agreement.

§ 18.4 WAIVER OF IMPACT CLAIMS. In all events, the Contractor waive all kinds of impact claims, including but not limited to, efficiency, loss of productivity, trade stacking, disruption, re-sequencing, and the like, regardless of whether all or part of such impact may be in any way attributable to the acts, the failure to act, or the omissions of the Owner, the Owner's agents or representatives, the Owner's consultants, if any, the Architect or the Architect's consultants, if any.

§ 18.5 The Contractor shall include similar No Damage For Delay and Waiver of Impact Claim provisions in any agreements that either party executes with any Subcontractors, suppliers and any other persons or entities that either party employs to perform the Work, and shall name the other party as third-party beneficiaries of such provisions.

§ 18.6 CLAIMS FOR CONSEQUENTIAL DAMAGES

The Contractor waives Claims for consequential damages arising out of or relating to this Contract. This waiver includes damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit.

§ 18.7 This Project is expected to be funded in part by a loan from the DWSRF Program of the State of Connecticut. The Contractors shall comply with all applicable DWSRF provisions set forth in Owner's Request for Qualifications and Proposal No. 19-02, attached hereto as Exhibit A

§19.1 SET ASIDE REQUIREMENTS

This Project is subject to state set-aside and contract compliance requirements, including nondiscrimination statutes and set aside requirements. This Project requires that three percent (3%) of the total value of the Project be awarded to certified minority owned business enterprises holding current certification from the state of Connecticut. This Project also require that five percent (5%) of the total value of the Project be awarded to certified women business enterprises holding a current certification from the state of Connecticut.

This Agreement entered into as of the day and year first written above.

(If required by law, insert cancellation period, disclosures or other warning statements above the signatures.)

OWNER (Signature)

Town of East Lyme, Connecticut acting through the
Town of East Lyme Water Department

(Printed name and title)

CONTRACTOR (Signature)

(Printed name and title)

LICENSE NO.:

JURISDICTION:

TELEPHONE

ATTACHMENT 1
METER INSTALL REPORT

ATTACHMENT 2
DEPLOYMENT MAP

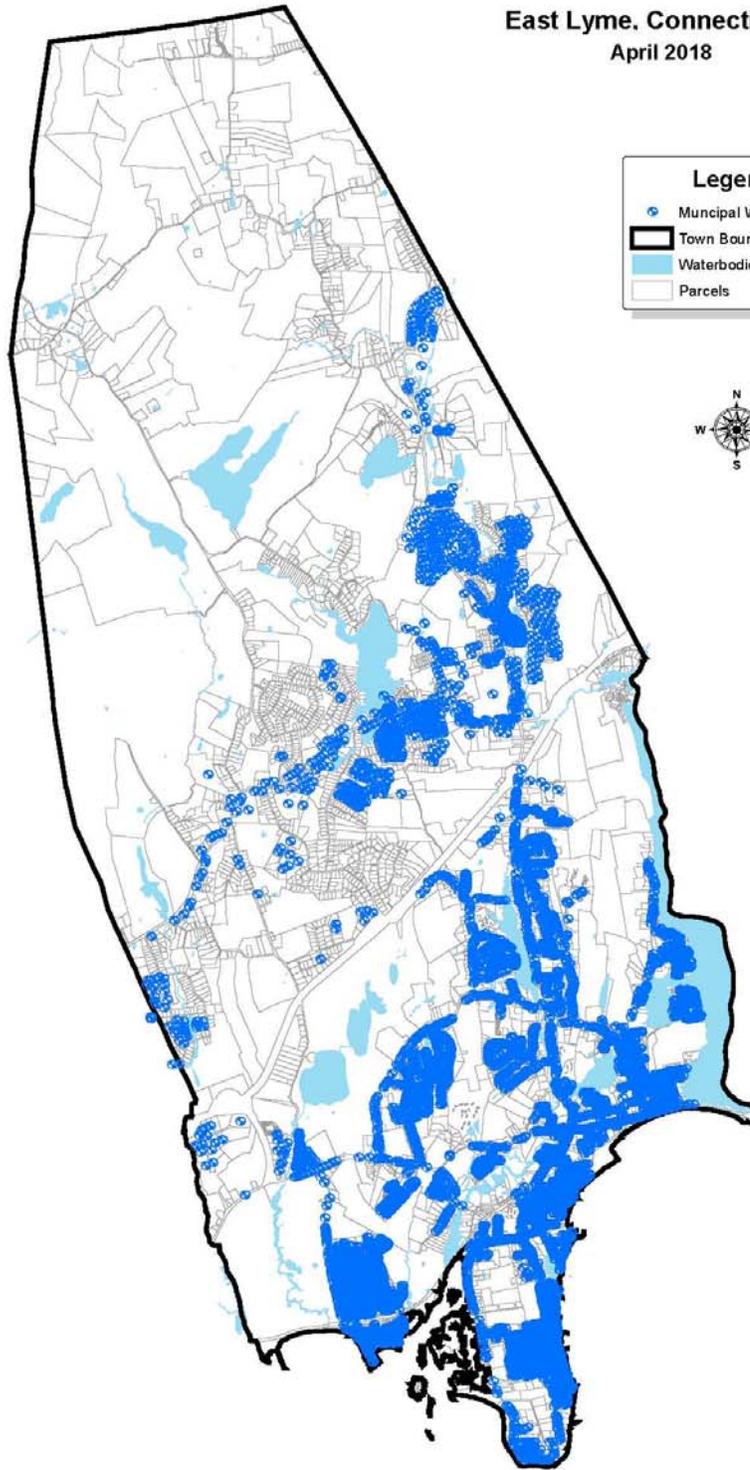
East Lyme Municipal Water Meters

East Lyme, Connecticut

April 2018

Legend

-  Municipal Water Meters
-  Town Boundary
-  Waterbodies
-  Parcels



SCALE



ATTACHMENT 3

East Lyme Water and Sewer

SAFETY GUIDELINES

East Lyme Water and Sewer

CONTRACTOR REQUIREMENTS

1.0 Contractor Responsibilities

Introduction:

The following are the East Lyme Water and Sewer contractor safety requirements. You, the Contractor are to read this material carefully and be prepared to sign and date the back page indicating that you will comply with these requirements. Please feel free to contact the Director of Public Works with any questions (860) 691-4102 with any questions.

Prior to Operation:

- 1.1** General safety operating requirements will be discussed at the Contractor's Orientation Meeting, prior to the start of the job.
- 1.2** The contractor must advise the East Lyme Water and Sewer Project Manager of hazards associated with their proposed work operation (chemicals, gases, dusts, radiation). Contractors will not be permitted to bring hazardous chemicals or materials onto the East Lyme Water and Sewer property without first providing the Material Safety Data Sheet, in advance, to the General Manager of Operations for approval by the East Lyme Water and Sewer Utilities Engineer. (See Guide 1 and 2 for additional Hazcom and Chemical Handling information and requirements).

2.0 Supervision of Employees

- 2.1** All contractors who conduct work at any East Lyme Water and Sewer facility will be responsible for complying with all applicable Federal, State, Local, OSHA and East Lyme Water and Sewer Environment, Health and Safety regulations. The contractor is responsible for notifying his/her personnel of specific hazards, emergency procedures, safe work practice, and safety rules which must be followed while on the job site.
- 2.2** The contractor is responsible for supervision of his/her work force and any subcontractors with regard to all aspects of the project. He/She agrees that all procedures discussed during the orientation are understood by the workers and will be followed.
- 2.3** The contractor will be responsible for providing his/her employees with medical care and first aid treatment.
- 2.4** Loose or hanging clothing, jewelry and long hair are prohibited near moving machines or parts.
- 2.5** Smoking is not permitted at any East Lyme Water and Sewer Utilities facility. Fire prevention and control is critical at any East Lyme Public

Utilities facility. Please review Guide 3 "Fire Protection and Prevention" for additional requirements.

3.0 Safety Equipment

- 3.1 The contractor is responsible for compliance with East Lyme Water and Sewer and OSHA regulations with regard to furnishing their employees with all necessary personal protective equipment and all tools and equipment needed to perform service at an East Lyme Water and Sewer facility. East Lyme Water and Sewer PPE; tools and equipment shall not be allowed to be used by contract personnel unless authorized in advance by East Lyme Water and Sewer.
- 3.2 Hard hats must be worn in all areas where work is being performed.
- 3.3 Eye protection shall be worn when performing a task which may endanger sight, and in all designated areas where safety glasses are required. (See Guide 4 "Personal Protective Equipment" for additional PPE information and requirements).
- 3.4 Hearing protection shall be worn as required. (See Guide 5 "Hearing Conservation" for additional information and requirements).

4.0 Work Area

- 4.1 The contractor is not permitted to manipulate any switch controls, valves or instruments without advance approval. The contractor will request permission, in advance, before commencement of any work on piping, electrical distribution systems, or utility systems.
- 4.2 Equipment lock-out mechanisms (locks and tags) shall be used in accordance with OSHA standards Lockout/Tagout Procedures.
 - A. Contractors will comply with OSHA 29 CFR 1910.269(d) or 29 CFR 1910.147 standards, "The Control of Hazardous Energy", and shall not begin work until procedures are coordinated with East Lyme Water and Sewer representatives.
 - B. East Lyme Water and Sewer locks and/or tags may be added (in addition) to outside contractor locks, and shall not be removed until a East Lyme Water and Sewer representative determines that it is safe to re-engage the energy source.
- 4.3 Practice good housekeeping at all times. Do not leave materials or equipment blocking aisles, walkways, stairs or other paths of egress.
- 4.4 Defective tools or equipment shall not be used. All tools and extension cords shall meet or exceed applicable standards.
- 4.5 Equipment requiring guards and safety devices shall be in good operating condition and shall have all guards in place and all safety devices working properly.

- 4.6** All ladders shall be ANSI approved and used in accordance with OSHA standards. All ladders shall be inspected each time before use.
- 4.7** Machinery and equipment shall not be started before a thorough check of the work area has been made by the project manager to assure that people are clear of any moving parts or operations, and all affected employees have been notified.
- 4.8** No person shall activate or operate powered industrial equipment without proper authorization.
- 4.9** No confined space will be entered by contractor personnel unless they follow recognized safe confined space entry procedures such as in U.S. NIOSH guidelines, ANSI Standard or other comparable State, Local, or Federal regulations. A confined space is defined as a vessel, tank, pipeline, pit or enclosed space where dangerous air contamination or lack of oxygen may be present due to a manufacturing process or work procedure, or where an egress path may be limited.
- A. The East Lyme Water and Sewer utility engineer shall be notified of any planned confined space entries.
 - B. No personnel shall enter a confined space before a permit has been completed and posted on site.
 - C. All contractors must supply their own monitoring and safety equipment for confined space entry.
- 4.10** Contractors will observe and honor all signs posted in the area in which they are working. Restricted areas are not to be entered without the express direction of the project manager.
- 4.11** Personal fall protection is required when working on unprotected surfaces 6 feet or more above ground. (See Guide 6 "Working at Elevations" for additional information and requirements when working at elevations).
- 4.11.1 Electrical Safety is a critical concern to the East Lyme Water and Sewer Department. All work related equipment is to be de-energized unless live circuit/equipment testing and maintenance is required. Line work can only be performed by "Qualified and Trained Employees" wearing the appropriate PPB and arc blast protection. NFPA 70-E requirements are to be enforced for all live work. (See Guide 7 "Electrical Safety" for additional information and requirements).
- 4.12** Any required Excavations shall follow the applicable OSHA standards. See "Guide # 8 - Excavations and Trenches" for additional contractor information and requirements.

5.0 Disclaimer

The provisions of this section should be considered as an introduction and not a substitute for a thorough understanding of the subjects. Furthermore, it is for information purposes only. This Document does not relieve the Contractor of its obligations to (1) control the manner and means by which it and its employees, subcontractors and agents perform work or services for the East Lyme Water and Sewer Department and (2) independently ascertain what health and safety practices are appropriate and necessary for the performance of such work or services. Contractors are expected to be familiar with and follow appropriate health and safety practices, including those required by the Federal Occupational Health and Safety Act ("OSHA") and those set forth in applicable Occupational Safety and Health Administration (OSHA) regulations, as well as any other applicable federal, state or local code.

**CONTRACTORS SAFETY REQUIREMENTS
ACKNOWLEDGEMENT FORM**

I have received copies and read all the East Lyme Water and Sewer "Contractors Safety Requirements" including the accompanying Guides. I understand these rules and agree to comply with them in entirety.

Contractor Representative

Company Name

Date

This signed document was given to the following East Lyme Water and Sewer representative:

East Lyme Water and Sewer Representative

Date

GUIDE 1: HAZARD COMMUNICATION

OVERVIEW

OSHA requires that the hazards associated with all chemicals used or stored at a job site be evaluated. This information must be communicated to employees who may be exposed to these chemicals or use them in their daily jobs. The process for informing employees about the chemicals, their locations and potential hazards is called a Hazard Communication (HAZCOM) program. In general, this program includes requirements and procedures for container labeling and other forms of warning procedures for obtaining and retaining material safety data sheets (MSDSs) and employee training.

MINIMUM HAZCOM REQUIREMENTS

In order to work at any East Lyme Water and Sewer facility or on any project, all contractors must, at least, meet the following requirements:

1. If any hazardous material is used or stored at the job site, the contractor's written HAZCOM program must be available to all contractor and East Lyme Water and Sewer personnel for review upon request.
2. The HAZCOM program must include procedures for:
 - Labeling containers and the use of warning forms;
 - Obtaining and retaining MSDSs;
 - Specific worker training requirements;
 - Documentation that these training requirements have been completed by each worker;
 - A list or inventory of hazardous material at the job site.
3. The contractors' supervisor must inform all workers about the hazardous material at the job site when they are first assigned to a project and whenever a new hazardous material is brought to the site.
4. Workers must be informed of the location of:
 - The HAZCOM program;
 - The list/inventory of hazardous substances;
 - The locations of MSDSs and the procedures for obtaining a copy of an MSDS;
 - These must all be available for each worker to review during their work period.
5. The East Lyme Water and Sewer representative must be informed of all chemicals brought to the site.
6. Each contractor must obtain information from the East Lyme Water and Sewer representative regarding chemicals that East Lyme Water and Sewer uses or stores at the site.
7. When more than one contractor is working at a job site, each contractor must inform the other(s) concerning the location of their MSDSs and procedures for labeling and worker protection.
8. **THE PRIME CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE HAZCOM PROGRAM ON THE JOB SITE.**
9. All containers will be labeled.
 - Labels on hazardous material containers will not be defaced or removed.
 - The labels will identify the substance in the container and appropriate warnings about the substance.
 - The material identity will match the material currently in the container, its MSDS, and the overall list/inventory.

10. An MSDS must be available at the job site for every chemical that is present at the site.
- A documented training program will be provided to every worker at the job site. This training will include:
 - Information regarding the HAZCOM program;
 - Health and environmental hazards of every chemical used at the job site;
 - Ways to detect the presence of hazardous materials at a job site (including monitoring methods and devices used);
 - How to read and understand the information contained on an MSDS; and
 - How workers can protect themselves from harmful exposure (e.g., safe work practices, personal hygiene, and protective equipment).

GUIDE 2: CHEMICAL SAFETY AND HANDLING

OVERVIEW

Federal and State laws as well as East Lyme Water and Sewer Department require that specific procedures are followed to properly handle chemicals to protect workers and prevent spills. These procedures include those for storing, handling, transferring and processing chemicals.

MINIMUM CHEMICAL SAFETY AND HANDLING REQUIREMENTS

Prior to working at any an East Lyme Water and Sewer facility or project, all contractors must, at a minimum, meet the following requirements.

1. The contractor must assure that the equipment brought into a East Lyme Water and Sewer site to deliver or store hazardous chemicals is in good condition and that all equipment required is operating.
2. Contractor personel must be licensed and/or have the necessary handling permits or certifications. Documentation must be present with the driver or on the vehicle at all times for inspection by an East Lyme Water and Sewer representative.
3. Contractor personnel must be thoroughly familiar with operation of equipment and the use of materials or chemicals used at any East Lyme Water and Sewer facility.
4. Contractor personnel should have knowledge of the physical properties, hazards and personal protective equipment (PPE) required. All contractor personnel shall be provided with appropriate PPE for the chemicals and hazards present.
5. Spill response equipment shall be available on location to contain or control a reasonably anticipated release or spill. All chemical spills at an East Lyme Water and Sewer facility or location must be reported to an East Lyme Water and Sewer authorized representative immediately upon discovery.
6. Contractor will provide to the East Lyme Water and Sewer Department a complete inventory of chemicals brought onto an East Lyme Water and Sewer facility or location. Contractor must have all material safety data sheets (MSDS) for the material carried and available on request.
7. At the end of the project the contractor shall remove any chemicals that were not used.

GUIDE 3: FIRE PROTECTION AND PREVENTION

OVERVIEW

Fire safety and prevention is critical to the effective operations of East Lyme Water and Sewer facilities. The East Lyme Water and Sewer Department focuses on responsibly safeguarding human and business assets to avoid a fire or explosion that may cause injury or disrupt operations. All contractors performing construction and maintenance operations must implement measures to prevent and control fires, if one occurs.

FIRE PREVENTION AND FIRE CONTROL REQUIREMENTS

Prior to working at any East Lyme Water and Sewer facility or project, all contractors must, at a minimum, meet the following requirements.

1. The contractor program must identify the fire protection requirements and procedures.
2. The contractor must identify personnel who are trained in the use of fire extinguishers and fire fighting techniques and can fight a fire during the early or incipient stage.
3. An East Lyme Water and Sewer representative will be informed of all fire or explosion occurrences.
4. Ensure all field offices, shanties and storage facilities are constructed in accordance with applicable codes and fabricated of noncombustible material for protection against fire.
5. The contractor must identify and inform the East Lyme Water and Sewer department, operations that present a potential fire hazard, for example hotwork (welding, grinding and cutting) and the use of flammable liquids and gases.
6. Contractor must implement procedures to eliminate and control fire hazards including housekeeping, electrical safety, safety procedures for hot work, storage and handling of flammable and combustible liquids and compressed gases.
7. Good housekeeping standards must be enforced in the work area, including the requirements that waste, rubbish and flammable materials and rags be removed from the area daily.
8. All waste, rubbish and flammable materials must be stored in approved containers.
9. Non combustible tables or shelves, or protected work area will be used for hot work.
10. Storing flammable liquids in approved safety cans that are painted red with a yellow band around the can and labeled to identify the contents.
11. Storing combustible liquids in green safety cans that are labeled to identify the contents.
12. Storing all Flammable Combustible Liquids (FCL's) in closed approved metal cabinets and only storing quantities of these liquids on-site that do not exceed the minimum amount required for efficient operation.
13. Prohibit the use of gasoline and other highly flammable liquids for cleaning.
14. Using approved pumps or approved self-closing faucets and drip pans when dispensing FCL from drums or portable tanks.
15. Class B/C rated fire extinguishers will be located in close proximity to FCL areas and monthly and annual inspections will be performed to ensure that the units are ready for use.

16. In the event of a fire involving compressed gases, the gases will be permitted to burn and not extinguished, under any circumstances.
17. Oil, grease and highly volatile liquids must not be stored near oxygen cylinders.
18. Smoking is prohibited near flammable or combustible liquids and gases.
19. Using liquefied petroleum gas (LPG) indoors for cutting and/or welding operations shall be limited to small quantities and no more than a 1-pound bottle shall be stored in the building.
20. Open flames or spark-producing tools must not be used in any enclosure where an explosion concern may exist until testing indicates that an explosion hazard does not exist.
21. Obtain an East Lyme Water and Sewer Hot Work permit if working in vicinity of a natural gas regulator or LNG facility.

GUIDE 4: PERSONAL PROTECTIVE EQUIPMENT

OVERVIEW

For many tasks, personal protective equipment (PPE) is as essential to the job as any tool. OSHA requires that every employer evaluate all tasks associated with a project to determine the hazards associated with these tasks and the appropriate PPE to be worn by each affected employee. This hazard assessment must be documented.

MINIMUM PPE REQUIREMENTS

In order to perform work at any East Lyme Water and Sewer facility or project, all contractors must, at least, meet the following requirements.

1. All employers must conduct a hazard assessment prior to the start of every project and as conditions change on the project to determine the types of PPE necessary for each task.
2. The results of the hazard assessment must be communicated to every employee on the project prior to the start of work and as conditions change.
3. All workers must be trained to recognize the need for and types of PPE necessary, the proper use of PPE, the limitations of PPE, and proper care and disposal of PPE.
4. All workers must be trained in the procedures for inspecting PPE prior to use to ensure it provides the required protection.
5. All PPE used must meet applicable American National Standards Institute (ANSI) standards.
6. All PPE must be maintained in a sanitary and reliable condition.
7. Where employees supply their own PPE, the employer is responsible for ensuring the adequacy, maintenance and sanitation of this PPE.
8. Hard hats must never be changed or modified in any way and must be appropriate for the type of work being performed.
9. Eye protection must be appropriate for the type of work being performed and must be equipped with side shields.
10. Burning goggles must be equipped with appropriate filtering lenses for the work being performed.
11. Gloves must provide adequate wrist and hand protection based on the tasks being performed and must be compatible with and resistant to any potential hazard (sharps, chemical, electrical, etc.)
12. Safety shoes or boots must be fitted with protective toe guards.
13. Additional PPE may be necessary for certain situations, for example overboots or rubber boots should be worn for wet conditions or chemical spills, etc.
14. Protective clothing (reusable or disposable) must be appropriate for the type of work being performed.
15. Orange or lime colored reflective vests, approved by the U.S. Department of Transportation must be worn when working in areas exposed to or adjacent to vehicle traffic.

16. Workers required to wear hearing protection must be allowed to select the type of devices they wish to wear from a number of suitable devices.
17. Flame resistant garments are required in areas where there is a potential for arc or flash.

GUIDE 5: HEARING CONSERVATION

OVERVIEW

Noise is defined as unwanted sound. Noise can cause sudden traumatic temporary hearing loss, long-term slowly occurring hearing loss that is irreversible, disruption of communication and masking of warning devices and alarms. These long-term effects may occur at noise levels lower than are constant and daily.

MINIMUM HEARING CONSERVATION REQUIREMENTS

In order to perform work at any East Lyme Water and Sewer facility or project, all contractors must, at least, meet the following requirements.

1. Workers must not be exposed to noise levels above those stated in the regulations.
2. All noise levels must be measured on the A-weighted scale by a trained person.
3. When noise exposure includes two or more periods at different noise levels, the combined noise exposure must be calculated.
4. When noise levels exceed the permissible limits, worker exposure must be controlled through engineering controls, administrative controls, personal protective equipment (PPE) or a combination of these.
5. Engineering controls consist of isolating, enclosing or insulating equipment or operations or substituting quieter equipment or operations.
6. Engineering controls are always preferred over other controls.
7. Administrative controls involve rotating workers to jobs having lower noise exposures and reducing the time that each worker is exposed.
8. PPE, for example earplugs and earmuffs, must be rated to reduce the noise exposure to within acceptable limits.
9. A noise exposure at or above 85 decibels on the A-weighted scale (dBA) averaged over an 8-hour time period (with or without PPE) requires a formal written hearing conservation program.
10. A hearing conservation program must include:
 - Noise monitoring;
 - Procedures for employee notification;
 - Provisions to permit employees to observe monitoring;
 - Initial and annual audiometric testing and an evaluation of the audiogram by a qualified professional;
 - A noise training program for all affected workers, and;
 - Formal record keeping.

