



**INFORMATION FOR BIDDERS
PROPOSAL - SPECIFICATIONS**

**FOR
FIRE PROTECTION CISTERN
AT 50 CUTLER ROAD**

PROJECT NO. 17-15

NOVEMBER 2018

**TOWN OF GREENWICH
CONNECTICUT**

**ENGINEERING DIVISION
DEPARTMENT OF PUBLIC WORKS**

**Town of Greenwich, Connecticut
Fire Protection Cistern at 50 Cutler Road**

Town Project No. 17-15

TABLE OF CONTENTS

<u>Section</u>	<u>Page No.</u>
Invitation to Bid	2
BIDDING REQUIREMENTS	
Section 1 Information for Bidders	3 to 10
Section 2 Bid	11 to 29
Section 3 Bid Bond	30 to 33
CONTRACT FORMS	
Section 4 Agreement	34 to 61
Section 5 Performance, Maintenance and Payment Bond	62 to 66
CONTRACT CONDITIONS	
Section 6 General Conditions	67 to 74
OTHER DOCUMENTS	
Section 7 Technical Provisions	75 to 109
Appendix A Soil Boring Logs	110 to 113
Appendix B Wetlands Permit	114 to 120
Appendix C Easement	121 to 125
Appendix D Easement Map	126 to 127
Appendix E Right-of-Entry Agreement	128 to 129
TECHNICAL PROVISIONS	
<u>Item No.</u>	<u>Page No.</u>
2020	76 to 77
Unclassified Excavation, Backfill, Formation of Embankments and Disposal of Surplus and Unsuitable Material	
2021	78 to 79
Rock Excavation	
2100	80 to 82
Water Pollution Control, Soil Erosion and Sedimentation Control Systems	
2170	83 to 85
Storage Tank Bedding and Backfill	
5000	86 to 91
10,000 Gallon Precast Concrete Cistern Tank, Dry Hydrant and Piping	
5070	92 to 96
4' Diameter Precast Concrete Riser Cone with Manhole Frame and Cover	
7160	97 to 100
Excavation Support System	
9130	101 to 102
Temporary 6' High Chain Link Construction Fencing	
9220	103 to 104
Crushed Stone Pull-Off Area	
9440	105 to 109
6" Topsoil, Seed and Shredded Straw Mulch	

INVITATION TO BID

Sealed bids, one (1) original and two (2) copies, will be received in the Office of the Purchasing Department and shall be opened and read aloud in the **Gisborne Conference Room**, Town Hall, 101 Field Point Road, Greenwich, Connecticut at **2 o'clock p.m.** (prevailing time) on **Wednesday, December 5, 2018** for the following work:

Fire Protection Cistern at 50 Cutler Road Town Project No. 17-15

A Bid Bond for **10% of total bid** must accompany each bid.

Bidders may be required to submit data covering financial resources, equipment and ability to perform the work rapidly and in a satisfactory manner.

The right is expressly reserved to reject any or all bids, to waive any informalities in the bids, or to accept such bids as appear to be in the best interest of the Town.

Specifications may be obtained on the Town's website, www.greenwichct.org. **It is the responsibility of the prospective bidder to check the website for any addenda issued up to 48 hours prior to the bid opening.**

Drawings and specifications will be posted to the Town's website and may be downloaded at no cost. Drawings taken from the Town's website and printed on the bidder's equipment may not be to scale.

Bidders shall complete the Vendor Information & Signatory Form for all Contracts equal to or in excess of \$250,000.00. Failure to complete the Vendor Information & Signatory Form, located in Section 2, will cause the contractors bid to be disqualified.

Attention of bidders is particularly called to the requirements as to conditions of employment to be observed, insurance coverage requirements, minimum wage rates to be paid under the contract and construction safety and health course requirements.

This contract is subject to state contract compliance requirements, including non-discrimination statutes and set-aside requirements. State law requires a minimum of twenty-five (25%) percent of the state-funded portion of the contract be set aside for award to subcontractors holding current certification from the Connecticut Department of Administrative Services. The contractor must demonstrate good faith effort to meet the 25% set-aside goals.



Amy J. Siebert, P.E.
Commissioner of Public Works

Date: November 14, 2018

SECTION 1

INFORMATION FOR BIDDERS

<u>TITLE</u>	<u>ARTICLE</u>
RECEIPT AND OPENING OF BIDS	1.1
LOCATION AND DESCRIPTION OF WORK TO BE DONE	1.2
CONTRACT DOCUMENTS	1.3
NON-REFUNDABLE FEE FOR DRAWINGS AND DOCUMENTS	1.4
QUESTIONS REGARDING DRAWINGS AND DOCUMENTS	1.5
BIDDERS TO INVESTIGATE	1.6
INFORMATION NOT GUARANTEED	1.7
BLANK FORM FOR BID	1.8
TIME LIMITS AND TIME CHARGE	1.9
WITHDRAWAL OF BIDS	1.10
CONTRACT BONDS	1.11
ABILITY AND EXPERIENCE OF BIDDER	1.12
BIDS	1.13
RIGHT TO REJECT OR ACCEPT BIDS	1.14
RIGHT TO ALTER FORM, QUANTITY, ETC., OF WORK	1.15
EXECUTION OF AGREEMENT	1.16
INSURANCE CERTIFICATES	1.17
COMPARISON OF BIDS	1.18
BID SECURITY	1.19
ITEMS	1.20
MINIMUM PREVAILING WAGE RATES	1.21
CONSTRUCTION SAFETY AND HEALTH COURSE	1.22
NON-CONNECTICUT CONTRACTORS	1.23
SUPPLIERS AND SUBCONTRACTORS	1.24
CT SET-ASIDE REQUIREMENTS RE: NON-DISCRIMINATION STATUTES	1.25

INFORMATION FOR BIDDERS

1.1 RECEIPT AND OPENING OF BIDS.

Sealed bids, one (1) original and two (2) copies, will be received in the Office of the Purchasing Department and shall be opened and read aloud in the **Gisborne Conference Room**, Town Hall, 101 Field Point Road, Greenwich, Connecticut at **2 o'clock p.m.** (prevailing time) on **Wednesday, December 5, 2018** for the following work:

Fire Protection Cistern at 50 Cutler Road Town Project No. 17-15

1.2 LOCATION AND DESCRIPTION OF WORK TO BE DONE.

The work herein specified to be done consists of the installation of a 10,000-gallon underground precast concrete fire protection cistern and associated vent pipe, dry hydrant piping, crushed stone pull-off area and property restoration to be located at 50 Cutler Road, Greenwich Connecticut, all as more particularly indicated, shown or described in the drawings, specifications and other contract documents and as described by the Engineer.

The Contractor shall furnish all labor, services, materials, equipment, plant, machinery, apparatus, appliances, tools, supplies and all other things necessary to do all work required for the completion of each item of the work and as herein specified.

The location, general characteristics and principal details of the work are indicated on drawings which are listed as follows:

SHEET NUMBER	TITLE
1 of 7	Title Sheet
2 of 7	Site & Grading Plans
3 of 7	Cross Sections
4 of 7	Construction Details
5 of 7	Soil Erosion & Sediment Control Details
6 of 7	Soil Boring Logs
7 of 7	Easement Map

The above drawings are the contract drawings, sometimes referred to herein as the "Drawings". Additional drawings showing details in accordance with which the work is to be done will be furnished from time to time by the Engineer, if found necessary, and shall then become a part of the contract drawings.

1.3 CONTRACT DOCUMENTS.

The 'Drawings', 'Invitation to Bid', 'Information for Bidders', Forms for 'Bid', 'Agreement' and 'Bonds', 'General Conditions' and 'Technical and Materials Specifications' become the contract documents and may be obtained on the Town's website, www.greenwichct.org.

Drawings and specifications will be posted to the Town's website and may be downloaded at no cost. Drawings taken from the Town's website and printed on the bidder's equipment may not be to scale.

1.4 NON-REFUNDABLE FEE FOR DRAWINGS AND DOCUMENTS.

Drawings and specifications will be posted to the Town's website and may be downloaded at no cost. Drawings taken from the Town's website and printed on the bidder's equipment may not be to scale.

1.5 QUESTIONS REGARDING DRAWINGS AND DOCUMENTS.

In general, no answer will be given to prospective bidders in reply to an oral question if the question involves an interpretation of the intent or meaning of the drawings or other contract documents or the equality or use of products or methods other than those designated or described on the drawings or in the specifications. Any information given to bidders other than by means of the drawings and other contract documents, including addenda, as described below, is given informally, for information and the convenience of the bidder only, and is not guaranteed. The bidder agrees that such information shall not be used as the basis of nor shall the giving of any such information entitle the bidder to assess any claim or demand against the Town or the Engineer on account thereof.

To receive consideration, such questions shall be submitted in writing to the Project Engineer, Jason M. Kaufman, P.E., Senior Civil Engineer, Engineering Division, 101 Field Point Road, Greenwich CT 06830 or by email to jason.kaufman@greenwichct.org at least five (5) days before the established date for receipt of Bids. If the questions involve the acceptability or use of any unspecified products or methods, it must be accompanied by drawings, specifications or other data in sufficient detail to enable the Engineer to determine the acceptability, equality and suitability of the unspecified product or method. In general, the Engineer will neither approve nor disapprove particular products prior to the opening of Bids; such products will be considered when offered by the Contractor for incorporation into the work.

The Engineer will set forth as addenda, which shall become a part of the contract documents, such questions received as above provided as in their sole judgment are appropriate or necessary and their decision regarding each. **It is the responsibility of the prospective bidder to check the Town's website (www.greenwichct.org) for any addenda issued up to 48 hours prior to the bid opening.**

The Contractor agrees to use the products and methods designated or described in the specifications as amended by the addenda. Any addenda issued shall take precedence over drawings or specifications.

Where there is a conflict between specifications and drawings, the higher standard shall prevail.

1.6 BIDDERS TO INVESTIGATE.

Bidders are required to submit their bids upon the following express conditions which shall apply to and be deemed a part of every bid received.

Bidders must satisfy themselves by personal examination of the site of the work and by such other means as they may wish, as to the actual conditions there existing, the character and requirements of the work, the difficulties attendant upon its execution, and the accuracy of all estimated quantities stated in the Bid.

Any subsurface information furnished is based on an interpretation made at specific locations as indicated and no assurance is given that these conditions are necessarily typical of other locations or that they have remained unchanged since the field data were obtained. Further, no assurance is given that the presence or absence of water and other subsurface conditions at the time of these explorations will be representative of actual conditions at the time of construction. The Contractor shall be solely responsible for any assumptions, deductions, or conclusions they may make or which may be derived from their examination of any available subsurface information.

1.7 INFORMATION NOT GUARANTEED.

All information given on the drawings or in the other contract documents relating to subsurface and other conditions, natural phenomena, existing pipes and other structures is furnished only for the information and convenience of bidders and is not guaranteed.

It is agreed and understood that the Town does not warrant guarantee that the subsurface or other conditions, natural phenomena, existing pipes or other structures encountered during construction will be the same as those indicated on the drawings or in the other contract documents and the bidder or Contractor shall assume all risk with respect to such conditions.

It is agreed further and understood that no bidder or Contractor shall use or be entitled to use any of the information made available to them or obtained in any examination made by them in any manner as a basis of or ground for, any claim or demand against the Town or the Engineer, arising from or by reason of any variance which may exist between the information made available and the actual subsurface or other conditions, natural phenomena, existing pipes or other structures actually encountered during the construction work.

The Contractor shall dig test pits, contact appropriate parties, or do any other necessary work, and at their own expense, to locate subsurface and other structures both shown and not shown on the drawings, in advance to performing work near the structure.

1.8 BLANK FORM FOR BID.

All bids must be upon the blank form for "Bid Sheet", which is given in Section 2, and must state the proposed price of each item of the work, both in words and in figures, and be signed by the bidder with their business address and place of residence.

1.9 TIME LIMITS AND TIME CHARGE.

The Contractors shall commence with the work within ten (10) days after receipt of 'Notice to Proceed' from the Town.

Time is of the essence of this contract and as prosecution of the work will inconvenience property owners, vehicular traffic, and pedestrians and adversely affect business in the area, it is essential that the work be pressed vigorously to completion. Also, the cost to the Town of administration of the contract, including engineering, inspection and supervision of construction, will be increased or decreased as the time occupied in the work is lengthened or shortened and the deprivation to the residents of the Town of the needed improvement herein contracted for will cause damages to the Town, the exact amount of which will be difficult to ascertain. Therefore, in order to avoid the uncertainties and time consuming effort involved, it is hereby estimated that the reasonably probable, foreseeable damages which will arise in the event of the Contractor's delay are hereby expressed in terms of a time charge which will be made against the Contractor, and dates for completion, suspension and/or commencement of work will be established in accordance with the following provisions.

