

# NORWICH PUBLIC UTILITIES

16 South Golden Street  
Norwich, Connecticut



**Specifications For:**

## **BEAN HILL SUBSTATION #1000 LINE RELAY UPGRADE**

**Bid No. 7500**

Opens  
August 20, 2015

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**BID NO. 7500**

ADVERTISEMENT FOR BIDS  
NORWICH PUBLIC UTILITIES (NPU)  
IS SOLICITING BIDS FOR

**BEAN HILL SUBSTATION #1000 LINE RELAY UPGRADE**

Sealed bids for the BEAN HILL SUBSTATION #1000 LINE RELAY UPGRADE for NORWICH PUBLIC UTILITIES will be received at the Office of the Purchasing Agent at City Hall, 100 Broadway, Norwich, Connecticut 06360 until **2:00 PM on August 20, 2015**, prevailing time, at which time they will be publicly opened and read aloud.

The Contract consists of designing, supplying all equipment and providing installation services to upgrade Norwich Public Utilities' 115 KV Transmission Protection Relays located in the Bean Hill Substation.

**Bid surety in the form of cash, a certified check or bid bond in the amount of five percent (5%) of this bid is required and must accompany the bid response.**

On or after July 22, 2015, Specifications may be viewed and downloaded from the following websites:

- City of Norwich [www.norwichct.org](http://www.norwichct.org)
- State of Connecticut [www.das.state.ct.us](http://www.das.state.ct.us)
- Public Purchase [www.publicpurchase.com](http://www.publicpurchase.com)

There will be a **mandatory** pre-bid meeting for all general contractors on Friday, July 31, 2015 at 10:00 am. All interested parties are to meet at the Norwich Public Utilities Administrative Offices, located at 16 South Golden Street, Norwich, CT 06360; the tour to the Bean Hill Substation will proceed from there. Late arrivals (more than fifteen (15) minutes after the scheduled start time) will not be given credit for attendance at the meeting. The City will not accept bids from any firms that did not attend the pre-bid meeting.

Questions regarding this bid should be directed to William R. Hathaway by fax to (860) 823-3812 or via email to [whathaway@cityofnorwich.org](mailto:whathaway@cityofnorwich.org). Questions must be received no later than 12:00 pm on August 7, 2015.

Norwich Public Utilities reserves the right to reject any or all bids, in whole or in part, to award any item, group of items, or total bid, and to waive any informality in the bids received if it deems it to be in the best interest of the Norwich Public Utilities to do so.

No Bidder may withdraw their bid within 90 days after the actual date of bid opening thereof. Should there be reason why the contract cannot be awarded within the specific period, this time may be extended by mutual agreement between the City and the designated, qualified low Bidder.

All final awards of the bid subject to comply with Ordinance No. 1235 adopted December 3, 1991.

All bids must be submitted in a sealed envelope bearing the bidder's name and bid number.

Responding bidders must ensure that employees and applicants for employment are not discriminated against because of their race, color, religion, age, handicap, familial status, sex, or national origin.

---

William Hathaway  
Purchasing Agent

NOTE: BIDDERS ARE HEREBY ADVISED THAT ONLY BID SURETIES FOR THE THREE LOWEST BIDDERS WILL BE HELD. ALL OTHERS WILL BE RELEASED WITHIN SEVEN DAYS.

REQUIRED DOCUMENTS – BIDDER’S CHECKLIST  
BEAN HILL SUBSTATION #1000 LINE RELAY UPGRADE

- |   |  |       |
|---|--|-------|
| 1 | Proposal                               | _____ |
| 2 | Bid/Unit Pricing                       | _____ |
| 3 | Addendum Acknowledgement (as required) | _____ |
| 4 | Bidder’s Bond                          | _____ |
| 5 | Statement of Bidder’s Qualifications   | _____ |
| 6 | Non-Collusion Affidavit                | _____ |
| 7 | Non-Discrimination in Employment       | _____ |
| 8 | Proposed Subcontractors List           | _____ |
| 9 | Proposed Supplier List                 | _____ |

**INFORMATION FOR BIDDERS**  
**BEAN HILL SUBSTATION #1000 LINE RELAY UPGRADE**

**1. RECEIPT AND OPENING OF BIDS**

Sealed bids for the “*Bean Hill Substation #1000 Line Relay Upgrade*” will be received at the office of the Purchasing Agent, City Hall, Norwich, Connecticut, at the time specified in the advertisement for bids, then opened and read aloud. The envelopes containing the bids must be sealed and designated as “*Bid#7500 Bean Hill Substation #1000 Line Relay Upgrade*”.

The owner may consider informal any bid not prepared and submitted in accordance with the provisions hereof and may waive any informalities in or reject any and all bids. Conditional or qualified bids will not be accepted. Any bid received after the time and date specified shall not be considered. Should there be reasons why the contract cannot be awarded within the specified period the time may be extended by mutual agreement between the owner and the bidder.

**2. PREPARATION OF BID**

Each Bid must be submitted on the prescribed form. All blank spaces for bid prices must be filled in, in ink or typewritten. All bids must be prepared in conformity with and shall be based on and submitted subject to all requirements of the Specifications and Drawings together with all Addenda thereto. To have a valid bid, all items must be quoted.

Bids which are incomplete, not properly endorsed or signed, or otherwise contrary to the instructions in this specification, shall be rejected. Conditional bids will not be accepted.

All bidders shall complete and return the “Statement of Bidder’s Qualifications” which is attached to the proposal.

**3. PRICES**

Bidders shall state the proposed price for the items by which the bids will be compared. This price is to cover all expenses in full conformity with the Specifications. No bid will be accepted which does not contain a unit or lump sum price for every item contained in the bid form.

**4. INFORMATION SUPPLIED TO BIDDERS**

The owner shall provide to bidders prior to bidding, all information that is pertinent to, and delineates and describes, the items to be purchased. Information obtained from any officer, agent, or employee of the owner or any other person shall not affect the risks or obligations assumed by the Contractor or relieve him from fulfilling any of the conditions of the Contract.

## 5. ADDENDA AND INTERPRETATIONS

No interpretation of the meaning of the Specifications, or other pre-bid documents will be made to any bidder orally. Every request for such interpretation shall be in writing, addressed to William R. Hathaway via email to [whathaway@cityofnorwich.org](mailto:whathaway@cityofnorwich.org) or by fax to (860) 823-3812. Questions must be received no later than 12:00 pm on August 7, 2015. Any and all interpretations and any supplemental instructions will be in the form of written Addenda to the Specifications, which, if issued, will be made available to all prospective bidders, not later than three (3) days prior to the date fixed for the opening of bids and found on one the following websites:

1. [www.norwichct.org](http://www.norwichct.org)
2. [www.das.state.ct.us](http://www.das.state.ct.us)
3. [www.publicpurchase.com](http://www.publicpurchase.com)

Addenda so issued shall become a part of the Contract Documents.

## 6. BID MODIFICATION

Any bidder may modify his bid by electronic communication at any time prior to the scheduled closing time for receipt of bids, provided such communication is received by the Owner prior to the closing time. The electronic communication should not reveal the bid price but should provide the addition or subtraction or other modifications so that the final prices or items will not be known by the Owner until the sealed bid is opened.

## 7. CORRECTIONS

Erasures or other changes in the bid must be explained or noted over the signature of the bidder.

## 8. WITHDRAWAL OF BIDS

Bids may be withdrawn personally or on written or electronic request dispatched by the bidder in time for delivery in the normal course of business prior to the time fixed for the opening. Negligence on the part of the bidder in preparing his bid confers no right of withdrawal or modification of his bid after such bid has been opened.

## 9. OBLIGATIONS OF THE BIDDER

Bidders must satisfy themselves by review of the Drawings and/or Specifications including Addenda and by additional means as they may prefer, as to the actual requirements of the proposed purchase. The submission of any bid will be accepted by the Owner as satisfactory proof that the bidder has satisfied himself in these respects. The bidder shall not at any time after the submission of a bid dispute or complain of such statements or information, nor, assert that there was any misunderstanding in regard to the requirements noted in the specifications.

## 10. BID SECURITY

### **Norwich Public Utilities**

Bean Hill Substation #1000 Line Relay Upgrade

Each bid must be accompanied by a certified check of the bidder, or a bid bond prepared on the form of bid bond attached hereto, duly executed by the bidder as principal and having as surety thereon a surety company approved by the Owner, in the amount of five percent (5%) of the bid. Such checks or bid bonds will be returned to all but the three lowest bidders within five days after the opening of bids, and the remaining checks or bid bonds will be returned promptly after the Owner and the accepted bidder have executed the contract; or if no award has been made within 90 days after the date of the opening of the bids, upon demand of the bidder at any time thereafter, so long as he has not been notified of the acceptance of his bid.