11. The following table is a guide to common noise levels:

<u>Permissible Duration (dBA)</u>	<u>Examples of Noise Sources</u>
15	Wooded Forest
25	Quiet Bedroom
35	Library
65	Normal Speaking
75	General Office Area
85	Average Machine Shop

Action Level for Hearing Conservation Program - 85 dBA

8 Hours	90
6 Hours	92
4 Hours	95
3 Hours	97
2 Hours	100 Air Spray Operation
1.5 Hours	102
30 Minutes	110 Power Table Saw
15 Minutes	115
7.5 Minutes	120
4 Minutes	125 Rock-n-Roll Concert
2 Minutes	130 Aircraft Jet Engine/Ear Pain Threshold
NOT TO EXCEED	140

12. A standard rule of thumb for noise states that when standing face-to-face at a distance of 1 to 2 feet, if it is necessary to raise your voice to be heard, the background noise exceeds 85 dBA.

GUIDE 6: WORKING AT ELEVATIONS

OVERVIEW

Falls from elevated work areas are one of the leading causes of death each year in occupational settings. Fall prevention is provided by engineering controls such as safety railings or personal fall protection systems. Precautions should also be taken to protect personnel from falling objects. A competent person is required to manage all processes involving scaffolding to ensure that scaffolding is erected, moved, used and dismantled safely.

MINIMUM WORKING ELEVATION REQUIREMENTS

In order to perform work at any East Lyme Water and Sewer Utilities facility or project, all contractors must, at least, meet the following requirements.

1. Elevated surfaces include openings (pits), open-sided platforms, floors or runways, stairs, ladders, mobile scaffolding, lifting equipment (aerial lifts and ladders).
2. Work performed at elevations must include safety harnesses and lifelines including:
 - Working on unprotected surfaces 6 feet or more above the ground or water.
 - Working on scaffolding 6 feet or more above the ground not equipped with proper railing.
 - Work on lifts where portions of the railing must be removed.
3. Lifelines/harnesses must be inspected and comply with the American National Standards Institute (ANSI) standards and be used according to manufacturers' operating procedures.
4. The lanyard must be a minimum of one-half inch nylon or equivalent and must not allow a fall of greater than 6 feet or one that would contact any lower level.
5. A body harness must be worn and a lanyard attached to the boom strap when working from an aerial lift device. Body belts are prohibited.
6. All open-sided floors, platforms or runways where a fall of 6 feet or more may occur must have railings and toeboards on all open sides.
7. Approved ladders will be used and inspected before each use to ensure their integrity.
8. Scaffold planking, guardrails, ladders and toeboards must be installed on scaffolds as required by the regulations. A scaffold must be rated for four times its intended load.
9. **CLIMBING ON SCAFFOLD CROSS MEMBERS IS PROHIBITED.**
10. Scaffolding must be cross-braced or braced diagonally and be plumb, square and rigid. Sections of scaffolding are locked together with cotter pins if uplifting may occur.
11. Lean-to scaffolds are prohibited.
12. Loading limitation of scaffold must not be exceeded.
13. The erection, installation and use of various scaffold types will be in compliance with all laws and regulations and manufacturers operating procedures.

GUIDE 7: ELECTRICAL SAFETY

OVERVIEW

Electrical safety is an important component to any safety program. To minimize personal injury from contact with energized sources, workers must be trained in fundamentals of electrical safety and all electrical hazards on a project must be identified and corrected. Only properly licensed electricians may perform any electrical work on East Lyme Water and Sewer projects.

MINIMUM ELECTRICAL SAFETY REQUIREMENTS

In order to perform work at any East Lyme Water and Sewer facility or project, all contractors must, at least, meet the following requirements.

1. Before work begins, all electric circuits, exposed or concealed, that may be contacted by workers must be posted with warning signs.
2. All workers must be notified of the location and hazard involved with nearby electrical circuits and protective measures taken.
3. Workers must not work near any part of an electrical circuit unless they are protected against shock by guarding or by de-energizing and grounding the circuit.
4. Workspaces, walkways and similar locations must be kept free of electrical cords and tools.
5. Equipment must not be stored around electrical cabinets to prevent access.
6. Workers must inspect all electrical equipment, including extension cords, for the following hazards:
 - Missing ground pins on plugs (except double-insulated);
 - Insulation pulled free from plugs or support connections;
 - Damaged insulation;
 - Exposed wires; and
 - Evidence of arcing, sparking or smoking.
7. When any conditions are identified on equipment that makes it unsafe to operate, the equipment must be removed from the site until repaired by a qualified person.
8. Portable lamps must be covered by a fixed, grounded (if metal) guard and equipped with an insulated handle.
9. All underground utilities must be marked prior to any groundbreaking activities.
10. Flexible cords must be suitable for the condition and location of use and must be used as appropriate.
11. Three-wire extension cords must be used and must be rated for hard or extra-hard use.
12. Splices and/or taps are prohibited in extension cords.
13. Extension cords must not be fastened with staples, hung on nails or suspended on wires.
14. Workers must be trained in the safety-related work practices that pertain to their job and cannot work near electrical hazards without training to recognize and avoid the hazard.

15. Electrical workers must test all equipment to verify if energy is present.
16. Only qualified, trained workers may test electrical equipment.
17. Workers must properly lockout and tagout any circuit or equipment being worked on and verify the equipment is de-energized.
18. Personal protective equipment used by electrical workers must be appropriate and in good condition.
19. Portable metal ladders and ladders with metal reinforcement are prohibited near energized electrical equipment.
20. ALL electrical equipment used on a project (hand tools, etc.) must be protected with a ground-fault circuit interrupter (GFCI).
21. Materials must not be stored in transformer vaults.
22. AC and DC wiring systems must be properly grounded.
23. Proper clearance from overhead power lines must be maintained at all times.

Guide 8: Excavation and Trenching

Overview

Excavation operations are among the first actions taken at a project site. Accidental cave-ins of earth that has been excavated account for a large majority of fatalities each year. In many cases, workers receive no warnings when excavated ground collapses and are suddenly trapped under tons of soil.

Minimum Excavation Requirements

In order to perform work on any East Lyme Water and Sewer facility or project, all contractors must, at least, meet the following requirements. Please note that additional requirements may be necessary based on job specific activities.

ALL UTILITIES MUST BE MARKED-OUT BY APPROPRIATE AUTHORITIES PRIOR TO ANY EXCAVATION.

- A trench is considered an excavation.
- All underground hazards (electric lines, gas/water lines, boulders, etc.) must be de-energized or removed/supported appropriately.
- Hand digging must be conducted near known or suspected underground systems.
- Ramps or runways used as a means of entry/exit for excavations must be designed by a competent person.
- A ladder or other safe means of exit must be used in excavations greater than 4 feet deep and cannot be greater than 25 feet from all workers in the excavation.
- Entering an excavation during digging is prohibited.
- When the atmosphere in an excavation is/can become hazardous, Proper atmospheric testing must be conducted as required by the Confined Space Program., Section 6 in this Safety Guideline.
- Daily inspections of the excavation and surrounding areas must be conducted by a competent person before work begins and as needed during the shift.
- Excavations must be shored or braced if nearby structures (buildings, sidewalks, etc.) may become unstable.
- All material, including excavated soil, must be stored at least 2 feet from the side of the excavation.
- Workers may only pass over an excavation on properly constructed walkways/bridges with guardrails in place.
- Adequate physical barriers must be provided around all excavations.
- Adequate protective systems must be used in excavations unless:
 - The excavation is entirely in stable bedrock; or
 - The excavation is less than 5 feet deep AND has been examined by a competent person who has found no signs of potential cave-ins.

· All excavations greater than 5 feet deep must be properly sloped, shored, braced, shielded, or protected by a system designed by a professional engineer.

If a potentially hazardous material is encountered during excavation, all work must stop until the material can be evaluated by a Safety Professional.

Regulatory

A complete text of the requirements for Excavations can be found in Title 29 Code of Federal Regulations, Part 1926, Subpart P.

Guide 9: Asbestos Awareness

Overview

Asbestos has been used in hundreds of different types of insulation products and building materials. Asbestos-containing materials (ACM) can release asbestos fibers into the air if damaged. To minimize the release of fibers and the potential for exposure concerns, the handling and removal of ACM is highly regulated. The highlights of our Company program are:

- Contractors are required to ensure that ACM is not inadvertently contacted or disturbed.
- Suspect ACM must be assumed to be ACM until results of sampling by a certified individual and analysis by a certified lab proves the material to be non-ACM.

Contractors will comply with the local, state and federal regulations for ACM work.

Minimum Asbestos Awareness Requirements

- When working in any East Lyme Water and Sewer facility or on any East Lyme Water and Sewer project, all contractors must meet, at a minimum, the following requirements. The contractor is responsible for ensuring that all controls and requirements are identified to address job-specific activities.
- All contractors handling ACM will be required to be certified and in accordance with applicable OSHA standards and be trained in the specific tasks they will perform.
- When contractor personnel contacts or disturbs ACM, the contractor will develop an Asbestos Abatement Work Plan that outlines the procedures for planning and completing the project/activity and will submit the Work Plan to the East Lyme Water and Sewer Project Coordinator for approval. The Contractor is responsible for the proper filing, permits and fees for projects that will disturb ACM.
- The contractor will use necessary equipment (negative pressure air machines, respirators, etc.) for activities that disturb ACM to control the releases of fibers and to ensure the safety of personnel.
- The contractor will comply with federal, state and local regulations, including approved site work procedures, asbestos abatement, disturbance control, personal and facility decontamination procedures, housekeeping practices, final cleanup requirements and clearance procedures, and project engineering control methods.
- The contractor will use the proper personal protective equipment and air monitoring procedures.
- The contractor will provide and maintain a Medical Surveillance Program for employees.
- The Storage/transport/disposal of ACM will comply with federal, state and local regulations.
- The contractor will maintain asbestos project and employee records for projects including, but not limited to, exposure monitoring records, medical records, training records, fit-test records, and project specific records, such as the amounts and types of asbestos abated, logbooks, waste transportation information and site identification information, etc.

Regulatory

- Title 29, Code of Federal Regulations (CFR), Occupational Safety and Health Administration (OSHA), Part 1910.1001 - General industry Standards for Asbestos.
- Title 29, CFR, OSHA, Part 1926.1101 - Construction Standards for Asbestos.

ATTACHMENT 4

DBE REQUIREMENTS



Clean Water Fund Memorandum (2016-003)

Disadvantaged Business Enterprise (DBE) Subcontractor Participation on Clean Water Fund (CWF) Construction Projects

I. PURPOSE

The municipality, through its Prime Contractor must make specified good faith efforts to attain the DBE goals as specified in this document in Section III. This is an administrative condition of the U.S. Environmental Protection Agency (EPA) Grant which funds Clean Water Fund Projects.

This memorandum supersedes the Clean Water Fund Memorandum Dated June 24, 2014

II. GOVERNING STATUTE OR REGULATION

General Compliance (Federal), 40 CFR, Part 33: The municipality, through its Prime Contractor must comply with the requirements of EPA's Program for Utilization of Small, Minority, and Women's Business Enterprises (MBE/WBE).

III. EPA REQUIREMENTS

The following clause shall be included in all construction contract documents for goods and services to be funded under the CWF:

The requirement for DBE subcontractor participation, expressed as a percentage of the total eligible contract amount, shall be a minimum of 8.0 percent with the following makeup:

MBE 3.0 percent WBE 5.0 percent

Failure to meet or exceed the required percentage or submit acceptable documentation of the six good faith efforts may render a bid non-responsive and may cause the bid to be rejected.

IV. CERTIFICATION

A DBE must be certified at the time that the subcontract for their services is executed. A business that is pending new certification, recertification, or whose certification has expired cannot be counted toward the goals.

In the case where a subcontractor DBE is certified as both a MBE and a WBE:

1. The prime contractor may count the entire value of the subcontract as either a MBE or a WBE.
2. The prime contractor may choose to split the subcontract between the MBE and the WBE categories to fulfill both goals. If the prime contractor chooses this route:
 - a. They must indicate the dollars to be apportioned to the categories either on the face of the copy of the fully executed subcontract submitted to the DEEP or by some other written method.

- b. The certification submitted to DEEP must indicate that the principal of the subcontractor is both a woman and a minority.
- c. For a certification that only identifies the subcontractor as a DBE, additional documentation is required as proof of dual status. In the case of ConnDOT, the detailed information page within their online database suffices as proof.

V. THE SIX GOOD FAITH EFFORTS AS SPECIFICALLY DEFINED BY EPA

The Six Good Faith Efforts are required methods employed by all DEEP Clean Water Fund recipients to ensure that all DBEs have the opportunity to compete for procurements funded by DEEP financial assistance dollars.

1. Ensure DBEs are made aware of contracting opportunities to the fullest extent practicable through outreach and recruitment activities. For Indian Tribal, State and Local and Government recipients, this will include placing DBEs on solicitation lists and soliciting them whenever they are potential sources.
2. Make information on forthcoming opportunities available to DBEs and arrange time frames for contracts and establish delivery schedules, where the requirements permit, in a way that encourages and facilitates participation by DBEs in the competitive process. This includes, whenever possible, posting solicitations for bids or proposals for a minimum of 30 calendar days before the bid or proposal closing date.
3. Consider in the contracting process whether firms competing for large contracts could subcontract with DBEs. For Indian Tribal, State and local Government recipients, this will include dividing total requirements when economically feasible into smaller tasks or quantities to permit maximum participation by DBEs in the competitive process.
4. Encourage contracting with a consortium of DBEs when a contract is too large for one of these firms to handle individually.
5. Use the services and assistance of the SBA and the Minority Business Development Agency of the Department of Commerce.
6. If the Prime Contractor awards subcontracts, require the Prime Contractor to take the above steps.

The Prime Contractor's certification as a DBE has no effect on this requirement. Therefore, if the Prime Contractor is a DBE, the Six Good Faith Efforts defined above must be employed in the procurement of subcontracts to be secured to achieve the MBE 3.0% and WBE 5.0% participation. Also, for subcontracts for material suppliers, only 25% of the dollar value of their contracts may be applied toward the required percentage listed above unless that supplier manufactures those supplies and/or adds specialized input to the process.

VI. ACCEPTABLE CERTIFICATION OPTIONS

1. **Connecticut Department of Administrative Services (DAS)** - DEEP will continue to accept DAS certification until such time as other State entities are identified whose certification processes meet the EPA criteria. DAS will only certify Connecticut based firms that meet the criteria under CGS 4a-60g.
2. **Connecticut Department of Transportation (ConnDOT)** - Companies that desire to do business with ConnDOT as well as the DEEP should seek ConnDOT certification which will be accepted by the DEEP. DBE firms are advised that the certification process can take 90 days to complete. ConnDOT will certify both in state as well as out of state firms.

3. **The Environmental Protection Agency (EPA)** – In the event an entity cannot be certified by ConnDOT as a DBE, that entity should seek certification with EPA. Such entities must provide EPA with evidence from ConnDOT denying certification.
4. **Small Business Administration (SBA-Federal)**-SBA certification is available to companies under the Woman Owned Small Business (WOSB) program and the SBA 8(a) Business Development Program (www.sba.gov/8abd/) which has a net worth ceiling of \$250,000 for initial applicants.
5. **Other states certification**- Prime Contractors and Engineering Consultants may utilize certification from other states. Such certification must specify the DBE designation. Where there is no DBE certification option within a state, the instance must be presented to the DEEP Financial Administrator assigned to the project for consideration on a per case basis.

VII. DBE COMPLIANCE PROCESS

Within fourteen (14) calendar days after bid opening the apparent low bidder shall complete and submit to the municipality the Subcontractor Verification Form provided in the contract documents along with corresponding DBE certification for each subcontractor. The municipality must then submit copies as part of the bid application to DEEP as demonstration of compliance with this memorandum. **Failure to submit these documents by the close of business of the fourteenth calendar day after bid opening may result in the bid being deemed non-responsive and may cause the bid to be rejected.** Two executed copies of the DBE subcontracts must be submitted to the municipality, who must then submit one copy to the DEEP Financial Administrator as demonstration of compliance with this memorandum.

No payment requests will be processed by DEEP until the executed copies of the subcontracts are on file in the DEEP office.

It is understood that the Prime Contractor must make and document the good faith efforts as defined above. Should the contractor not meet the goals, documentation of good faith efforts will be required to be submitted to the DEEP Municipal Facilities Engineer for consideration that the good faith effort was extensive enough to warrant the acceptance of a lower goal for the specific contract in question.

The prime contractor is required to employ the six good faith efforts in that the DBE percentages shall be maintained or exceeded in the event of one subcontractor being substituted for another.

I hereby verify that I have read and understand the DBE requirements in this memorandum and will procure subcontracts whose percentages will meet or exceed the minimums listed above.

Contract Name _____

Prime Contractor Company Name _____

Prime Contractor Authorized Signature _____ **Date** _____

VIII. DEFINITIONS

CGS: Connecticut General Statutes

ConnDOT: Connecticut Department of Transportation

CWF: Clean Water Fund

DAS: Connecticut Department of Administrative Services

DBE: Disadvantaged Business Enterprise

DEEP: Department of Energy and Environmental Protection

EPA: Environmental Protection Agency (Federal)

MBE: Minority Business Enterprise

SBA: Small Business Administration (Federal)

WBE: Woman Business Enterprise

WOSB: Woman Owned Small Business (Federal program - SBA)

May 25, 2016
Date


Denise Ruzicka, Director
Planning and Standards Division
Bureau of Water Protection and Land Reuse



Disadvantage Business Enterprise (DBE) Subcontractor Verification Form

Prime Contractor Company Name: _____

Contract Name/Number: _____

Contract Award Amount: \$ _____

Note to prime contractor: You are required to complete this form listing each DBE (MBE or WBE) subcontractor to be employed in work eligible for the Drinking Water State Revolving Fund within the table below. Please submit an original of this completed form, along with each subcontractor's current, valid DBE certificate, to the municipality within 14 days of bid opening. In the event that this form is not submitted with the bid application, the bid could be rendered nonresponsive and rejected.

Name of proposed subcontractor/vendor	Type (MBE or WBE)	Type of Product or Service * (see below)	Contact Name, Address, Phone # of Subcontractor or Vendor	Dollar amount of proposed subcontract	Dollar Amount contributing toward MBE/WBE goal†	MBE % of Contract towards goal	WBE % of Contract towards goal
* Type of Product or Service:		1 - Construction	2 - Supplies	3 - Services	4 - Equipment		

† *Supplier is defined as follows: A supplier is a business which acts as a distributor of materials or equipment and which provides a commercially useful function when such activity is traditional in the industry manufacturing the material or equipment supplied. Suppliers will receive 25% credit for providing supplies and receive 100% for manufacturing or fabrication of supply items. Haulers will receive 100% credit if they provide the material that is hauled. Commercially useful function will normally include:*

- 1. Providing Technical Assistance to the purchaser prior to the purchase, during installation and after the supplies or equipment are placed in service;*
- 2. Manufacturing or being first tier below manufacturer of the supplies or equipment supplied;*
- 3. Providing Functions other than just accepting and referring request for supplies or equipment to another party for direct shipment to a contractor.*

The completion and submission of this form does not constitute a contractual agreement between the general contractor and the named subcontractor, but is solely for documenting proposed compliance with DBE participation under the Department of Public Health's (DPH) Drinking Water State Revolving Fund (DWSRF). Should another subcontractor be substituted in place of the firm named above, both the municipality and the DPH (Drinking Water Section – DWSRF Unit, 410 Capitol Ave, MS#51 WAT, PO Box 340308, Hartford, CT 06134-0308) should be notified in writing within three (3) business days of the change, and a copy of this form must be completed for the replacement subcontractor. The DBE percentages shall be maintained or exceeded in the event of one subcontractor being substituted for another.

Prime Contractor Authorized Signature: _____ Date: _____

ATTACHMENT 5
AIS REQUIREMENTS



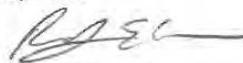
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

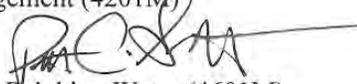
MAR 20 2014

OFFICE OF WATER

MEMORANDUM

SUBJECT: Implementation of American Iron and Steel provisions of P.L. 113-76,
Consolidated Appropriations Act, 2014

FROM: For Andrew D. Sawyers, Director 
Office of Wastewater Management (4201M)

Peter C. Grevatt, Director 
Office of Ground Water and Drinking Water (4601M)

TO: Water Management Division Directors
Regions I - X

P.L. 113-76, Consolidated Appropriations Act, 2014 (Act), includes an "American Iron and Steel (AIS)" requirement in section 436 that requires Clean Water State Revolving Loan Fund (CWSRF) and Drinking Water State Revolving Loan Fund (DWSRF) assistance recipients to use iron and steel products that are produced in the United States for projects for the construction, alteration, maintenance, or repair of a public water system or treatment works if the project is funded through an assistance agreement executed beginning January 17, 2014 (enactment of the Act), through the end of Federal Fiscal Year 2014.

Section 436 also sets forth certain circumstances under which EPA may waive the AIS requirement. Furthermore, the Act specifically exempts projects where engineering plans and specifications were approved by a State agency prior to January 17, 2014.

The approach described below explains how EPA will implement the AIS requirement. The first section is in the form of questions and answers that address the types of projects that must comply with the AIS requirement, the types of products covered by the AIS requirement, and compliance. The second section is a step-by-step process for requesting waivers and the circumstances under which waivers may be granted.

Implementation

The Act states:

Sec. 436. (a)(1) None of the funds made available by a State water pollution control revolving fund as authorized by title VI of the Federal Water Pollution Control Act (33 U.S.C. 1381 et seq.) or made available by a drinking water treatment revolving loan fund as authorized by section 1452 of the Safe Drinking Water Act (42 U.S.C. 300j-12) shall be used for a project for the construction, alteration, maintenance, or repair of a public water system or treatment works unless all of the iron and steel products used in the project are produced in the United States.

(2) In this section, the term “iron and steel products” means the following products made primarily of iron or steel: lined or unlined pipes and fittings, manhole covers and other municipal castings, hydrants, tanks, flanges, pipe clamps and restraints, valves, structural steel, reinforced precast concrete, and construction materials.

(b) Subsection (a) shall not apply in any case or category of cases in which the Administrator of the Environmental Protection Agency (in this section referred to as the “Administrator”) finds that—

(1) applying subsection (a) would be inconsistent with the public interest;

(2) iron and steel products are not produced in the United States in sufficient and reasonably available quantities and of a satisfactory quality; or

(3) inclusion of iron and steel products produced in the United States will increase the cost of the overall project by more than 25 percent.

(c) If the Administrator receives a request for a waiver under this section, the Administrator shall make available to the public on an informal basis a copy of the request and information available to the Administrator concerning the request, and shall allow for informal public input on the request for at least 15 days prior to making a finding based on the request. The Administrator shall make the request and accompanying information available by electronic means, including on the official public Internet Web site of the Environmental Protection Agency.