A time charge of One Thousand Dollars (\$1,000.00) per day will be made against the Contractor for each and every day (Saturdays, Sundays and legal holidays excluded) that the work is in progress beyond one hundred and eighty (180) calendar days (no days excluded) after the Contractor has been notified to commence with the work. The amount of time charge will be deducted from the monthly and final payments due the Contractor as these are made. This time charge will continue, except as provided below, until the work is completed and accepted, but not including retainer, maintenance or repair period, if any. The Engineer's decision concerning whether the work has been completed shall be final, as provided in Article 4.4 of this contract.

Each bidder should include in their estimate of the cost of the work, a sum equal to the amount

derived by multiplying said time charge by the number of days which they estimate the time charge will apply. This sum shall not appear as a separate item of the bid, but shall be distributed among the various items on which prices are asked on the bid sheet. The time charge will be suspended during the period of any delay that may be caused by the Town, either through change of plan or through ordering suspension of the work for any reason other than failure on the part of the Contractor to comply with the specifications, said suspension must be certified by engineer.

If any delay is caused to the Contractor by specific orders of the Engineer to stop the work (for reasons other than failure on the part of the Contractor to comply with the requirements of the contract documents), such delay will entitle the Contractor to an equivalent extension of time, and the suspension of the time charge only during such an extension of time. When extra or additional work is ordered by the Engineer, the Contractor will be allowed a suspension of the time charge expressed in days and derived by dividing the cost of such additional work by the time charge factor.

The time charge factor is that number derived by dividing the total amount of the contract on which the award is made by the number of days between date work is started and date of completion and acceptance of the repair and alteration, etc., deducting Saturdays, Sundays and legal holidays.

1.10 WITHDRAWAL OF BID.

Except as hereinafter in this article otherwise expressly provided, once their bid is submitted and received by the Town for consideration and comparison with other bids similarly submitted, the Bidder agrees that they may not and will not withdraw it within forty-five (45) consecutive calendar days after the actual date of opening of Bids.

Upon proper written request and identification, Bids may be withdrawn only as follows

1. At any time prior to the designated time for the opening of bids
2. Provided the bid has not theretofore been accepted by the Town, at any time subsequent to the expiration if the period during which the bidder has agreed not to withdraw their bid.

Unless a bid is withdrawn as provided above, the Bidder agrees that it shall be deemed open for acceptance until the 'agreement' has been executed by both parties thereto or until Town notifies a Bidder in writing that their bid is rejected or that the Town does not intend to accept it, or returns their bid deposit. Notice of acceptance of a bid shall not constitute rejection of any other bid.

1.11 CONTRACT BONDS.

The Bidder whose bid is accepted agrees to furnish the 'contract bonds' in the forms which follow in Section 5, entitled 'Contract Bonds', each in the sum of the full amount of the bid, including allowance for contingencies and extra work, and/or contract price as determined by the Engineer, and duly executed and acknowledged by the said Bidder as principle and by a surety company qualified to do business under the laws of the State of Connecticut and satisfactory to the Town, as surety, for the faithful performance of the contract and payment for labor and materials. The premiums for such bonds shall be paid by the Contractor. The 'Contract Bond' is only required for contracts exceeding \$100,000.

For contracts that require a Performance, Maintenance and Payment Bond, the contractor shall maintain all of the specified required insurance coverage and continue to document the specified required insurance coverage for one (1) year after completion of the work of the contract (or other such time as the contractor or other agreement requires).

The Bidder must provide a letter from the bonding company stating that their company is able to

receive performance bonding within one weeks' time after receipt of award on the Town of Greenwich Performance, Maintenance and Payment Bond Form (enclosed herein) for this project in the total amount of the bid. The letter must be on the bonding company's letterhead with their name address and telephone number and must be submitted with the bid.

1.12 ABILITY AND EXPERIENCE OF BIDDER.

No award will be made to any Bidder who cannot satisfy the Town that they have sufficient ability and experience in this class of work and sufficient capital and plant to enable them to prosecute and complete the work successfully within the time named, or, where such time is not named, within reasonable period of time as is determined by the Engineer. The Town's decision or judgment on these matters shall be final, conclusive and binding.

The Town may make such investigations as it deems necessary, and the Bidder shall furnish to the Town, under oath if so required, all such information and data for this purpose as the Town may request.

The ability of any Bidder to obtain a performance bond will not be regarded as the sole test of such Bidder's competency or responsibility.

1.13 BIDS.

The Town may reject bids which in its sole judgment are either incomplete, conditional, obscure or not responsive or which contain additions not called for, erasures not properly initialed, alterations or similar irregularities, or the Town may waive such omissions, conditions or irregularities.

1.14 RIGHT TO REJECT OR ACCEPT BIDS.

The Town reserves the right to reject any or all bids with or without reason, or to accept any bid even if it is not the low bid, should the Town deem it to be in the public interest or the interest of the Town to do so. The Town's decision on the qualifications of any bid and/or its decision to accept any bid, or reject any or all bids shall be final, conclusive and binding on all Bidders.

1.15 RIGHT TO ALTER FORM, QUANTITY, OF WORK.

The Town further reserves the right to make alterations in the lines, grade, plan, form and quantity of the work herein contemplated, either before award of contract to the successful Bidder and/or before or after the commencement of the work because of priority restrictions, insufficient funds in appropriations, or other cause. If such alterations diminish the quantity of the work to be done, they shall not constitute a claim for damage or for anticipated profits on the work dispensed with, or affect the prices bid for the various classes of work remaining. If they increase the amount of work, such increase shall be paid for according to the quantity actually done and at the price or prices bid for the various classes of work, or if not susceptible of classification, the price or prices shall be agreed upon in writing in advance, and in case of failure to so agree, the Contractor shall do the work as aforesaid as extra work.

1.16 EXECUTION OF AGREEMENT.

The Bidder whose bid is accepted will be required and agrees to duly execute the 'agreement' and furnish the required contract bonds and insurance certificates within ten (10) days after award of the contract.

1.17 INSURANCE CERTIFICATES.

The Bidder is required to submit with their bid a signed 'Insurance Procedure Form', enclosed

herein. By signing this form, the Bidder acknowledges that they will provide the insurance coverage required for the contemplated work at no additional charge to the Town of Greenwich.

The Contractor will not be permitted to start any construction work until they have submitted certificates covering all insurance and in such form called for under that article of the 'agreement', titled 'Insurance', and has obtained approval in writing of such certificates from the Town.

1.18 COMPARISON OF BIDS.

Bids will be compared on the basis of the sum of the quantities multiplied by respective unit prices, added to lump-sum prices, all as stated in the 'Bid Sheet'.

In the event that there is a discrepancy in the Bid Sheet between the Lump-Sum or unit prices written in words and figures, the prices written in words shall govern.

The Town agrees to examine and consider each bid submitted in consideration of the Bidder's agreements, as hereinabove set forth in the Bid Sheet.

1.19 BID SECURITY.

Each bid must be accompanied by a bid bond prepared on the form of bid bond attached hereto duly executed and acknowledged by the Bidders, as principal, and by a surety company qualified to do business in the State of Connecticut and satisfactory to the Town, as surety.

The bid bond shall be in the sum of 10% of total bid and shall be enclosed in the sealed envelope containing the Bid. Each bid bond may be held by the Town as security for the fulfillment of the Bidder's 'agreement' as hereinabove set forth and as set forth in the Bid Sheet. Should the Bidder fail to fulfill such agreements, the Bid Bond shall become payable to the Town, as liquidated damages, otherwise, the Bid Bond shall become null and void.

1.20 ITEMS.

The work to be done under this contract has been divided into parts or items to enable each Bidder to bid on the different portions of the work in accordance with their estimate of their cost and so that the actual quantity of work executed under each item may be paid for at the price bid for that particular item.

1.21 MINIMUM PREVAILING WAGES.

The minimum prevailing wages paid on this project, when applicable, shall be as shown on the State of Connecticut Labor Department, Wage and Workplace Standards Division, 'Schedule of Prevailing Rates' a copy of which is attached to these specifications or, if not attached, shall be issued by addendum. See Section 4.48 of these specifications.

1.22 CONSTRUCTION SAFETY AND HEALTH COURSE.

Pursuant to Connecticut General Statutes Section 31-53b the Bidder awarded a Contract for new construction of \$1,000,000 or more or rehabilitation, repair or the like of \$100,000 or more must furnish proof with the weekly certified payroll for the first week each employee begins work that any person performing the work of a mechanic, laborer or worker has completed a course of at least ten (10) hours in duration in construction safety and health approved by the federal Occupational Safety and Health Administration in accordance with regulations adopted by the State of Connecticut Labor Commissioner. See Section 4.48 of these specifications.

1.23 NON-CONNECTICUT CONTRACTORS.

Pursuant to Connecticut General Statutes § 12-430(7), as amended by Connecticut Public Act #11-61, Sec.66, a nonresident contractor shall comply with the State of Connecticut's bonding requirements.

1.24 SUPPLIERS AND SUBCONTRACTORS.

The Town would appreciate it if all bidders would include Greenwich suppliers and subcontractors in solicitation of prices for the proposed work.

1.25 STATE OF CONNECTICUT (CT) SET-ASIDE REQUIREMENTS REGARDING NON-DISCRIMINATION STATUTES.

The Contractor who is selected to perform this State project must comply with Connecticut General Statutes §§4a-60, 4a-60a, 4a-60g, and 46a-68b through 46a-68f, inclusive, as amended by June 2015 Special Session Public Act 15-5.

State law requires a minimum of twenty-five (25%) percent of the state-funded portion of the contract for award to subcontractors holding current certification from the Connecticut Department of Administrative Services ("DAS") under the provisions of Connecticut General Statutes §4a-60g. (25% of the work with DAS certified Small and Minority owned businesses and 25% of that work with DAS certified Minority, Women and/or Disabled owned businesses.) The Contractor must demonstrate good faith effort to meet the 25% set-aside goals.

Contractor will coordinate with the State directly for Commission on Human Rights & Opportunity Contract Compliance regulations (CHRO)

For municipal public works contracts and quasi-public agency projects, the Contractor must file a written or electronic non-discrimination certification with the Commission on human Rights and Opportunities. Forms can be found at:

http://www.ct.gov/opm/cwp/view.asp?a=2982&q=390928&opmNav_GID=1806

SECTION 2

BID

To the Town of Greenwich, Connecticut, herein called the Town, acting by and through its Department of Public Works, Fire Protection Cistern at 50 Cutler Road, Town Project No. 17-15, Greenwich, Connecticut.

The undersigned, as Bidder, herein referred to as singular and masculine, declares as follows

- (1) The only parties interested in this bid as principals are named herein
- (2) This bid is made without collusion with any other person, firm or corporation
- (3) No officer, agent or employee of the owner is directly or indirectly interested in this bid
- (4) They have carefully examined the site of the proposed work and fully informed and satisfied themselves as to the conditions there existing, the character and requirements of the proposed work, the difficulties attendant upon its execution and the accuracy of all estimated quantities stated in this bid, and they have carefully read and examined the drawings, the annexed proposed 'agreement' and the specifications and other contract documents therein referred to and knows and understands the terms and provisions thereof
- (5) And they understand that the quantities of work tabulated in this bid or indicated on the drawings or in the specifications or other contract documents are only approximate and are subject to increase or decrease as deemed necessary by the Engineer

And they agree that, if this bid is accepted they will contract with the Town, as provided in the copy of the contract documents deposited in the office of the Engineering Division of the Department of Public Works, this bid form being part of said contract documents and that they will perform all the work and furnish all the materials and equipment, and provide all labor, services, plant, machinery, apparatus, tools, appliances, supplies and all within the time therein prescribed and according to the requirements of the contract documents and of the Engineer as therein set forth, and that they will take in full payment therefore the Lump-Sum or unit price applicable to each item of the work as stated in the following Bid Sheets.

Bidders must bid on each item. All entries in the entire bid must be made clearly and in ink. Prices bid must be written in both words and figures. Bidders should insert extended item prices obtained from quantities and unit prices and insert the total price and applicable addenda numbers where indicated.