#### 11. POWER OF ATTORNEY

Attorneys-in-fact who sign bid bonds or contract bonds must file with each bond a certified and effectively dated copy of their power of attorney.

#### 12. METHOD OF AWARD-LOWEST QUALIFIED BIDDER

The term "lowest responsible bidder" shall mean the bidder whose bid is the lowest of those bidders possessing the ability and experience necessary for the faithful performance of the work. The Owner reserves the right to award the work based upon information contained in the Statement of Bidders Qualifications submitted with their bid.

If, at the time this Contract is to be awarded, the lowest bid submitted by a qualified bidder does not exceed the amount of funds then estimated by the owner as available to finance the Contract; the Contract will be awarded to that bidder. If the bid exceeds such amount, the owner expressly reserves the right to increase or decrease any class, item, or part of the work. This reservation includes the omission of any such item, items, class, or part of the work as may be decided by the owner at prices submitted by the bidder to bring the Contract within available funds; or the owner may reject all bids.

#### 13. TAXES

The City of Norwich is considered exempt from the payment of Federal excise taxes, Connecticut Sales Taxes, etc. and such taxes shall be identified separately or excluded from the bid prices.

#### 14. UNCERTAINTY OF QUANTITIES

The Owner makes **no commitment as to the quantity of equipment(s)** to be purchased under this contract. The Owner does call particular attention to the uncertainty of the quantities which cannot be predicted in advance.

Only such quantities of the respective items actually delivered and accepted will be paid for. An increase or decrease in the quantity for any item shall not be regarded as grounds for an increase or decrease in the bid prices.

### **Norwich Public Utilities**

Bean Hill Substation #1000 Line Relay Upgrade

PROPOSAL  
NORWICH PUBLIC UTILITIES  
NORWICH, CONNECTICUT

**BEAN HILL SUBSTATION #1000 LINE RELAY UPGRADE**

Date: \_\_\_\_\_

City of Norwich  
Department of Public Utilities  
City Hall  
Norwich, Connecticut 06360

The undersigned \_\_\_\_\_ doing  
business in \_\_\_\_\_  
County of \_\_\_\_\_ State of \_\_\_\_\_, has examined  
the site where the proposed construction is to take place and has carefully read the Information to  
Bidders, General Conditions, Special Conditions, Technical Specifications, Addenda, and  
examined the drawings therein referred to and he proposes and agrees that he will contract with  
the City of Norwich, CT in the form of Contract deposited in the Office of the Purchasing Agent,  
City Hall, Norwich, Connecticut to provide all necessary machinery, tools, apparatus, equipment,  
and other means of construction and do all the work and furnish all the materials specified in the  
contract, called for in the specifications or shown on the drawings in the manner and time  
prescribed and according to the requirements of the engineer, as herein set forth.

**The Contractors has read and familiarized themselves with the Norwich Public Utilities  
Safety Guidelines included in these Specifications.** \_\_\_\_\_

**Contractor's Initials**

**Date**

BID PROPOSAL  
NORWICH PUBLIC UTILITIES  
NORWICH, CONNECTICUT

**BEAN HILL SUBSTATION #1000 LINE RELAY UPGRADE**

TO: City of Norwich  
Department of Public Utilities  
City Hall  
Norwich, Connecticut 06360

FROM: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

The undersigned, having familiarized (himself, itself, themselves) with the existing conditions on the Project Site affecting the cost of the work, and with the Contract Document for the ***Bean Hill Substation #1000 Line Relay Upgrade*** and hereby proposes to furnish all supervision, technical personnel, labor, materials, equipment, tools, appurtenances, services, materials not supplied by the Owner, and anything else necessary, including utility and transportation to perform and complete this Contract, all in accordance with the Contract Documents for the unit prices quoted.

**STATEMENT OF WORK  
#1000 115KV TRANSMISSION LINE  
RELAY UPGRADE**

**1.0 SCOPE**

Norwich Public Utilities (NPU) is requesting material, design and installation services to upgrade its 115 KV Transmission Protection Relays located in the Bean Hill Substation.

**2.0 SERVICES**

- 2.1 Provide turnkey engineering services to replace existing transmission feeder protection scheme for the 115KV line servicing NPU's Bean Hill Substation.
- 2.2 Furnish and install 1 SEL-311L Transmission Primary Relay or NPU approved equal in NPU's Bean Hill Substation on the #1000 115KV transmission line
- 2.3 Furnish and install 1 GE-D60 Transmission Backup Relay or NPU approved equal
- 2.4 Furnish and install 1 SEL-2407 Satellite Clock or NPU approved equivalent.
- 2.5 Furnish and install any wire and/or cable harnesses required to support installation of new relays.
- 2.6 Furnish and install new cabinet cover plate to fit new relays. Cabinet cover will measure approximately 24" x 48".
- 2.7 Remove all existing mechanical relays located in the Bean Hill Substation associated with the #1000 transmission line
- 2.8 All design and installation work shall be fully compliant with NERC CIP V5 standards
- 2.9 Program up to 100 DNP points, to include inputs and outputs, based on NPU's SCADA system. These DNP points will be provided by NPU.
- 2.10 Provide all information required by Transmission Operator, CONVEX, to coordinate system outage including, but not limited to:
  - a. Length of outage required for install
  - b. Emergency restoration time for a transmission system emergencyNPU will coordinate system outages as required.
- 2.11 Coordinate as required with Transmission Owner Eversource Energy and NPU to schedule and complete end to end testing.
- 2.12 Conduct engineering studies as required to ensure the effective operation of new breakers and relays. This includes, but is not limited to, a coordination study with Dudley St, NU Tunnel, and NU Montville Substations
- 2.13 Submit design drawings, setting list, and bill of materials to NPU for approval

- 2.14 Update existing station drawings to reflect work performed. Electronic copies of As-Built drawings in AutoCad format shall be provided to NPU at the completion of work.
- 2.15 Complete all testing associated with new relay upgrade in accordance with manufacturer's standards and specifications to ensure the system is fully operational.
- 2.16 Provide operation and maintenance training on new equipment for NPU field personnel.
- 2.17 Provide technical training to NPU engineering personnel.
- 2.18 Provide Final Relay Setting file to NPU in Accelerator Quickset format.
- 2.19 Provide project schedule to NPU.

**ALTERNATE STATEMENT OF WORK  
BEAN HILL SUBSTATION  
POWERLINE CARRIER EQUIPMENT UPGRADE**

**1.0 SCOPE**

Norwich Public Utilities (NPU) is requesting material, design and installation services to upgrade its 115 KV Transmission Communication Transmitter and Receiver Unit located in the Bean Hill Substation.

**2.0 SERVICES**

- 2.1 Provide turnkey engineering services to replace existing transmission feeder protection scheme for the 115KV line servicing NPU's Bean Hill Substation.
- 2.2 Furnish and install 1 new 115 KV Transmission Communication Transmitter and Receiver Unit at NPU's Bean Hill Substation for the #1000 115 kV transmission line that is compatible with the existing Transmission Owner's Power Line Carrier Scheme.
- 2.3 Furnish and install any wire and/or cable harnesses required to support installation of new communication equipment.
- 2.4 Remove and dispose of all existing powerline carrier communication equipment located at the Bean Hill Substation associated with the #1000 transmission line protection scheme.
- 2.5 Submit design drawings, setting list, and bill of materials to NPU for approval
- 2.6 Update existing station drawings to reflect work performed. Electronic copies of As-Built drawings in AutoCad format shall be provided to NPU at the completion of work.
- 2.7 Coordinate as required with NPU and Transmission Owner, Eversource Energy, to schedule work. System outages will be coordinated by NPU.
- 2.8 Conduct engineering studies as required to ensure the effective operation of new relays.
- 2.9 Complete all testing associated with new relay upgrade in accordance manufacturer's standards and specifications to ensure the system is fully operational.
- 2.10 Provide operation and maintenance training on new equipment for NPU field personnel.
- 2.11 Provide technical training to NPU engineering personnel..

**UNIT PRICING**

**Norwich Public Utilities (NPU) is requesting material, design and installation services to upgrade its 115 KV Transmission Protection Relays located in the Bean Hill Substation**

**Perform all services noted in above Scope of Service for one circuit.**

<u>Description</u>	<u>Total Cost</u>
Materials	\$ _____
Labor	\$ _____
Total	\$ _____

**ADD ALTERNATE**

**Norwich Public Utilities (NPU) is requesting material, design and installation services to upgrade its 115 KV Transmission Communication Transmitter and Receiver Unit located in the Bean Hill Substation.**

<u>Description</u>	<u>Total Cost</u>
Materials	\$ _____
Labor	\$ _____
Total	\$ _____

**This contract is to be awarded to that responsible Bidder whose total bid is the lowest number of dollars for the above items.**

If the Contractor should choose to employ manufacturers or suppliers other than those listed on the drawings and specifications, he shall submit a list of said suppliers as part of this proposal. If no list is included in the proposal, it shall be concluded by the City that the Contractor will use only those suppliers listed on the drawings. An "or equal" supplier shall be included on the submitted list.