(d) This section shall be applied in a manner consistent with United States obligations under international agreements.

(e) The Administrator may retain up to 0.25 percent of the funds appropriated in this Act for the Clean and Drinking Water State Revolving Funds for carrying out

the provisions described in subsection (a)(1) for management and oversight of the requirements of this section.

(f) This section does not apply with respect to a project if a State agency approves the engineering plans and specifications for the project, in that agency's capacity to approve such plans and specifications prior to a project requesting bids, prior to the date of the enactment of this Act.

The following questions and answers provide guidance for implementing and complying with the AIS requirements:

Project Coverage

1) What classes of projects are covered by the AIS requirement?

All treatment works projects funded by a CWSRF assistance agreement, and all public water system projects funded by a DWSRF assistance agreement, from the date of enactment through the end of Federal Fiscal Year 2014, are covered. The AIS requirements apply to the entirety of the project, no matter when construction begins or ends. Additionally, the AIS requirements apply to all parts of the project, no matter the source of funding.

2) Does the AIS requirement apply to nonpoint source projects or national estuary projects?

No. Congress did not include an AIS requirement for nonpoint source and national estuary projects unless the project can also be classified as a 'treatment works' as defined by section 212 of the Clean Water Act.

3) Are any projects for the construction, alteration, maintenance, or repair of a public water system or treatment works excluded from the AIS requirement?

Any project, whether a treatment works project or a public water system project, for which engineering plans and specifications were approved by the responsible state agency prior to January 17, 2014, is excluded from the AIS requirements.

4) What if the project does not have approved engineering plans and specifications but has signed an assistance agreement with a CWSRF or DWSRF program prior to January 17, 2014?

The AIS requirements do not apply to any project for which an assistance agreement was signed prior to January 17, 2014.

5) What if the project does not have approved engineering plans and specifications, but bids were advertised prior to January 17, 2014 and an assistance agreement was signed after January 17, 2014?

If the project does not require approved engineering plans and specifications, the bid advertisement date will count in lieu of the approval date for purposes of the exemption in section 436(f).

6) What if the assistance agreement that was signed prior to January 17, 2014, only funded a part of the overall project, where the remainder of the project will be funded later with another SRF loan?

If the original assistance agreement funded any construction of the project, the date of the original assistance agreement counts for purposes of the exemption. If the original assistance agreement was only for planning and design, the date of that assistance agreement will count for purposes of the exemption only if there is a written commitment or expectation on the part of the assistance recipient to fund the remainder of the project with SRF funds.

7) What if the assistance agreement that was signed prior to January 17, 2014, funded the first phase of a multi-phase project, where the remaining phases will be funded by SRF assistance in the future?

In such a case, the phases of the project will be considered a single project if all construction necessary to complete the building or work, regardless of the number of contracts or assistance agreements involved, are closely related in purpose, time and place. However, there are many situations in which major construction activities are clearly undertaken in phases that are distinct in purpose, time, or place. In the case of distinct phases, projects with engineering plans and specifications approval or assistance agreements signed prior to January 17, 2014 would be excluded from AIS requirements while those approved/signed on January 17, 2014, or later would be covered by the AIS requirements.

8) What if a project has split funding from a non-SRF source?

Many States intend to fund projects with “split” funding, from the SRF program and from State or other programs. Based on the Act language in section 436, which requires that American iron and steel products be used in any project for the construction, alteration, maintenance, or repair of a public water system or treatment works receiving SRF funding between and including January 17, 2014 and September 30, 2014, any project that is funded in whole or in part with such funds must comply with the AIS requirement. A “project” consists of all construction necessary to complete the building or work regardless of the number of contracts or assistance agreements involved so long as all contracts and assistance agreements awarded are closely related in purpose, time and place. This precludes the intentional splitting of SRF projects into separate and smaller contracts or assistance agreements to avoid AIS coverage on some portion of a larger

project, particularly where the activities are integrally and proximately related to the whole. However, there are many situations in which major construction activities are clearly undertaken in separate phases that are distinct in purpose, time, or place, in which case, separate contracts or assistance agreement for SRF and State or other funding would carry separate requirements.

9) What about refinancing?

If a project began construction, financed from a non-SRF source, prior to January 17, 2014, but is refinanced through an SRF assistance agreement executed on or after January 17, 2014 and prior to October 1, 2014, AIS requirements will apply to all construction that occurs on or after January 17, 2014, through completion of construction, unless, as is likely, engineering plans and specifications were approved by a responsible state agency prior to January 17, 2014. There is no retroactive application of the AIS requirements where a refinancing occurs for a project that has completed construction prior to January 17, 2014.

10) Do the AIS requirements apply to any other EPA programs, besides the SRF program, such as the Tribal Set-aside grants or grants to the Territories and DC?

No, the AIS requirement only applies to funds made available by a State water pollution control revolving fund as authorized by title VI of the Federal Water Pollution Control Act (33 U.S.C. 1381 et seq.) or made available by a drinking water treatment revolving loan fund as authorized by section 1452 of the Safe Drinking Water Act (42 U.S.C. 300j-12)

Covered Iron and Steel Products

11) What is an iron or steel product?

For purposes of the CWSRF and DWSRF projects that must comply with the AIS requirement, an iron or steel product is one of the following made primarily of iron or steel that is permanently incorporated into the public water system or treatment works:

- Lined or unlined pipes or fittings;
- Manhole Covers;
- Municipal Castings (defined in more detail below);
- Hydrants;
- Tanks;
- Flanges;
- Pipe clamps and restraints;
- Valves;
- Structural steel (defined in more detail below);
- Reinforced precast concrete; and
- Construction materials (defined in more detail below).

12) What does the term 'primarily iron or steel' mean?

'Primarily iron or steel' places constraints on the list of products above. For one of the listed products to be considered subject to the AIS requirements, it must be made of greater than 50% iron or steel, measured by cost. The cost should be based on the material costs.

13) Can you provide an example of how to perform a cost determination?

For example, the iron portion of a fire hydrant would likely be the bonnet, body and shoe, and the cost then would include the pouring and casting to create those components. The other material costs would include non-iron and steel internal workings of the fire hydrant (i.e., stem, coupling, valve, seals, etc). However, the assembly of the internal workings into the hydrant body would not be included in this cost calculation. If one of the listed products is not made primarily of iron or steel, United States (US) provenance is not required. An exception to this definition is reinforced precast concrete, which is addressed in a later question.

14) If a product is composed of more than 50% iron or steel, but is not listed in the above list of items, must the item be produced in the US? Alternatively, must the iron or steel in such a product be produced in the US?

The answer to both question is no. Only items on the above list must be produced in the US. Additionally, the iron or steel in a non-listed item can be sourced from outside the US.

15) What is the definition of steel?

Steel means an alloy that includes at least 50 percent iron, between .02 and 2 percent carbon, and may include other elements. Metallic elements such as chromium, nickel, molybdenum, manganese, and silicon may be added during the melting of steel for the purpose of enhancing properties such as corrosion resistance, hardness, or strength. The definition of steel covers carbon steel, alloy steel, stainless steel, tool steel and other specialty steels.

16) What does 'produced in the United States' mean?

Production in the United States of the iron or steel products used in the project requires that all manufacturing processes, including application of coatings, must take place in the United States, with the exception of metallurgical processes involving refinement of steel additives. All manufacturing processes includes processes such as melting, refining, forming, rolling, drawing, finishing, fabricating and coating. Further, if a domestic iron and steel product is taken out of the US for any part of the manufacturing process, it becomes foreign source material. However, raw materials such as iron ore, limestone and iron and steel scrap are not covered by the AIS requirement, and the

material(s), if any, being applied as a coating are similarly not covered. Non-iron or steel components of an iron and steel product may come from non-US sources. For example, for products such as valves and hydrants, the individual non-iron and steel components do not have to be of domestic origin.

17) Are the raw materials used in the production of iron or steel required to come from US sources?

No. Raw materials, such as iron ore, limestone, scrap iron, and scrap steel, can come from non-US sources.

18) If an above listed item is primarily made of iron or steel, but is only at the construction site temporarily, must such an item be produced in the US?

No. Only the above listed products made primarily of iron or steel, permanently incorporated into the project must be produced in the US. For example trench boxes, scaffolding or equipment, which are removed from the project site upon completion of the project, are not required to be made of U.S. Iron or Steel.

19) What is the definition of 'municipal castings'?

Municipal castings are cast iron or steel infrastructure products that are melted and cast. They typically provide access, protection, or housing for components incorporated into utility owned drinking water, storm water, wastewater, and surface infrastructure. They are typically made of grey or ductile iron, or steel. Examples of municipal castings are:

- Access Hatches;
- Ballast Screen;
- Benches (Iron or Steel);
- Bollards;
- Cast Bases;
- Cast Iron Hinged Hatches, Square and Rectangular;
- Cast Iron Riser Rings;
- Catch Basin Inlet;
- Cleanout/Monument Boxes;
- Construction Covers and Frames;
- Curb and Corner Guards;
- Curb Openings;
- Detectable Warning Plates;
- Downspout Shoes (Boot, Inlet);
- Drainage Grates, Frames and Curb Inlets;
- Inlets;
- Junction Boxes;
- Lampposts;
- Manhole Covers, Rings and Frames, Risers;

Meter Boxes;
Service Boxes;
Steel Hinged Hatches, Square and Rectangular;
Steel Riser Rings;
Trash receptacles;
Tree Grates;
Tree Guards;
Trench Grates; and
Valve Boxes, Covers and Risers.

20) What is 'structural steel'?

Structural steel is rolled flanged shapes, having at least one dimension of their cross-section three inches or greater, which are used in the construction of bridges, buildings, ships, railroad rolling stock, and for numerous other constructional purposes. Such shapes are designated as wide-flange shapes, standard I-beams, channels, angles, tees and zees. Other shapes include H-piles, sheet piling, tie plates, cross ties, and those for other special purposes.

21) What is a 'construction material' for purposes of the AIS requirement?

Construction materials are those articles, materials, or supplies made primarily of iron and steel, that are permanently incorporated into the project, not including mechanical and/or electrical components, equipment and systems. Some of these products may overlap with what is also considered "structural steel". This includes, but is not limited to, the following products: wire rod, bar, angles, concrete reinforcing bar, wire, wire cloth, wire rope and cables, tubing, framing, joists, trusses, fasteners (i.e., nuts and bolts), welding rods, decking, grating, railings, stairs, access ramps, fire escapes, ladders, wall panels, dome structures, roofing, ductwork, surface drains, cable hanging systems, manhole steps, fencing and fence tubing, guardrails, doors, and stationary screens.

22) What is not considered a 'construction material' for purposes of the AIS requirement?

Mechanical and electrical components, equipment and systems are not considered construction materials. Mechanical equipment is typically that which has motorized parts and/or is powered by a motor. Electrical equipment is typically any machine powered by electricity and includes components that are part of the electrical distribution system.

The following examples (including their appurtenances necessary for their intended use and operation) are NOT considered construction materials: pumps, motors, gear reducers, drives (including variable frequency drives (VFDs)), electric/pneumatic/manual accessories used to operate valves (such as electric valve actuators), mixers, gates, motorized screens (such as traveling screens), blowers/aeration equipment, compressors, meters, sensors, controls and switches, supervisory control and

data acquisition (SCADA), membrane bioreactor systems, membrane filtration systems, filters, clarifiers and clarifier mechanisms, rakes, grinders, disinfection systems, presses (including belt presses), conveyors, cranes, HVAC (excluding ductwork), water heaters, heat exchangers, generators, cabinetry and housings (such as electrical boxes/enclosures), lighting fixtures, electrical conduit, emergency life systems, metal office furniture, shelving, laboratory equipment, analytical instrumentation, and dewatering equipment.

23) If the iron or steel is produced in the US, may other steps in the manufacturing process take place outside of the US, such as assembly?

No. Production in the US of the iron or steel used in a listed product requires that all manufacturing processes must take place in the United States, except metallurgical processes involving refinement of steel additives.

24) What processes must occur in the US to be compliant with the AIS requirement for reinforced precast concrete?

While reinforced precast concrete may not be at least 50% iron or steel, in this particular case, the reinforcing bar and wire must be produced in the US and meet the same standards as for any other iron or steel product. Additionally, the casting of the concrete product must take place in the US. The cement and other raw materials used in concrete production are not required to be of domestic origin.

If the reinforced concrete is cast at the construction site, the reinforcing bar and wire are considered to be a construction material and must be produced in the US.

Compliance

25) How should an assistance recipient document compliance with the AIS requirement?

In order to ensure compliance with the AIS requirement, specific AIS contract language must be included in each contract, starting with the assistance agreement, all the way down to the purchase agreements. Sample language for assistance agreements and contracts can be found in Appendix 3 and 4.

EPA recommends the use of a step certification process, similar to one used by the Federal Highway Administration. The step certification process is a method to ensure that producers adhere to the AIS requirement and assistance recipients can verify that products comply with the AIS requirement. The process also establishes accountability and better enables States to take enforcement actions against violators.

Step certification creates a paper trail which documents the location of the manufacturing process involved with the production of steel and iron materials. A step certification is a process under which each handler (supplier, fabricator, manufacturer,

processor, etc) of the iron and steel products certifies that their step in the process was domestically performed. Each time a step in the manufacturing process takes place, the manufacturer delivers its work along with a certification of its origin. A certification can be quite simple. Typically, it includes the name of the manufacturer, the location of the manufacturing facility where the product or process took place (not its headquarters), a description of the product or item being delivered, and a signature by a manufacturer's responsible party. Attached, as Appendix 5, are sample certifications. These certifications should be collected and maintained by assistance recipients.

Alternatively, the final manufacturer that delivers the iron or steel product to the worksite, vendor, or contractor, may provide a certification asserting that all manufacturing processes occurred in the US. While this type of certification may be acceptable, it may not provide the same degree of assurance. Additional documentation may be needed if the certification is lacking important information. Step certification is the best practice.

26) How should a State ensure assistance recipients are complying with the AIS requirement?

In order to ensure compliance with the AIS requirement, States SRF programs must include specific AIS contract language in the assistance agreement. Sample language for assistance agreements can be found in Appendix 3.

States should also, as a best practice, conduct site visits of projects during construction and review documentation demonstrating proof of compliance which the assistance recipient has gathered.

27) What happens if a State or EPA finds a non-compliant iron and/or steel product permanently incorporated in the project?

If a potentially non-compliant product is identified, the State should notify the assistance recipient of the apparent unauthorized use of the non-domestic component, including a proposed corrective action, and should be given the opportunity to reply. If unauthorized use is confirmed, the State can take one or more of the following actions: request a waiver where appropriate; require the removal of the non-domestic item; or withhold payment for all or part of the project. Only EPA can issue waivers to authorize the use of a non-domestic item. EPA may use remedies available to it under the Clean Water Act, the Safe Drinking Water Act, and 40 CFR part 31 grant regulations, in the event of a violation of a grant term and condition.

It is recommended that the State work collaboratively with EPA to determine the appropriate corrective action, especially in cases where the State is the one who identifies the item in noncompliance or there is a disagreement with the assistance recipient.

If fraud, waste, abuse, or any violation of the law is suspected, the Office of Inspector General (OIG) should be contacted immediately. The OIG can be reached at 1-

888-546-8740 or OIG_Hotline@epa.gov. More information can be found at this website: <http://www.epa.gov/oig/hotline.htm>.

28) How do international trade agreements affect the implementation of the AIS requirements?

The AIS provision applies in a manner consistent with United States obligations under international agreements. Typically, these obligations only apply to direct procurement by the entities that are signatories to such agreements. In general, SRF assistance recipients are not signatories to such agreements, so these agreements have no impact on this AIS provision. In the few instances where such an agreement applies to a municipality, that municipality is under the obligation to determine its applicability and requirements and document the actions taken to comply for the State.

Waiver Process

The statute permits EPA to issue waivers for a case or category of cases where EPA finds (1) that applying these requirements would be inconsistent with the public interest; (2) iron and steel products are not produced in the US in sufficient and reasonably available quantities and of a satisfactory quality; or (3) inclusion of iron and steel products produced in the US will increase the cost of the overall project by more than 25 percent.

In order to implement the AIS requirements, EPA has developed an approach to allow for effective and efficient implementation of the waiver process to allow projects to proceed in a timely manner. The framework described below will allow States, on behalf of the assistance recipients, to apply for waivers of the AIS requirement directly to EPA Headquarters. Only waiver requests received from states will be considered. Pursuant to the Act, EPA has the responsibility to make findings as to the issuance of waivers to the AIS requirements.

Definitions

The following terms are critical to the interpretation and implementation of the AIS requirements and apply to the process described in this memorandum:

Reasonably Available Quantity: The quantity of iron or steel products is available or will be available at the time needed and place needed, and in the proper form or specification as specified in the project plans and design.

Satisfactory Quality: The quality of iron or steel products, as specified in the project plans and designs.

Assistance Recipient: A borrower or grantee that receives funding from a State CWSRF or DWSRF program.

Step-By-Step Waiver Process

Application by Assistance Recipient

Each local entity that receives SRF water infrastructure financial assistance is required by section 436 of the Act to use American made iron and steel products in the construction of its project. However, the recipient may request a waiver. Until a waiver is granted by EPA, the AIS requirement stands, except as noted above with respect to municipalities covered by international agreements.

The waiver process begins with the SRF assistance recipient. In order to fulfill the AIS requirement, the assistance recipient must in good faith design the project (where applicable) and solicit bids for construction with American made iron and steel products. It is essential that the assistance recipient include the AIS terms in any request for proposals or solicitations for bids, and in all contracts (see Appendix 3 for sample construction contract language). The assistance recipient may receive a waiver at any point before, during, or after the bid process, if one or more of three conditions is met:

1. Applying the American Iron and Steel requirements of the Act would be inconsistent with the public interest;
2. Iron and steel products are not produced in the United States in sufficient and reasonably available quantities and of a satisfactory quality; or
3. Inclusion of iron and steel products produced in the United States will increase the cost of the overall project by more than 25 percent.

Proper and sufficient documentation must be provided by the assistance recipient. A checklist detailing the types of information required for a waiver to be processed is attached as Appendix 1.

Additionally, it is strongly encouraged that assistance recipients hold pre-bid conferences with potential bidders. A pre-bid conference can help to identify iron and steel products needed to complete the project as described in the plans and specifications that may not be available from domestic sources. It may also identify the need to seek a waiver prior to bid, and can help inform the recipient on compliance options.

In order to apply for a project waiver, the assistance recipient should email the request in the form of a Word document (.doc) to the State SRF program. It is strongly recommended that the State designate a single person for all AIS communications. The State SRF designee will review the application for the waiver and determine whether the necessary information has been included. Once the waiver application is complete, the State designee will forward the application to either of two email addresses. For CWSRF waiver requests, please send the application to: cwsrfwaiver@epa.gov. For DWSRF waiver requests, please send the application to: dwsrfwaiver@epa.gov.

Evaluation by EPA

After receiving an application for waiver of the AIS requirements, EPA Headquarters will publish the request on its website for 15 days and receive informal comment. EPA Headquarters will then use the checklist in Appendix 2 to determine whether the application properly and adequately documents and justifies the statutory basis cited for the waiver – that it is quantitatively and qualitatively sufficient – and to determine whether or not to grant the waiver.

In the event that EPA finds that adequate documentation and justification has been submitted, the Administrator may grant a waiver to the assistance recipient. EPA will notify the State designee that a waiver request has been approved or denied as soon as such a decision has been made. Granting such a waiver is a three-step process:

1. Posting – After receiving an application for a waiver, EPA is required to publish the application and all material submitted with the application on EPA’s website for 15 days. During that period, the public will have the opportunity to review the request and provide informal comment to EPA. The website can be found at: http://water.epa.gov/grants_funding/aisrequirement.cfm
2. Evaluation – After receiving an application for waiver of the AIS requirements, EPA Headquarters will use the checklist in Appendix 2 to determine whether the application properly and adequately documents and justifies the statutory basis cited for the waiver – that it is quantitatively and qualitatively sufficient – and to determine whether or not to grant the waiver.
3. Signature of waiver approval by the Administrator or another agency official with delegated authority – As soon as the waiver is signed and dated, EPA will notify the State SRF program, and post the signed waiver on our website. The assistance recipient should keep a copy of the signed waiver in its project files.

Public Interest Waivers

EPA has the authority to issue public interest waivers. Evaluation of a public interest waiver request may be more complicated than that of other waiver requests so they may take more time than other waiver requests for a decision to be made. An example of a public interest waiver that might be issued could be for a community that has standardized on a particular type or manufacturer of a valve because of its performance to meet their specifications. Switching to an alternative valve may require staff to be trained on the new equipment and additional spare parts would need to be purchased and stocked, existing valves may need to be unnecessarily replaced, and portions of the system may need to be redesigned. Therefore, requiring the community to install an alternative valve would be inconsistent with public interest.

EPA also has the authority to issue a public interest waiver that covers categories of products that might apply to all projects.

EPA reserves the right to issue national waivers that may apply to particular classes of assistance recipients, particular classes of projects, or particular categories of iron or steel products. EPA may develop national or (US geographic) regional categorical waivers through the identification of similar circumstances in the detailed justifications presented to EPA in a waiver request or requests. EPA may issue a national waiver based on policy decisions regarding the public's interest or a determination that a particular item is not produced domestically in reasonably available quantities or of a sufficient quality. In such cases, EPA may determine it is necessary to issue a national waiver.

If you have any questions concerning the contents of this memorandum, you may contact us, or have your staff contact Jordan Dorfman, Attorney-Advisor, State Revolving Fund Branch, Municipal Support Division, at dorfman.jordan@epa.gov or (202) 564-0614 or Kiri Anderer, Environmental Engineer, Infrastructure Branch, Drinking Water Protection Division, at anderer.kirsten@epa.gov or (202) 564-3134.

Attachments

Appendix 1: Information Checklist for Waiver Request

The purpose of this checklist is to help ensure that all appropriate and necessary information is submitted to EPA. EPA recommends that States review this checklist carefully and provide all appropriate information to EPA. This checklist is for informational purposes only and does not need to be included as part of a waiver application.

Items	✓	Notes
<p>General</p> <ul style="list-style-type: none"> • Waiver request includes the following information: <ul style="list-style-type: none"> — Description of the foreign and domestic construction materials — Unit of measure — Quantity — Price — Time of delivery or availability — Location of the construction project — Name and address of the proposed supplier — A detailed justification for the use of foreign construction materials • Waiver request was submitted according to the instructions in the memorandum • Assistance recipient made a good faith effort to solicit bids for domestic iron and steel products, as demonstrated by language in requests for proposals, contracts, and communications with the prime contractor 		
<p>Cost Waiver Requests</p> <ul style="list-style-type: none"> • Waiver request includes the following information: <ul style="list-style-type: none"> — Comparison of overall cost of project with domestic iron and steel products to overall cost of project with foreign iron and steel products — Relevant excerpts from the bid documents used by the contractors to complete the comparison — Supporting documentation indicating that the contractor made a reasonable survey of the market, such as a description of the process for identifying suppliers and a list of contacted suppliers 		
<p>Availability Waiver Requests</p> <ul style="list-style-type: none"> • Waiver request includes the following supporting documentation necessary to demonstrate the availability, quantity, and/or quality of the materials for which the waiver is requested: <ul style="list-style-type: none"> — Supplier information or pricing information from a reasonable number of domestic suppliers indicating availability/delivery date for construction materials — Documentation of the assistance recipient's efforts to find available domestic sources, such as a description of the process for identifying suppliers and a list of contacted suppliers. — Project schedule — Relevant excerpts from project plans, specifications, and permits indicating the required quantity and quality of construction materials • Waiver request includes a statement from the prime contractor and/or supplier confirming the non-availability of the domestic construction materials for which the waiver is sought • Has the State received other waiver requests for the materials described in this waiver request, for comparable projects? 		