Materials and supplies purchased for this Contract which are to be physically incorporated in and become a permanent installation in the work will be exempt from the Connecticut Sales and Use Tax under the Connecticut Education, Welfare and Public Health Tax Act. Each bidder shall take this exemption into account in calculating their Bid for the Work.

The undersigned understands that information relative to subsurface and other conditions, natural phenomena, existing pipes and other structures (surface and/or subsurface) has been furnished only for their information and convenience without any warranty or guarantee, express or implied, that the subsurface and/or other conditions, natural phenomena, existing pipes and other structures (surface and/or subsurface) actually encountered will be the same as those shown on the drawings or in any of the other contract documents and they agree that they shall not use or be entitled to use any such information made available to them through the contract documents or otherwise or obtained by them in their own examination of the site, as a basis of or ground for any claim against the Town, arising from or by reason of any variance which may exist between the aforesaid information made available to or acquired by them and the subsurface and/or other conditions, natural phenomena, existing pipes and other structures (surface and/or subsurface) actually encountered during the construction work, and they have made due allowance therefore in this bid.

The undersigned agrees that for extra work, if any, performed in accordance with the terms and provisions of the annexed form of Agreement, they will accept compensation as stipulated therein in full payment for such Extra Work.

If this bid is accepted by the Town, the undersigned agrees to complete the entire work provided to be done under the contract within the time stipulated in the Information for Bidders, Article 1.9 headed "Time Limits and Time Charge."

As provided in the Information for Bidders, the bidder hereby agrees that they will not withdraw this bid within forty-five (45) consecutive calendar days after the actual date of the opening of bids, and that, if the Town shall accept this bid, the bidder will duly execute and acknowledge the Agreement and furnish, duly executed and acknowledged, the required Contract Bonds and Insurance Certificates within ten (10) days after date of the award of the contract.

Should the bidder fail to fulfill any of their agreements as hereinabove set forth, the Town shall have the right to retain as liquidated damages, the amount of the bid check which shall become the Town's property. If a Bid Bond was given, it is agreed that the amount thereof shall be paid as liquidated damages to the Town by surety.

The undersigned has read and agrees to provide the types and required insurance coverage limits, as defined by Article 4.6 "Insurance". The submitted bid includes the cost relating to the insurance requirements for the contract work.

The bidder, by submittal of this bid, agrees with the Town that the amount of the bid security deposited with this bid fairly and reasonably represents the amount of damages the Town will suffer due to the failure of the bidder to fulfill their agreements as above provided.

(Name of Bidder)

(Signature and Title of Authorized Representative)

(Business Address)

(Type or Print Name of Authorized Representative)

(City and State)

(Affix Corporate Seal)

(Federal Tax Identification Number)

(Date)

(Telephone Number)

(Fax Number)

(E-Mail Address)

**BIDDING SHEETS
FOR
FIRE PROTECTION CISTERN AT 50 CUTLER ROAD**

TO: Amy J. Siebert, P.E.
Commissioner of Public Works
Town Hall
101 Field Point Road
Greenwich, CT 06836-2540

Date: _____, 2018
From: _____

Telephone: _____

Dear Madam:

_____ shall install and/or furnish all materials and perform all work as required by and as called for by the drawings and specifications for Town Project No. 17-15, Fire Protection Cistern at 50 Cutler Road in Greenwich, Connecticut.

BID

Item No.	Estimated Quantity	L.S.	Brief Description of Item and Bid in Writing and Figures	Total in Figures
2020	1	L.S.	Unclassified Excavation, Backfill, Formation of Embankments and Disposal of Surplus and Unsuitable Material, per Lump Sum of _____ Dollars and _____ Cents (\$_____)	\$ _____
2021	20	C.Y.	Rock Excavation, per Cubic Yard of _____ Dollars and _____ Cents (\$_____)	\$ _____
2100	1	L.S.	Water Pollution Control, Soil Erosion and Sedimentation Control Systems, per Lump Sum of _____ Dollars and _____ Cents (\$_____)	\$ _____
2170	1	L.S.	Storage Tank Bedding and Backfill, per Lump Sum of _____ Dollars and _____ Cents (\$_____)	\$ _____
5000	1	L.S.	10,000 Gallon Precast Concrete Cistern Tank, Dry Hydrant and Piping, per Lump Sum of _____ Dollars and _____ Cents (\$_____)	\$ _____
5070	1	L.S.	4' Diameter Precast Concrete Riser Cone with Manhole Frame and Cover, per Lump Sum of _____ Dollars and _____ Cents (\$_____)	\$ _____

**BIDDING SHEETS FOR
TOWN PROJECT NO. 17-15**

BID

Item No.	Estimated Quantity		Brief Description of Item and Bid in Writing and Figures	Total in Figures
7160	1	L.S.	Excavation Support System, per Lump Sum of _____ Dollars and _____ Cents (\$_____)	\$ _____
9130	1	L.S.	Temporary 6' High Chain Link Construction Fencing, per Lump Sum of _____ Dollars and _____ Cents (\$_____)	\$ _____
9220	1	L.S.	Crushed Stone Pull-Off Area, per Lump Sum of _____ Dollars and _____ Cents (\$_____)	\$ _____
9440	180	S.Y.	6" Topsoil, Seed and Shredded Straw Mulch, per Square Yard of _____ Dollars and _____ Cents (\$_____)	\$ _____

For informal comparison only and not to be considered as part of this bid, the total price of the Bid as described in the Information for Bidders, Article headed "Comparison of Bids" for Project No. 17-15 is:

_____ Dollars and
(written words)
_____ Cents (\$_____).
(written words)

The Bid(s) include Addenda Number

Notes:

1. Bidders shall completely fill out the included "Vendor Information & Signatory Form" for all base bids equal to or in excess of two hundred fifty thousand dollars (\$250,000). Failure to complete this form or failure to provide the necessary back up information for any question on this form will result in disqualification of the Bid.
2. The non-Connecticut bidders must be verified by the State of Connecticut Department Revenue Services and shall submit a copy of its letter of verification with its bid for contracts equal to or in excess of \$250,000.00. Failure to provide the verification documentation will cause the contractors bid to be disqualified.
3. Include "Time Charge" in the bid prices (see Article 1.9 of "Information for Bidders").

The Bidder is - a corporation incorporated in the State of _____
 - A partnership - An Individual. (Bidder must add and delete as necessary to make the foregoing sentence read correctly.)

If the Bidder is a corporation, Affix corporate seal and give below the names of its President, Treasurer and General Manager. If a partnership, give full names and residential addresses of all general partners and if an individual, give residential address if different from business address.

The required names and addresses of all persons interested in the foregoing bid, as principals, are as follows

PRINCIPAL NAME & TITLE	ADDRESS

_____ Affix Corporate Seal

The Bidder is requested to list below five (5) references for similar work of equal size to that included in the proposed contract that they have done within the last three years which will enable the Town to judge their experience, skill and business standing. Please include project date, contact person and phone number.

COMPANY NAME	PROJECT DATE	CONTACT PERSON	PHONE NUMBER

(ADD SUPPLEMENTARY PAGE IF NECESSARY.)

CERTIFICATE AS TO MINIMUM PREVAILING WAGES

The undersigned, being duly sworn, deposed and says

1. That they are the _____ of the Contractor,
(Title)

In the project hereinafter referred to, and is authorized to execute this certification on behalf of the Contractor,

2. In connection with Fire Protection Cistern at 50 Cutler Road, Town Project No. 17-15, Greenwich, Connecticut, it is hereby certified that the Contractor has read and understands the provisions of Section 4.48, Prevailing Wages, of these specifications and has included in their bid price the cost of compliance with their requirements.

3. This certification is made at the request of the Town of Greenwich for the purpose of inducing the Town to enter into a contract for the project work and knowing that the Town will rely upon the truth of the representation herein made.

Subscribed and sworn to

Before me this _____ day of _____ 20_____.

(SIGNATURE OF PERSON
AUTHORIZED TO SIGN)

(TYPE OR PRINT NAME OF PERSON
AUTHORIZED TO SIGN)

NOTARY PUBLIC

Vendor Information & Signatory Form
For all Contracts Equal to or Greater than \$250,000

Vendor Name: _____

Primary Business Address: _____

Telephone: _____ Fax: _____

Email: _____ Web Site: _____

Secondary Business Location(s) if any:

Business Address: _____

Telephone: _____ Fax: _____

Email: _____ Web Site: _____

Business Address: _____

Telephone: _____ Fax: _____

Email: _____ Web Site: _____

Type of Entity: Corporation: _____ Type of Corp.: _____ LLC: _____
Partnership: _____ Joint Venture: _____ Sole Proprietorship: _____
Other (please describe): _____

1. CT State Business License Number (if applicable): _____
State Agency issuing license: _____
2. Number of years in business under entity name: _____
3. Provide below the full names of entity's owners (> 20% ownership), officers and managers. (use a separate sheet of paper if necessary)

4. Has the entity changed its name within the past 3 years?
a. YES NO
5. If yes, provide former name(s): _____
6. Have there been any recent (within the last three years) changes in control/ownership, > 20% of the entity?
a. YES NO
7. If yes, explain. (use a separate sheet of paper if necessary)
8. Have officers or principals of the entity ever had any license suspended or revoked (other than Driver's License) for any reason?
a. YES NO
9. If yes, please explain. (use a separate sheet of paper if necessary)
10. Is the entity or has the entity, or any of its principals, officers, members or owners ever been a party to or involved in any US civil, criminal, antitrust violation, regulatory action, settlements, lawsuit or other legal action involving the Town of Greenwich or any other municipality in the States of CT or NY related to the vendor's business activities?
a. YES NO
11. If the answer to question number 10 is 'yes', please explain below. (use a separate sheet of paper if necessary.)

12. Has any principal, officer, member or owner of the undersigned entity within the last three years been a principal, officer, member or owner of any entity that has filed for bankruptcy or been voluntarily or involuntarily dissolved?
 a. YES NO
 b.

13. Name and title of person completing / responsible for submission of this bid or contract and the responses to this questionnaire: _____

14. Telephone number and email address for person identified in questions #13:
 Phone No.: _____ Email Address: _____

15. If requested by the Town during the solicitation process, the vendor hereby agrees to provide the Town with copies of the most recent three (3) years of Loss History Reports for all lines of insurance coverage from its insurance carrier (as named herein) for all contracts and RFPs/RFQs/RFBs equal to or in excess of \$250,000.
 a. YES NO

Name of Insurance Carrier: _____

The loss history reports shall include claims data for all fifty US states; detail of each claim for the past three years for AL, GL, WC; and a summary page with the annual total claim amounts for the past three years for AL, GL, and WC.

16. Have any claims been made against the entity's performance bond? YES NO

17. Please indicate whether your entity is currently debarred from doing business in the State of Connecticut or any other state.
 a. YES List of States: _____ NO

18. Please indicate whether your entity has ever been convicted of OSHA violations.
 a. YES (Attach separate page(s) with explanation.) NO

With regard to item No.17 and 18, the vendor understands and agrees that it has a continuing obligation to inform the Town of any OSHA violation and if it is debarred from doing business in the State of Connecticut or any other State after it has submitted this Vendor Information Form. The Vendor understands and agrees that its obligation to keep the Town informed of any change in status continues up to and including the time of award of the contract and if vendor is awarded the contract, its obligation shall continue during the entire duration of the contract.

19. Provide below an inventory list of all major equipment owned by the entity that would be used on this project:

20. Provide a complete list of the entity's current public customers located in the State of Connecticut:

CUSTOMER	ADDRESS	CONTRACT ANNUAL AMOUNT

FAILURE TO COMPLETE THIS FORM OR FAILURE TO PROVIDE THE NECESSARY BACK UP INFORMATION FOR ANY QUESTION ON THIS FORM MAY RESULT IN DISQUALIFICATION.