Wherever in the plans and specifications, an item of equipment or material is designated by reference to a particular brand, manufacturer or trade name, it is understood that an equal product may be substituted by the bidder or Contractor, under the conditions as stated above.

The undersigned agrees, if awarded the Contract, to execute and complete the work within the time specified in the "Information to Bidders".

The undersigned has checked carefully all the above figures and understands that the OWNER will not be responsible for any errors or omissions on the part of the undersigned in making up this bid.

The Bidder acknowledges the receipt of the following Addenda;

Addendum No. \_\_\_\_\_, dated \_\_\_\_\_

Addendum No. \_\_\_\_\_, dated \_\_\_\_\_

Addendum No. \_\_\_\_\_, dated \_\_\_\_\_

Enclosed is the Bidder's Bond, Certified Check or Cashier's Check No. \_\_\_\_\_ in the amount of five (5%) of the Bid.

Bidder understands that the Owner reserves the right to reject any or all bids and to waive any informality in the bidding.

The bidder agrees that this bid shall be good and may not be withdrawn for a period of 60 calendar days after the scheduled closing time for receiving bids.

Respectfully submitted:

By \_\_\_\_\_  
(Title)

\_\_\_\_\_  
(Business Address)

\_\_\_\_\_  
(Telephone Number)

\_\_\_\_\_  
(Email / Fax Number)

(SEAL - if bid is by a corporation)

**BID BOND**

**KNOW ALL MEN BY THESE PRESENTS:** That we, the undersigned, \_\_\_\_\_ of \_\_\_\_\_ (hereinafter called the 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 the Surety), are held and firmly bound unto the City of Norwich 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 \_\_\_\_\_ 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 \_\_\_\_\_ calendar days in addition to the original \_\_\_\_\_ 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**

**Principal**

\_\_\_\_\_  
Print Surety Name

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Agent's Signature and Date.

\_\_\_\_\_  
Signature of Owner Representative and Date

**Enclose a valid Power of Attorney**

**Norwich Public Utilities**

Bean Hill Substation #1000 Line Relay Upgrade

### STATEMENT OF BIDDER'S QUALIFICATIONS

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

1. Name of Bidder:
2. Permanent main office address:
3. When organized:
4. If a corporation, where incorporated:
5. How many years have you been engaged in the contracting business under your present firm or trade name?
6. Contracts on hand: (Schedule these, showing amount of each contract and the appropriate dates of completion)
7. General character of work performed by your company:
8. Have you ever failed to complete any work awarded to you? If so, where and why?
9. Have you ever defaulted on a contract? If so, where and why?
10. List projects similar to this that your organization completed within the last 5 years? The contractor shall attach a summary of such work that identifies:
  - Name of Owner
  - Date of Work
  - Contract Amount
  - Brief Description of Work
11. List of major equipment available for this contract:







PROPOSED SUBCONTRACTORS

THE BIDDER SHALL STATE THE NAMES OF ALL THE SUBCONTRACTORS THAT HE PROPOSES TO USE. ATTACH ADDITIONAL SHEETS IF NEEDED.

If none, write "None" \_\_\_\_\_

.....  
\*Description of Work \_\_\_\_\_

Proposed Subcontractor, Name \_\_\_\_\_

Address \_\_\_\_\_

.....  
\*Description of Work \_\_\_\_\_

Proposed Subcontractor, Name \_\_\_\_\_

Address \_\_\_\_\_

.....  
\*Description of Work \_\_\_\_\_

Proposed Subcontractor, Name \_\_\_\_\_

Address \_\_\_\_\_

.....  
\*Insert description of work and subcontractors' names as may be required.

This is to certify that all names of the above-mentioned subcontractors are submitted with full knowledge and consent of the respective parties.

The Bidder warrants that none of the proposed subcontractors have any conflict of interest as respects this contract.

Bidder \_\_\_\_\_  
(Fill in Name)

By \_\_\_\_\_  
(Signature and Title)

PROPOSED SUPPLIERS

THE BIDDER SHALL STATE THE NAMES OF PROPOSED MATERIAL SUPPLIERS FOR THE PROJECT. ATTACH ADDITIONAL SHEETS IF NEEDED.

If none, write "None" \_\_\_\_\_  
.....

\*Description of Material \_\_\_\_\_

Proposed Supplier, Name \_\_\_\_\_

Address \_\_\_\_\_  
.....

\*Description of Material \_\_\_\_\_

Proposed Supplier, Name \_\_\_\_\_

Address \_\_\_\_\_  
.....

\*Description of Material \_\_\_\_\_

Proposed Supplier, Name \_\_\_\_\_

Address \_\_\_\_\_  
.....

\*Insert description of work and suppliers names as may be required.

This is to certify that all names of the above-mentioned suppliers are submitted with full knowledge and consent of the respective parties.

The Bidder warrants that none of the proposed suppliers have any conflict of interest as respects this contract.

Bidder \_\_\_\_\_  
(Name)

By \_\_\_\_\_  
(Signature and Title)

**BID NO. 7500**  
**BEAN HILL SUBSTATION #1000 LINE RELAY UPGRADE**

**AGREEMENT**

THIS AGREEMENT made and entered into on the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.  
BY AND BETWEEN  
CONTRACTOR, \_\_\_\_\_ Party of the First Part, and NORWICH  
PUBLIC UTILITIES Party of the Second Part, hereinafter referred to as NPU.

\*\* WITNESSETH \*\*

The CONTRACTOR, in consideration of the sum to be paid him by the NPU and of the covenants and agreements herein contained, hereby agrees at its own proper cost and expense to do all the work and furnish all materials, tools, labor, and all appliances, machinery, and appurtenances for the project to the extent of the Proposal made by the CONTRACTOR, dated the \_\_\_\_\_, all in full compliance with the Contract Documents referred to herein.

The Contract Documents shall include but not be limited to the Bidding Requirements, signed copy of the Proposal, Contract Forms (including any Amendments), Request for Proposal, the General and Special Conditions, Supplemental Conditions, if any, Bonds, Technical Specifications, Maps, Plans and Drawings, and any other printed or written explanatory matter thereof, including any and all addenda, as prepared by NPU, all of which are made a part of this Contract as if fully and completely set forth herein. All of the aforesaid documents are collectively referred to as "Contract Documents".

The CONTRACTOR agrees to commence the work to be performed under this agreement on a date to be specified in a written notice by the NPU, and shall be fully completed within by the date specified in the NPU's Notice to Proceed.

In the event the CONTRACTOR fails to complete the work within the time limit or extended time limit agreed upon, as more particularly set forth in the Contract Documents, liquidated damages shall be paid to NPU in the amount of \$500.00 per calendar day.

Upon submission by the CONTRACTOR of evidence satisfactory to NPU that all payrolls, materials, bills and other costs incurred by the CONTRACTOR in connection with the completion of the work have been paid in full, a final settlement of the account of the Contract shall be made within sixty (60) days of the completion of the CONTRACTOR of all work covered by the Contract and the acceptance of such work by the NPU, except in no event shall final payment be made until 30 days has lapsed since the final Notice of Publication of Completion has been made.

It is mutually agreed between the parties that at any time after the execution of this Agreement and the Performance and Payment Bonds attached, NPU shall deem the sureties upon such bonds to be unsatisfactory; or if, for any reasons such bond ceases to be adequate to cover the performance of the work, the CONTRACTOR shall, at its expense, within five (5) days after the

receipt of notice from NPU to do so, furnish additional bond or bonds, in such form and amount and with such surety or sureties as will be satisfactory to NPU. In such event, no further payment to the CONTRACTOR shall be deemed to be due under the Contract until such new or additional security for the faithful performance of the work shall be furnished in manner and form satisfactory to NPU.

The said CONTRACTOR further agrees to indemnify, hold harmless, and defend NPU, members of the NPU Utility Board, or their representatives, employees, agents or servants from and against any and all liability for loss, damages, attorney fees, and expenses which NPU, members of the NPU Utility Board, or their representatives, employees, agents or servants, may suffer or be held liable by reason of injury or damage to any person or property arising out of or in any manner connected with the operations to be performed under this Contract whether or not due in whole or in part to any act, omission, or negligence of NPU, the members of the NPU Utility Board, or to any of their representatives, employees, agents or servants.