Appendix 2: HQ Review Checklist for Waiver Request

Instructions: To be completed by EPA. Review all waiver requests using the questions in the checklist, and mark the appropriate box as Yes, No or N/A. Marks that fall inside the shaded boxes may be grounds for denying the waiver. If none of your review markings fall into a shaded box, the waiver is eligible for approval if it indicates that one or more of the following conditions applies to the domestic product for which the waiver is sought:

1. The iron and/or steel products are not produced in the United States in sufficient and reasonably available quantities and of a satisfactory quality.
2. The inclusion of iron and/or steel products produced in the United States will increase the cost of the overall project by more than 25 percent.

Review Items	Yes	No	N/A	Comments
<p>Cost Waiver Requests</p> <ul style="list-style-type: none"> • Does the waiver request include the following information? <ul style="list-style-type: none"> — Comparison of overall cost of project with domestic iron and steel products to overall cost of project with foreign iron and steel products — Relevant excerpts from the bid documents used by the contractors to complete the comparison — A sufficient number of bid documents or pricing information from domestic sources to constitute a reasonable survey of the market • Does the Total Domestic Project exceed the Total Foreign Project Cost by more than 25%? 				
<p>Availability Waiver Requests</p> <ul style="list-style-type: none"> • Does the waiver request include supporting documentation sufficient to show the availability, quantity, and/or quality of the iron and/or steel product for which the waiver is requested? <ul style="list-style-type: none"> — Supplier information or other documentation indicating availability/delivery date for materials — Project schedule — Relevant excerpts from project plans, specifications, and permits indicating the required quantity and quality of materials • Does supporting documentation provide sufficient evidence that the contractors made a reasonable effort to locate domestic suppliers of materials, such as a description of the process for identifying suppliers and a list of contacted suppliers? <p>Based on the materials delivery/availability date indicated in the supporting documentation, will the materials be unavailable when they are needed according to the project schedule? (By item, list schedule date and domestic delivery quote date or other relevant information)</p> • Is EPA aware of any other evidence indicating the non-availability of the materials for which the waiver is requested? <p>Examples include:</p> <ul style="list-style-type: none"> — Multiple waiver requests for the materials described in this waiver request, for comparable projects in the same State — Multiple waiver requests for the materials described in this waiver request, for comparable projects in other States — Correspondence with construction trade associations indicating the non-availability of the materials • Are the available domestic materials indicated in the bid documents of inadequate quality compared those required by the project plans, specifications, and/or permits? 				

Appendix 3: Example Loan Agreement Language

ALL ASSISTANCE AGREEMENT MUST HAVE A CLAUSE REQUIRING COMPLIANCE WITH THE AIS REQUIREMENT. THIS IS AN EXAMPLE OF WHAT COULD BE INCLUDED IN SRF ASSISTANCE AGREEMENTS. EPA MAKES NO CLAIMS REGARDING THE LEGALITY OF THIS CLAUSE WITH RESPECT TO STATE LAW:

Comply with all federal requirements applicable to the Loan (including those imposed by the 2014 Appropriations Act and related SRF Policy Guidelines) which the Participant understands includes, among other, requirements that all of the iron and steel products used in the Project are to be produced in the United States (“American Iron and Steel Requirement”) unless (i) the Participant has requested and obtained a waiver from the Agency pertaining to the Project or (ii) the Finance Authority has otherwise advised the Participant in writing that the American Iron and Steel Requirement is not applicable to the Project.

Comply with all record keeping and reporting requirements under the Clean Water Act/Safe Drinking Water Act, including any reports required by a Federal agency or the Finance Authority such as performance indicators of program deliverables, information on costs and project progress. The Participant understands that (i) each contract and subcontract related to the Project is subject to audit by appropriate federal and state entities and (ii) failure to comply with the Clean Water Act/Safe Drinking Water Act and this Agreement may be a default hereunder that results in a repayment of the Loan in advance of the maturity of the Bonds and/or other remedial actions.

Appendix 4: Sample Construction Contract Language

ALL CONTRACTS MUST HAVE A CLAUSE REQUIRING COMPLIANCE WITH THE AIS REQUIREMENT. THIS IS AN EXAMPLE OF WHAT COULD BE INCLUDED IN ALL CONTRACTS IN PROJECTS THAT USE SRF FUNDS. EPA MAKES NO CLAIMS REGARDING THE LEGALITY OF THIS CLAUSE WITH RESPECT TO STATE OR LOCAL LAW:

The Contractor acknowledges to and for the benefit of the City of _____ (“Purchaser”) and the _____ (the “State”) that it understands the goods and services under this Agreement are being funded with monies made available by the Clean Water State Revolving Fund and/or Drinking Water State Revolving Fund that have statutory requirements commonly known as “American Iron and Steel;” that requires all of the iron and steel products used in the project to be produced in the United States (“American Iron and Steel Requirement”) including iron and steel products provided by the Contractor pursuant to this Agreement. The Contractor hereby represents and warrants to and for the benefit of the Purchaser and the State that (a) the Contractor has reviewed and understands the American Iron and Steel Requirement, (b) all of the iron and steel products used in the project will be and/or have been produced in the United States in a manner that complies with the American Iron and Steel Requirement, unless a waiver of the requirement is approved, and (c) the Contractor will provide any further verified information, certification or assurance of compliance with this paragraph, or information necessary to support a waiver of the American Iron and Steel Requirement, as may be requested by the Purchaser or the State. Notwithstanding any other provision of this Agreement, any failure to comply with this paragraph by the Contractor shall permit the Purchaser or State to recover as damages against the Contractor any loss, expense, or cost (including without limitation attorney’s fees) incurred by the Purchaser or State resulting from any such failure (including without limitation any impairment or loss of funding, whether in whole or in part, from the State or any damages owed to the State by the Purchaser). While the Contractor has no direct contractual privity with the State, as a lender to the Purchaser for the funding of its project, the Purchaser and the Contractor agree that the State is a third-party beneficiary and neither this paragraph (nor any other provision of this Agreement necessary to give this paragraph force or effect) shall be amended or waived without the prior written consent of the State.

Appendix 5: Sample Certifications

The following information is provided as a sample letter of **step** certification for AIS compliance. Documentation must be provided on company letterhead.

Date

Company Name

Company Address

City, State Zip

Subject: American Iron and Steel Step Certification for Project (XXXXXXXXXX)

I, (company representative), certify that the (melting, bending, coating, galvanizing, cutting, etc.) process for (manufacturing or fabricating) the following products and/or materials shipped or provided for the subject project is in full compliance with the American Iron and Steel requirement as mandated in EPA's State Revolving Fund Programs.

Item, Products and/or Materials:

1. Xxxx
2. Xxxx
3. Xxxx

Such process took place at the following location:

If any of the above compliance statements change while providing material to this project we will immediately notify the prime contractor and the engineer.

Signed by company representative

The following information is provided as a sample letter of certification for AIS compliance. Documentation must be provided on company letterhead.

Date

Company Name

Company Address

City, State Zip

Subject: American Iron and Steel Certification for Project (XXXXXXXXXX)

I, (company representative), certify that the following products and/or materials shipped/provided to the subject project are in full compliance with the American Iron and Steel requirement as mandated in EPA's State Revolving Fund Programs.

Item, Products and/or Materials:

1. Xxxx
2. Xxxx
3. Xxxx

Such process took place at the following location:

If any of the above compliance statements change while providing material to this project we will immediately notify the prime contractor and the engineer.

Signed by company representative

ATTACHMENT 6

RCSA 22a-482-4(f)(3)(A-L)

REGULATIONS OF CONNECTICUT STATE AGENCIES (RCSA)

Sec. 22a-482-4 (f) Required Provisions for Architectural/Engineering Contracts

- (3) Model Subagreement Clauses. Municipalities must include the following clauses or their equivalent in all subagreements for architectural or engineering services. (Municipalities may substitute other terms for "municipality" and "engineer" in their subagreements.)
- (A) Supersession. The municipality and the engineer agree that this and other appropriate clauses in this section or their equivalent apply to the state grant eligible work to be performed under this subagreement and that these clauses supersede any conflicting provisions of this subagreement.
 - (B) Privity of Subagreement. This subagreement is expected to be funded in part with funds from the State of Connecticut, Department of Environmental Protection (DEP). Neither the State nor any of its departments, agencies, or employees is or will be a party to this subagreement or any lower tier subagreement. This subagreement is subject to regulations adopted pursuant to Section 22a-482 of the Connecticut General Statutes in effect on the date of the grant award for the project.
 - (C) Changes may be made as follows:
 - (i) The municipality may at any time, by written order, make changes within the general scope of this subagreement in the services or work to be performed. If such changes cause an increase or decrease in the engineer's cost or time required to perform any services under this agreement, whether or not changed by any order, an equitable adjustment shall be made and this subagreement shall be modified in writing. The engineer must assert any claim for adjustment under this clause in writing within 30 days from the date of receipt by the engineer of the notification of change unless the municipality grants additional time before the date of final payment; and
 - (ii) No services for which an additional compensation will be charged by the engineer shall be furnished without the written authorization of the municipality; and
 - (iii) In the event that there is a modification of the Commissioner's requirements relating to the services to be performed under this agreement after the date of execution of this agreement, the increased or decreased cost of performance of the services provided for in the agreement shall be reflected in an appropriate modification of this agreement.

- (D) Termination may occur as follows:
- (i) This subagreement may be terminated in whole or in part in writing by either party in the event of substantial failure by the other party to fulfill its obligations under this subagreement through no fault of the terminating party. However, no termination may be effected unless the other party is given not less than ten (10) calendar days written notice (delivered by certified mail, return receipt requested) of intent to terminate and an opportunity for consultation with the terminating party prior to termination:
 - (ii) This subagreement may be terminated in whole or in part in writing by the municipality for its convenience, provided that the engineer is given not less than ten (10) calendar days written notice (delivered by certified mail, return receipt requested) of intent to terminate and an opportunity for consultation with the terminating party prior to termination;
 - (iii) If termination for default is effected by the municipality, an equitable adjustment in the price provided for in this subagreement shall be made, but no amount shall be allowed for anticipated profit on unperformed services or other work and any payment due to the engineer at the time of termination may be adjusted to cover any additional costs to the municipality because of the engineer's default. If termination for default is effected by the engineer; or if termination for convenience is effected by the municipality; the equitable adjustment shall include a reasonable profit for services or other work performed. The equitable adjustment for any termination shall provide for payment to the engineer for services rendered and expenses incurred prior to the termination, in addition to termination and settlement costs reasonably incurred by the engineer relating to commitments which had become firm prior to the termination;
 - (iv) Upon receipt of a termination action pursuant to paragraphs (i) or (ii) above, the engineer shall promptly discontinue all services affected (unless the notice directs otherwise) and deliver or otherwise make available to the municipality all data, drawings, specifications, reports, estimates, summaries and such other information and materials as may have been accumulated by the engineer in performing this subagreement, whether completed or in process;
 - (v) Upon termination under paragraphs (i) or (ii) above, the municipality may take over the work and prosecute the same to completion by subagreement with another party or otherwise; and
 - (vi) If, after termination for failure of the engineer to fulfill contractual obligations, it is determined that the engineer had not failed to fulfill contractual obligations, the termination shall be deemed to have been for the convenience of the municipality. In such event, adjustment of the price provided for in this subagreement shall be made as provided in paragraph (iv) of this clause.

- (E) Remedies. Except as may be otherwise provided in this subagreement, all claims, counter-claims, disputes, and other matters in question between the municipality and the engineer arising out of or relating to this subagreement or the breach thereof will be decided by arbitration, if the parties mutually agree, or in a court of competent jurisdiction within the district in which the municipality is located.
- (F) Price Reduction for Defective Cost or Pricing Data (This clause is applicable if the amount of the agreement exceeds \$100,000). The engineer warrants that cost and pricing data submitted for evaluation with respect to negotiation of prices for negotiated subagreements and lower tier subagreements is based on current, accurate, and complete data supported by books and records. If the municipality or Commissioner determines that any price, including profit, negotiated in connection with this subagreement, any lower tier subagreement, or any amendment thereunder was increased by any significant sums because the data provided was incomplete, inaccurate, or not current at the time of submission, then such price, cost or profit shall be reduced accordingly, and the subagreement shall be modified in writing to reflect such reduction.

(NOTE - Since the subagreement is subject to reduction under this clause by reason of defective cost or pricing data submitted in connection with certain subcontractors, the engineer may wish to include a clause in each such subcontract requiring the subcontractor to appropriately indemnify the engineer. It is also expected that any subcontractor subject to such indemnification will generally require substantially similar indemnification for defective cost or pricing data required to be submitted by lower tier subcontractors.)

- (G) Audit; Access to Records.
 - (i) The engineer shall maintain books, records, documents, and other evidence directly pertinent to performance on grant work under this agreement in accordance with generally accepted accounting principles and practices consistently applied. The engineer shall also maintain the financial information and data used by the engineer in the preparation or support of the cost submission required for any negotiated subagreement or change order in effect on the date of execution of this agreement and a copy of the cost summary shall be submitted to the municipality. The Commissioner or any of his duly authorized representatives shall have access to all such books, records, documents, and other evidence for inspection, audit, and copying during normal business hours. The engineer will provide proper facilities for such access and inspection.
 - (ii) The engineer agrees to include paragraphs (i) through (v) of this clause in all his contracts and all lower tier subcontracts directly related to project performance that are in excess of \$10,000, and to make paragraphs (i) through (v) of this clause applicable to all change orders directly related to project performance;
 - (iii) Audits conducted under this provision shall be in accordance with generally accepted auditing standards and established procedures and guidelines of the reviewing or audit department and meeting the requirements of Section 20-282 of the Connecticut General Statutes;

- (iv) The engineer agrees to the disclosure of all information and reports resulting from access to records under paragraphs (i) and (ii) of this clause, to any of the department referred to in paragraph (i), provided that the engineer is afforded the opportunity for an audit exit conference and an opportunity to comment and submit any supporting documentation on the pertinent portions of the draft audit report and that the final audit report will include written comments of reasonable length, if any, of the engineer; and
 - (v) The engineer shall maintain and make available records under paragraphs (i) and (ii) of this clause during performance on grant funded work under this agreement and until 3 years from the date of final grant payment for the project. In addition, those records which relate to any "Dispute" appeal under a grant agreement, to litigation, to the settlement of claims arising out of such performance, or to costs or items to which an audit exception has been taken, shall be maintained and made available until 3 years after the date of resolution of such appeal, litigation, claim, or exception.
- (H) **Covenant Against Contingent Fees.** The engineer warrants that no person or selling agency has been employed or retained to solicit or secure this subagreement upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, except bona fide employees or bona fide established commercial or selling agencies maintained by the engineer for the purpose of securing business. For breach or violation of this warranty the municipality shall have the right to annul this agreement without liability or in its discretion to deduct from the contract price or consideration, or otherwise recover, the full amount of such commission, percentage, brokerage, or contingent fee.
- (I) **Gratuities.**
 - (i) If the municipality or finds after a notice and hearing that the engineer, or any of the engineer's agents or representatives, offered or gave gratuities (in the form of entertainment, gifts, or otherwise), to any official, employee, or agent of the municipality or the State, in an attempt to secure a subagreement or favorable treatment in awarding, amending, or making any determinations related to the performance of this agreement, the municipality may, by written notice to the engineer, terminate this agreement. The municipality may also pursue other rights and remedies that the law or this subagreement provides. However, the existence of the facts on which the municipality bases such findings shall be in issue and may be reviewed in proceedings under the Remedies clause of the agreement;
 - (ii) In the event this subagreement is terminated as provided in paragraph (i), the municipality may pursue the same remedies against the engineer as it could pursue in the event of a breach of the subagreement by the engineer and, as a penalty, in addition to any other damages to which it may be entitled by law, to exemplary damages in an amount (as determined by the municipality) which shall be not less than three nor more than ten times the costs the engineer incurs in providing any such gratuities to any such officer or employee.
- (J) **Responsibility of the Engineer.**

- (i) The engineer shall be responsible for the professional quality, technical accuracy, timely completion, and the coordination of all designs, drawings, specifications, reports, and other services furnished by the engineer under this subagreement. The engineer shall, without additional compensation, correct or revise any errors, omissions, or other deficiencies in his designs, drawings, specifications, reports, and other services
- (ii) The engineer shall perform the professional services necessary to accomplish the work required to be performed under this subagreement, in accordance with this subagreement and applicable requirements of the Commissioner in effect on the date of execution of the assistance agreement for this project;
- (iii) Approval by the municipality or the Commissioner of drawings, designs, specifications, reports, and incidental work or materials furnished hereunder shall not in any way relieve the engineer of responsibility for the technical adequacy of his work. Neither the municipality's nor Commissioner's review, approval, acceptance, or payment for any of the services shall be construed as a waiver of any rights under this subagreement or of any cause of action arising out of the performance of this subagreement;
- (iv) The engineer shall be and shall remain liable, in accordance with applicable law, for all damages to the municipality or the State caused by the engineer's negligent performance of any of the services furnished under this subagreement, except for errors, omissions, or other deficiencies to the extent attributable to the municipality, municipality-furnished data, or any third party. The engineer shall not be responsible for any time delays in the project caused by circumstances beyond the engineer's control;
- (v) The engineer's obligations under this clause are in addition to the engineer's other expressed or implied warranties under this subagreement or State law and in no way diminish any other rights that the municipality may have against the engineer for faulty materials, equipment, or work.

(K) Payment.

- (i) Payment shall be made in accordance with the payment schedule incorporated in this subagreement as soon as practicable upon submission of statements requesting payment by the engineer to the municipality. If no such payment schedule is incorporated in this subagreement, the payment provisions of paragraph (ii) of this clause shall apply;
- (ii) The engineer may request monthly progress payments and the municipality shall make them as soon as practicable upon submission of statements requesting payment by the engineer to the municipality. When such progress payments are made, the municipality may withhold up to ten (10) percent of the vouchered amount until satisfactory completion by the engineer of work and services within a step called for under this subagreement. When the municipality determines that the work under this subagreement or any specified task hereunder is substantially

complete and that the amount of retained percentages is in excess of the amount considered by the municipality to be adequate for its protection, it shall release to the engineer such excess amount;

- (iii) No payment request made under paragraph (i) or (ii) of this clause shall exceed the estimated amount and value of the work and services performed by the engineer under this subagreement. The engineer shall prepare the estimates of work performed and shall supplement them with such supporting data as the municipality may require; and
- (iv) Upon satisfactory completion of the work performed under this subagreement, as a condition precedent to final payment under this subagreement or to settlement upon termination of the subagreement, the engineer shall execute and deliver to the municipality a release of all claims against the municipality arising under or by virtue of this subagreement, other than such claims, if any, as may be specifically exempted by the engineer from the operation of the release in stated amounts to be set forth therein.

(L) Copyrights and Rights in Data.

- (i) The engineer agrees that any plans, drawings, designs, specifications, computer programs (which are substantially financed by State funds), technical reports, operating manuals, and other work submitted with an engineering report, or with a design or construction financing assistance or which are specified to be delivered under this subagreement or which are developed or produced and paid for under this subagreement (referred to in this clause as "Subject Data") and including all raw data obtained or generated by the engineer during the course of his work under this subagreement are subject to certain rights in the United States. These rights include the right to use, duplicate, and disclose such subject data, in whole or in part, in any manner for any purpose whatsoever, and to have others do so. If the material is copyrightable, the engineer may copyright it, subject to the rights of the State described herein, but the municipality and the State reserve a royalty-free, nonexclusive, and irrevocable license to reproduce, publish, and use such materials, in whole or in part, and to authorize others to do so. The engineer shall include appropriate provisions to achieve the purpose of this condition in all subcontracts expected to produce copyrightable subject data; and
- (ii) All such subject data furnished by the engineer pursuant to this subagreement are instruments of his services in respect to the project. It is understood that the engineer does not represent such subject data to be suitable for reuse on any other project or for any other purpose. If the municipality reuses the subject data without the engineer's specific written verification or adaptation, such reuse will be at the risk of the municipality without liability to the engineer. Any such verification or adaptation will entitle the engineer to further compensation at rates agreed upon by the municipality and the engineer.

ATTACHMENT 7

RCSA 22a-482-4(h)(i)(o)

REGULATIONS OF CONNECTICUT STATE AGENCIES (RCSA)

Sec. 22a-482-4 (h) Procurement Requirements-General

- (1) Applicability. This defines the responsibilities of the State and the municipality and the minimum procurement standards for each municipality's procurement system.
- (2) Municipality responsibility.
 - (A) The municipality is responsible for the settlement and satisfactory completion in accordance with sound business judgement and good administrative practice of all contractual and administrative issues arising out of subagreements entered into under the assistance agreement. This includes issuance of invitations for bids or requests for proposals, selection of contractors, award of subagreements, settlement of protests, claims, disputes and other related procurement matters.
 - (B) The municipality shall maintain a subagreement administration system to assure that contractors perform in accordance with the terms, conditions and specifications of their subagreements.
 - (C) The municipality shall review its proposed procurement actions to avoid purchasing unnecessary or duplicative items.
 - (D) The municipality shall consider consolidating its procurement or dividing it into parts to obtain a more economical purchase.
 - (E) Where appropriate, the municipality shall make an analysis of lease versus purchase alternatives in its procurement actions.
 - (F) A municipality may request technical assistance from the Commissioner for the administration and enforcement of any subagreement awarded under this section. However, such assistance does not relieve the municipality of its responsibilities under this section.
 - (G) A municipality may use innovative procurement methods or procedures only if it receives the Commissioner's prior written approval.
- (3) Municipality reporting requirements. The municipality shall request, in writing, the Commissioner's authorization to award each construction subagreement which has an aggregate value over \$10,000. The request shall include:
 - (A) Name, address, telephone number and employee identification number of the construction contractor;
 - (B) Amount of the award;
 - (C) Estimated starting and completion dates;
 - (D) Project number, name and site location of the project; and
 - (E) Copy of the tabulations of bids or offers and the name of each bidder or offeror.