Signature _____ Date: _____

Print Name and Title _____

Non-Discrimination and Affirmative Action Provisions

- (A)(1) The Contractor agrees and warrants that in the performance of the Contract such Contractor will not discriminate or permit discrimination against any person or group of persons on the grounds of race, color, religious creed, age, marital status, national origin, ancestry, sex, gender identity or expression, sexual orientation, intellectual disability, mental disability 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. The Contractor further agrees to take affirmative action to insure that applicants with job-related qualifications are employed and that employees are treated when employed without regard to of race, color, religious creed, age, marital status, national origin, ancestry, sex, gender identity or expression, intellectual disability, mental disability or physical disability, including, but not limited to, blindness, unless it is shown by such Contractor that such disability prevents performance of the work involved; (2) the Contractor agrees, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, to state that it is an "affirmative action-equal opportunity employer" in accordance with regulations adopted by the commission; (3) the Contractor agrees to provide each labor union or representative of workers with which such Contractor has a collective bargaining agreement or other contract or understanding and each vendor with which such Contractor has a contract or understanding, a notice to be provided by the commission advising the labor union or workers' representative of the Contractor's commitments under this section, and to post copies of the notice in conspicuous places available to employees and applicants for employment; (4) the Contractor agrees to comply with each provision of this section and sections 46a-68e and 46a-68f and with each regulation or relevant order issued by said commission pursuant to sections 46a-56, 46a-68e, 46a-68f and 46a-86; (5) the Contractor agrees to provide the Commission on Human Rights and Opportunities with such information requested by the commission, and permit access to pertinent books, records and accounts, concerning the employment practices and procedures of the Contractor as relate to the provisions of this section and section 46a-56.
- (B) Any Contractor who is a party to a municipal public works contract or quasi-public agency project, where any such contract is valued at less than \$50,000 for each year of the contract, shall provide the Commission on Human Rights and Opportunities with a written or electronic representation that complies with the nondiscrimination agreement and warranty under subsection (A)(1) above, provided if there is any change in such representation, the Contractor shall provide the updated representation to the Commission not later than 30 days after such change. Any Contractor who is a party to a municipal public works contract or a quasi-public agency project, where any such contract is valued at \$50,000 or more for any year of the contract, shall provide the Commission with any one of the following: (1) Documentation in the form of a company or corporate policy adopted by resolution of the board of directors, shareholder, managers, members or other governing body of such Contractor that complies with the nondiscrimination agreement and warranty under subsection (A)(1) of this section; (2) Documentation in the form of a company or corporate policy adopted by a prior resolution of the board of directors, shareholders, managers, members or other governing body of such contractor if (a) the prior resolution is certified by a duly authorized corporate officer of such contractor to be in effect on the date the documentation is submitted, and the executive director of the Commission on Human Rights and Opportunities or designee certifies that the prior resolution complies with the nondiscrimination agreement and warranty under subdivision (A)(1) of this section; or (3) Documentation in the form of an affidavit signed under penalty of false statement by a chief executive officer, president, chairperson or other corporate officer duly authorized to adopt company or corporate policy that certifies that the company or corporate policy of the contractor complies with the nondiscrimination agreement and warranty under subdivision (A)(1) of this section and is in effect on the date the affidavit is signed..

- (C) If the Contract is a municipal public works contract or a quasi-public agency project, the Contractor agrees and warrants that s/he will make good faith efforts to employ minority business enterprises as subcontractors and suppliers of materials on such public works project. The Contractor shall include the provisions of subdivision (A)(1) of this section in every subcontract or purchase order entered into to fulfill any obligation of a municipal public works contract or contract for a quasi-public agency project, and such provisions shall be binding on a subcontractor, vendor or manufacturer, unless exempted by regulations or orders of the Commission on Human Rights and Opportunities. The Contractor shall take such action with respect to any such subcontract or purchase order as the Commission may direct as a means of enforcing such provisions, including sanctions for noncompliance in accordance with section 46a-56; provided, if such Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the Commission regarding a state contract, the contractor may request the state of Connecticut to enter into any such litigation or negotiation prior thereto to protect the interests of the state and the state may so enter.
- (D) "Minority business enterprise" means any small contractor or supplier of materials fifty-one per cent or more of the capital stock, if any, or assets of which is owned by a person or persons: (1) Who are active in the daily affairs of the enterprise, (2) who have the power to direct the management and policies of the enterprise and (3) who are members of a minority, as such term is defined in subsection (a) of section 32-9n; and "good faith" means that degree of diligence which a reasonable person would exercise in the performance of legal duties and obligations. "Good faith efforts" shall include, but not be limited to, those reasonable initial efforts necessary to comply with statutory or regulatory requirements and additional or substituted efforts when it is determined that such initial efforts will not be sufficient to comply with such requirements. Determination of the Contractor's good faith efforts shall include, but shall not be eliminated to, the following factors: The contractor's employment and subcontracting policies, patterns and practices; affirmative advertising recruitment and training; technical assistance activities and such other reasonable activities or efforts as the Commission on Human Rights and Opportunities may prescribe that are designed to ensure the participation of minority business enterprises in municipal public works contracts or quasi-public agency projects. "Municipal public works project" means that portion of an agreement entered into on or after October 1, 2015, between any individual, firm or corporation and a municipality for the construction, rehabilitation, conversion, extension, demolition or repair of a public building, highway or other changes or improvements in real property, which is financed in whole or in part by the state, including, but not limited to, matching expenditures, grants, loans, insurance or guarantees but excluding any project of an alliance district, as defined in section 10-262u, finance by the state funding in an amount equal to fifty thousand dollars or less. "Quasi-public agency project" means the construction, rehabilitation, conversion, extension, demolition or repair of a building or other changes or improvements in real property pursuant to a contract entered into on or after October 1, 2015, which is financed in whole or in part by a quasi-public agency using state funds, including, but not limited to, matching expenditures, grants, loans, insurance or guarantees.

**Checklist for Municipalities
For Contracting
Effective October 1st, 2015**

- Post the bid notice with CHRO language included
- Pre-bid meeting (if applicable)
- Provide bid documents with CHRO language included
(Notification to Bidders/Contract Compliance Monitoring Report included)
- Screen Bids
- Check CHRO website for contractor affidavit list
- Check with CT Law Journal and the Department of Labor to ensure contractor is not debarred
- Select bidder (consider information on the Notification to Bidders/Contract Compliance Monitoring Report)
- Send notice to selected bidder and copy to CHRO (email Alvin.Bingham@ct.gov)
 - \$50,000.00 to \$499,999.99 Notification of Contract Award
 - \$500,000.00 equal to or greater than Intent to Award Contract Notice
- Include non-discrimination and set-aside language in contract and submit proposed contract language to CHRO for review (email Neal.Kline@ct.gov)
- Execute contract with contract compliance and set-aside language
 - \$50,000.00 to \$499,999.99 when awarded
 - \$500,000.00 equal to or greater than only when:
 - Contractor has submitted an approved Affirmative Action Plan to CHRO **OR**
 - Request authorization from CHRO to execute contract and retain 2% per month of the total contract value until contractor has submitted an approved Affirmative Action Plan to CHRO and CHRO has granted approval
- Ensure a copy of a letter of transmittal from the contractor was received confirming an Affirmative Action Plan was filed with CHRO

For Contracts Equal to or Greater than \$500,000.00

*The contract cannot be awarded without an approved Affirmative Action Plan **OR** authorization from CHRO to award and retain 2%*

- Contact CHRO AA/CC Unit to request authorization to execute the contract prior to the contractor's Affirmative Action Plan being approved (email Alvin.Bingham@ct.gov)
- Execute Contract when CHRO gives approval to do so
- Retain 2% of the total state-funded portion of the contract per month until CHRO approves the contractor's Affirmative Action Plan
- The municipality receives written notice from CHRO to release the 2% retainage
- Release the 2% retainage to the contractor

**Checklist for Contractors
On Municipal Public Works Contracts
Effective October 1st, 2015**

- Attend pre-bid meeting (if applicable)
- Discuss any parts of the contract that require special materials, equipment or installation that cannot be subcontracted (e.g. specialized medical equipment that can be installed by specific companies only)
- Complete non-discrimination affidavit form and submit to CHRO (email Spencer.Hill@ct.gov)
(This only needs to be done once every twelve months-check contractor affidavit list)
- Submit bid documents (be sure to read CHRO language and set-aside requirements)
(complete the Notification to Bidders/Contract Compliance Monitoring Report-which is included in the bid information -and return with your bid)

Selected Contractor

For projects greater than \$50,000 but less than \$500,000 in state funds

- Review award notice from municipality and follow instructions
 - If contractor has less than 50 employees submit a Set-Aside Plan to CHRO within 30 days of execution of contract
 - Contractors with 50 or more employees shall file an Affirmative Action Plan within 30 days of the execution of contract

For projects equal to or greater than \$500,000 in state funds

- Review the intent to award notice from municipality and follow instructions
 - Submit an Affirmative Action Plan to CHRO prior to award of contract
 - Receive approval of Affirmative Action Plan prior to award of contract

Other filing requirements

- Send a copy of a letter of transmittal to the municipality to confirm an Affirmative Action Plan or Set-Aside Plan was filed with CHRO
- File monthly reports as required
 - Monthly Employment Utilization Report (257/257a)
 - Monthly SBE/MBE Status Report (258/258a)
 - Monthly Materials Consumption Report (259)
 - Cumulative Employment Utilization Report for end of project (257b)
- Respond to request for closeout documents from CHRO, including, but not limited to:
 - Final SBE/MBE Status Report (258/258a)
 - Lien Waivers
 - Letter of Substantial Completion (when applicable)

**COMMISSION ON HUMAN RIGHTS AND OPPORTUNITIES
CONTRACT COMPLIANCE REGULATIONS
NOTIFICATION TO BIDDERS**

(Revised 09/3/15)

The contract to be awarded is subject to contract compliance requirements mandated by Sections 4a-60 and 4a-60a of the Connecticut General Statutes; and, when the awarding agency is the State, Sections 46a-71(d) and 46a-81i(d) of the Connecticut General Statutes. There are Contract Compliance Regulations codified at Section 46a-68j-21 through 43 of the Regulations of Connecticut State Agencies, which establish a procedure for awarding all contracts covered by Sections 4a-60 and 46a-71(d) of the Connecticut General Statutes.

According to Section 46a-68j-30(9) of the Contract Compliance Regulations, every agency awarding a contract subject to the contract compliance requirements has an obligation to “aggressively solicit the participation of legitimate minority business enterprises as bidders, contractors, subcontractors and suppliers of materials.” “Minority business enterprise” is defined in Section 4a-60 of the Connecticut General Statutes as a business wherein fifty-one percent or more of the capital stock, or assets belong to a person or persons: “(1) Who are active in daily affairs of the enterprise; (2) who have the power to direct the management and policies of the enterprise; and (3) who are members of a minority, as such term is defined in subsection (a) of Section 32-9n.” “Minority” groups are defined in Section 32-9n of the Connecticut General Statutes as “(1) Black Americans . . . (2) Hispanic Americans . . . (3) persons who have origins in the Iberian Peninsula . . . (4) Women . . . (5) Asian Pacific Americans and Pacific Islanders; (6) American Indians . . .” An individual with a disability is also a minority business enterprise as provided by Section 4a-60g of the Connecticut General Statutes. The above definitions apply to the contract compliance requirements by virtue of Section 46a-68j-21(11) of the Contract Compliance Regulations.

The awarding agency will consider the following factors when reviewing the bidder’s qualifications under the contract compliance requirements:

- (a) the bidder’s success in implementing an affirmative action plan;
- (b) the bidder’s success in developing an apprenticeship program complying with Sections 46a-68-1 to 46a-68-17 of the Administrative Regulations of Connecticut State Agencies, inclusive;
- (c) the bidder’s promise to develop and implement a successful affirmative action plan;
- (d) the bidder’s submission of employment statistics contained in the “Employment Information Form”, indicating that the composition of its workforce is at or near parity when compared to the racial and sexual composition of the workforce in the relevant labor market area; and
- (e) the bidder’s promise to set aside a portion of the contract for legitimate minority business enterprises. See Section 46a-68j-30(10)(E) of the Contract Compliance Regulations.

INSTRUCTIONS AND OTHER INFORMATION

The following BIDDER CONTRACT COMPLIANCE MONITORING REPORT must be completed in full, signed, and submitted with the bid for this contract. The contract awarding agency and the Commission on Human Rights and Opportunities will use the information contained thereon to determine the bidders compliance to Sections 4a-60 and 4a-60a CONN. GEN. STAT., and Sections 46a-68j-23 of the Regulations of Connecticut State Agencies regarding equal employment opportunity, and the bidder’s good faith efforts to include minority business enterprises as subcontractors and suppliers for the work of the contract.

1) **Definition of Small Contractor**

Section 4a-60g CONN. GEN. STAT. defines a small contractor as a company that has been doing business under the same management and control and has maintained its principal place of business in Connecticut for a one year period immediately prior to its application for certification under this section, had gross revenues not exceeding fifteen million dollars in the most recently completed fiscal year, and at least fifty-one percent of the ownership of which is held by a person or persons who are active in the daily affairs of the company, and have the power to direct the management and policies of the company, except that a nonprofit corporation shall be construed to be a small contractor if such nonprofit corporation meets the requirements of subparagraphs (A) and (B) of subdivision 4a-60g CONN. GEN. STAT.