The CONTRACTOR must file with NPU evidence of adequate insurance for damages to persons and property which may arise out of performance of this Contract, and which is set forth in the Contract Documents and attachments hereto.

Work performed by an outside contractor shall be under the supervision of NPU Personnel. Questions regarding the Scope of Work or modifications to the Scope of Work are to be submitted in writing to NPU. Questions are to be resolved in writing by the authorized Contractor representative and an NPU designee.

NPU reserves the right to consider each request for changes to the Scope of Work and determine the impact on the overall project. A written acknowledgement of the acceptance or non-acceptance of the change will be made within a reasonable time frame, not to exceed 24 hours of receipt of the request.

This Contract is to be governed by the laws of the State of Connecticut.

NPU and CONTRACTOR each is hereby bound and the partners, successors, executors, administrators and legal representatives of NPU and CONTRACTOR (and to the extent permitted below the assigns of NPU and CONTRACTOR) are hereby bound to the other party to this Contract and to the partners, successors, executors, administrators and legal representatives (and said assigns) of such other party, in respect of all covenants, agreements, and obligations of this Contract.

Neither NPU nor CONTRACTOR may assign, sublet, or transfer any rights under or interest (including, but without limitation, moneys that are due or may become due) in this Contract without the written consent of the other, except to the extent that any assignment, subletting, or transfer is mandated or restricted by law. Unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under this Contract.

IN WITNESS WHEREOF, the parties hereto have executed this Contract on the day and date first written above in three (3) consecutive counterparts, each of which shall, without proof or accounting for the other counterparts, be deemed as the original Contract.

Attest: NORWICH PUBLIC UTILITIES

By: John Bilda  
Title: General Manager

Attest: \_\_\_\_\_

Attest: CONTRACTOR

By: \_\_\_\_\_  
Title: \_\_\_\_\_

Attest: \_\_\_\_\_

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS: That we \_\_\_\_\_  
(Name of Contractor)

\_\_\_\_\_ a \_\_\_\_\_  
(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)

\_\_\_\_\_  
Principal  
By \_\_\_\_\_ (s)

\_\_\_\_\_  
(Address-Zip Code)

\_\_\_\_\_  
Witness as to Principal

\_\_\_\_\_  
(Address-Zip Code)

\_\_\_\_\_  
Surety

ATTEST:

\_\_\_\_\_  
(Surety) Secretary  
(SEAL)

By \_\_\_\_\_  
Attorney-in-Fact

\_\_\_\_\_  
Witness as to Surety

\_\_\_\_\_  
(Address-Zip Code)

\_\_\_\_\_  
(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 \_\_\_\_\_  
(Name of Contractor)

\_\_\_\_\_ a \_\_\_\_\_  
(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 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.

## **BEAN HILL SUBSTATION #1000 LINE RELAY UPGRADE**

### **1. CONTRACT AND CONTRACT DOCUMENTS**

The drawings, plans, specifications, and addenda enumerated in the Technical Specification, the General Conditions, the Advertisement for Bid, the Information for Bidders, and the Bid Proposal as accepted by the Owner, shall be binding upon the parties to this Agreement as if fully set forth therein. Whenever the term Contract Documents is used it shall mean and include the drawings, specifications and addenda. The Owner shall interpret his own requirements. In case of conflict or inconsistency between the provisions of the signed portions of the Contract Documents and those of the specifications, the provisions of the signed portions shall govern.

### **2. DEFINITIONS**

**Project Manager:** Individual in responsible charge of the work with skill and abilities to interpret plans and specifications, schedules and layout of the work and direct the work force at the job site and with experience as defined in Superintendence by the Contractor.

**Field Technician:** Individual having the skills and abilities equivalent to that of a journeyman for all necessary work to be performed, such as pipe-fitter, mason, welder, truck driver, or equipment operator.

**Owner:** The Owner of the project is the City of Norwich via Norwich Public Utilities.

**Contractor:** The term "Contractor" as hereinafter used shall refer to the General Contractor for this job.

**Owner's Representative:** The term "Owner's Representative" as hereinafter used shall refer to any engineer or inspector whom the Owner may designate to inspect, test or oversee the work herein specified.

**Contract:** Wherever the term "contract" is used in the General Conditions, it shall mean the actual Bid Form, Specifications, Plans, General Conditions, any Special Conditions and formal purchase order issued to successful bidder.

### **3. REPRESENTATIONS OF THE CONTRACTOR**

The Contractor represents and warrants:

- a. That he is financially solvent and that he is experienced and competent to perform the type of work required under this contract and that he is able to furnish the plant, materials, supplies, or equipment that may be necessary to perform the work as specified.
- b. That he is familiar with all Federal, State and municipal laws, ordinances, orders, and regulations which may in any way effect the project work, or the employment of

- persons thereon, including but not limited to any special acts relating to the work or to the project of which it is a part.
- c. That such temporary and permanent work required by the contract documents to be done by him will be satisfactorily constructed and can be used for the purpose for which it was intended and that such construction will not injure any person or damage property.
  - d. That he has carefully examined the drawings, specifications, and addenda, if any, and the site of the work and that from his own investigations, he has satisfied himself as to the nature and location of the work, the character of equipment and other facilities needed for the performance of the work, the general and local conditions, and all other items that may affect the work.
  - e. That he is aware of the hazards involved in the work and the danger to life and property both evident and inherent and that he will conduct the work in a careful and safe manner without injury to persons or property.

#### 4. CONTRACT SECURITY

The Contractor shall furnish a Performance Bond and Payment Bond in amounts equal to at least one hundred percent (100%) of the contract price as security for the faithful performance of the Contract, and for the payment of all persons performing labor on the project under this contract and furnishing materials, equipment and all other incidentals in connection with this contract. The Surety on such a bond shall be a duly authorized surety company satisfactory to the Owner and the cost of the same shall be paid by the Contractor prior to the starting of any work, the bonds must be approved by the Owner and be in the Owner's hands. The bonds must be from a surety company licensed and approved to do business in the State of Connecticut.

#### 5. CONTRACTOR'S OBLIGATIONS

The Contractor shall perform all work in a good workmanlike manner, and in accordance with the plans and specifications and any supplements thereto, and according to any directions or orders given by the Owner unless otherwise stipulated. He shall furnish all supplies, materials, except those supplies and materials furnished by the Owner, facilities, equipment, tools and anything else necessary or proper to perform and complete the work required by this contract. He shall furnish, erect, maintain, and remove any construction plant or temporary work as may be required. He alone shall be responsible for the safety, efficiency, and adequacy of his plant, appliances, and methods and for any damage which may result from their failure or their improper construction maintenance, or operation. The Contractor shall observe, comply with, and be subject to all terms, conditions, requirements, and limitations of the contract and specifications and shall do, carry on, and complete the entire work to the satisfaction of the Owner.

The Contractor shall be solely responsible for all the work and shall provide all precautionary measures necessary for preventing injury to persons or damage to property. All injury or damage of whatever nature resulting from the work or resulting to persons, property, or the work during its progress, from whatever cause, shall be the responsibility of the Contractor.

The Contractor shall hold the Owner and their duly authorized agents, harmless and defend and indemnify them against damages or claims for damages due to injuries to persons or property arising out of the execution of the project work, and for damages to materials furnished for the work, for infringement of inventions, patents, and patent rights used in doing the work, and for any act, omission, or instance of neglect by the Contractor, his agents, employees, or subcontractors.

The Contractor shall bear all losses resulting to him, including but not limited to losses sustained on account of the character, quality, or quantity of any part of the work, or all parts of the work, or because the nature of the conditions in or on the project site are different from what was estimated or indicted, or on account of the weather, elements, or other causes.

#### 6. SUPERINTENDENCE BY THE CONTRACTOR

The Contractor shall give the work the constant attention necessary to facilitate the progress thereof and shall cooperate with the Owner in every possible way.

At the site of the work the Contractor shall, at all times employ a suitably experienced foreman who shall have full authority to act for the Contractor. It is understood that the employment of such representatives shall be acceptable to the Owner and shall be persons as can be continued in that capacity for the duration of the contract.

#### 7. USE OF PREMISES AND REMOVAL OF DEBRIS

Nothing herein contained or shown on any drawings shall be construed as giving the Contractor exclusive occupancy of the work area. The Owner or any other contractors employed by him, the various utility companies, contractors or subcontractors employed by State or Federal agencies, or any other agencies involved in the general project or upon public rights-of-way, may enter upon or cross the area of work or occupy portions of the area as is directed or necessary. When the territory of one contract is the convenient means of access to the other, the Contractor shall arrange his work in such a manner as to permit such access to the other and prevent unnecessary delay to the work as a whole.