- (4) Copies of contract documents. The municipality must promptly submit to the Commissioner copies of any prime contract or modification thereof, and revisions to plans and specifications.
- (5) Limitations on subagreement award.
 - (A) The municipality shall award subagreements only to responsible contractors that possess the potential ability to perform successfully under the terms and conditions of a proposed procurement. A responsible contractor is one that has:
 - (i) Financial resources, technical qualifications, experience, an organization and facilities adequate to carry out the project, or a demonstrated ability to obtain these;
 - (ii) Resources to meet the completion schedule contained in the subagreement;
 - (iii) A satisfactory performance record for completion of subagreements;
 - (iv) Accounting and auditing procedures adequate to control property, funds and assets; and
 - (v) Demonstrated compliance or willingness to comply with the civil rights, equal employment opportunity, labor laws and other statutory requirements.
 - (B) The municipality shall not make awards to contractors who have been suspended or debarred by Connecticut State Agencies.
- (6) Violations. The municipality shall refer violations of law to the local or State officials having the proper jurisdiction.
- (7) Competition.
 - (A) The municipality shall conduct all procurement transactions in a manner that provides maximum open and free competition.
 - (B) Procurement practices shall not unduly restrict or eliminate competition. Examples of practices considered to be unduly restrictive include:
 - (i) Noncompetitive practices between firms;
 - (ii) Organizational conflicts of interest;
 - (iii) Unnecessary, experience and bonding requirements;
 - (iv) Local laws, ordinances, regulations or procedures which give local bidders or proposers preference over other bidders or proposers in evaluating bids or proposals; and
 - (v) Placing unreasonable requirements on firms in order for them to qualify to do business.

- (C) The municipality may use a prequalification list(s) of persons, firms or products if it:
 - (i) Updates its prequalified list(s) at least every six months;
 - (ii) Reviews and acts on each request for prequalification made more than thirty (30) days before the closing date for receipt of proposals or bid opening; and
 - (iii) Gives adequate public notice of its prequalification procedures in accordance with the public notice procedures.
 - (D) A municipality may not use a prequalified list(s) of persons or firms if the procedure unnecessarily restricts competition.
- (8) Profit.
- (A) Municipalities must assure that only fair and reasonable profits are paid to contractors awarded subagreements under State assistance agreements.
 - (B) The municipality shall negotiate profit as a separate element of price for each subagreement in which there is no price competition, or where price is based on cost analysis.
 - (C) Where the municipality receives two or more bids, profit included in a formally advertised, competitively bid, fixed price subagreement shall be considered reasonable.
 - (D) Off-the-shelf or catalog supplies are exempt from this section.
- (9) Use of small, minority, and women's businesses. The municipality must take affirmative steps to assure that small, minority, and women's businesses are used to the maximum extent practicable. The Commissioner may impose goals as conditions of financial assistances.
- (10) Privity of subagreement. The State shall not be a party to any subagreement nor to any solicitation or request for proposals.
- (11) Documentation.
- (A) Procurement records and files for procurements in excess of \$10,000 shall include the following:
 - (i) Basis for contractor selection;
 - (ii) Written justification for selection of the procurement method;
 - (iii) Written justification for use of any specification which does not provide for maximum free and open competition;
 - (iv) Written justification for the type of subagreement;

- (v) Basis for award cost or price, including a copy of the cost or price analysis made and documentation of negotiations; and

- (vi) A municipality must state the reasons in writing for rejecting any or all bids and the justification for procurements on a noncompetitively negotiated basis and make them available for public inspection.

(12) Specifications.

- (A) Nonrestrictive specifications.
 - (i) No specification for bids or statement of work in connection with such works shall be written in such a manner as to contain proprietary, exclusionary or discriminatory requirements other than those based upon performance, unless such requirements are necessary to test or demonstrate a specific thing or to provide for necessary interchangeability of parts and equipment, or at least two brand names or trade names of comparable quality or utility are listed and are followed by the words "or equal". If brand or trade names are specified, the municipality must be prepared to identify to the Commissioner, or in any protest action, the salient requirements (relating to the minimum needs of the project) which must be met by any offeror. The single base bid method of solicitation for equipment and parts for determination of a low, responsive bidder may not be utilized. With regard to materials, if a single material is specified, the municipality must be prepared to substantiate the basis for the selection of the material.
 - (ii) Project specifications shall, to the extent practicable, provide for maximum use of structures, machines, products, materials, construction methods, and equipment which are readily available through competitive procurement, or through standard or proven production techniques, methods, and processes.
- (B) Sole source restriction. A specification shall not require the use of structures, materials, equipment, or processes which are known to be available only from a sole source, unless the Commissioner determines in advance that the municipality's engineer has adequately justified in writing that the proposed use meets the particular project's minimum needs or the Commissioner determines that use of a single source is necessary to promote innovation.
- (C) Experience clause restriction. The general use of experience clauses requiring equipment manufacturers to have a record of satisfactory operation for a specified period of time or of bonds or deposits to guarantee replacement in the event of failure is restricted to special cases where the municipality's engineer adequately justifies any such requirement in writing. Where such justification has been made, submission of a bond or deposit shall be permitted instead of a specified experience period. The period of time for which the bond or deposit is required should not exceed the experience period specified.

(13) Force account work.

- (A) The municipality must receive the Commissioner's prior written approval for use of the force account method for any planning, design work or construction work.

- (B) The Commissioner may approve the force account method upon the municipality's demonstration that it possesses the necessary competence required to accomplish such work and that the work can be accomplished more economically by use of the force account method, or emergency circumstances dictate its use.
- (C) Use of the force account method for construction work shall generally be limited to minor portions of a project.

(14) Code of conduct.

- (A) The municipality shall maintain a written code or standards of conduct which shall govern the performance of its officers, employees, or agents engaged in the award and administration of subagreements supported by State funds. No employee, officer or agent of the municipality shall participate in the selection, award or administration of a subagreement supported by State funds if a conflict of interest, real or apparent, would be involved.
- (B) Such a conflict would arise when:
 - (i) Any employee, officer or agent of the municipality, any member of the immediate families, or their partners, have a financial or other interest in the firm selected for award; or
 - (ii) An organization which may receive or has been awarded a subagreement employs, or is about to employ, any person under (B)(i) of this Section.
- (C) The municipality's officers, employees or agents shall neither solicit nor accept gratuities, favors or anything of monetary value from contractors, potential contractors or other parties to subagreements.
- (D) Municipalities may set minimum rules where the financial interest is not substantial or the gift is an unsolicited item of nominal value.
- (E) To the extent permitted by State or local law or regulations, the municipality's code of conduct shall provide for penalties, sanctions or other disciplinary actions for violations of the code by the municipality's officers, employees or agents or by contractors or their agents.

(15) Payment to consultants.

- (A) For all State assistance agreements, the State will limit its participation in the salary rate (excluding overhead) paid to individual consultants retained by a municipality or by a municipality's contractors or subcontractors to the maximum daily rate for a GS-18 federal employee. (Municipality's may, however, pay contractors and subcontractors more than this amount.) This limitation applies to consultation services of designated individuals with specialized skills who are paid at a daily or hourly rate. The rate does not include transportation and subsistence costs for travel performed; municipality's will pay these in accordance with their

normal travel reimbursement practices.

- (B) Subagreements with firms for services which are awarded using these procurement requirements are not affected by this limitation.
- (16) Cost and price considerations.
- (A) The municipality shall conduct a cost analysis of all negotiated change orders and all negotiated subagreements estimated to exceed \$10,000.
 - (B) The municipality shall conduct a price analysis of all formally advertised procurements estimated to exceed \$10,000 if there are fewer than three bidders.
 - (C) For negotiated procurement, contractors and subcontractors shall submit cost or pricing data in support of their proposals to the municipality.
- (17) Small purchases.
- (A) Small Purchase Procurement. If the aggregate amount involved in any one procurement transaction does not exceed \$10,000, including estimated handling and freight charges, overhead and profit, the municipality may use small purchase procedures.
 - (B) Small Purchase Procedures. Small purchase procedures are relatively simple procurement methods that are sound and appropriate for procurement of services, supplies or other property costing in the aggregate not more than \$10,000.
 - (C) Requirements for Competition.
 - (i) Municipalities shall not divide a procurement into smaller parts to avoid the dollar limitation for competitive procurement.
 - (ii) Municipalities shall obtain price or rate quotations from an adequate number of qualified sources.
- (18) Negotiation and award of subagreements.
- (A) Unless the request for proposals states that award may be based on initial offers alone, the municipality must conduct meaningful negotiations with the best qualified offerors with acceptable proposals within the competitive range, and permit revisions to obtain best and final offers. The best qualified offerors must have equal opportunities to negotiate or revise their proposals. During negotiations, the municipality must not disclose the identity of competing offerors or any information from competing proposals.
 - (B) The municipality must award the subagreement to the responsible offeror whose proposal is determined in writing to be the most advantageous to the municipality, taking into consideration price and other evaluation criteria set forth in the request for proposals.

- (C) The municipality must promptly notify unsuccessful offerors that their proposals were rejected.
 - (D) The municipality must document its procurement file to indicate how proposals were evaluated, what factors were used to determine the best qualified offerors within the competitive range, and what factors were used to determine the subagreement award.
- (19) Optional selection procedure for negotiation and award of subagreement for architectural and engineering services.
- (A) The municipality may evaluate and select an architect or engineer using the procedures in this subdivision in place of the procedures in "Negotiation and award of subagreements" in subdivision (18).
 - (B) The municipality may use responses from requests for statement of qualifications to determine the most technically qualified architects or engineers.
 - (C) After selecting and ranking the most qualified architects or engineers, the municipality will request technical proposals from those architects or engineers and inform them of the evaluation criteria the municipality will use to rank the proposals.
 - (D) The municipality shall then select and determine, in writing, the best technical proposal.
 - (E) After selecting the best proposal, the municipality shall attempt to negotiate fair and reasonable compensation with that offeror.
 - (F) If the municipality and the offeror of the best proposal cannot agree on the amount of compensation, the municipality shall formally terminate negotiations with that offeror. The municipality shall then negotiate with the offeror with the next best proposal. This process will continue until the municipality reaches agreement on compensation with an offeror with an acceptable proposal. Once the municipality terminates negotiations with an offeror, the municipality cannot go back and renegotiate with that offeror.
- (20) Noncompetitive negotiation procurement method. Noncompetitive negotiation may be used only when the award of a subagreement is not feasible under small purchase, formal advertising, or competitive negotiation procedures. The municipality may award a noncompetitively negotiated subagreement only under the following circumstances:
- (A) The item is available only from a single source;
 - (B) A public exigency or emergency exists and the urgency for the requirement will not permit a delay incident to competitive procurement; or
 - (C) After solicitation from a number of sources, competition is determined to be

inadequate.

- (21) Use of the same architect or engineer during construction
 - (A) If the municipality is satisfied with the qualifications and performance of the architect or engineer who provided any or all of the planning or design services for the project, it may wish to retain that firm or individual during construction of the project. The municipality may do so without further public notice and evaluation of qualifications provided that it received financial assistance for the planning and/or design services and selected the architect or engineer in accordance with these procurement regulations.
 - (B) However, if the municipality uses the procedures in (A) to retain an architect or engineer, any construction subagreements between the architect or engineer and the municipality must meet the procurement provisions of Section 22a-482-4(i)(5).
- (22) Negotiation of subagreements.
 - (A) Formal advertising, with adequate purchase descriptions, sealed bids, and public openings shall be the required method of procurement unless negotiation under (B) of this section is necessary to accomplish sound procurement.
 - (B) All negotiated procurement shall be conducted in a manner to provide to the maximum practicable extent open and free competition appropriate to the type of project work to be performed. The municipality is authorized to negotiate subagreements if any of the following conditions exist:
 - (i) Public exigency will not permit the delay incident to formally advertised procurement (e.g. an emergency procurement);
 - (ii) The aggregate amount involved does not exceed \$10,000;
 - (iii) The material or service to be procured is available from only one person or entity. If the procurement is expected to aggregate more than \$10,000, the municipality must document its file with a justification of the need for noncompetitive procurement, and provide such documentation to the Commissioner on request;
 - (iv) The procurement is for personal or professional services (including architectural or engineering services) or for any service that a university or other educational institution may render;
 - (v) No responsive, responsible bids at acceptable price levels have been received after formal advertising, and the Commissioner's prior written approval has been obtained;
 - (vi) The procurement is for materials or services where the price is established by law;

- (vii) The procurement is for technical items or equipment requiring standardization and interchangeability of parts with existing equipment; or
 - (viii) The procurement is for experimental, developmental or research services.
- (23) Enforcement. If the Commissioner determines that the municipality has failed to comply with any of these procurement provisions, he or she may impose any of the following sanctions:
- (A) The grant may be terminated or annulled under Section 22a-482-4(t).
 - (B) Project costs directly related to the noncompliance may be disallowed.
 - (C) Payment otherwise due to the municipality of up to 10 percent may be withheld.
 - (D) Project work may be suspended under Sec. 22a-482-4(g) (5).
 - (E) A non-complying municipality may be found non-responsible or ineligible for future state funding assistance or a non-complying contractor may be found non-responsible or ineligible for approval for future contract award under state grants.
 - (F) An injunction may be entered or other equitable relief afforded by a court of appropriate jurisdiction.
 - (G) Such other administrative or judicial action may be instituted if it is legally available and appropriate.
- (24) Contract Enforcement. Commissioner authority. At the request of a municipality, the Commissioner is authorized to provide technical and legal assistance in the administration and enforcement of any contract related to pollution abatement facilities for which a State grant was made and to intervene in any civil action involving the enforcement of such contracts, including contract disputes which are the subject of either arbitration or court action in accordance with the requirements of Section 22a-482-4(f)(1).

Sec. 22a-482-4 (i) Architectural/Engineering Procurement Requirements

- (1) Type of Contract (Subagreement).
 - (A) General. Cost-plus-percentage-of-cost and percentage-of-construction-cost contracts are prohibited. Cost reimbursement, fixed price, or per diem contracts or combinations of these may be negotiated for architectural or engineering services. A fixed price contract is generally used only when the scope and extent of work to be performed is clearly defined. In most other cases, a cost reimbursement type of contract is more appropriate. A per diem contract may be used if no other type of contract is appropriate. An incentive fee may be used if the municipality submits an adequate independent cost estimate and price comparison.
 - (B) Cost reimbursement contract. Each cost reimbursement contract must clearly

establish a cost ceiling which the engineer may not exceed without formally amending the contract and a fixed dollar profit which may not be increased except in the case of a contract amendment to increase the scope of work.

- (C) Fixed price contract. An acceptable fixed price contract is one which establishes a guaranteed maximum price which may not be increased unless a contract amendment increases the scope of work.
- (D) Compensation procedures. If, under either a cost reimbursement or fixed price contract, the municipality desires to use a multiplier type of compensation, all of the following must apply:
 - (i) The multiplier and the portions of the multiplier allocable to overhead and allocable to profit have been specifically negotiated;
 - (ii) The portion of the multiplier allocable to overhead includes only allowable items of cost under the cost principles;
 - (iii) The portions of the multiplier allocable to profit and allocable to overhead have been separately identified in the contract; and
 - (iv) The fixed price contract includes a guaranteed maximum price for completion of the specifically defined scope of work; and the cost reimbursement contract includes a fixed dollar profit which may not be increased except in the case of a contract amendment which increases the scope of work.
- (E) Per diem contracts. A per diem agreement may be utilized only after a determination that a fixed price or cost reimbursement type contract is not appropriate. Per diem agreements should be used only to a limited extent, e.g., where the first task under the planning share involves establishing the scope and cost of succeeding planning tasks, or for incidental services such as expert testimony or intermittent professional or testing services. (Resident engineer and resident inspection services should generally be compensated at cost plus fixed fee). Cost and profit included in the per diem rate must be specifically negotiated and displayed separately in the engineer's proposal.

The contract must clearly establish a price ceiling which may not be exceeded without formally amending the contract.

- (2) Public Notice. Adequate public notice must be given of the requirement for architectural or engineering services for all subagreements.
 - (A) Public announcement. A notice of request for qualifications should be published in professional journals, newspapers, or publications of general circulation over a reasonable area and, in addition, if desired, through posted public notices or written notification directed to interested persons, firms, or professional organizations inviting the submission of statements of qualifications. The announcement must clearly state the deadline and place for submission of qualification statements.

- (B) Exceptions. Public notice is not required under the following circumstances:
 - (i) For design or construction phases of a grant funded project if the municipality is satisfied with the qualifications and performance of any engineer who performed all or any part of the planning or design work and the engineer has the capacity to perform the subsequent steps; and
 - (ii) The municipality desires the same engineer to provide architectural or engineering services for the subsequent steps or for subsequent segments of design work in one project if a single pollution abatement facilities is segmented into two or more construction projects. If the design work is accordingly segmented so that the initial contract for preparation of construction drawings and specifications does not cover the entire pollution abatement facilities to be built under one grant then the municipality may use the same engineering firm that was selected for the initial segment of design work for subsequent segments.

- (3) Evaluation of Qualifications.
 - (A) The municipality shall review the qualifications of firms which responded to the announcement or were on the prequalified list and shall uniformly evaluate the firms.
 - (B) Qualifications shall be evaluated through an objective process (e.g., the appointment of a board or committee which, to the extent practicable, should include persons with technical skills).
 - (C) Criteria which should be considered in the evaluation of candidates for submission of proposals should include:
 - (i) Specialized experience and technical competence of the candidate or firm and its personnel (including a joint venture, association or professional subcontractor) considering the type of services required and the complexity of the project;
 - (ii) Past record of performance on contracts with the municipality, other government agencies or public bodies, and with private industry., including such factors as control of costs, quality of work, and ability to meet schedules;
 - (iii) The candidate's capacity to perform the work (including any specialized services) within the time limitations, considering the firm's current and planned workload;
 - (iv) The candidate's familiarity with the types of problems applicable to the project; and
 - (v) Avoidance of personal and organizational conflicts of interest.

- (4) Solicitation and Evaluation of Proposals.
 - (A) Solicitation of Professional Services Proposals.
 - (i) Requests for professional services proposals must be sent to no fewer than three candidates who either responded to the public announcement or were selected from the prequalified list, unless, after good faith effort to solicit qualifications, fewer than three qualified candidates respond, in which case all qualified candidates must be provided request for proposals;
 - (ii) Requests for professional services proposals must be in writing and must contain the information necessary to enable a prospective offeror to prepare a proposal properly. The request for proposals must include a solicitation statement and must inform offerors of the evaluation criteria; and
 - (iii) Submission deadline. Requests for proposals must clearly state the deadline and place for submission.
 - (B) Evaluation of Proposals.
 - (i) All proposals submitted in response to the request for professional services proposals must be uniformly evaluated. The municipality shall also evaluate the candidate's proposed method of accomplishing the work required;
 - (ii) Proposals shall be evaluated through an objective process (e.g., the appointment of a board or committee) which, to the extent practicable, should include persons with technical skills. Oral (including telephone) or written interviews should be conducted with top rated proposers, and information derived therefrom shall be treated on a confidential basis; and
 - (iii) Municipalities must base their determinations of qualified offerors and acceptable proposals solely on the evaluation criteria stated in the request for proposals.
- (5) Negotiation.
 - (A) Municipalities are responsible for negotiation of their contracts for architectural or engineering services. Contract procurement including negotiation may be performed by the municipality directly or by another person or firm retained for the purpose. Contract negotiations may include the services of technical, legal, audit, or other specialists to the extent appropriate.
 - (B) Negotiations may be conducted in accordance with State or local requirements, as long as they meet the minimum requirements as set forth in this section.
 - (C) The object of negotiations with any candidate shall be to reach agreement on the provisions of the proposed contract. The municipality and the candidate shall

discuss, as a minimum:

- (i) The scope and extent of work and other essential requirements;
 - (ii) Identification of the personnel and facilities necessary to accomplish the work within the required time including, where needed, employment of additional personnel, subcontracting, joint venture, etc;
 - (iii) Provisions of the required technical services in accordance with regulations and criteria established for the project; and
 - (iv) A fair and reasonable price for the required work, to be determined in accordance with the cost and profit considerations.
- (6) Cost and Price Considerations.
- (A) The candidate(s) selected for negotiation shall submit to the municipality for review sufficient cost and pricing data to enable the municipality to ascertain the necessity and reasonableness of costs and amounts proposed and the allowability and eligibility of costs proposed.
 - (B) The municipality shall submit to the Commissioner for review:
 - (i) Documentation of the public notice of need for architectural or engineering services and selection procedures.
 - (ii) The cost and pricing data the selected engineer submitted.
 - (iii) A certification of review and acceptance of the selected engineer's cost and price.
 - (iv) A copy of the proposed subagreement.
 - (C) The Commissioner shall review the complete subagreement procurement procedure and approve the municipality's compliance with appropriate procedures before the municipality awards the subagreement.
 - (D) Cost review.
 - (i) The municipality shall review proposed subagreement costs.
 - (ii) As a minimum, proposed subagreement costs shall be presented on EPA form 5700-41 on which the selected engineer shall certify that the proposed costs reflect complete, current, and accurate cost and pricing data applicable to the date of anticipated subagreement award.
 - (iii) In addition to the specific elements of cost, the estimated amount of profit shall be set forth separately in the cost summary for fixed price contracts and a maximum total dollar amount of profit shall be set forth separately in

the cost summary for cost reimbursement contracts.

- (iv) The municipality may require more detailed cost data than the form requires in order to substantiate the reasonableness of proposed subagreement costs. The Commissioner may require more detailed documentation only when the selected engineer is unable to certify that the cost and pricing data used are complete, current, and accurate. The Commissioner may on a selected basis, perform a pre-award cost analysis on any subagreement. A provisional overhead rate should be agreed upon before contract award.
 - (v) The engineer shall have an accounting system which accounts for costs in accordance with generally accepted accounting principles. This system shall provide for the identification, accumulation, and segregation of allowable and unallowable project costs among projects. Allowable project costs shall be determined by the Commissioner. The engineer must propose and account for costs in a manner consistent with his normal accounting procedures.
 - (vi) Subagreements awarded on the basis of a review of a cost element summary and a certification of complete, current, and accurate cost and pricing data shall be subject to downward renegotiation or recoupment of funds where the Commissioner determines that such certification was not based on complete, current, and accurate cost and pricing data or was not based on allowable costs at the time of award.
- (7) Profit. The objective of negotiations shall be the exercise of sound judgment and good administrative practice including the determination of a fair and reasonable profit based on the firm's assumption of risk and input to total performance and not merely the application of a predetermined percentage factor. For the purpose of subagreements under State grants, profit is defined as the net proceeds obtained by deducting all allowable costs (direct and indirect) from the price. (This definition of profit may vary from the firm's definition of profit for other purposes.) Profit on a subagreement and each amendment to a subagreement under a grant should be sufficient to attract engineers who possess the talent and skills necessary for the accomplishment of project objectives, and to stimulate efficient and expeditious completion of the project. Where cost review is performed, the municipality should review the estimate of profit as it reviews all other elements of price.
- (8) Award of Subagreement.
- (A) The municipality shall obtain the written approval of the Commissioner prior to the award of any subagreement or amendment.
 - (B) The municipality shall promptly notify unsuccessful candidates.
- (9) Required Solicitation and Subagreement Provisions.
- (A) Required solicitation statement. Requests for qualifications or proposals must include the following statement, as well as the proposed terms of the subagreement.

Any contract awarded under this request for (qualifications/professional proposals) is expected to be funded in part by the State of Connecticut, Department of Environmental Protection. This procurement will be subject to requirements contained in Section 22a-482-4(h),(i), and (o) of the regulations of Connecticut State Agencies. The State of Connecticut will not be a party to this request for (qualifications/ professional proposals) or any resulting contract.