MANAGEMENT: Managers plan, organize, direct, and control the major functions of an organization through subordinates who are at the managerial or supervisory level. They make policy decisions and set objectives for the company or departments. They are not usually directly involved in production or providing services. Examples include top executives, public relations managers, managers of operations specialties (such as financial, human resources, or purchasing managers), and construction and engineering managers.

BUSINESS AND FINANCIAL OPERATIONS: These occupations include managers and professionals who work with the financial aspects of the business. These occupations include accountants and auditors, purchasing agents, management analysts, labor relations specialists, and budget, credit, and financial analysts.

MARKETING AND SALES: Occupations related to the act or process of buying and selling products and/or services such as sales engineer, retail sales workers and sales representatives including wholesale.

LEGAL OCCUPATIONS: In-House Counsel who is charged with providing legal advice and services in regards to legal issues that may arise during the course of standard business practices. This category also includes assistive legal occupations such as paralegals, legal assistants.

COMPUTER SPECIALISTS: Professionals responsible for the computer operations within a company are grouped in this category. Examples of job titles in this category include computer programmers, software engineers, database administrators, computer scientists, systems analysts, and computer support specialists

ARCHITECTURE AND ENGINEERING: Occupations related to architecture, surveying, engineering, and drafting are included in this category. Some of the job titles in this category include electrical and electronic engineers, surveyors, architects, drafters, mechanical engineers, materials engineers, mapping technicians, and civil engineers.

OFFICE AND ADMINISTRATIVE SUPPORT: All clerical-type work is included in this category. These jobs involve the preparing, transcribing, and preserving of written communications and records; collecting accounts; gathering and distributing information; operating office machines and electronic data processing equipment; and distributing mail. Job titles listed in this category include telephone operators, bill and account collectors, customer service representatives, dispatchers, secretaries and administrative assistants, computer operators and clerks (such as payroll, shipping, stock, mail and file).

BUILDING AND GROUNDS CLEANING AND MAINTENANCE: This category includes occupations involving landscaping, housekeeping, and janitorial services. Job titles found in this category include supervisors of landscaping or housekeeping, janitors, maids, grounds maintenance workers, and pest control workers.

CONSTRUCTION AND EXTRACTION: This category includes construction trades and related occupations. Job titles found in this category include boilermakers, masons (all types), carpenters, construction laborers, electricians, plumbers (and related trades), roofers, sheet metal workers, elevator installers, hazardous materials removal workers, paperhangers, and painters. Paving, surfacing, and tamping equipment operators; drywall and ceiling tile installers; and carpet, floor and tile installers and finishers are also included in this category. First line supervisors, foremen, and helpers in these trades are also grouped in this category..

INSTALLATION, MAINTENANCE AND REPAIR: Occupations involving the installation, maintenance, and repair of equipment are included in this group. Examples of job titles found here are heating, ac, and refrigeration mechanics and installers; telecommunication line installers and repairers; heavy vehicle and mobile equipment service technicians and mechanics; small engine mechanics; security and fire alarm systems installers; electric/electronic repair, industrial, utility and transportation equipment; millwrights; riggers; and manufactured building and mobile home installers. First line supervisors, foremen, and helpers for these jobs are also included in the category.

MATERIAL MOVING WORKERS: The job titles included in this group are Crane and tower operators; dredge, excavating, and lading machine operators; hoist and winch operators; industrial truck and tractor operators; cleaners of vehicles and equipment; laborers and freight, stock, and material movers, hand; machine feeders and offbearers; packers and packagers, hand; pumping station operators; refuse and recyclable material collectors; and miscellaneous material moving workers.

PRODUCTION WORKERS: The job titles included in this category are chemical production machine setters, operators and tenders; crushing/grinding workers; cutting workers; inspectors, testers sorters, samplers, weighers; precious stone/metal workers; painting workers; cementing/gluing machine operators and tenders; etchers/engravers; molders, shapers and casters except for metal and plastic; and production workers.

3) Definition of Racial and Ethnic Terms (as used in Part IV Bidder Employment Information) (Page 3)

<p><u>White</u> (not of Hispanic Origin)- All persons having origins in any of the original peoples of Europe, North Africa, or the Middle East.</p> <p><u>Black</u>(not of Hispanic Origin)- All persons having origins in any of the Black racial groups of Africa.</p> <p><u>Hispanic</u>- All persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.</p>	<p><u>Asian or Pacific Islander</u>- All persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands. This area includes China, India, Japan, Korea, the Philippine Islands, and Samoa.</p> <p><u>American Indian or Alaskan Native</u>- All persons having origins in any of the original peoples of North America, and who maintain cultural identification through tribal affiliation or community recognition.</p>
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BIDDER CONTRACT COMPLIANCE MONITORING REPORT

PART I - Bidder Information

Company Name Street Address City & State Chief Executive	Bidder Federal Employer Identification Number _____ Or Social Security Number _____
Major Business Activity (brief description)	Bidder Identification (response optional/definitions on page 1) -Bidder is a small contractor. Yes ___ No ___ -Bidder is a minority business enterprise Yes ___ No ___ (If yes, check ownership category) Black ___ Hispanic ___ Asian American ___ American Indian/Alaskan Native ___ Iberian Peninsula ___ Individual(s) with a Physical Disability ___ Female ___
Bidder Parent Company (If any)	- Bidder is certified as above by State of CT Yes___ No___
Other Locations in Ct. (If any)	

PART II - Bidder Nondiscrimination Policies and Procedures

1. Does your company have a written Affirmative Action/Equal Employment Opportunity statement posted on company bulletin boards? Yes___ No___	7. Do all of your company contracts and purchase orders contain non-discrimination statements as required by Sections 4a-60 & 4a-60a Conn. Gen. Stat.? Yes___ No___
2. Does your company have the state-mandated sexual harassment prevention in the workplace policy posted on company bulletin boards? Yes___ No___	8. Do you, upon request, provide reasonable accommodation to employees, or applicants for employment, who have physical or mental disability? Yes___ No___
3. Do you notify all recruitment sources in writing of your company's Affirmative Action/Equal Employment Opportunity employment policy? Yes___ No___	9. Does your company have a mandatory retirement age for all employees? Yes___ No___
4. Do your company advertisements contain a written statement that you are an Affirmative Action/Equal Opportunity Employer? Yes ___ No ___	10. If your company has 50 or more employees, have you provided at least two (2) hours of sexual harassment training to all of your supervisors? Yes ___ No ___ NA ___
5. Do you notify the Ct. State Employment Service of all employment openings with your company? Yes ___ No ___	11. If your company has apprenticeship programs, do they meet the Affirmative Action/Equal Employment Opportunity requirements of the apprenticeship standards of the Ct. Dept. of Labor? Yes ___ No ___ NA ___
6. Does your company have a collective bargaining agreement with workers? Yes___ No___ 6a. If yes, do the collective bargaining agreements contain non-discrimination clauses covering all workers? Yes___ No___ 6b. Have you notified each union in writing of your commitments under the nondiscrimination requirements of contracts with the state of Ct? Yes___ No___	12. Does your company have a written affirmative action Plan? Yes ___ No ___ If no, please explain.
	13. Is there a person in your company who is responsible for equal employment opportunity? Yes ___ No ___ If yes, give name and phone number.

1. Will the work of this contract include subcontractors or suppliers? Yes__ No__

1a. If yes, please list all subcontractors and suppliers and report if they are a small contractor and/or a minority business enterprise. (defined on page 1 / use additional sheet if necessary)

1b. Will the work of this contract require additional subcontractors or suppliers other than those identified in 1a. above?

Yes__ No__

PART IV - Bidder Employment Information

Date:

JOB CATEGORY *	OVERALL TOTALS	WHITE (not of Hispanic origin)		BLACK (not of Hispanic origin)		HISPANIC		ASIAN or PACIFIC ISLANDER		AMERICAN INDIAN or ALASKAN NATIVE	
		Male	Female	Male	Female	Male	Female	Male	Female	male	female
Management											
Business & Financial Ops											
Marketing & Sales											
Legal Occupations											
Computer Specialists											
Architecture/Engineering											
Office & Admin Support											
Bldg/ Grounds Cleaning/Maintenance											
Construction & Extraction											
Installation , Maintenance & Repair											
Material Moving Workers											
Production Occupations											
TOTALS ABOVE											
Total One Year Ago											
FORMAL ON THE JOB TRAINEES (ENTER FIGURES FOR THE SAME CATEGORIES AS ARE SHOWN ABOVE)											
Apprentices											
Trainees											

*NOTE: JOB CATEGORIES CAN BE CHANGED OR ADDED TO (EX. SALES CAN BE ADDED OR REPLACE A CATEGORY NOT USED IN YOUR COMPANY)

1. Which of the following recruitment sources are used by you? (Check yes or no, and report percent used)				2. Check (X) any of the below listed requirements that you use as a hiring qualification (X)		3. Describe below any other practices or actions that you take which show that you hire, train, and promote employees without discrimination
SOURCE	YES	NO	% of applicants provided by source			
State Employment Service					Work Experience	
Private Employment Agencies					Ability to Speak or Write English	
Schools and Colleges					Written Tests	
Newspaper Advertisement					High School Diploma	
Walk Ins					College Degree	
Present Employees					Union Membership	
Labor Organizations					Personal Recommendation	
Minority/Community Organizations					Height or Weight	
Others (please identify)					Car Ownership	
					Arrest Record	
					Wage Garnishments	

Certification (Read this form and check your statements on it CAREFULLY before signing). I certify that the statements made by me on this BIDDER CONTRACT COMPLIANCE MONITORING REPORT are complete and true to the best of my knowledge and belief, and are made in good faith. I understand that if I knowingly make any misstatements of facts, I am subject to be declared in non-compliance with Section 4a-60, 4a-60a, and related sections of the CONN. GEN. STAT.

(Signature)	(Title)	(Date Signed)	(Telephone)
-------------	---------	---------------	-------------

Bidder Notification Letter Sample
Format Public Works Projects over
\$500,000

XYZ Company
street address
city/state

RE: Project number and name
Project location
Contract award amount
SBE/MBE Set-Aside Requirement (choose one of three options)

(Choose the provision that applies to the award, and delete the remaining two boxes)

25% for SBE contractors of which 25% (or 6.25% of project total) for SMBE contractors	6.25% for contractors	SMBE	Contractor must document good faith effort to include MBE contractors
---	-----------------------	------	---

Attn: company official

Date:

Subject: Affirmative Action Plan Requirements

Dear

Your company has been identified as the bidder of choice for the above referenced project. The work for this project falls under the provisions of CONN. GEN. STAT. Sections 46a-68c and 46a-68d which requires that prior to the award of this contract by this agency, you must have your company affirmative action plan approved by the Commission on Human Rights and Opportunities. Enclosed for your convenience is the suggested format for an affirmative action plan to assist in the preparation of your company plan. Should you have any questions regarding the preparation of your plan, you may contact the Contract Compliance Unit at the Commission on Human Rights and Opportunities at (860) 541-4709.

A copy of your plan must be submitted to the Commission on Human Rights and Opportunities within 30 days of your receipt of this letter. The Commission will review your affirmative action plan as required by Sections 46a68j-25 through 29 of the Administrative Regulations of Connecticut State Agencies within 60 days of submission. When the plan is approved, the

Commission will notify you and this agency so the contract can be awarded. Please send your affirmative action plan to:

Commission on Human Rights and Opportunities
25 Sigourney Street Hartford, CT 06106 Attn:
Contract Compliance Unit

Optional: You are also instructed to send a copy of the letter transmitting your plan to the Commission on Human Rights and Opportunities to:

Contract Awarding Agency Name
(address etc.)