The Contractor shall undertake at his own expense:

- a. To take every precaution against injuries to persons or damage to property.
- b. To store his apparatus, materials, equipment, and supplies in such orderly fashion at the site of the work as will not unduly interfere with the progress of his work or any others.

- c. To place upon the work or any part thereof, only such loads as are consistent with the safety of that portion of the work.
- d. To clean frequently all refuse, scrap, and debris caused by his operations, and to dispose of same away from the site, so that the work site is maintained in a neat, workmanlike appearance.
- e. To effect all cutting, fitting, or patching of his work required to make the same conform to the drawings and specifications, and except with the consent of the Owner, not to cut or otherwise alter the work of any other contractor.
- f. Before final payment, to remove all surplus materials falsework, temporary structures, including foundations thereof, plants of any description, and debris of any nature resulting from his operations and to dispose of same away from the site, so that the site is left in a neat, orderly, and workmanlike condition.

#### 8. GENERAL WARRANTY

Neither the final certificate of payment nor any provision in the contract documents nor partial or entire occupancy of the premises by the Owner shall constitute an acceptance of work not done in accordance with the contract documents or relieve the Contractor of liability in respect to any express warranties or responsibility for faulty workmanship or materials.

The Contractor shall remedy any defects in the work and pay for any damage to other work resulting therefrom, which shall appear within a period of one year (1) from the date of final acceptance of the work, unless a longer period is specified by the Owner. The Owner will give final notice of observed defects with reasonable promptness.

#### 9. PROTECTION OF WORK AND PROPERTY - EMERGENCY

- a. The Contractor shall at all times safely guard the Owner's property from injury or loss in connection with this contract. He shall at all times safely guard and protect his own work, and that of adjacent property, from damage. The Contractor shall replace or make good any such damage, loss, or injury at no additional expense to the Owner.
- b. In case of an emergency which threatens loss or injury of property, and/or safety of life the Contractor will be allowed to act, without previous instructions from the Owner, in a diligent manner. He shall notify the Owner immediately thereafter. Any claim for compensation by the Contractor due to such extra work shall be promptly submitted to the Owner for approval.
- c. Where the Contractor has not taken action but has notified the Owner of an emergency threatening injury to persons or damage to the work or to any adjoining property, he shall act as instructed or authorized by the Owner.

## 10. THE OWNER'S AUTHORITY

The Owner shall give all orders and directions contemplated under this contract and specifications relative to the execution of the work. The Owner shall determine the amount, quality, acceptability, and fitness of the work and materials which are to be paid for under this contract and shall decide all questions which may arise in relation to said work and the construction thereof. The Owner's estimates and decisions shall be final and conclusive, except as herein otherwise expressly provided. In case any question shall arise between the parties hereto relative to said contract or specifications, the determination or decision of the Owner shall be a condition precedent to the right of the Contractor to receive any money or payment for work under this contract affected by such questions. The Owner shall decide 'the meaning and intent of any portion of the specifications and of any plans or drawings where the same may be found to be obscure or be in dispute. Any differences or conflicts in regard to their work which may arise between the Contractor and other contractors performing work for the Owner shall be adjusted and determined by the Owner.

## 11. ALL WORK SUBJECT TO CONTROL BY THE OWNER

In the performance of the work, the Contractor shall abide by all orders, directions, and requirements of the Owner, and shall perform all work to the satisfaction of the Owner, and at such times and places, by such methods, and in such manner and sequence as he may require. The Owner shall determine the amounts, quality, acceptability, and fitness of all parts of the work. The Owner shall interpret the drawings, specifications, contract documents, all other documents, and the extra work orders. The Owner shall also decide all other questions in connection with the work. The Contractor shall employ no plant, equipment, materials, methods or men to which the Owner objects and shall remove no plant, materials, or equipment or other facilities from the work site without the Owner's permission. Upon request the Owner will confirm in writing any oral order, direction, requirement, or determination.

Inspectors shall be authorized to inspect all work done and materials furnished. Such inspection may extend to all parts of the work and to the preparation or manufacture of the materials to be used. The presence or absence of an inspector shall not relieve the Contractor from any requirements of the contract. In case of any dispute arising between the Contractor and the inspector as to materials furnished or the manner in which the work is being executed, the inspector shall have the authority to reject material or suspend work until the question has been decided by the Owner. The inspector shall not be authorized to revoke, alter, enlarge, relax, or release any requirement of these specifications; neither shall the inspector be authorized to approve or accept any portion of the work or to issue instructions contrary to the drawings and specifications. The inspector shall in no case act as foreman or perform other duties for the Contractor, or interfere with the management of the work by the latter. Any advice which the inspector may give the Contractor shall in no way be construed as binding the Owner, or the Engineers in any way, nor releasing the Contractor from the fulfillment of the terms of the contract.

## 12. THE OWNER'S CONTROL NOT LIMITED

The enumeration in this contract of particular instances in which the opinion, judgment, discretion, or determination of the Owner shall control or in which work shall be performed to his satisfaction or subject to his approval or inspection, shall not imply that only matters similar to those enumerated shall be so governed and performed, but without exception all the work shall be so governed and performed.

## 13. RIGHT OF THE OWNER TO TERMINATE THE CONTRACT

In the event that any of the provisions of this contract are violated by the Contractor, or any of his subcontractors, the Owner may serve written notice upon the Contractor and the Surety of its intention to terminate the contract, such notice to contain the reasons for such intention to terminate the contract. If within ten days (10) such violation or delay shall not cease and satisfactory arrangement of correction made, the contract shall, at the expiration of the ten days, cease and immediately serve notice thereof upon the Surety and the Contractor, and the Surety shall have the power to take over and perform the contract, provided, however, that if the Surety does not commence performing thereof within ten days (10) from the date of mailing to such Surety of Notice of termination, the Owner may take over the work and prosecute the same to completion by contract or force account at the expense of the Contractor, and the Contractor and his Surety shall be liable to the Owner for any excess cost occasioned the Owner thereby.

## 14. INTERPRETATION OF DRAWINGS AND SPECIFICATIONS

Except for the Contractor's executed set, any/all drawings and/or specifications are the properties of the Owner. The Owner will furnish the Contractor drawings and/or specifications as needed and if applicable. Anything on the drawings and not mentioned in the specifications, or anything in the specifications that is not shown on the drawings shall have the same force and effect as if mentioned in both. In case of conflict or inconsistency between the drawings and the specifications, the specifications shall take precedence.

## 15. REPORTS, RECORDS AND DATA

The Contractor and each of his subcontractors, shall submit to the Owner such schedules of quantities, and costs, progress schedules, payrolls, reports, estimates, records, or other data as the Owner may request concerning the work performed or to be performed under this contract.

## 16. RIGHTS-OF-WAY AND SUSPENSION OF WORK

Land and rights-of-way for the purpose of this contract shall be furnished by the Owner to the extent shown on the drawings; the Owner will use due diligence in acquiring said lands and rights-of-way as speedily as possible.

If however, lands or rights-of-way cannot be obtained before work on the project begins, the Contractor shall begin his work upon such land or rights-of-way as have been previously acquired by the Owner, and no claims for damages whatsoever will be allowed by reason of the

delay in obtaining the remaining land and rights-of-way. Should the Owner be prevented or enjoined from proceeding with the work, or from authorizing its prosecution, either before or after the commencement by reason of litigation, or by reason of its inability to procure the lands or rights-of-way for the said work, the Contractor shall not be entitled to make or assert a claim for damages by reason of the said delay, or to withdraw from the contract except by consent of the Owner. Time for completion of work will be extended to such time as the Owner determines will compensate for the time lost by such delay, such determination to be set forth in writing.

#### 17. SUBCONTRACTORS

If subcontractors are employed in the hourly contract, they shall be paid for at the established unit prices in Proposal without further markups.

The Contractors may utilize the services of specialty subcontractors on those parts of the work which, under normal contracting practices, are performed by specialty subcontractors.

The Contractor shall not award work to any subcontractor other than those listed in his bid, without the prior written approval of the Owner, which approval will not be given until the Contractor submits a written statement concerning the proposed award to the subcontractor, which statement shall contain such information as the Owner may require.

The Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the work, to bind the subcontractors to the contract documents insofar as applicable to the subcontract work and to give the Contractor under any provisions of the contract documents.

Nothing contained in this contract shall create any contractual relationship between the Owner and any subcontractor.