- (B) Content of subagreement. Each subagreement must adequately define the scope and extent of project work; the time for performance and completion of the contract work including, where appropriate, dates for completion of significant project tasks; personnel and facilities necessary to accomplish the work within the required time; the extent of subcontracting and consultant agreements; and payment provisions. If any of these elements cannot be defined adequately for later tasks or steps at the time of contract execution, the contract should not include the subsequent tasks or steps at that time.
- (10) Subagreement Payments-Architectural or Engineering Services. The municipality shall make payment to the engineer in accordance with the payment schedule incorporated in the engineering agreement. Any retainage is at the option of the municipality. No payment request made by the engineer under the agreement may exceed the estimated amount and value of the work and services performed.
- (11) Subcontracts under Subagreements for Architectural or Engineering Services. Neither award and execution of subcontracts under a prime contract for architectural or engineering services nor the procurement and negotiation procedures used by the engineer in awarding such subcontracts are required to comply with any of the provisions, selection procedures, policies or principles set forth herein.

Sec. 22a-482-4 (o) Protests

- (1) General. A protest based upon an alleged violation of the procurement requirements may be filed against a municipality's procurement action by a party with an adversely affected direct financial interest. Any such protest must be received by the municipality within the time period in (2)(A) of this section. The municipality is responsible for resolution of the protest before taking the protested action, in accordance with (4) of this section, except as otherwise provided by (9) of this section or 22a-482-4(j)(2)(H)(v).
- (2) Time limitations.
 - (A) A protest under (4) of this section should be made as early as possible during the procurement process to avoid disruption of or unnecessary delay to the procurement process. A protest authorized by (4) of this section must be received by the municipality within one week after the basis for the protest is known or should have been known, whichever is earlier.
 - (i) In the case of an alleged violation of the specification requirements of Section 22a-482-4(h)(12), relating to specifications (e.g., that a product fails to qualify as an "or equal") a protest need not be filed prior to the opening of bids. The municipality may resolve the issue before receipt of bids or proposals through a written or other formal determination, after

notice and opportunity to comment is afforded to any party with a direct financial interest.

- (ii) When an alleged violation of the specification requirements of Section 22a-482-4(h)(12) first arises subsequent to the receipt of bids or proposals, the municipality must decide the protest if the protest was received by the municipality within one week of the time that the municipality's written or other formal notice is first received.
- (B) A protest appeal authorized by this section must be filed in a court of competent jurisdiction within the locality of the municipality within one week after the complainant has received the municipality's determination.
- (C) If a protest is mailed, the complaining party bears the risk of nondelivery within the required time period. All documents transmitted in accordance with this section shall be mailed by certified mail (return receipt requested) or otherwise delivered in a manner which will objectively establish the date of receipt. Initiation of protest actions under (4) or (5) of this section may be made by brief telegraphic notice accompanied by prompt mailing or other delivery of a more detailed statement of the basis for the protest. Telephone protests will not be considered.

- (3) Other initial requirements.
- (A) The initial protest document must briefly state the basis for the protest and should:
- (i) Refer to the specific portions of these regulations which allegedly prohibit the procurement action;
 - (ii) Specifically request a determination pursuant to this section;
 - (iii) Identify the specific procurement document(s) or portion(s) of them in issue; and
 - (iv) Include the name, telephone number, and address of the person representing the protesting party.
- (B) The party filing the protest must concurrently transmit a copy of the initial protest document and any attached documentation to all other parties with a direct financial interest which may be adversely affected by the determination of the protest (all bidders or proposers who appear to have a substantial and reasonable prospect of receiving an award if the protest is denied or sustained) and to the Commissioner.
- (4) Municipality determination.
- (A) The municipality is responsible for the initial resolution of protests based upon alleged violations of the procurement requirements.
- (B) When the municipality receives a timely written protest, it must defer the protested procurement action in accordance with (7) of this section and:
- (i) Afford the complaining party and interested parties an opportunity to present arguments in support of their views in writing or at a conference or other suitable meeting (such as a city council meeting);
 - (ii) Inform the complainant and other interested parties of the procedures which the municipality will observe for resolution of the protest;
 - (iii) Obtain an appropriate extension of the period for acceptance of the bid and bid bond(s) of each interested party, where applicable (failure to agree to a suitable extension of such bid and bid bond(s) by the party which initiated the protest shall be cause for summary dismissal of the protest by the municipality or the Commissioner); and
 - (iv) Promptly deliver (by certified mail, return receipt requested, or by personal delivery) its written determination of the protest to the complaining party and to each other participating party.
- (C) The municipality's determination must be accompanied by a legal opinion addressing issues arising under State, or local law, if any and, when construction is

involved, by an engineering report, if appropriate.

- (D) The municipality should decide the protest as promptly as possible - generally within 3 weeks after receipt of a protest, unless extenuating circumstances require a longer period of time for proper resolution of the protest.
- (5) Procedures.
- (A) Where resolution of an issue properly raised with respect to a procurement requirement necessitates prior or collateral resolution of a legal issue arising under State or local law, and such law is not clearly established in published legal decisions of the State or other relevant jurisdiction, the municipality may rely upon:
 - (i) An opinion of the municipality's legal counsel adequately addressing the issue;
 - (ii) The established or consistent practice of the municipality, to the extent appropriate;
 - (iii) The law of other local jurisdictions as established in published legal decisions; or
 - (iv) If none of the foregoing adequately resolve the issue, published decisions of the Comptroller General of the United States (U.S. General Accounting Office) or of the Federal or State courts addressing Federal or State requirements comparable to procurement requirements of this section.
 - (B) A party who submits a document subsequent to initiation of a protest proceeding must simultaneously furnish each of the other parties with a copy of such document.
 - (C) The procedures established herein are not intended to preclude informal resolution or voluntary withdrawal of protests. A complainant may withdraw its appeal at any time, and the protest proceedings shall thereupon be terminated.
 - (D) A protest may be dismissed for failure to comply with procedural requirements set forth in this section.
- (6) Burden of proof.
- (A) In protest proceedings, if the municipality proposes to award a formally advertised, competitively bid, fixed price contract to a party who has submitted the apparent lowest price, the party initiating the protest will bear the burden of proof.
 - (B) In protest proceedings:
 - (i) If the municipality proposes to award a formally advertised, competitively bid, fixed price contract to a bidder other than the bidder which submitted the apparent lowest price, the municipality will bear the burden of proving

that its determination concerning responsiveness is in accordance with these regulations; and

- (ii) If the basis for the municipality's determination is a finding of non-responsibility, the municipality must establish and substantiate the basis for its determination and must adequately establish that such determination has been made in good faith.
- (7) Deferral of procurement action. Upon receipt of a protest, the municipality must defer the protested procurement action (for example, defer the issuance of solicitations, contract award, or issuance of notice to proceed under a contract) until ten days after delivery of its determination to the participating parties. The municipality may receive or open bids at its own risk, if it considers this to be in its best interest. When the Commissioner has received a written protest, he or she must notify the municipality promptly to defer its protested procurement action until notified of the formal or informal resolution of the protest.
- (8) Enforcement. Noncompliance with the procurement provisions by the municipality shall be cause for enforcement action in accordance with one or more of the provisions of Section 22a-482-4(f)(23).
- (9) Limitation. A protest may not be filed with respect to the following:
 - (A) Issues not arising under the procurement provisions;
 - (B) Issues relating to the selection of a consulting engineer, provided that a protest may be filed only with respect to the mandatory procedural requirements of Section 22a-482-4(i);
 - (C) Issues primarily determined by local law or ordinance and as to which the Commissioner, upon review, determines that there is no contravening state requirement and that the municipality's action has a rational basis;
 - (D) Provisions of State regulations applicable to direct State contracts unless such provisions are explicitly referred to or incorporated in these regulations;
 - (E) Basic project design determinations; or
 - (F) Award of subcontracts or issuance of purchase orders under formally advertised, competitively bid, lump sum construction contracts. However, protest may be made to alleged violations of the following:
 - (i) Specification requirements of Section 22a-482-4(h)(12); or

- (ii) Provisions applicable to the procurement procedures, negotiation or award of subcontracts or issuance of purchase orders under Section 22a-482-4(1).

ATTACHMENT 8

Connecticut Executive Orders 3, 16, 17

STATE OF CONNECTICUT

BY HIS EXCELLENCY

THOMAS J. MESKILL

GOVERNOR

EXECUTIVE ORDER NO. THREE

WHEREAS, sections 4-61d(b) and 4-114a of the 1969 supplement to the general statutes require nondiscrimination clauses in state contracts and subcontracts for construction on public buildings, other public works and goods and services, and

WHEREAS, section 4-61e(c) of the 1969 supplement to the general statutes requires the labor department to encourage and enforce compliance with this policy by both employers and labor unions, and to promote equal employment opportunities, and

WHEREAS, the government of this state recognizes the duty and desirability of its leadership in providing equal employment opportunity, by implementing these laws,

NOW, THEREFORE, I, THOMAS J. MESKILL, Governor of the State of Connecticut, acting by virtue of the authority vested in me under section twelve of article fourth of the constitution of the state, as supplemented by section 3-1 of the general statutes, do hereby ORDER and DIRECT, as follows, by this Executive Order:

I

The labor commissioner shall be responsible for the administration of this Order and shall adopt such regulations as he deems necessary and appropriate to achieve the purposes of this Order. Upon the promulgation of this Order, the commissioner of finance and control shall issue a directive forthwith to all state agencies, that henceforth all state contracts and subcontracts for construction on public buildings, other public works and goods and services shall contain a provision rendering such contract or subcontract subject to this Order, and that such contract or subcontract may be cancelled, terminated or suspended by the labor commissioner for violation of or noncompliance with this Order or state or federal laws concerning nondiscrimination, notwithstanding that the labor commissioner is not a party to such contract or subcontract.

II

Each contractor having a contract containing the provisions prescribed in section 4-114a of the 1969 supplement to the general statutes, shall file, and shall cause each of his subcontractors to file, compliance reports with the contracting agency or the labor commissioner, as may be directed such reports shall be filed within such times and shall contain such information as to employment policies and statistics of the contractor and each subcontractor, and shall be in such form as the labor commissioner may prescribe. Bidders or prospective contractors or

subcontractors may be required to state whether they have participated in any previous contract subject to the provisions of this Order or any preceding similar Order, and in that event to submit on behalf of themselves and their proposed subcontractors compliance reports prior to or as an initial part of their bid or negotiation of a contract.

III

Whenever the contractor or subcontractor has a collective bargaining agreement or other contract or understanding with a labor organization or employment agency as defined in section 31-122 of the general statutes, the compliance report shall identify the said organization or agency and the contracting agency or the labor commissioner may require a compliance report to be filed with the contracting agency or the labor commissioner, as may be directed, by such organization or agency, signed by an authorized officer or agent of such organization or agency, with supporting information, to the effect that the signer's practices and policies, including but not limited to matters concerning personnel, training, apprenticeship, membership, grievance and representation, and upgrading, do not discriminate on grounds of race, color, religious creed, age, sex or national origin, or ancestry of any individual, and that the signer will either affirmatively cooperate in the implementation of the policy and provisions of this Order, or that it consents and agrees that recruitment, employment and the terms and conditions of employment under the proposed contract shall be in accordance with the purposes and provisions of the Order.

IV

The labor commissioner may by regulation exempt certain classes of contracts, subcontracts or purchase orders from the implementation of this Order, for standard commercial supplies or raw materials, for less than specified amounts of money or numbers of workers or for subcontractors below a specified tier. The labor commissioner may also provide by regulation for the exemption of facilities of a contractor which are in all respects separate and distinct from activities of the contractor related to the performance of the state contract, provided only that such exemption will not interfere with or impede the implementation of this Order, and provided further, that in the absence of such an exemption, all facilities shall be covered by the provisions of this Order.

V

Each contracting agency shall be primarily responsible for obtaining compliance with the regulations of the labor commissioner with respect to contracts entered into by such agency or its contractors. All contracting agencies shall comply with the regulations of the labor commissioner in discharging their primary responsibility for securing compliance with the provisions of contracts and otherwise with the terms of this Order and of the regulations of the labor commissioner issued pursuant to this Order. They are directed to cooperate with the labor commissioner and to furnish the labor commissioner such information and assistance as he may require in the performance of his functions under this Order. They are further directed to appoint or designate from among the personnel of each agency, compliance officers, whose duty shall be to seek compliance with the objectives of this Order by conference, conciliation, mediation, or persuasion.

VI

The labor commissioner may investigate the employment practices and procedures of any state contractor or subcontractor and the practices and policies of any labor organization or employment agency hereinabove described, relating to employment under the state contract, as concerns nondiscrimination by such organization or agency as hereinabove described, or the labor commissioner may initiate such investigation by the appropriate contract agency, to determine whether or not the contractual provisions hereinabove specified or statutes of the state respecting them have been violated. Such investigation shall be conducted in accordance with the procedures established by the labor commissioner and the investigating agency shall report to the labor commissioner any action taken or recommended.

VII

The labor commissioner shall receive and investigate or cause to be investigated complaints by employees or prospective employees of a state contractor or subcontractor or members or applicants for membership or apprenticeship or training in a labor organization or employment agency hereinabove described, which allege discrimination contrary to the contractual provisions specified hereinabove or state statutes requiring nondiscrimination in employment opportunity. If this investigation is conducted for the labor commissioner by a contracting agency, that agency shall report to the labor commissioner what action has been taken or is recommended with regard to such complaints

VIII

The labor commissioner shall use his best efforts, directly and through contracting agencies, other interested federal, state and local agencies, contractors and all other available instrumentalities, including the commission on human rights and opportunities, the executive committee on human rights and opportunities, and the apprenticeship council under its mandate to provide advice and counsel to the labor commissioner in providing equal employment opportunities to all apprentices and to provide training, employment and upgrading opportunities for disadvantaged workers, in accordance with section 31-51(d) of the 1969 supplement to the general statutes, to cause any labor organization or any employment agency whose members are engaged in work under government contracts or referring workers or providing or supervising apprenticeship or training for or in the course of work under a state contract or subcontract to cooperate in the implementation of the purposes of this Order. The labor commissioner shall in appropriate cases notify the commission on human rights and opportunities or other appropriate state or federal agencies whenever it has reason to believe that the practices of any such organization or agency violate equal employment opportunity requirements of state or federal law.

IX

The labor commissioner or any agency officer or employee in the executive branch designated by regulation of the labor commissioner may hold such hearings, public or private, as the labor commissioner may deem advisable for compliance, enforcement or educational purposes under this Order.

(a) The labor commissioner may hold or cause to be held hearings, prior to imposing ordering or recommending the imposition of penalties and sanctions under this Order. No order for disbarment of any contractor from further state contracts shall be made without affording the contractor an opportunity for a hearing. In accordance with such regulations as the labor commissioner may adopt, the commissioner or the appropriate contracting agency may

(1) Publish or cause to be published the names of contractors or labor organizations or employment agencies as hereinabove described which it has concluded have complied or failed to comply with the provisions of this Order or the regulations of the labor commissioner in implementing this Order.

(2) Recommend to the commission on human rights and opportunities that in cases in which there is substantial or material violation or threat thereof of the contractual provision or related state statutes concerned herein, appropriate proceedings be brought to enforce them, including proceedings by the commission on its own motion under chapter 563 of the general statutes and the enjoining, within the limitations of applicable law, of organizations, individuals or groups who prevent directly or indirectly or seek to prevent directly or indirectly compliance with the provisions of this Order.

(3) Recommend that criminal proceedings be brought under chapter 939 of the general statutes.

(4) Cancel, terminate, suspend or cause to be cancelled, terminated, or suspended in accordance with law any contract or any portion or portions thereof for failure of the contractor or subcontractor to comply with the nondiscrimination provisions of the contract. Contracts may be cancelled, terminated, suspended absolutely or their continuance conditioned upon a program for fixture compliance approved by the contracting agency.

(5) Provide that any contracting agency shall refrain from entering into any further contracts or extensions or modifications of existing contracts with any contractor until he has satisfied the labor commissioner that he has established and will carry out personnel and employment policies compliant with this Order.

(6) Under regulations prescribed by the labor commissioner each contracting agency shall make reasonable efforts within a reasonable period of time to secure compliance with the contract provisions of this Order by methods of conference conciliation, mediation or persuasion, before other proceedings shall be instituted under this Order or before a state contract shall be cancelled or terminated in whole or in part for failure of the contractor or subcontractor to comply with the contract provisions of state statute and this Order.

(b) Any contracting agency taking any action authorized by this Order, whether on its own motion or as directed by the labor commissioner or pursuant to his regulations shall promptly

notify *him* of such action. Whenever the labor commissioner makes a determination under this Order, he shall promptly notify the appropriate contracting agency and other interested federal, state and local agencies of the action recommended. The state and local agency or agencies shall take such action and shall report the results thereof to the labor commissioner within such time as he shall specify.

XI

If the labor commissioner shall so direct, contracting agencies shall not enter into contracts with any bidder or prospective contractor unless he has satisfactorily complied with the provisions of this Order, or submits a program, for compliance acceptable to the labor commissioner, or if the labor commissioner so authorizes, to the contracting agency.

XII

Whenever a contracting agency cancels or terminates a contract, or a contractor has been disbarred from, further government contracts because of noncompliance with the contract provisions with regard to nondiscrimination, the labor commissioner or the contracting agency shall rescind such disbarment, upon the satisfaction of the labor commissioner that the contractor has purged himself of such noncompliance and will thenceforth carry out personnel and employment policies of nondiscrimination in compliance with the provision of this order.

XIII

The labor commissioner may delegate to any officer, agency or employee in the executive branch any function or duty of the labor commissioner under this Order except authority to promulgate regulations of a general nature.

XIV

This Executive Order supplements the Executive Order issued on September 28, 1967. All regulations, orders, instructions, designations and other directives issued heretofore in these premises, including those issued by the heads of various departments or agencies under or pursuant to prior order or statute, shall remain in full force and effect, unless and until revoked or superseded by appropriate authority, to the extent that they are not inconsistent with this Order.

This Order shall become effective thirty days after the date of this Order.

Dated at Hartford, Connecticut, this 16th day of June, 1971.

Thomas J. Meskill,

State of Connecticut

By His Excellency

John G. Rowland

Governor

Executive Order No. Sixteen

WHEREAS, the State of Connecticut recognizes that workplace violence is a growing problem that must be addressed; and

WHEREAS, the State is committed to providing its employees a reasonably safe and healthy working environment, free from intimidation, harassment, threats, and /or violent acts; and

WHEREAS, violence or the threat of violence by or against any employee of the State of Connecticut or member of the public in the workplace is unacceptable and will subject the perpetrator to serious disciplinary action up to and including discharge and criminal penalties.

NOW, THEREFORE, I, John G. Rowland, Governor of the State of Connecticut, acting by virtue of the authority vested in me by the Constitution and by the statutes of this state, do hereby ORDER and DIRECT:

1. That all state agency personnel, contractors, subcontractors, and vendors comply with the following **Violence in the Workplace Prevention Policy**:

The State of Connecticut adopts a statewide zero tolerance policy for workplace violence.

Therefore, except as may be required as a condition of employment:

- o No employee shall bring into any state worksite any weapon or dangerous instrument as defined herein.
- o No employee shall use, attempt to use, or threaten to use any such weapon or dangerous instrument in a state worksite.
- o No employee shall cause or threaten to cause death or physical injury to any individual in a state worksite.

Weapon means any firearm, including a BB gun, whether loaded or unloaded, any knife (excluding a small pen or pocket knife), including a switchblade or other knife having an automatic spring release device, a stiletto, any police baton or nightstick *or* any martial arts weapon or electronic defense weapon.

Dangerous instrument means any instrument, article, or substance that, under the circumstances, is capable of causing death or serious physical injury.

Violation of the above reasonable work rules shall subject the employee to disciplinary action up to and including discharge.

2. That each agency must prominently post this policy and that all managers and supervisors must clearly communicate this policy to all state employees
3. That all managers and supervisors are expected to enforce this policy fairly and uniformly.
4. That any employee who feels subjected to or witnesses violent, threatening, harassing, or intimidating behavior in the workplace immediately report the incident or statement to their supervisor, manager, or human resources office.
5. That any employee who believes that there is a serious threat to their safety or the safety of others that requires immediate attention notify proper law enforcement authorities and his or her manager or supervisor
6. That any manager or supervisor receiving such a report shall immediately contact their human resources office to evaluate, investigate and take appropriate action.
7. That all parties must cooperate fully when questioned regarding violations of this policy.
8. That all parties be advised that any weapon or dangerous instrument at the worksite will be confiscated and that there is no reasonable expectation of privacy with respect to such items in the workplace.
9. That this order applies to all state employees in the executive branch.
10. That each agency will monitor the effective implementation of this policy.
11. That this order shall take effect immediately.

Dated in Hartford, Connecticut, this fourth day of August, 1999.

Filed this 4th day of August, 1999.