If you have any other questions concerning this matter, please contact the undersigned at (860) (phone #)

Sincerely,

agency official

copy: Contract Compliance Unit, CHRO x
x x

C:aapnotltr

SECTION 3

BID BOND

INSTRUCTIONS IN USE OF BOND FORM

1. The Bid Bond form given on the following pages shall be used.
2. The surety on the Bond may be any corporation authorized to act as surety in the State of Connecticut.
3. The full name and business or residence address of each individual party to the Bond shall be inserted in the space provided therefore, and each such party shall sign the Bond with their usual signature on the line opposite the scroll seal.
4. If the principals are partners, their individual names appear in the space provided therefore, with the recital that they are partners composing a firm, naming it, and the Bond shall be executed by a general partner who has been authorized to act on behalf of the partnership.
5. If the principal or surety is a corporation, the name of the state in which incorporated shall be inserted in the space provided therefore and said instrument shall be executed and attested under the corporate seal as indicated in the form. If the corporation has no corporate seal, the fact shall be stated, in which case a scroll of adhesive seal shall appear following the corporate name.
6. The official character and authority of the person or persons executing the Bond for a corporation shall be certified by a proper officer, in lieu of such certificate, there may be attached to the Bond, copies of so much of the records of the corporation as will show the official character and authority of the officers signing, duly certified by a proper office, under the corporate seal, to be true copies.
7. If the principal or surety is a Limited Liability Company (LLC), the names of the members shall appear in the spaces provided therefore, with the recital that they are members of an LLC, naming it, and the Bond shall be executed by a managing member who has been authorized to act on behalf of the LLC. The official character and authority of the person or persons executing the Bond for an LLC shall be certified by a proper managing member. In lieu of such certificate, there may be attached to the Bond, copies of so much of the records of the LLC as will show the official character and authority of the members signing, duly certified by a proper member to be true copies.
8. The date of this Bond must not be prior to the date of the instrument in connection with which it is given.

FORM OF BID BOND

***** BID BOND *****

TOWN OF GREENWICH

_____ Date Bond Executed

Principals

Surety

_____ Penal Sum of Bond (Expressed in Words and Figures)

_____ Date of Bid

Know all persons by these presents, that we, the principals and surety above named, are held and firmly bound unto the Town of Greenwich, Connecticut, in the penal sum of the amount stated above, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents. The condition of this obligation is such that whereas the principal has submitted the accompanying Bid, dated as shown above, for:

Project Name

Now, therefore, if the principal shall not withdraw said Bid within the period specified therein after the opening of the same, or if no period be specified, within sixty (60) days after the said opening, and shall within the period specified therefore, or, if no period be specified, within ten (10) days after the prescribed forms are presented to them for signature, execute such further contractual documents, if any, as may be required by the terms of the Bid as accepted, and give bonds with good and sufficient surety or sureties as may be required, for the faithful performance and proper fulfillment of the resulting contract, and for the protection of all persons supplying labor and materials in the prosecution of the work provided for in such contract or in the event of the withdrawal of said Bid within the period specified, or the failure to enter into such contract and give such bonds within the time specified, if the principal shall pay the Town of Greenwich, Connecticut, the difference between the amount specified in said Bid and the amount for which said Town may procure the required work, supplies and services, if the latter amount be in excess of the former, then the above obligation shall be void and of no effect, otherwise to remain in full force and virtue.

In witness whereof, the above-bounden parties have executed this instrument under their several seals on the date indicated above. The name and corporate seal (if applicable) of each corporate party being hereto affixed.

Name of Partnership

Business Address (SEAL)

Partner - (Hereunto Duly Authorized)

IN THE PRESENCE OF

WITNESS

INDIVIDUAL PRINCIPAL

1. _____ AS TO

(SEAL)

2. _____ AS TO

(SEAL)

3. _____ AS TO

(SEAL)

4. _____ AS TO

(SEAL)

ATTEST

* _____

* CORPORATE PRINCIPAL

* BUSINESS ADDRESS

AFFIX
CORPORATION
SEAL

* BY-(HEREUNTO DULY AUTHORIZED)

* TITLE

ATTEST

* _____

* CORPORATE SURETY

* BUSINESS ADDRESS

AFFIX
CORPORATION
SEAL

* BY-(HEREUNTO DULY AUTHORIZED)

* TITLE

CERTIFICATE AS TO CORPORATE PRINCIPAL

I, _____, certify that I am the _____ of the Corporation/Limited Liability Company named as Principal in the within Bond, that _____, who signed the said Bond on behalf of the Principal, was then _____ of _____ said Corporation/Limited Liability Company, that I know their signature and their signature thereto is genuine, and that said Bond was duly signed, sealed (if a Corporation) and attested for and in behalf of said Corporation/Limited Liability Company by authority of its governing body.

(CORPORATE SEAL)

(CORPORATE SECRETARY)

SECTION 4
AGREEMENT

<u>TITLE</u>	<u>ARTICLE</u>
DEFINITIONS	4.1
THE CONTRACT DOCUMENTS.....	4.2
OBLIGATIONS AND LIABILITY OF CONTRACT.....	4.3
AUTHORITY OF THE ENGINEER.....	4.4
SUPERVISION OF WORK.....	4.5
INSURANCE	4.6
PATENTS.....	4.7
COMPLIANCE WITH LAWS	4.8
PROVISINS REQUIRED BY LAW DEEMED INSERTED	4.9
PERMITS	4.10
NOT TO SUBLET OR ASSIGN.....	4.11
TIME FOR COMMENCEMENT AND COMPLETION OF WORK	4.12
LIQUIDATED DAMAGES OR TIME CHARGE	4.13
NIGHT AND SUNDAY WORK.....	4.14
EMPLOY COMPETENT INDIVIDUALS	4.15
EMPLOY SUFFICIENT LABOR AND EQUIPMENT	4.16
INTOXICATING LIQUORS	4.17
ACCESS TO WORK.....	4.18
EXAMINATION OF WORK	4.19
DEFECTIVE WORK.....	4.20
PROTECTION AGAINST WATER AND STORM.....	4.21
MISTAKES OF CONTRACTOR.....	4.22
RIGHT TO MATERIALS	4.23

<u>TITLE</u>	<u>ARTICLE</u>
CHANGES	4.24
EXTRA WORK	4.25
CHANGES NOT TO AFFECT BONDS.....	4.26
CLAIMS FOR DAMAGE.....	4.27
ABANDONMENT OF WORK OR OTHER DEFAULT	4.28
PRICES FOR WORK	4.29
MONEYS MAY BE RETAINED.....	4.30
USE OR PARTIAL PAYMENT NOT ACCEPTANCE	4.31
PROGRESS ESTIMATES	4.32
FINAL ESTIMATES AND PAYMENT.....	4.33
GUARANTEE.....	4.34
RETAIN MONEY FOR REPAIRS	4.35
APPLICATION OF MONIES RETAINED.....	4.36
LIENS	4.37
CLAIMS	4.38
NO WAIVER	4.39
LIABILITY OF OWNER.....	4.40
RETURN OF DRAWINGS.....	4.41
CLEANING UP	4.42
LEGAL ADDRESS OF CONTRACTOR.....	4.43
HEADINGS.....	4.44
MODIFICATION OR TERMINATION.....	4.45
GOVERNING LAWS.....	4.46
RESIDENT'S PREFERENCE.....	4.47
PREVAILING WAGES	4.48
PAYMENT OF SUBCONTRACTORS	4.49

This agreement, herein referred to as the "Agreement", executed this _____ day of _____ in the year Two Thousand and _____, by and between the

Town of Greenwich, Connecticut, acting _____
Through its Department of Public Works, duly authorized therefore, which acts, herein solely for said Town and without personal liability to itself, Party of the first part, and

_____ Party of the second part.

Witnesseth, that the parties to these presents, each in consideration of the undertakings, promises and agreements on the part of the other herein contained, have undertaken, promised and agreed and do hereby undertake, promise and agree, the party of the first part for itself, its successors and assigns, and the party of the second part for themselves and their heirs, executors, administrators, successors and assigns, as follows

4.1 DEFINITIONS.

Wherever the words hereinafter defined or pronouns used in their stead occur in the contract documents, they shall have the following meaning

The word 'Owner' or 'Town' shall mean the party of the first part above designated.

The word 'Contractor' shall mean the party of the second part above designated.

The word 'State' shall mean the State of Connecticut including its Department of Transportation and any office, department, board, council, commission, institution or other entity of the State.

The word 'Architect' and/or the word 'Engineer' shall mean that person or firm duly appointed by the Town to undertake the duties and powers herein assigned to the Engineer, acting either directly or through duly authorized representatives.

The word 'Specifications' when used herein shall be deemed to refer to the General Conditions, Technical and Materials Specifications and Special Conditions, if any.

The words 'Herein', 'Hereinafter', 'Hereunder' and words of like import, shall be deemed to refer to the contract documents.

The word 'Project' means certain improvements to be made to the Fire Protection Cistern at 50 Cutler Road, Town Project No. 17-15, which include, but are not limited to the installation of a 10,000-gallon underground precast concrete fire protection cistern and associated vent pipe, dry hydrant piping, crushed stone pull-off area and property restoration to be located at 50 Cutler Road.

4.2 THE CONTRACT DOCUMENTS.

The 'Agreement', the 'Information for Bidders', the Contractor's 'Bid' as accepted by the owner, the 'Special Conditions', if any, the 'General, Technical and Materials specifications', the 'Drawings' and all addenda and amendments to any of the foregoing, collectively constitute the contract documents, and are sometimes herein referred to as the "Contract".

The contract documents are complementary, and what is called for by anyone shall be as binding as if called for by all. In the event of any conflict or inconsistency between the provisions of the 'Special Conditions', if any, and the provisions of any of the other contract documents, the provisions of the "Special

Conditions", if any shall prevail. In the event of conflict or inconsistency between the provisions of the 'Agreement' and the provisions of the contract documents other than the 'special Conditions', if any, the provisions of the 'agreement' shall prevail.

4.3 OBLIGATIONS AND LIABILITY OF CONTRACTOR.

The Contractor shall do all the work and perform and furnish all the labor, services, materials, equipment, plant, machinery, apparatus, appliances, tools, supplies and all other things (except as otherwise expressly provided herein) necessary and as herein specified for the proper performance and completion of the work in the manner and within the time hereinafter specified, in strict accordance with the drawings, specifications and other contract documents, in conformity with the directions and to the satisfaction of the Engineer, and at the prices herein agreed upon therefore.

All parts of the work and all fixtures, equipment, apparatus and other items indicated on the drawings and not mentioned in the specifications, or vice versa, and all work and material usual and necessary to make the work complete in all its parts, including all incidental work necessary to make it complete and satisfactory and ready for use and operation, whether or not they are indicated on the drawings or mentioned in the specifications, shall be furnished and executed the same as if they were called for both by the drawings and by the specifications.

The Contractor shall coordinate their operations with those of any other Contractors who may be employed on other work of the Town, shall avoid interference therewith, and shall cooperate in the arrangements for storage of materials and equipment.

The Contractor shall notify the Fire and Police Departments prior to any construction which is expected to block off vehicular or pedestrian traffic.

The Contractor shall conduct their work so as to interfere as little as possible with private business and public travel. Wherever and whenever necessary or required, they shall maintain fences, furnish watchmen, maintain lights and take such other precautions as may be necessary to protect life and property and at their own expenses unless specifically provided for otherwise herein.

The Contractor shall have complete responsibility for the work and the protection thereof and for preventing injuries to persons and damage to the work and property and utilities on or about the work, until final completion and acceptance thereof. They shall in no way be relieved of their responsibility by any right of the Engineer to give permission or directions relating to any part of the work, by any such permission or directions given, or by failure of the Engineer to give such permission or directions. The Contractor shall bear all costs, expenses, losses and damages on account of the quantity or character of the work or the nature of the land (including but not limited to subsurface conditions) in or under or on which the work is done being different from that indicated or shown in the contract documents or from what was estimated or expected, or on account of the weather, elements, or other causes. The Contractor shall indemnify and save harmless the Town and the Engineer and their officers, agents, servants and employees, from and against any and all claims, demands, suits, proceedings, liabilities, judgments, awards, losses, damages, costs and expenses, including attorneys' fees, on account of bodily injury, sickness, disease, death or other damages sustained by any person or persons or injury or damage to or destruction of any property, directly or indirectly arising out of, relating to or in connection with the work, whether or not due or claimed to be due in whole or in part to the active, passive or concurrent negligence or fault of the Contractor, their officers, agents, servants or employees, any of their subcontractors, the Town, the Engineer or any of their respective officers, agents, servants, or employees and/or any other person or persons, and whether or not such claims, demands, suits or proceedings are just, unjust, groundless, false or fraudulent, and the Contractor shall and does hereby assume and agrees to pay for (or, in the case of professional liability matters indemnify for,) the defense of all such claims, demands, suits and proceedings, provided, however, that the Contractor shall not be required to indemnify the Town, the Engineer, their officers, agents, servants or employees, against any such damages, occasioned solely by defects in maps, plans, drawings, designs, or specifications prepared, acquired or used by the Engineer and/or solely by the negligence or fault of the

Engineer, and provided further, that the Contractor shall not be required to indemnify the Town, their officers, agents, servants, or employees, against such damages occasioned solely by acts or omissions of the Town in connection with the work.