#### 18. ASSIGNMENTS

The Contractor shall not assign the whole or any part of this contract or any monies due or to become due hereunder without the written consent of the Owner. In case the Contractor assigns all or part of any monies due or to become due under this contract, the instrument of assignment shall contain a clause substantially to the effect that it is agreed that the right of the assignee in and to any monies due or to become due to the Contractor shall be subject to prior claims of all persons, firms, or corporations for services rendered or materials supplied for the performance of the work called for in this contract.

#### 19. MUTUAL RESPONSIBILITY OF CONTRACTORS

If, through acts of neglect on the part of the Contractor, any other contractor or any subcontractor shall suffer loss or damage to the work, the Contractor agrees to settle with such other contractor or subcontractor by agreement or arbitration. If such other contractor or subcontractor shall assert any claim against the Owner on account of any damage alleged to have been sustained, the Owner shall notify the Contractor who shall indemnify and save harmless the Owner against any such claim.

## 20. SEPARATE CONTRACTS

The Owner reserves the right to let other contracts in connection with the contemplated work of the project, or contiguous projects of the Owner. The Contractor, therefore, will afford to any such other contractors reasonable opportunity for the introduction and storage of their materials and the execution of their work, will properly connect and coordinate his work with theirs, and will not commit or permit any act which will interfere with the performance of their work.

## 21. SAFETY AND HEALTH REGULATIONS

If the Contractor, in the Owner's opinion, fails to provide a safe condition at the construction area, then the Owner may take control of the site and provide needed safety measures at the Contractor's expense.

The fact that the Owner may retain control of the premises, or that it or its agents may take action to erect or maintain railings or fences shall not relieve the Contractor's obligations hereunder.

In addition to the above, when and as necessary, or when required by the Owner, the Contractor shall post sign and employ watchmen or flagmen for the direction of traffic at the site and for excluding at all times unauthorized persons from the work site.

The Contractor shall be responsible for excluding at all times from the land within the construction areas, all persons not directly connected with the work.

These contract documents, and the joint and several phases of construction hereby contemplated, are to be governed, at all times, by the applicable provisions of the Federal law(s) including but not limited to the following:

1. Williams-Steiger Occupational Safety and Health Act, 1970, Public Law 92-596;
2. Part 1910 of the Occupational Safety and Health Standards, Chapter XVII of Title 29, Code of Federal Regulations.
3. This project is subject to all of the Safety and Health Regulations (CFR 29, Part 1926 and all subsequent amendments) as promulgated by the U.S. Department of Labor on June 24, 1974.
4. Any and all safety and health standards as noted in the Technical Specification and Norwich Public Utilities' Safety Guidelines (attached).

In the event of any inconsistencies between the above laws and regulations and the provisions of these contract documents, the laws and regulations shall prevail.

## 22. AS BUILT DRAWINGS/DATA

- a. The Contractor shall submit promptly to the Owner data and information required by the Owner and prepared in accordance with a schedule predetermined between the Owner and the Contractor. After examination of such drawings/data by the Owner, and the return thereof, if resubmission is required the Contractor shall make such corrections to the drawings and postings as have been indicated and shall furnish the Owner with corrected copies. Regardless of corrections made in or approval given to such drawings by the Owner, the Contractor will, nevertheless, be responsible for the accuracy of such data and information and for their conformity to specifications, unless he notifies the Owner in writing of any deviations at the time he furnishes the data and information. Contractor shall provide accurate As-Built information for any/all underground construction prior to payment for any work performed.
- b. The Owner reserves the right to direct the contract to deliver 'As Built' information using GIS.

## 23. MATERIALS, SERVICES AND FACILITIES

It is understood that, except as otherwise specifically stated in the contract documents, the Contractor shall provide and pay for all materials, labor, tools, equipment, water, light, power, transportation, superintendence, temporary construction of every nature, and all other services and facilities of every nature whatsoever, necessary to protect, execute, complete, and deliver the work within the specified time. Should the Contractor require electric power and/or water, he shall make necessary arrangements with the Owner for securing it and bear any expense involved, unless expressly provided for otherwise in the specifications.

## 24. CONTRACTOR'S TITLE TO MATERIALS

No material, supplies, or equipment for the work shall be purchased by the Contractor or any subcontractor, subject to any chattel mortgage or under a conditional sale or other agreement by which an interest therein or in any part thereof is retained by the seller or supplier. The Contractor warrants good title to all material, supplies, and equipment installed or incorporated in the work and further warrants upon completion of all work, to deliver the premises, together with all improvements and appurtenances constructed or placed thereon by him, to the Owner free from any claims, liens, or charges, or encumbrances and further agrees that neither he nor any person, firm, or corporation furnishing any material or labor for any work covered by this contract shall have the right to a lien upon the premises or any improvement or appurtenance thereon.

## 25. INSPECTION AND TESTING OF MATERIALS

All materials and equipment used in the completion of the project shall be new and of current manufacture. If required by the Owner, testing will be done in accordance with accepted standards and as directed by the Owner; the laboratory or inspection agency shall be selected and paid for by the Owner.

All materials and workmanship shall be subject to inspection, examination, and testing by the Owner at any and all times during manufacture and/or construction and at any and all places where such manufacture and or construction is carried on, to establish conformance with these specifications and suitability for uses intended. Without additional charge the Contractor shall furnish promptly all reasonable facilities, labor, and materials necessary to make tests so required safe and convenient; he shall also furnish any mill, factory, or other such tests based on the Standards and Tentative Standards of the American Society for Testing Materials as required by the Owner.

#### 26. BRAND NAME OR EQUAL CLAUSE

Recipients must incorporate in their specifications a clear and accurate description of the technical requirements for the material, product or service to be procured. Such description shall not, in competitive procurements, contain features which unduly restrict competition. The description shall include a statement of the qualitative nature of the material, product or service to be procured and, when necessary, shall set forth those minimum essential characteristics and standards to which it must conform if it is to satisfy its intended use. Detailed product specifications shall be avoided if at all possible when it is impractical or uneconomical to make a clear and accurate description of the technical requirements; a "brand name or equal" description approved by the Owner may be used as a means to define the performance or other salient requirements of procurement. The specific features of the named brand which must be met by offeror(s) shall be clearly stated.

#### 27. CONTRACTOR'S BOND AND INSURANCE

Each Bidder must be able to enter into contract, covering the work, within 10 days from the acceptance of his proposal.

The successful bidder must, within 10 days from the date of acceptance of his proposal, furnish and file with the Owner, a corporate performance bond and payment bond or equivalent security, guaranteeing, completion of the job in accordance with the proposal. This bond or equivalent security shall be for 100% of the amount of the contract. The cost of a bond is to be figured as part of the cost of the job. The Surety Company must be one licensed to do business in the State of Connecticut and must be satisfactory to the Owner.

The successful bidder must, within 10 days from the date of acceptance of his proposal, file with the Owner, Workers Compensation, Commercial General Liability, Commercial Auto Liability Certificates of Insurance satisfactory to the Owner, in compliance with the law, and in the following form and amount:

Liability Insurance shall include all major divisions of coverage and be on a comprehensive basis including:

- a. Products and Completed Operations
- b. Personal and Advertising Injury Liability

#### **Norwich Public Utilities**

Bean Hill Substation #1000 Line Relay Upgrade

- c. Contractual Liability wording included in policy language
- d. Broad Form Property Damage including Completed Operations
- e. NPU shall be named as an additional insured with respect to Commercial General Liability, Commercial Automobile Liability, and Commercial Umbrella Liability on a separate endorsement
- f. A waiver of subrogation in favor of NPU shall be contained in the Workers Compensation and all liability policies and must be provided through separate endorsements
- g. All insurance policies, which name NPU as an additional insured, must be endorsed to read as primary and non-contributory coverage regardless of the application of other insurance

1. Workers Compensation

State:	Statutory
Voluntary Compensation (by any exempt entities)	Same as State Workers Compensation

Employer's Liability	\$1,000,000 Each Accident
	\$1,000,000 Disease, Policy Limit
	\$1,000,000 Disease, Each Employee

2. General Liability (Including Premises-Operations; Products and Completed Operations; Broad Form Property Damage):

(a) Bodily Injury: \$1,000,000 Each Occurrence  
\$2,000,000 Aggregate

(b) Property Damage: \$1,000,000 Each Occurrence  
\$2,000,000 Aggregate

(c) Property Damage Liability Insurance shall include coverage for the following hazards:

X (Explosion)     C (Collapse)     U (Underground)

(d) Contractual Liability or included in Commercial General Liability Coverage:

(1) Bodily Injury: \$1,000,000 Each Occurrence  
\$2,000,000 Aggregate

(2) Property Damage: \$1,000,000 Each Occurrence  
\$2,000,000 Aggregate

(e) Personal Injury, (with Employment Exclusion deleted if applicable):  
\$1,000,000 Each Occurrence  
\$1,000,000 Aggregate

- (f) The General Aggregate limit on the General Liability policy shall not be less than \$2,000,000. Policy shall be endorsed to have Per Project Aggregate.
3. Umbrella Excess Liability or \$5,000,000 excess  
\$5,000,000 over Primary Insurance  
\$10,000 Retention
  4. Commercial Automobile Liability (owned, non-owned, hired):
    - (a) Bodily Injury
    - (b) Property Damage: \$1,000,000 combined single limit
  5. Professional Liability Insurance

Professional Liability insurance policy may be required if Contractor or their subcontractor provides services of a professional nature, including design or design/build services to the project. Professional Liability insurance in an amount not less than \$1,000,000 per claim/\$1,000,000 annual aggregate shall apply. Evidence of coverage in the form of a Certificate of Insurance shall be provided prior to the start of work.