SUSAN BYSIEWICZ, Secretary of the State

State Of Connecticut

By His Excellency

Thomas J. Meskill

Governor

Executive Order No. Seventeen

WHEREAS, Section 31-237 of the General Statutes of Connecticut as amended requires the maintaining of the established free services of the Connecticut State Employment Service to both employers and prospective employees and

WHEREAS, Section 31-5 of the General Statutes of Connecticut requires that no compensation or fee shall be charged or received directly or indirectly for the services of the Connecticut State Employment Service and

WHEREAS, large numbers of our citizens who have served in the Armed Forces of our nation are returning to civilian life in our state and seeking employment in civilian occupations and

WHEREAS, we owe a duty as well as gratitude to these returning veterans including the duty to find suitable employment for them and

WHEREAS, many of our handicapped citizens are fully capable of employment and are entitled to be placed in suitable employment and

WHEREAS, many of the citizens of our state who are unemployed are unaware of the job openings and employment opportunities which do in fact exist in our state and

WHEREAS, notwithstanding the free services of the Connecticut State Employment Service, many of our Connecticut employers do not use its free services or do not avail themselves fully of all the services offered,

NOW, THEREFORE, I, THOMAS J. MESKILL, Governor of the State of Connecticut, acting by virtue of the authority vested in me under the fourth article of the Constitution of the State and in accordance with Section 3-1 of the General Statutes, do hereby ORDER and direct, as follows, by this Executive Order:

- I. The Labor Commissioner shall be responsible for the administration of this Order and shall do all acts necessary and appropriate to achieve its purpose. Upon promulgation of this Order, the Commissioner of Finance and Control shall issue a directive forthwith to all state agencies, that henceforth all state contracts and subcontracts for construction on public buildings, other public works and goods and services shall contain a provision rendering such contract or subcontract subject to this Order, and that such contract or subcontract may be cancelled, terminated or suspended by the Labor Commissioner for violation of or noncompliance with this Order, notwithstanding that the Labor Commissioner is not a party to such contract or subcontract.
- II. Every contractor and subcontractor having a contract with the state or any of its agencies, boards, commissions, or departments, every individual partnership, corporation, or business entity having business with the state or who or which seeks to do business with the state, and every bidder or

- prospective bidder who submits a bid or replies to an invitation to bid on any state contract shall list all employment openings with the office of the Connecticut State Employment Service in the area where the work is to be performed or where the services are to be rendered.
- III. All state contracts shall contain a clause which shall be a condition of the contract that the contractor and any subcontractor holding a contract directly under the contractor shall list all employment openings with the Connecticut State Employment Service. The Labor Commissioner may allow exceptions to listings of employment openings which the contractor proposes to fill from within its organization from employees on the rolls of the contractor on the date of publication of the invitation to bid or the date on which the public announcement was published or promulgated advising of the program concerned.
 - IV. Each contracting agency of the state shall be primarily responsible for obtaining compliance with this Executive Order. Each contracting agency shall appoint or designate from among its personnel one or more persons who shall be responsible for compliance with the objectives of this Order.
 - V. The Labor Commissioner shall be and is hereby empowered to inspect the books, records, payroll and personnel data of each individual or business entity subject to this Executive Order and may hold hearings or conferences, formal or informal, in pursuance of the duties and responsibilities hereunto delegated to the Labor Commissioner.
 - VI. The Labor Commissioner or any agency officer or employee in the executive branch designated by regulation of the Labor Commissioner may hold such hearings, public or private, as the Labor Commissioner may deem advisable for compliance, enforcement or educational purposes under this Order.
 - VII. (a) The Labor Commissioner may hold or cause to be held hearings, prior to imposing, ordering, or recommending the imposition of penalties and sanctions under this Order. In accordance herewith, the Commissioner or the appropriate contracting agency may suspend, cancel, terminate, or cause to be suspended, cancelled, or terminated in accordance with law any contract or portion or portions thereof for failure of the contractor or subcontractor to comply with the listing provisions of the contract. Contracts may be cancelled, terminated, suspended absolutely or their continuance conditioned upon a program for future compliance approved by the contracting agency.
(b) Any contracting agency taking any action authorized by this Order, whether on its own motion or as directed by the Labor Commissioner, shall promptly notify him of such action. Whenever the Labor Commissioner makes a determination under this Order, he shall promptly notify the appropriate contracting agency of the action recommended. The agency shall report the results to the Labor Commissioner promptly.
 - VIII. If the Labor Commissioner shall so direct, contracting agencies shall not enter into contracts with any bidder or prospective contractor unless he has satisfactorily complied with the provisions of this Order.

This Order shall become effective sixty days after the date of this Order.

Dated at Hartford, Connecticut, this 15th day of February 1973.

Thomas J. Meskill
Governor

Filed this 15th day of February 1973.

Hany Hammer
Secretary Of The State (Deputy)

ATTACHMENT 9

Non Collusion Affidavit

ATTACHMENT 10

Non Discrimination Agreement

ATTACHMENT 11

Bid Bond

BID BOND

KNOW ALL MEN BY THESE PRESENTS: That we, the undersigned, _____ of _____ (hereinafter called Principal) as Principal, and _____ a corporation organized and existing under the laws of the State of _____ and duly authorized to transact a surety business in the State of Connecticut (hereinafter called Surety), are held and firmly bound unto the Town of East Lyme as Owner, in the penal sum of _____ in lawful money of the United States of America, for the payment of which sum, well and truly made to the Owner, we bind ourselves, our heirs, successors, and assigns, jointly and severally, firmly by these presents has herewith submitted a bid for the for the contract for the _____ project, bids for which are scheduled to be opened on _____

THE CONDITION OF THIS OBLIGATION is such, that whereas the Principal has herewith submitted a bid for the contract for the above referenced project

NOW, THEREFORE, if the following conditions are satisfied, this obligation shall become void:

- a) the Principal shall not withdraw its bid within 90 days after the bid opening of the same without the consent of the Owner, and
- b) the Owner shall award said project to the Principal in writing, and
- c) the Principal shall, as required by the Owner pursuant to the bid specifications for the project, execute a contract in writing for the project within the time specified by the Owner, after being notified by the Owner in writing of the award, including all submissions relating to that contract execution as may be required by the bid specifications, to be submitted to the Owner prior to contract execution, and
- d) the Principal shall deliver such surety bond as shall be acceptable to the Owner for the performance of the work according to said written agreement (contract), and shall in all other respects perform the agreement created by the acceptance of said bid.

Otherwise, the Principal and Surety hereto agree to pay unto the Owner the difference between the amount of the bid of said Principal, submitted herewith, and the amount for which the Owner may contract with another party to perform the work covered by the said bid of the Principal.

The Surety executing this instrument hereby agrees that its obligation shall not be impaired by any extension(s) of the time for contract execution that the Principal and Owner may agree to, notice of which extension(s) to the Surety being hereby waived; provided that such waiver of notice shall apply only with respect to extensions aggregating not more than 180 calendar days in addition to the original 90 days allowed for expiration of this bid bond.

IN TESTIMONY WHEREOF, the said Principal and Surety have caused this bond to be signed by their duly-authorized representatives and have caused their names and corporate seals to be affixed on this form on the respective dates of their signatures.

Surety

Print Surety Name

Agent's signature and date. **Enclose a valid Power of Attorney**

Principal

Print Name

Signature of Authorized Representative and date

ATTACHMENT 12

Payment/Performance Bond

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS: That we _____

_____ a _____

(Name of Contractor)
(Corporation, Partnership, or Individual)
hereinafter called "Principal" and _____

(Surety)
of, _____ State of _____ hereinafter called the
"Surety", are held and firmly bound into of _____ of

(Owner)
_____, hereinafter called "Owner", in the penal sum of
(City and State)
_____ Dollars

(\$ _____) in lawful money of the United States, for the payment made, we bind ourselves, and successors, jointly presents of which sum well and truly to be our heirs, executors, administrators and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that Whereas, the Principal entered into a certain contract with the Owner, dated the _____ day of _____, 20__, which contract is hereby incorporated by reference and made a part hereof for the construction of:

The Surety expressly acknowledges and agrees that the Contract incorporates by reference certain additional documentation therein described, all of which is an integral part of the Contract whether or not the same are attached to this Bond. Complete copies of the Contract and all attachments are on file with the Owner and are available for inspection.

NOW, THEREFORE, if the Principal shall well, truly and faithfully perform its duties, all the undertakings, covenants, terms, conditions, and agreements of said contract during the original term thereof, and any extensions thereof which may be granted by the Owner, with or without notice to the Surety, and if he shall satisfy all claims and demands incurred under such contract, and shall fully indemnify and save harmless the Owner from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the Owner all outlay and expense which the Owner may incur in making good any default, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety, for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the work to be performed thereunder of the specifications accompanying the same shall in any wise affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the work of to the specifications.

PROVIDED, FURTHER, that no final settlement between the Owner and the Contractor shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in six (6) counterparts, each one of which shall be deemed an original this _____ day of _____, 20__.

ATTEST:

(Principal) Secretary
(SEAL)

Witness as to Principal

(Address-Zip Code)

ATTEST:

(Surety) Secretary
(SEAL)

Witness as to Surety

(Address-Zip Code)

Principal
By _____ (s)

(Address-Zip Code)

Surety

By _____
Attorney-in-Fact

(Address-Zip Code)

NOTE: Date of Bond must not be prior to date of Contract. If Contractor is Partnership, all partners should execute bond.

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS: That we _____

_____ a _____

(Name of Contractor)
(Corporation, Partnership, or Individual)
hereinafter called "Principal" and _____

(Surety)
of, _____ State of _____ hereinafter called the
"Surety", are held and firmly bound into of _____ of

(Owner)
_____, hereinafter called "Owner", in the penal sum of
(City and State)
_____ Dollars

(\$ _____) in lawful money of the United States, for the payment made, we bind ourselves, and successors, jointly presents of which sum well and truly to be our heirs, executors, administrators and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that Whereas, the Principal entered into a certain contract with the Owner, dated the _____ day of _____, 20____, a copy of which is hereto attached and made a part hereof for the construction of:

The Surety expressly acknowledges and agrees that the Contract incorporates by reference certain additional documentation therein described, all of which is an integral part of the Contract whether or not the same are attached to this Bond. Complete copies of the Contract and all attachments are on file with the Owner and are available for inspection.

NOW, THEREFORE, if the Principal shall well, truly and faithfully perform its duties, all the undertakings, covenants, terms, conditions, and agreements of said contract during the original term thereof, and any extensions thereof which may be granted by the Owner, with or without notice to the Surety, and if he shall satisfy all claims and demands incurred under such contract, and shall fully indemnify and save harmless the Owner from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the Owner all outlay and expense which the Owner may incur in making good any default, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety, for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the work to be performed there under of the specifications accompanying the same shall in any wise affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the work of to the specifications.

PROVIDED, FURTHER, that no final settlement between the Owner and the Contractor shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in six (6) counterparts, each one of which shall be deemed an original, this _____ day of _____, 20__.

ATTEST:

(Principal) Secretary
(SEAL)

Witness as to Principal

(Address-Zip Code)

ATTEST:

(Surety) Secretary
(SEAL)

Witness as to Surety

(Address-Zip Code)

Principal
By _____ (s)

(Address-Zip Code)

Surety

By _____
Attorney-in-Fact

(Address-Zip Code)

NOTE: Date of Bond must not be prior to date of Contract. If Contractor is Partnership, all partners should execute bond.

ATTACHMENT 13

Water Meter Specification and installation sheets



iPERL Smart Water Meter

Electromagnetic Flow Measurement System

Sensus iPERL® smart water meters are designed to capture both lost water and lost revenue. The innovative magnetic technology delivers unmatched low flow registration and minimal pressure loss. With no moving parts, iPERL maintains its accuracy over a 20 year lifetime and is equipped with smart water alarms – delivering the intelligence you need to quickly resolve issues in the field.

CAPABILITIES

- The iPERL meter has an operating range of 0.11 gpm (0.025 m³/hr) to 55 gpm (12.5 m³/hr)—it even starts to register flow as low as 0.03 gpm (0.007 m³/hr).
- Sizes include: 5/8" (DN 15mm), 3/4" (DN 20mm) and 1" (DN 25mm)
- iPERL can be installed horizontally, vertically or diagonally.

BENEFITS

- Maximize investment with iPERL's magnetic technology, which delivers a 20-year accuracy warranty, with no repairs
- Get smart water alarms to detect issues such as leaks, reverse flow, empty pipe, etc.
- Improve low flow accuracy to drive additional revenue

Industry Leading Performance

The patented measurement technology of the iPERL water meter provides enhanced accuracy at both low and high flows. Over a 20-year lifespan, your iPERL will measure just as accurately as the day it was installed.

Solid State Magnetic Technology

By avoiding the use of a mechanical measuring element inside the flow tube, metering performance is linear over the entire flow range – ensuring no reduction in accuracy at any flow rate over the life of the meter. The iPERL meter uses our patented remanent magnetic field technology – requiring far less energy and delivering superior accuracy.

Alarms

Quick resolution of field issues is made possible with smart water alarms including leak detection, reverse flow, empty pipe, magnetic tamper and low battery. When integrated with our FlexNet® communication network, remotely gathering and transmitting data has never been more reliable or profitable.

Construction

The iPERL meter body is made of composite alloy and contains no metal material. Inside the meter body is an electronic register and a measuring device that is comprised of a composite alloy flow tube. Embedded in the flow tube are coated silver electrodes. iPERL utilizes these to measure the fluid velocity through the flow tube – enabling less power consumption and predictable meter performance. The iPERL meter has a 20-year accuracy warranty and a 20-year battery life guarantee.



iPERL Smart Water Meter

Electronic Register

The 9-digit hermetically-sealed electronic register with LCD display was designed to eliminate dirt, fog and moisture contamination in pit settings. The large, easy-to-read display includes AMR digits, direction of flow, units of measure and smart water alarms. The AMR digits and units of measure are fully programmable. The register also provides integrated customer data logging.

AMI / AMR Compatibility

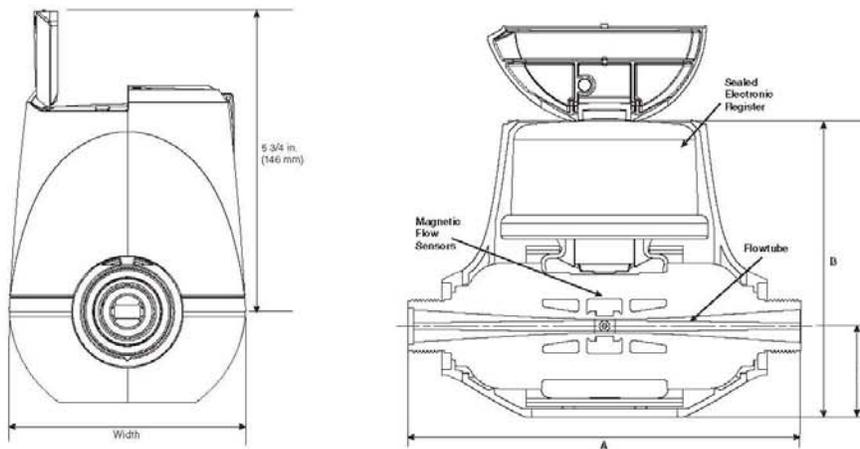
Sensus iPERL meters are compatible with common AMR/AMI systems, including the Sensus FlexNet® communication network.

Conformance to Standards

The iPERL meter far exceeds the most recent revision of ANSI/AWWA Standard C-700 and C-710 for accuracy and pressure loss requirements. All iPERL meters are NSF/ANSI Standard 61 Annex F and G compliant and tested to AWWA standards.

Tamper Resistant

The integrated construction of the iPERL water meter prevents removal of the register to obtain free water. The magnetic tamper and low field alarms will both indicate any attempt to tamper with the magnetic field of the iPERL meter.



Dimensions and Net Weights

Size	A (lay length)	B	C	Spud Ends	NPSM Thread Size	Width	Net Weight
5/8" (DN 15 mm)	7-1/2" (190 mm)	6-1/10" (155 mm)	1-3/4" (44 mm)	5/8" (15 mm)	3/4" (19 mm)	4-1/2" (114 mm)	3.1 lb. (1.4 kg)
3/4"S (5/8" x 3/4") (DN 20 mm)	7-1/2" (190 mm)	6-1/10" (155 mm)	1-3/4" (44 mm)	3/4" (20 mm)	1" (25 mm)	4-1/2" (114 mm)	3.1 lb. (1.4 kg)
3/4" (DN 20 mm)	9" (229 mm)	6-1/10" (155 mm)	1-3/4" (44 mm)	3/4" (20 mm)	1" (25 mm)	4-1/2" (114 mm)	3.2 lb. (1.5 kg)
1" (DN 25 mm)	10-3/4" (273 mm)	6-1/10" (155 mm)	1-3/4" (44 mm)	1" (25 mm)	1-1/4" (32 mm)	4-1/2" (114 mm)	3.3 lb. (1.6 kg)

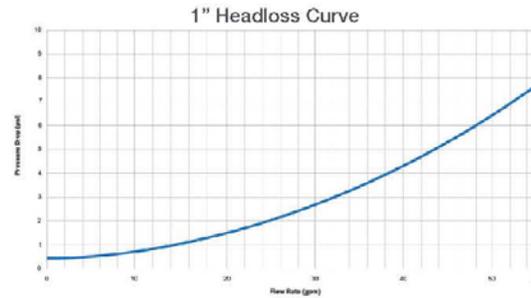
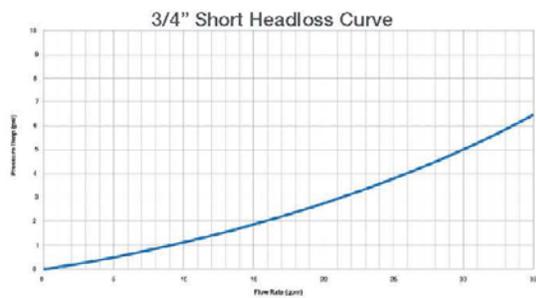
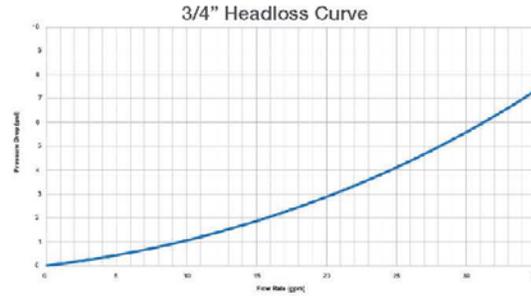
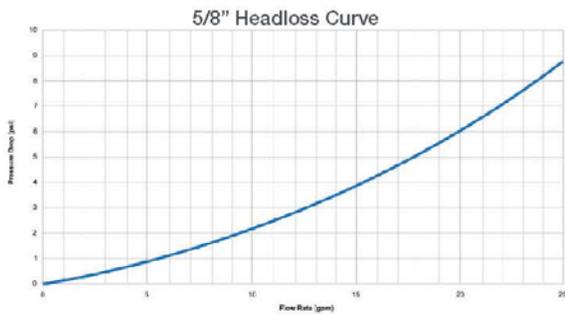


iPERL Smart Water Meter

Specifications

Service	Measurement of potable and reclaimed water. Water operating temperature range of 33°F (0.56°C) -80°F (26.7°C)
Starting Flow	5/8" (DN 15mm) size: 0.03 gpm (0.007 m ³ /h) 3/4" (DN 20mm) size: 0.03 gpm (0.007 m ³ /h) 1" (DN 25mm) size: 0.11 gpm (0.025 m ³ /h)
Low Flow Range (±3%)	5/8" (DN 15mm) size: >0.11 gpm (0.025 m ³ /hr) to <0.18 gpm (0.041 m ³ /hr) 3/4" (DN 20mm) size: >0.11 gpm (0.025 m ³ /hr) to <0.18 gpm (0.041 m ³ /hr) 1" (DN 25mm) size: >0.3 gpm (0.068 m ³ /hr) to <0.4 gpm (0.09 m ³ /hr)
Normal Water Operating Flow Range (±1.5%)	5/8" (DN 15mm) size: 0.18 to 25 gpm (0.04 to 5.7 m ³ /hr) 3/4" (DN 20mm) size: 0.18 to 35 gpm (0.04 to 8.0 m ³ /hr) 1" (DN 25mm) size: 0.4 to 55 gpm (0.09 to 12.5 m ³ /hr)
Maximum Operating Pressure	5/8" and 3/4" size: 200 psi (13.8 bar) 1" size: 175 psi (12.1 bar)
Measurement Technology	Solid state electromagnetic flow
Register	Hermetically sealed, 9-digit programmable electronic register; AMR/AMI compatible; iPERL register programmable using the UniPro [®] communicator and FieldLogic [™] software
Materials	External housing – Thermal plastic; Flowtube – Polyphenylene sulfide alloy; Electrode – Silver/silver chloride; Register cover – Tempered glass
Alarm Defaults	Alarm Duration – 90 days; Leak Duration before alarm is triggered – 24 hours; Datalog Interval – 1 hour; Alarm Mask

Headloss Curves





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Raleigh, NC 27615
1-800-638-3748
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iPERL™ Water Meter Installation Instructions

INSTALLATION

1. Unpack the iPERL meter from the packaging and remove the spud thread protectors.
2. Inspect the iPERL meter for any parts that may have been damaged during shipping.
3. If a new install, thoroughly flush new water service plumbing before installing the iPERL meter.
4. Turn off the water supply valves.

CAUTION: *Ensure the metallic water service plumbing is properly grounded per electrical codes. If installing indoors, install an electrical grounding strap for safety.*

5. If an existing install, pull the current meters out of the pit or disassemble current meter.
6. Orientate the iPERL meter so that the direction of the flow arrow on the system body is aligned with the direction of the flow arrow in the plumbing system.
7. Install the new iPERL meter connection gaskets in both meter couplings.
8. Align the threads and hand-tighten the coupling nuts.
9. Using a wrench, tighten an extra 1/4 to 1/2 turn on each coupling nut.

NOTE: *Do not over-tighten. You may tighten after turning on the water (if leaks are present). Additionally, do not use the opposite coupling nut for support when tightening a coupling nut. This could overstress the meter body and cause it to crack.*

10. After the iPERL meter is installed, shut off the outlet shut-off valve.
11. Open the inlet shut-off valve slowly until the iPERL meter is full of water and ensure that there are no leaks.
12. Open the outlet valve slowly until air is out of the meter and service line.

13. Open a valve downstream of the iPERL meter to ensure that no foreign debris in the water obstructs the operations of the meter.

14. Check the read on the iPERL meter to make sure it is registering a positive number and not displaying an empty pipe alarm. If the alarm is present, make sure the iPERL meter is installed in the correct direction. It will take about 30 seconds for the iPERL to register flow after an empty pipe alarm is triggered.

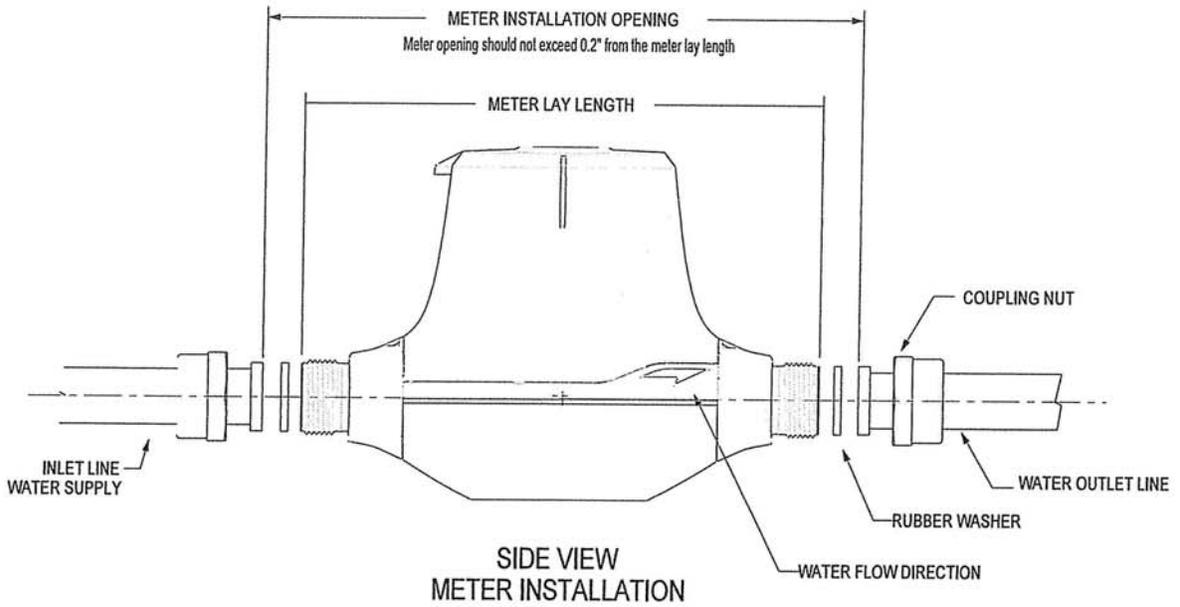
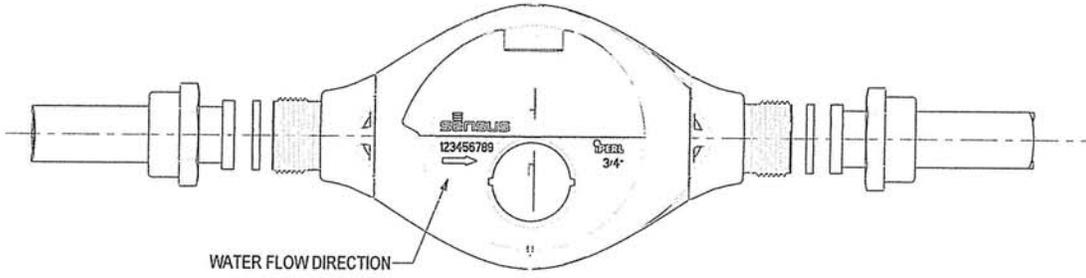
15. Attach an endpoint to the iPERL meter via a coupler cable, if required.
16. Record read information as required by the utility.