The Contractor shall conduct their operations so as not to damage existing structures or work installed either by them or by other Contractors. In case of any such damage resulting from their operations, they shall repair and make good as new, the damaged portions at their own expense with the consent of the damaged party. In the event that consent is not given, the Contractor shall continue to be liable for the damages caused.

The Contractor shall be as fully responsible to the Town for the acts and omissions of their subcontractors, their officers, agents, servants and employees as they are for their own acts and omissions and those of their own officers, agents, servants and employees.

Should the Contractor sustain any loss, damage or delay through any act or omission of any other Contractor or any subcontractor of any such other contractor or any material supplier, the Contractor shall have no claim against the Town therefore, other than for an extension of time, but shall have recourse solely to such other Contractor, subcontractor or material supplier.

If any other Contractor or any subcontractor of any such other Contractor shall suffer or claim to have suffered loss, damage or delay by reason of the acts or omissions of the Contractor or of any of their subcontractors, the Contractor agrees to assume the defense against any such claim and to reimburse such other Contractor or subcontractor for such loss or damage. The Contractor agrees to and does hereby indemnify and save harmless the Town from and against any and all claims by such other Contractor or subcontractors, alleging such loss, damage or delay and from and against any and all claims, demands, suits, proceedings, liabilities judgments, awards, losses, damages, costs and expenses including attorneys' fees arising out of, relating to or resulting from such claims.

The Contractor shall promptly pay all federal, state and local taxes which may be assessed against them in connection with the work or their operations under the agreement and/or the other contract documents, including, but not limited to, taxes attributable to the purchase of material and equipment, to the performance of services and the employment of persons in the prosecution of the work.

4.4 AUTHORITY OF THE ENGINEER.

The Engineer shall be the sole judge of the intent and meaning of the drawings, special conditions, if any, and technical and material specifications and their decisions thereon and their interpretation thereof shall be final, conclusive and binding on all parties.

The Engineer shall be the Town's representative during the life of the contract and they shall observe the work in progress on behalf of the Town. They shall have authority (1) to act on behalf of the Town to the extent expressly provided in the contract or otherwise in writing. (2) to stop the work whenever such stoppage may be necessary, in their sole discretion, to prevent improper execution of the work or otherwise to protect the interests of the Town. (3) to approve and direct the sequence of execution and general conduct of the work and to direct that changes be made in such sequence where, in their sole discretion, public necessity or welfare, the interest of the Town or the progress of the work shall require. Such approval and/or direction shall, however, in no way relieve or diminish the responsibility of the Contractor for or in the conduct or the work. (4) to determine the amount, quality, acceptability and fitness of all work, materials and equipment required by the contract. (5) to decide all questions which arise in relation to the work, the execution thereof, and the fulfillment of the contract.

The Contractor shall proceed without delay to perform the work as directed, instructed, determined or decided by the Engineer and shall comply promptly with such directions, instructions, determinations or decisions. If the Contractor has any objections thereto, they may require that any such direction, instruction, determination or decision be put in writing and within ten (10) days after receipt of any such writing they

may file a written protest with the Town stating clearly and in detail their objections, the reasons therefore and the nature and amount of additional compensation, if any, to which they claim they will be entitled thereby. A copy of such protest shall be filed with the Town. Unless the Contractor files such written protest with the Town and Engineer within such ten (10) day period, they shall be deemed to have waived all grounds for protest of such direction, instructions, determination or decision and all claims for additional compensation or damages occasioned thereby, and shall further be deemed to have accepted such direction, instruction, determination or decision as being fair, reasonable and finally determinative of their obligations and rights under the contract.

The Engineer's decision on any matter mentioned above shall be final and conclusive when made in good faith and in the exercise of their best judgment and shall be accepted by the Contractor and the owner in all cases.

4.5 SUPERVISION OF WORK.

The Contractor shall give the work the constant attention necessary to ensure the expeditious and orderly progress thereof and shall cooperate with the Engineer in every possible way.

At all times, the Contractor shall have as their agent on the work a competent superintendent capable of reading and thoroughly understanding the drawings and specifications, with full authority to execute the directions of the Engineer without delay and to supply promptly such labor, services, materials, equipment, plant, apparatus, appliances, tools, supplies and other items as may be required. Such superintendent shall not be removed from the work without the prior written consent of the Engineer. If, in the opinion of the Engineer, the superintendent or any successor proves incompetent, the Contractor shall replace them with another person approved by the Engineer, such approval, however, shall in no way relieve or diminish the Contractor's responsibility for the new superintendent.

Whenever the Contractor or their agent or superintendent is not present on any part of the work where it may be necessary to give directions or instructions with respect to such work, such directions or instructions may be given by the Engineer to and shall be received and obeyed by the foreman or any other person in charge of the particular work involved.

4.6 INSURANCE.

Insurance Requirements:

Before starting and until final completion and acceptance of the work called for in the Contract and expiration of the guarantee period provided for in the Contract, the Contractor shall procure and maintain insurance of the types and amounts checked in paragraphs A through F, below.

The Contractor shall require each of its subcontractors to procure and maintain, until final completion, acceptance and guarantee of each subcontractor's work, the same insurance of the types and amounts as checked in paragraphs A through F below.

Certification and Cancellation:

The Contractor shall furnish, prior to the start of work called for in the Contract, three (3) certificates to the Town of each insurance policy or policies with the Code Number of the policy for each, a representation that policy cannot be canceled or amended by the insurer in less than sixty (60) days after the Town has received written notice of cancellation or amendment by certified or registered mail, also a representation that the insurer will notify the Town immediately of any lapse in coverage cancellation or restrictive amendment and also attach a true copy of the broker or agent's license to do business in Connecticut. Such certificates shall be on the Town form attached hereto and shall contain an affirmative representation that the coverage afforded is as required herein.

The Contractor shall furnish prior to the start of work called for in the contract the Acord certificate of insurance form for insurance documentation purposes as well as an endorsement letter from their Agent/Broker.

The awarded vendor will be required to provide insurance coverage as specified on the **Insurance Requirements Sheet, enclosed herein**, of this Request for Bid. Upon award, the **Acord certificate of insurance form** must be completed by the vendor's insurance agent/broker and submitted to the Engineering Division. The Town of Greenwich must be added as an additional insured on the Acord form. The signing agent/broker must also certify in writing that the Town of Greenwich and owner of 50 Cutler Road has been endorsed as an additional insured on the General Liability insurance policy. This letter shall be addressed to the Engineering Division and **must follow exactly the format of the 'Sample Agent/Broker Letter' enclosed herein**. The letter must be dated **on or after** the date stated on the Acord certificate of insurance. If the insurance coverage required is provided on more than one Acord certificate of insurance, then additional endorsement letters are also required. **The authorized representative who signs the Acord form must sign the letter as well.**

The Town of Greenwich will not accept insurance coverage, other than Excess Liability coverage, from insurance providers that are surplus lines writers in Connecticut. All insurance companies providing coverage, other than excess liability coverage, must be licensed in the state of Connecticut. Please provide this information to your insurance agent/broker.

Please note that the Acord certificate of insurance must be signed by an individual authorized representative, not with the agency name. The signature must be an original ink signature, not a stamped signature.

Company name and address must conform on all documents including insurance documentation. The Contract number, project name and a brief description must be inserted in the "Description of Operations" section of the Acord form. **It must be confirmed on the Acord Form that the Town of Greenwich and owner of 50 Cutler Road is endorsed as an additional insured by having the appropriate box checked off and stating such in the "Description of Operations" section. The "Description of Operations" section should also reference Contract No. (provided to the awarded vendor), Construction of the Fire Protection Cistern at 50 Cutler Road Town Project No. 17-15.**

The Contractor shall be responsible for maintaining the specified insurance coverage in force to secure all of the Contractor's obligations under the Contract with an insurance company or companies with an AM Best Rating of A:VII or better, licensed to write such insurance in Connecticut and acceptable to the Risk Manager, Town of Greenwich. For excess liability only, non-admitted insurers are acceptable, provided they are permitted to do business through Connecticut excess line brokers per listing on the current list of Licensed Insurance Companies, Approved Reinsurers, Surplus Lines Insurers and Risk Retention Groups issued by the State of Connecticut Insurance Department.

The vendor **should submit with the bid** the signed, original "**Insurance Procedure**" form, **enclosed herein**, which states that the vendor agrees to provide the specified insurance coverage for this Bid at no additional charge above any insurance charge declared in the bid.

TOWN OF GREENWICH

INSURANCE PROCEDURE

PLEASE NOTE:

RETURN THIS COMPLETED FORM WITH YOUR BID/PROPOSAL. FAILURE TO DO SO MAY RESULT IN YOUR BID/PROPOSAL BEING REJECTED.

Please take the insurance requirements of the Contract to your agent/broker immediately upon receipt of the bid documents to determine your existing coverage and any costs for new or additional coverage required for the work noted in this Request for Bid/Proposal. Any bids/proposals which contain exceptions to the insurance requirements may be considered nonresponsive and may be rejected.

STATEMENT OF VENDOR:

I have read the insurance requirements for this work and have taken the documentation to my insurance agent/broker. The bid/proposal cost reflects any additional costs relating to insurance requirements for this work.

If I am awarded this contract, I or my insurance agent shall submit all of the required insurance documentation to the Town of Greenwich Engineering Division within ten (10) days after the date of the award of the contract.

Signature

Date

Contractor

Insurance Requirement Sheet

Insurance Requirements: Before starting and until final completion and acceptance of the work called for in the Contract and expiration of the guarantee period provided for in the Contract, the Contractor and its subcontractors, if any, shall procure and maintain insurance of the types and amounts checked in paragraphs A through F below for all Contract operations.

- A. **General Liability, with minimum coverage for combined bodily injury and property damage liability of \$2,000,000 general aggregate, \$1,000,000 per occurrence including:**
 - 1. **Commercial General Liability.**
 - 2. **Town as additional insured. Contractor's insurance must be primary and non-contributory.**
 - 3. **Owners and Contractors Protective Liability (separate policy in the name of the Town).**

- B. **Comprehensive Automobile Liability, with minimum coverages of \$1,000,000 combined single limit for bodily injury and property damage, including, where applicable, coverage for any vehicle, all owned vehicles, scheduled vehicles, hired vehicles, non-owned vehicles and garage liability.**

- C. **Excess Liability, with minimum coverage of \$5,000,000 in umbrella form, or such other form as approved by Town Department Head and Risk Management Director.**

- D. **Workers' Compensation and Employer's Liability, with minimum coverage as provided by Connecticut State Statutes.**

- E. **Professional Liability (for design and other professionals for Errors and Omissions), with minimum coverage of \$1,000,000. If the policy is on a claims-made basis, coverage shall be continually renewed or extended for three (3) years after work is completed under the Contract.**

- F. **Other (Builder's Risk, etc.): _____.**

- G. **CERTIFICATE HOLDER: TOWN OF GREENWICH
ATTN: ENGINEERING DIVISION (Also fill in on ACORD Certificate of Insurance)
101 Field Point Road, Greenwich, CT 06830.**

SPECIAL NOTE: Private property owner at 50 Cutler Road must be listed as additionally insured.

The **Acord certificate of insurance form** must be executed by your insurance agent/broker and returned to this office. The most current Acord form should be used for insurance documentation purposes. Company name and address must conform on all documents including insurance documentation. It is required that the agent/broker note the individual insurance companies providing coverage, rather than the insurance group, on the Acord form. The Contract number (provided to the awarded Contractor), project name and a brief description must be inserted in the "Description of Operations" field. It must be confirmed on the Acord Form that the Town of Greenwich is endorsed as an additional insured by having the appropriate box checked off and stating such in the "Description of Operations" field. A letter from the awarded vendor's agent/broker certifying that the Town of Greenwich has been endorsed onto the general liability policy as an additional insured is also mandatory. This letter must follow exactly the format provided by the Purchasing Department and must be signed by the same individual authorized representative who signed the Acord form, both of which must be signed with original ink "wet" signatures. If the insurance coverage required is provided on more than one Acord certificate of insurance, then additional agent/broker letters are also required. Contract development will begin upon receipt of complete, correct insurance documentation.