The Contractor shall purchase and maintain, until final payment, property insurance upon the Work at the site in an amount equal to the total bid price for the completed construction. This insurance shall include the interests of Owner, Contractor, Subcontractors, Engineer and Engineer's consultants in the Work, shall insure against the perils of fire and extended coverage, shall include "all risk" insurance for physical loss and damage including theft, vandalism, and malicious mischief, collapse and water damage, and shall include damages, losses and expenses arising out of or resulting from any insured loss or incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers, architects, attorneys and other professionals).

If subcontractors are employed, same limits as named above shall apply and the certificate of insurance must be filed with the Owner.

No contract shall be binding upon the Owner until such bond shall have been given and until Commercial General Liability, Commercial General Auto Liability and Workers Compensation policy certificates indicated above have been filed with the Owner and approved as to form and sufficiency by the Owner. The insurance policy certificate provided by the successful bidder and all subcontractors shall carry a statement by the insurance company that the Owner will receive at least ten (10) days' notice prior to cancellation of any portion of the policies or any modifications in the insurance coverage that may affect the Owner's interest. The cost of all insurance coverage shall be included in the price of the contract cost.

The insurance company must be licensed to do business in the State of Connecticut and must be satisfactory to the Owner and rated at least A- / VIII by A.M. Best.

## 28. INDEMNITY OF OWNER BY CONTRACTOR

The Contractor shall indemnify, defend and save harmless the Owner against any and all damages to property or injuries to or death of any person or persons, including property and employees or agents of the Owner, and shall defend, indemnify and save harmless the Owner from any and all claims, demands, suits, actions or proceedings of any kind or nature including workmen's compensation claims, of or by anyone whomsoever, in any way resulting from or arising out of the operations in connection herewith, including operations of subcontractors and acts or omissions of employees or agents of Contractor or his subcontractors. Insurance coverage specified herein and in any special conditions constitutes the minimum requirements and said requirements shall in no way lessen or limit the liability of Contractor under the terms of the contract. The Contractor shall procure and maintain, at his own cost and expense, any additional kinds and amounts of insurance which, in his own judgment, may be necessary for his proper protection in the prosecution of the work. The Contractor agrees to well and truly save and indemnify and keep harmless, the Owner against all liability, judgments, costs and expenses which may in any wise come against the Owner or which may in any way result from carelessness, omission or neglect of the Contractor or his agents, employees or workmen in any way arising or resulting from the operation in connection herewith, including all liability to the Owner resulting from the failure to erect or maintain sufficient railing or fence as required by Section 13a-111, Connecticut General Statutes, and against all liability from defects claimed to be in violation of Section 13a-149, Connecticut General Statutes. Any additional cost of this save harmless insurance coverage shall be included in the price of the contract.

## 29. COMPETENT HELP TO BE EMPLOYED

All work shall be accomplished by able, skilled and competent personnel. If any person employed on the work by the Contractor shall appear to be incompetent or unreliable in any way, he shall be discharged immediately upon the request of the Owner and shall not again be employed on the work.

## 30. SPIRITUOUS LIQUORS AND DRUGS

The Contractor shall neither permit nor suffer the introduction or use of spirituous liquors upon the work embraced in this contract. Illegal substances or drugs of any kind unless ordered by a physician are prohibited. Any employee found using spirituous liquors, illegal substances or drugs of any kind unless ordered by a physician shall be immediately discharged.

## 31. PROHIBITING EMPLOYEE DISCRIMINATION BY CONTRACTOR

The Contractor agrees and warrants that in the performance of this contract he will not discriminate or permit discrimination against any person or group of persons on the grounds of race, color, religion, national origin, sex, or physical disability, including, but not limited to, blindness, unless it is shown by such Contractor that such disability prevents performance of the work involved in any manner prohibited by the laws of the United States or of the State of Connecticut, and further agrees to provide the commission on human rights and opportunities

with such information requested by the commission concerning the employment practices and procedures of the Contractor as relate to the provisions of this section.

### 32. CLAIMS FOR EXTRA WORK

After the contract has been signed, no claims for extra work will be honored, unless authorized in writing by the Owner.

### 33. OWNER'S RIGHT TO DO WORK

If the Contractor should neglect to prosecute the work properly or fail to perform any provision of this contract, the Owner, after five (5) days written notice to the Contractor may, without prejudice to any other remedy he may have, make good such deficiencies and may deduct the cost thereof from the payment, then or thereafter due the Contractor.

### 34. PAYMENTS

Payment for the work will be made when the work outlined in the specifications is completed or in accordance with the terms stated herein. Invoices shall be prepared in prescribed form by the Contractor and shall be submitted to the Owner's Representative in triplicate for checking and certifications.

No payment or compensation of any kind shall be made to the Contractor for damages because of hindrance or delay from any cause in the progress of work whether such hindrance or delays be avoidable or unavoidable.

### 35. PAYMENT TO SUBCONTRACTOR

The Owner assumes no obligation to pay to or to see to the payment of any sum to any subcontractor.

### 36. WORK IN INCLEMENT WEATHER

The Owner or the Owner's Representative will determine when conditions are unfavorable for work and may order the work or any portion of it suspended whenever, in his opinion the conditions are not such as will insure first class work. In general, work shall be prosecuted throughout the year and the Contractor will be expected to keep work going and employment of labor as continuous as possible. However, the Contractor shall, and shall cause his subcontractors to protect carefully his and their work against damage or injury from the weather. If this is not done to the Owner's satisfaction and any damage to the work occurs, the work shall be removed and replaced at the expense of the Contractor.

### 37. ARCHEOLOGICAL FINDS

The Contractor, for the life of this contract, is herewith required to immediately notify the resident engineer or inspector and the following organization in the event that any articles such

as "Charcoal", "bone", "shell", "cultural objects, fire cracked stones or stone flaking material" or any other such related items of historical significance are discovered:

Connecticut Historic Preservation Commission  
59 South Prospect Street  
Hartford, Connecticut 06106 (Tel. 566-3116)

#### 38. TOILET ACCOMMODATIONS

The Contractor shall provide necessary sanitary toilet accommodations for the workmen.

#### 39. LIENS

The final payment for the work will not be made until the Owner is satisfied that no liens have, or can be placed for material or labor on this work. If required by the Owner, waivers of liens may be required. If the Contractor or any subcontractor refuses to furnish a release or waiver of liens, they may furnish a bond satisfactory to the Owner to indemnify the Owner against any liens.

#### 40. GENERAL GUARANTEE

The Contractor shall guarantee his work for a period of one (1) year after the date of the Owner's Representative's final inspection and acceptance as evidenced by final payment. He shall during that period repair promptly, at his own cost and expense all breaks, failures or defects which develop in his work as a result of faulty material or workmanship. The performance bond shall remain in effect through the guarantee period.

#### 41. FINAL INSPECTION AND ACCEPTANCE

Upon receipt of written notice from the Contractor that his work is complete, the Owner's Representative will make a final inspection and will notify the Contractor of all instances in which the work fails to comply with the specifications as well as any defects which he may discover. The Contractor shall thereupon comply with the specifications and he shall remedy any defects at his own cost and expense and to the satisfaction of the Owner's Representative. Upon the completion of such alterations or repairs the Owner's Representative will issue his certificate of final acceptance of work. The issuance of such certificate of final acceptance by the Owner's Representative shall not prevent the Owner from recovering damages at any subsequent time for work found to be actually defective.

#### 42. FINAL PAYMENT

The acceptance by the Contractor of payment for the final invoice, made after the Owner's Representative's certification of final acceptance as provided for in these General Conditions, shall release the Owner and every agent of the Owner from all further claims or liabilities to the Contractor of whatever nature, except for the remaining sum or sums of money withheld under the provisions of the contract.