Considerations

- iPERL meters should be installed on the discharge side of a pump with the flow directional arrow pointed downstream.
- If a pump is installed on the outlet side of the iPERL meter, a minimum of ten (10) diameters of straight pipe should be immediately downstream of the iPERL meter to obtain valid system registration.
- Suitable shutoff valves should be installed adjacent to the inlet and outlet of the iPERL meter so that the service may be shutoff if it is necessary to remove the iPERL meter.
- Clean and flush the service line thoroughly on the inlet side before installing the iPERL meter.
- Make sure that metallic water service plumbing is properly grounded as per local electrical codes. If installing indoors, install an electrical grounding strap for safety.
- The water lines must be coaxially aligned within three (3) degrees (0.4 inches) to ensure a proper seal.
- It is recommended that old gaskets be completely removed and discarded and new 3/32" thick rubber gaskets be used with every installation.



TOP VIEW
METER INSTALLATION



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SmartPoint 510M

Non-Pit Set Module

The SmartPoint® 510M Non-Pit Set Module is a radio transceiver that provides water utilities inbound and outbound access to water measurement and ancillary device diagnostics via radio signal. The SmartPoint 510M Module is designed for non-submersible/non-pit installations.

TouchCoupler Design

The SmartPoint 510M Module utilizes TouchCoupler, the patented Sensus inductive coupling communication platform, to interface with the encoded meter. With TouchCoupler, the SmartPoint 510M Module can connect to the meter using existing two-wire AMR installations instead of requiring utilities to access the home to install a new three-wire system. This results in a fast, efficient and reliable connection at minimal cost.

Operation

With its migratable, two-way communication ability, the M-Series SmartPoint functions as a walk-by/drive-by endpoint, fixed-base endpoint, or combination of the two. This flexibility increases utility data collection capabilities and streamlines operations. The SmartPoint 510M Module receives input from the meter register and remotely sends data to a walk-by/drive-by or fixed-base collection device. The SmartPoint 510M Module easily migrates from walk-by/drive-by to fixed base by simply installing a Base Station.

In walk-by/drive-by mode, the SmartPoint 510M Module collects data and awaits an activation signal from the Vehicle Gateway Basestation (VGB) or Hand-Held Device (HHD). Upon signal receipt, it transmits readings, the meter identification number and any alarms.

As a fixed-base endpoint, the SmartPoint 510M Module interacts with one or more strategically placed Base Stations located in the utility service area. Top of the hour readings and other diagnostics are instantly forwarded to the Regional Network Interface (RNI)™ at time of transmission. The FlexNet® communication network provides unmatched reliability by using expansive tower receiver coverage of metering end points, data/message redundancy, failover backup provisions and operation on FCC primary use (unshared) RF spectrum.

BENEFITS:

- Easily receives input from either walk-by/drive-by or fixed-base collection device
- Controls both deployment and lifetime operation costs
- Compact installation that saves time, space and money - without reducing system performance
- Delivers a fast, efficient, reliable connection at minimal cost
- Minimizes new infrastructure investment
- Enables effective leak detection



SmartPoint 510M

Non-Pit Set Module

Powerful Transmission, Flexible Platform

The SmartPoint® 510M Non-Pit Set Module offers several advantages that control both deployment and lifetime operation costs. Its powerful, industry leading two watt transmitter broadcasts over large distances and minimizes collection infrastructure. And after the SmartPoint 510M Module is installed, its migratable, two-way system platform can be updated without requiring personnel to visit each meter and/or inconveniencing customers.

Additional SmartPoint 510M Module Features

The SmartPoint 510M Module obtains hourly

readings and can monitor continuous flow over a programmable period of time, alerting the utility to leak conditions. In addition, the SmartPoint 510M Module stores up to 840 consumption intervals (35 days of hourly consumption), providing the utility with the ability to extract detailed usage profiles for consumer information and dispute resolution. The SmartPoint 510M Module also incorporates a two-port design, allowing the utility to connect multiple registers and ancillary devices (such as acoustic monitoring) to a single SmartPoint. This results in a compact installation that saves time, space and money – without reducing system performance.

Specifications

Service	Wall mounted (non-pit/non-submersible) installation interfacing the utility meter to the Sensus FlexNet system.
Physical characteristics	Width: 5 9/16" x Height: 5 1/2" x Depth: 3"
Weight	1.13 lbs/18.08 oz
Color	Tan
Frequency range	900 - 950 MHz, 8000 channels X 6.25 kHz steps
Modulation	Proprietary Narrow Band
Memory	Non-Volatile
Power	Lithium Thionyl Chloride batteries
Approvals	US: FCC CFR 47: Part 24D, Part 101C, Part 15 Licensed operation Canada: Industry Canada (IC) RSS-134, RSS-119
Operating temperature	- 22° F to +185° F - 30° C to + 85° C
Options	Dual or single port availability; TouchCoupler only, wired only
Installation environment	The 510M is designed for side-of-home applications where it is not subject to submergence.
Compatibility	TouchCoupler and Wired Version: Sensus Encoder Registers, Badger ADE water registers, Master Meter AccuLinx, and Hersey Translator (approved TR/PL Lead) Wired Version Only: Elster Encoder (Sensus protocol), Neptune ARB VI (ProRead), Hersey Translator, Zenner PMN Nitro 01, McCrometer flowcom FC100-00M, and Kamstrup flowIQ 2100 Refer to the 510M/520M SmartPoint® Module Water Meter and Ancillaries Compatibility Quick Guide for the latest compatibility information.
Warranty	20 years - Based on six transmissions per day. Refer to Sensus G-500 for warranty.



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FlexNet SmartPoint

Installation Instructions for Model 510M - Non Pit Unit

IMPORTANT

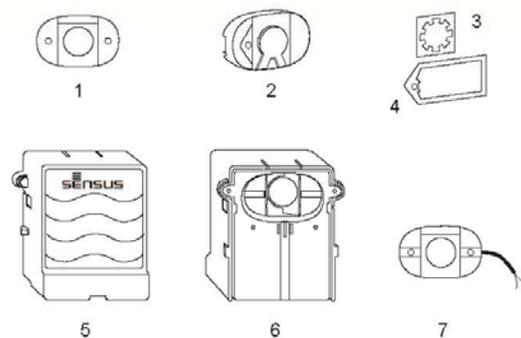
The following information contains installation instructions for the Sensus Model 510M SmartPoint.

Note: This installation sheet is only for installation of the Sensus Model 510M. For instructions on installing other AMI devices, please request and refer to the individual installation instruction for those devices.

GENERAL INFORMATION

The Model 510M SmartPoint is designed for non pit, non submersible applications and is available for both a single port and dual port operation. The Model 510M should be mounted outdoors where it is not subject to submergence and to maximize performance in fixed base applications. The Model 510M is not intended for outdoor meter pits or vaults. The unit can be installed with either a TouchCoupler connection or wire connection. Please refer to the Aquasense water-compatibility document, WAMDS-40000, for compatibility and AMI-495 for programming instructions.

DEFINITIONS



1. Sensus TouchPad
2. TouchPad Cover Assembly Complete
3. TouchPad Fastener
4. TouchPad Cover Locking Clip
5. Model 510 Radio (Front View)
6. Model 510 Radio TouchCoupler Enabled Assembly (Rear View with TouchPad Cover)
7. TouchPad Extension Assembly

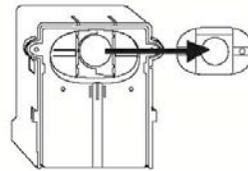
RECOMMENDED TOOLS AND MATERIALS

- Wire stripping tool
- Screwdriver - Small standard head for terminal connections
- Power drill and bit (1/4")
- 8 x 1" sheet metal screws
- TouchPad extension cable
- Seal wire (optional)

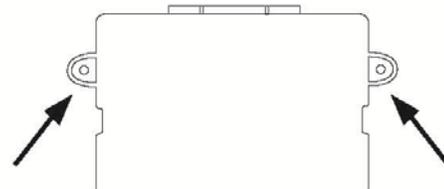
TOUCHCOUPLER - INSTALLATION INSTRUCTIONS

SINGLE PORT - TOUCHCOUPLER INSTALLATION

1. Perform a TouchRead on TouchPad(s) to insure TouchRead to the encoder works.
2. Taking a completely assembled Model 510M SmartPoint and TouchCoupler Spacer with TouchPad Cover, align the TouchPad Cover over an installed Sensus TouchPad.
3. Place the unit over the TouchPad and press firmly until secure.



4. For additional support (optional), remove the front cover and pre-drill the holes designed to fasten the unit to the wall. (Holes indicated in diagram below.) Secure the unit to the wall with screws. Once secured, replace front cover of unit.

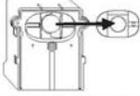


5. Once the unit is closed and secured, begin the activation process. (Refer to AMI-495 for programming instructions).
6. For security (optional), a seal wire may be used on the bottom of the unit for tamper evidence.
7. Coil excess wire and then secure to the body of the meter or service line in a presentable manner.

SINGLE PORT – REMOTE TOUCHCOUPLER INSTALLATION

Remote TouchCoupler installations are an option when a direct TouchCoupler (Sensus only) connection cannot be completed due to physical limitations. Before proceeding with the installation of a remote TouchCoupler application, be sure to find a location free from obstacles that would interfere with the connection from the TouchPad Cover to the transmitter.

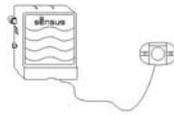
1. Perform a TouchRead on TouchPad to insure TouchRead to the encoder works.
2. Remove current TouchPad.
3. Replace current TouchPad with TouchPad extension assembly.



4. Connect current TouchPad to wires extending from the TouchPad extension assembly.
5. Mount current TouchPad in a location free from obstruction for SmartPoint to be mounted over it.
6. Perform TouchRead to verify integrity of wiring.
7. Taking a completely assembled 510M TouchCoupler SmartPoint, place over the Sensus TouchPad and press firmly to secure.
8. For additional support (optional), remove the front cover and pre-drill the holes designated to fasten to the wall (Holes shown in diagram below). Secure the unit to the wall with screws and snap on the front cover.



9. Once all the connections are complete, snap on the front cover and for tamper prevention place a seal wire on the bottom of the unit.
10. Once the unit is secured, begin the activation process. (Refer to AM-485 for programming instructions).



DUAL PORT – TOUCHCOUPLER INSTALLATION

1. Perform a TouchRead on TouchPad(s) to insure TouchRead to the encoder works.
2. For new installations of dual ports, find a suitable location for an installation where two TouchPads can be installed that will be free from interference. The optimum distance should be less than 12'; otherwise wires may require field splicing. (For existing TouchPad connections when a second port is added, select a location for the second TouchPad installation that will be free from interference.)
3. Determine which of the two TouchPads will use the TouchPad Cover only and which will use the TouchCoupler unit as the primary connection.

Note: If TouchPad is not already installed, install TouchPad allowing enough room for the TouchPad Cover to be securely placed over the installed TouchPad.

4. Place the remote TouchPad Cover firmly over the Sensus TouchPad until secured.



5. Place the SmartPoint over the second TouchPad location and press firmly until the unit is secured to the TouchPad. For additional support (optional), pre-drill the holes designed to fasten the unit to the wall. Secure the unit to the wall with screws.

Note: If not already installed, install the second TouchPad allowing enough room to connect the transmitter to the TouchPad.

6. Strip wires prior to inserting into terminal strip.
7. Connect the wires from the TouchPad Cover to the coordinating port terminals in the SmartPoint labeled TouchCoupled.

Note: Red and black wires are non-polarized.



8. Once all the connections are complete, snap on the front cover and for tamper prevention place seal wire on bottom of unit.
9. Once the unit is closed and secured, begin the activation process. (Refer to AM-485 for programming instructions.)

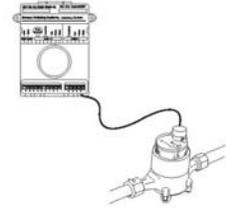


SINGLE AND DUAL PORT – WIRED INSTALLATION

1. Place the SmartPoint at the location for installation. With the front cover removed, mark the location to pre-drill the holes designed to fasten the unit to the wall. (Holes shown in figure below).



2. Remove the SmartPoint from the wall and use a 1/4" drill bit to pre-drill the fastener holes.
3. Place the unit on the wall and align the pre-drilled holes with the fastener locations.
4. Secure the unit to the wall with screws.
5. Strip wires prior to inserting into terminal strip.
6. Connect the wires from the register to the coordinating port terminals in the SmartPoint.



Note: See the encoder wiring reference chart for proper color-coded wiring connections. Badger, Neptune and Ester registers must be wired directly to a 510M port and not through a Multihead module connected to the 510M.

Encoder wiring reference:

SmartPoint Terminal	Sensus Register	Badger ADE	Neptune ProRead	Ester Encoder
Black	Black	Black	Green	Black
Red	Red	Red	Black	Green
Green	Green	Green	Red	Red

7. Once all terminal connections are complete, snap on the front cover and for tamper prevention place seal wire on bottom of unit.
8. Once the unit is closed and secured, begin the activation process. (Refer to AM-485 for programming instructions.)



FCC COMPLIANCE

This equipment has been tested and found to comply with the limitations for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with these instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio and television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving device
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TC technician



Warning!

No party shall make any modifications or changes to the Sensus Model 510M transmitter (the equipment) without express written consent of Sensus. Doing so could result in the equipment becoming non-compliant with the requirements of the Federal Communications Commission Rules CFR47 part 15 and could void the user's authority to operate the equipment.

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SENSUS



SmartPoint 520M

Pit Set Module

The FlexNet® SmartPoint® 520M Module is a radio transceiver that provides water utilities inbound and outbound access to water measurement and ancillary device diagnostics via radio signal. The SmartPoint 520M is designed for submersible, pit-set environments. With its migratable, two-way communication ability, the M-Series SmartPoint functions as a walk-by/drive-by endpoint, fixed base endpoint, or combination of the two. This flexibility increases utility data collection capabilities and streamlines operations.

BENEFITS:

- Fast, efficient and reliable connection
- Easily receives input from either walk-by/drive-by or fixed base collection device
- Controls both deployment and lifetime operation costs
- Compact installation that saves time, space and money - without reducing system performance
- Delivers a fast, efficient, reliable connection at minimal cost
- Minimizes new infrastructure investment
- Enables effective leak detection

TouchCoupler Design

The SmartPoint 520M Module utilizes TouchCoupler, the patented Sensus inductive coupling communication platform, to interface with the encoded meter. With TouchCoupler, the SmartPoint 520M Module can connect to the meter using existing two wire AMR installations instead of requiring utilities to access the meter to install a new three-wire connection. This results in a fast, efficient and reliable connection at minimal cost.

Operation

The FlexNet SmartPoint 520M Module receives input from the meter register and remotely sends data to a walk-by/drive-by or fixed base collection device. The SmartPoint 520M Module easily migrates from walk-by/drive-by to fixed base by simply installing a Base Station.

In walk-by/drive-by mode, the SmartPoint 520M Module collects data and awaits an activation signal from the Vehicle Gateway Basestation (VGB) or Hand-Held Device (HHD). Upon signal receipt, it transmits readings, the meter identification number and any alarms.

As a fixed-base endpoint, the SmartPoint 520M Module interacts with one or more strategically placed Base Stations located in the utility service area. Top of the hour readings and other diagnostics are instantly forwarded to the Regional Network Interface (RNI) at time of transmission. The FlexNet system provides unmatched reliability by using expansive tower receiver coverage of metering end points, data/message redundancy, failover backup provisions and operation on FCC primary use (unshared) RF spectrum.



SmartPoint 520M

Pit Set Module

Powerful Transmission, Flexible Platform

The SmartPoint® 520M Module offers several advantages that control both deployment and lifetime operation costs. It's powerful, industry-leading two watt transmitter broadcasts over large distances and minimizes collection infrastructure. And once the SmartPoint is installed, its migratable, two-way system platform can be updated without requiring personnel to visit each meter and/or inconveniencing customers.

Additional Smartpoint 520M Module Features

The SmartPoint 520M Module obtains hourly

readings and can monitor continuous flow over a programmable period of time, alerting the utility to leak conditions. In addition, the SmartPoint stores up to 840 consumption intervals (35 days of hourly consumption), providing the utility with the ability to extract detailed usage profiles for consumer information and dispute resolution. The SmartPoint also incorporates a two-port design, allowing the utility to connect multiple registers and ancillary devices (such as acoustic monitoring) to a single SmartPoint. This results in a compact installation that saves time, space and money - without reducing system performance.

Specifications

Service	Pit set installation interfacing the utility meter to the Sensus FlexNet system. Unit requires 1.75" diameter hole in pit lid; fits pit lid thicknesses up to 1.75"
Physical characteristics	Width: 4.43" x Height: 5.09" x Depth: 3"
Weight	1.0 lbs/16.0 oz
Color	Black
Frequency range	900 – 950 MHz, 8000 channels X 6.25 kHz steps
Modulation	Proprietary Narrow Band
Memory	Non-Volatile
Power	Lithium Thionyl Chloride batteries
Approvals	US: FCC CFR 47: Part 24D, Part 101C, Part 15 Licensed operation Canada: Industry Canada (IC) RSS-134, RSS-119
Operating temperature	- 22° F to +185° F - 30° C to + 85° C
Options	Dual or single port availability; TouchCoupler only, wired only, Nicor Connector
Installation environment	100% condensing, water submersible
Compatibility	TouchCoupler and Wired Version: Sensus Encoder Registers and Badger ADE water registers and Master Meter AccuLinx Wired Version Only: Elster Encoder (Sensus protocol) and Neptune ARB VI (ProRead). Hersey Translator
Warranty	20 years – Based on six transmissions per day. Refer to Sensus G-500 for warranty.



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SmartPoint™ Model 520M - Pit Set Module Installation Instructions

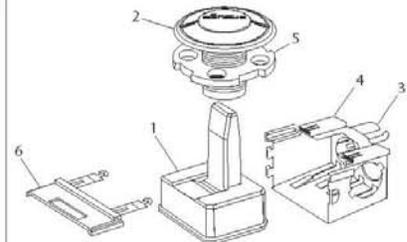
GENERAL INFORMATION

The Model 520M SmartPoint is designed for pit set environments and is available for both single and dual port operation. The Model 520M must be installed through the pit lid to maximize performance in fixed base applications. The module can be installed with either a TouchCoupler connection or wire connection. Please refer to the FieldLogic documentation for programming instructions.

TYPE	COMPATIBILITY
Touch Coupler and Wired Version	Sensus ECRll and ICE water registers
Wired Version Only	Badger ADE, Elster Encoder (Sensus protocol) Neptune ARB VI (ProRead)

NOTE: This installation sheet is only for installation of the Sensus Model 520M. For instructions on installing other AMI devices, please refer to the individual installation instruction for those devices.

Definitions

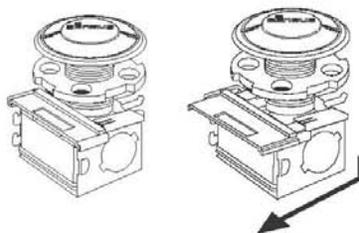


- 1) HDPE Radio
- 2) Pit Lid Housing
- 3) TouchCoupler TR/PL Adaptor (TouchCoupler enabled units only)
- 4) Boot
- 5) Pit Locking Nut
- 6) Boot Locking Clip

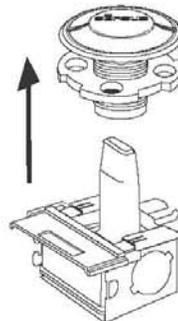
TOUCHCOUPLER INSTALLATION

STEP 1. DISASSEMBLE THE 520M UNIT

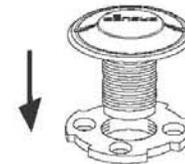
- Disassemble the Model 520 SmartPoint module to begin the installation procedure. Unlock the radio device by pressing down on the two tabs on the Boot Locking Clip facing the port side connections. Once the tabs are depressed, slide the Boot Locking Clip out by pushing down and out until the Pit Lid Housing is released from the Boot.



- Slide the Pit Lid Housing off of the Boot and Boot Locking Clip assembly.



- Remove the Pit Locking Nut from the underneath of the Pit Lid Housing by turning the nut counter clockwise.



COMPLIANCE STATEMENTS

Warning!

The antenna used for this transmitter must not be co-located in conjunction with any other antenna or transmitter.

Attention!

For Class B - Unintentional Radiators:
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) this device may not cause harmful interference and
(2) this device must accept any interference received, including interference that may cause undesired operation.

Attention!

Any modifications made to this device that are not approved by Sensus may void the authority granted to the user by the FCC to operate equipment.

Attention!

ICES-003 Class B Notice—Avis NMB-003, Class B
This Class B digital apparatus complies with Canadian ICES-003.

Warning!

DO NOT INCINERATE or subject battery cells to temperatures in excess of 212°F. Such treatment can cause cell rupture.

Warning!

There is danger of explosion if batteries are mis-handled or incorrectly replaced. On systems with replaceable batteries, replace only with the same manufacturer and type or equivalent type recommended per the instructions provided in the product service manual.
Do not disassemble batteries or attempt to recharge them outside the system. Do not dispose of batteries in fire.
Dispose of batteries properly in accordance with the manufacturer's instructions and local regulations.

Warning!

If you are not sure of the rated power of your radio, contact your Sensus representative or dealer and supply the product model number found on the product label. If you cannot determine the rated power out, then assure 20cm separation from the body to the device.

Warning!

TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER TO QUALIFIED SERVICE PERSONNEL.

Attention!

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

Radiation Hazard!

In order to satisfy the FCC RF exposure limit of 0.60 mW/cm² for transmitting devices, a separation distance of 20cm (7.8 inches) or more should be maintained while operating the Sensus WFL2. To ensure compliance, operations at closer than this distance are not recommended. This minimum safe distance is required between personnel and this antenna of this device.

Attention!

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.
Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Attention!

This radio transmitter the Sensus WFL2 has been approved by Industry Canada to operate with the antenna types listed below with the maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Le présent émetteur radio (Sensus WFL2) a été approuvé par Industrie Canada pour fonctionner avec les types d'antenne énumérés ci-dessous et ayant un gain admissible maximal et l'impédance requise pour chaque type d'antenne. Les types d'antenne non inclus dans cette liste, ou dont le gain est supérieur au gain maximal indiqué, sont strictement interdits pour l'exploitation de l'émetteur.

- Omni -2dBi

Attention!

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication. Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante.

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