#### 43. CORRECTION OF FAULTY WORK AFTER FINAL PAYMENT

The approval of the final Request for Payment by the Owner and the making of the final payment by the Owner to the Contractor shall NOT relieve and Contractor of the responsibility for faulty materials or workmanship. The Owner shall promptly give notice to faulty materials or workmanship and the Contractor shall promptly replace any such defects discovered within two years from the date of written acceptance of the work. The Owner shall decide all questions arising under this paragraph.

#### 44. TERMINATION FOR CONVENIENCE

The Owner hereby reserves the right to terminate the performance of this contract for any reason the Owner deems appropriate. The Owner will pay all actual costs to date of termination; however, the Contractor shall not be entitled to any profit on furnished or unearned work.

#### 45. USE OF "HE", "HIS" OR "HIM"

Whenever in these specifications the masculine words, "he", "his", or "him" are used pertaining to the Contractor, Owner, Engineer or any other entity or person it shall be for brevity, and in no way is any sexual discrimination intended.

**TECHNICAL SPECIFICATIONS  
#1000 115KV TRANSMISSION LINE  
RELAY UPGRADE**

**1.0 MATERIAL**

**1.1 Transmission Protection Relay**

- 1.1.1 The relay shall compare local and remote phase and sequence currents to provide operation in less than one cycle. The relay shall operate for unbalanced faults with currents below line charging current. Mismatched CTs shall be accommodated by relay setting. Distortion caused by CT saturation of one or both ends shall not cause misoperation.
- 1.1.2 The relay shall incorporate four zones of phase and ground mho distance and quadrilateral ground distance protection for use if potentials are available. Two zones shall be settable for either forward or reverse direction. Both positive-sequence memory polarized and compensator-distance phase distance elements shall be available. The relay shall detect CCVT transients and block the operation of underreaching Zone 1 distance elements during the transient period. The relay shall detect stable and unstable power swings.
- 1.1.3 The relay shall incorporate phase, residual ground, and negative-sequence overcurrent elements. These shall have directional control available for use if potentials are available. A system to automatically select the most stable polarizing source for ground directional elements shall be included.
- 1.1.4 The relay shall have options for a direct or IEEE C37.94 single- or multimode fiber-optic interface, or EIA-422 or G.703 operating at 56 kb or 64 kb. The relay shall accommodate up to 5 ms of channel asymmetry.
- 1.1.5 The relay shall operate with one or two communications channels. When two channels are used as hot standby, the relay shall switch to the unfaulted channel with no protection interruption.
- 1.1.6 The relay shall be suitable for two- or three-terminal lines. For three-terminal protection the relay system shall be capable of protecting the line with dual channels at each relay or with dual channels on only one of three relays.
- 1.1.7 The relay shall selectively coordinate with inverse-time overcurrent protection on a tapped load using total current from all line terminals.
- 1.1.8 The relay shall accommodate protection of bus stubs by programmable logic condition without requiring settings change or settings group change.
- 1.1.9 The relay shall incorporate a four-shot recloser with four independently set open time intervals. Independently set reset times from reclose cycle and from lockout shall be available.
- 1.1.10 The relay shall include six steps of frequency protection. All elements shall be settable for under- or overfrequency
- 1.1.11 The relay shall incorporate phase and phase-to-phase under- and overvoltage elements as well as sequence overvoltage elements for protection and control.

- 1.1.12 The relay shall include two synchronism-check elements with separate maximum angle settings. The synchronism-check function shall compensate for breaker close time and allow different sources of synchronizing voltage (VA, VB, VC, VAB, VBC, VCA).
- 1.1.13 The relay shall be capable of automatically recording oscillographic records of 15, 30, or 60 cycles containing local and remote currents, local voltages, system frequency, and dc system voltage. Events shall be stored in nonvolatile memory. The relay shall also include a Sequential Events Recorder (SER) that stores the latest 512 entries.
- 1.1.14 The relay shall include a breaker wear monitor with user-definable wear curves, operation counter, and accumulated interrupted currents per phase.
- 1.1.15 The relay shall measure and report the substation battery voltage presented to the relay power supply terminals. Two user-selectable threshold parameters shall be provided for alarm and control purposes. Voltage level at the time of tripping shall be monitored and recorded.
- 1.1.16 The relay shall include a fault locating algorithm to provide an accurate estimate of fault location without communications channels, special instrument transformers, or pre-fault information.
- 1.1.17 The relay shall include 16 local control elements, 16 remote control logic switches, 16 latching control switches, and 16 display messages in conjunction with a local display panel included in the relay. The relay shall have the capability to display custom messages.
- 1.1.18 The relay shall include programmable logic functions for a wide range of user configurable protection, monitoring, and control schemes.
- 1.1.19 The relay shall provide the option to include dual fiber-optic or copper 10/100 Mbps Ethernet interfaces for engineering access and SCADA communications.
- 1.1.20 The relay shall allow communications from any ASCII terminal without software.
- 1.1.21 The relay shall include a minimum of three independent EIA-232 and one EIA-485 serial ports for external communications. Two ports shall simultaneously support relay-to-relay eight-bit direct logic communication.
- 1.1.22 The relay shall include an interface port for a demodulated IRIG-B time synchronization input signal. The line current differential protection shall not rely on this or any other external time synchronization.
- 1.1.23 The relay shall be capable of continuous operation over a temperature range of  $-40^{\circ}$  to  $+85^{\circ}$ C.
- 1.1.24 The relay shall include operation as a phasor measurement and control unit (PMCU).
- 1.1.25 The relay shall provide the option for IEC 61850-compliant communications. The IEC 61850 capability shall include GOOSE messaging and defined logical node data points.
- 1.1.26 The vendor shall supply the actual measured Mean-Time Between Failures (MTBF) for the device upon request.

# NORWICH PUBLIC UTILITIES SAFETY GUIDELINES

## CONTRACTOR REQUIREMENTS

### 1.0 Contractor Responsibilities

#### Introduction:

The following are the Norwich Public Utilities 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 Klaus F. Broscheit, Norwich Public Utilities Safety Officer (508) 776-9713 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 Norwich Public Utilities 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 Norwich Public Utilities property without first providing the Material Safety Data Sheet, in advance, to the General Manager of Operations for approval by the Norwich Public Utilities Safety Officer. (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 Norwich Public Utilities facility will be responsible for complying with all applicable Federal, State, Local, OSHA and Norwich Public Utilities 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 Norwich Public Utilities facility. Fire prevention and control is critical at any Norwich 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 Norwich Public Utilities 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 a Norwich Public Utilities facility. Norwich Public Utilities PPE; tools and equipment shall not be allowed to be used by contract personnel unless authorized in advance by NPU.
- 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 Norwich Public Utilities representatives.

B. Norwich Public Utilities locks and/or tags may be added (in addition) to outside contractor locks, and shall not be removed until a Norwich Public Utilities 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 Norwich Public Utilities Safety Consultant 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 Norwich Public Utilities. 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 PPE 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 Norwich Public Utilities 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 NORWICH PUBLIC UTILITIES  
"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 NORWICH PUBLIC UTILITIES  
representative:

\_\_\_\_\_  
NORWICH PUBLIC UTILITIES 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 Norwich Public Utilities 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 Norwich Public Utilities 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 Norwich Public Utilities representative must be informed of all chemicals brought to the site.
6. Each contractor must obtain information from the Norwich Public Utilities representative regarding chemicals that Norwich Public Utilities 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 Norwich Public Utilities 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 Norwich Public Utilities facility or project, all contractors must, at a minimum, meet the following requirements.

1. The contractor must assure that the equipment brought into a Norwich Public Utilities site to deliver or store hazardous chemicals is in good condition and that all equipment required is operating.
2. Contractor personnel 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 a Norwich Public Utilities representative.
3. Contractor personnel must be thoroughly familiar with operation of equipment and the use of materials or chemicals used at any Norwich Public Utilities 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 a Norwich Public Utilities facility or location must be reported to a Norwich Public Utilities authorized representative immediately upon discovery.
6. Contractor will provide to Norwich Public Utilities a complete inventory of chemicals brought onto a Norwich Public Utilities 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 Norwich Public Utilities facilities. Norwich Public Utilities 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 Norwich Public Utilities 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. A Norwich Public Utilities 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 noncombustible material for protection against fire.
5. The contractor must identify and inform Norwich Public Utilities 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 a NPU 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 Norwich Public Utilities 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 Norwich Public Utilities 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 Norwich Public 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 Norwich Public Utilities projects.

### **MINIMUM ELECTRICAL SAFETY REQUIREMENTS**

In order to perform work at any Norwich Public Utilities 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 Norwich Public Utilities 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 Norwich Public Utilities facility or on any Norwich Public Utilities 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 Norwich Public Utilities 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.