The Contractor shall be responsible for maintaining the above insurance coverage in force to secure all of the Contractor's obligations under the Contract with an insurance company or companies with an AM Best Rating of A:VII or better, licensed to write such insurance in Connecticut and acceptable to the Risk Manager, Town of Greenwich. For excess liability only, non-admitted insurers are acceptable, provided they are permitted to do business through Connecticut excess line brokers per listing on the current list of Licensed Insurance Companies, Approved Reinsurers, Surplus Lines Insurers and Risk Retention Groups issued by the State of Connecticut Insurance Department.

**SAMPLE
AGENT/BROKER
(LETTERHEAD)**

(Date)

Town of Greenwich
Engineering Division
101 Field Point Road
Greenwich, CT 06830

Re: **(Name of the Insured)**
Town of Greenwich Contract No. XXXX

To Whom It May Concern:

The undersigned hereby certifies as follows:

- (1) I am a duly licensed insurance agent under the laws of the State of **[insert state]** and an authorized representative of all companies affording coverage under the Acord form submitted herewith;
- (2) The Town of Greenwich has been endorsed as an additional insured under general liability policy no. **[insert policy number]**, issued by **[insert company affording coverage]** to **[name of insured]**;
- (3) The general liability policy referenced in paragraph (2) above meets or exceeds the coverage in Commercial General Liability ISO form CG 00 01 10 01, including contractual liability;
- (4) The policies listed in the Acord form submitted to the Town of Greenwich in connection with the above referenced contract have been issued to the insured in the amounts stated and for the periods indicated in the Acord form; and
- (5) The Town of Greenwich shall be given thirty (30) days prior written notice of cancellation, lapse or restrictive amendment (except ten days' notice of nonpayment) of the policies listed in the Acord form.

Sincerely,

(Signature)

Authorized Representative for all companies listed in the Acord form

4.7 PATENTS.

The Contractor shall indemnify and save harmless the Town and all persons acting for or on behalf of the Town from all claims and liability of any nature or kind, and all damages, costs and expenses, including attorneys' fees, arising from or occasioned by an infringement or alleged infringement of any patent rights on any invention, process, materials, equipment, article, or apparatus, or any part hereof, furnished and installed by the Contractor, or arising from or occasioned by the use or manufacture thereof, including their use by the Town.

4.8 COMPLIANCE WITH LAWS.

The Contractor shall keep themselves fully informed of all existing and future Federal, State and local laws, ordinances, rules and regulations affecting those engaged or employed on the work, the materials and equipment used in the work or the conduct of the work, and of all orders, decrees and other requirements of bodies or tribunals having any jurisdiction or authority over the same. If any discrepancy or inconsistency is discovered in the drawings, specifications or other contract documents in relation to any such law, ordinance, rule, regulation, order decree or other requirement, the Contractor shall forthwith report the same to the Engineer in writing. The Contractor shall at all times observe and comply with and cause all their agents, servants, employees and subcontractors to observe and comply with all such existing and future laws, ordinances, rules regulations, orders, decrees, and other requirements, and they shall protect, indemnify and save harmless the Town, its officers, agents, servants, and employees, from and against any and all claims, demands, suits, proceedings, liabilities, judgments, penalties, losses, damages, costs and expenses, including attorneys' fees, arising from or based upon any violation or claimed violation of any such law, ordinance, rule, regulation, order, decree or other requirement, whether committed by the Contractor or any of their agents, servants, employees or subcontractors.

4.9 PROVISIONS REQUIRED BY LAW DEEMED INSERTED.

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

4.10 PERMITS.

The Contractor shall, at their own expense, take out and maintain all necessary permits from the State, Town, or other public authorities, shall give all notices required by law and shall post all bonds and pay all fees and charges incidental to the due and lawful prosecution of the work.

4.11 NOT TO SUBLET OR ASSIGN.

The Contractor shall constantly give their personal attention to the faithful prosecution of the work, shall keep the same under their personal control, shall not assign the contract or sublet the work or any part thereof without the previous written consent of the Town, and shall not assign any of the monies payable under the contract, or their claim thereto, unless by and with the like written consent of the Town and the surety on the contract bonds. Any assignment or subletting in violation hereof shall be void and unenforceable.

4.12 TIME FOR COMMENCEMENT AND COMPLETION OF WORK.

The Contractor shall commence with the work within ten (10) days after receipt of notice to proceed from the Town. The rate of progress shall be such that the work shall be performed and completed in accordance with the contract before the expiration of the time limit stipulated, if any, under article 1.9, 'time limits and time charge', which time is of the essence of the agreement.

4.13 LIQUIDATED DAMAGES OR TIME CHARGE.

Liquidated damages or time charge, if any, shall be as specified under article 1.9, 'time limits and time charge'.

4.14 NIGHT AND SUNDAY WORK.

No work shall be done at night or on Sunday except (1) usual protective work, such as pumping and the tending of lights and fires, (2) work done in case of emergency threatening injury to persons or property, or (3) if all of the conditions set forth in the next paragraph below are met.

No work other than that included in (1) and (2) above, shall be done at night except when (A), in the sole judgment of the Engineer, the work will be of advantage to the Town and can be performed satisfactorily at night, (B) the work will be done by a crew organized for regular and continuous night work, and (C) the Engineer has given written permission for such night work.

4.15 EMPLOY COMPETENT INDIVIDUALS.

The Contractor shall employ only competent individuals on the work and shall not employ individuals or means which may cause strikes, work stoppages or disturbance by workers employed by the Contractor, any subcontractor, the Town, the Engineer or any other Contractor. Whenever the Engineer notifies the Contractor in writing that in their opinion, any person on the work is incompetent, unfaithful, disorderly, or otherwise unsatisfactory or not employed in accordance with the provisions of the contract, such person shall be discharged from the work and shall not again be employed on it, except with the written consent of the Engineer.

4.16 EMPLOY SUFFICIENT LABOR AND EQUIPMENT.

If in the sole judgment of the Engineer, the Contractor is not employing sufficient labor, plant, equipment or other means to complete the work within the time specified, the Engineer may, after giving written notice, require the Contractor to employ such additional labor, plant, equipment and other means as the Engineer deems necessary to enable the work to progress properly.

4.17 INTOXICATING LIQUORS.

The Contractor shall not sell and shall neither permit nor suffer the introduction or use of intoxicating liquors upon or about the work.

4.18 ACCESS TO WORK.

The Town, the Engineer and their officers, agents, servants, and employees may at any and all times and for any and all purposes, enter upon the work and the site thereof and the premises used by the Contractor, and the Contractor shall at all times provide safe and proper facilities therefore.

4.19 EXAMINATION OF WORK.

The Engineer shall be furnished by the Contractor with every reasonable facility for examining and inspecting the work and for ascertaining that the work is being performed in accordance with the requirements and intent of the contract, even to the extent of requiring the uncovering or taking down portions of finished work by the Contractor. Should the work thus uncovered or taken down prove satisfactory, the cost of uncovering or taking down and the replacement thereof, shall be considered as extra work unless the original work was done in violation of the contract in point of time or in the absence of the Engineer or their inspector and without their written authorization, in which case said cost shall be borne by the Contractor. Should the work uncovered or taken down prove unsatisfactory, said cost shall likewise be borne by the Contractor.

4.20 DEFECTIVE WORK.

The inspection of the work shall not relieve the Contractor of any of their obligations to perform and complete the work as required by the contract. Defective work shall be corrected and unsuitable materials, equipment, apparatus and other items shall be replaced by the Contractor, notwithstanding that such work, materials, equipment, apparatus and other items may have been previously overlooked or accepted or estimated for payment. If the work or any part thereof shall be found defective at any time before the final acceptance of the work, the Contractor shall forthwith make good such defect in a manner satisfactory to the Engineer. If any material, equipment, apparatus or other items brought upon the site for use or incorporation in the work, or selected for the same, is condemned by the Engineer as unsuitable or not in conformity with the specifications or any of the other contract documents, the Contractor shall forthwith remove such materials, equipment, apparatus and other items from the site of the work and shall at their own cost and expense, make good and replace the same and any material furnished by the Town which shall be damaged or rendered defective by the handling or improper installation by the Contractor, their agents, servants, employees or subcontractors.

4.21 PROTECTION AGAINST WATER AND STORM.

The Contractor shall take all precautions necessary to prevent damage to the work by storms or by water entering the site of the work directly or through the ground. In case of damage by storm or water, the Contractor shall at their own cost and expense make such repairs or replacements or rebuild such parts of the work as the Engineer may require in order that the finished work may be completed as required by the Contractor.

The Engineer may suspend the performance of any work at any time when, in their judgment, the conditions are not suitable or the proper precautions are not being taken, whatever the weather may be, in any season. The Contractor agrees that they shall not have or assert any claim for or be entitled to any additional compensation or damages on account of any such suspension.

4.22 MISTAKES OF CONTRACTOR.

The Contractor shall promptly correct and make good any and all defects, damages, omissions, or mistakes for which they and/or their agents, servants, employees or subcontractors are responsible, and they shall pay to the Town all costs, expenses, losses and damages resulting there from or by reason thereof as determined by the Engineer.

4.23 RIGHT TO MATERIALS.

Nothing in the contract shall be constructed as vesting in the Contractor any right or property in the materials, equipment, apparatus and other items furnished after they have been installed or incorporated in or attached or affixed to the work or the site, but all such materials, equipment, apparatus and other items shall, upon being so installed, incorporated, attached or affixed, become the property of the Town.

4.24 CHANGES.

The Town, through the Engineer, may make changes in the work and in the drawings and specifications therefore by making alterations therein, additions thereto or omissions there from. All work resulting from such changes shall be performed and furnished under and pursuant to the terms and conditions of the contract. If such changes result in an increase or decrease in the work to be done hereunder, or increase or decrease the quantities thereof, adjustment in compensation shall be made therefore, at the unit prices stipulated in the contract for such work, except that if unit prices are not stipulated for such work, compensation for additional or increased work shall be made as provided hereinafter under the article titled 'extra work', and for eliminated or decreased work the Contractor shall allow the Town a reasonable credit as determined by the Engineer. Except in an emergency endangering life or property, no change shall be made unless in pursuance of a written order from the Engineer authorizing the change and no claim for additional compensation shall be valid unless the change is so ordered.

The Contractor agrees that they shall neither have nor assert any claim for or be entitled to any

additional compensation for damages or for loss of anticipated profits on work that is eliminated.

4.25 EXTRA WORK.

The Contractor shall perform any extra work (work in connection with the contract but not provided for herein) when and as ordered in writing by the Engineer, at the unit prices stipulated in the contract for such work, or, if none are so stipulated, either (A) at the price agreed upon before such work is commenced and named in the written order for such work, or (B) if the Engineer so elects, for the reasonable cost of such work, as determined by the Contractor and approved by the Engineer, plus a percentage of such cost, as set forth below. No extra work shall be paid for unless specifically ordered as such, in writing by the Engineer.

The cost of extra work done under (B) above, shall include the reasonable cost to the Contractor of materials installed and equipment used, common and skilled labor, and foremen and the fair rental of all machinery and equipment used on the extra work for the period of such use.

At the request of the Engineer, the Contractor shall furnish itemized statements of the cost of the extra work ordered as above, and give the Engineer access to all records, accounts, bills and vouchers and correspondence relating thereto.

The Contractor may include in the cost of extra work the amounts of additional premiums, if any, (other than premiums on bonds) paid on the required insurance on account of such extra work of social security or other direct assessments upon the Contractor's payroll by Federal or other properly authorized public agencies and of other approved assessments when such assessments are not normally included in payments made by the Contractor directly to their employees, but in fact are, and customarily recognized as, part of the cost of doing work.

The fair rental for all machinery and equipment shall be based upon the most recent edition of 'Compilation of Rental Rates for Construction Equipment', published by the Associated Equipment Distributors, or a similar publication approved by the Engineer. Rental for machinery and equipment shall be based upon an appropriate fraction of the approved monthly rate schedule. If said extra work requires the use of machinery or equipment not already on the site of the work, the cost of transportation, not exceeding a distance of 100 miles, of such machinery or equipment to and from the work shall be added to the fair monthly rental, provided however, that this shall not apply to machinery or equipment already required to be furnished under the terms of the contract.

The Contractor shall not include in the cost of extra work any cost or rental for small tools, buildings, or any portion of the time of the Contractor, their superintendent, or their office and engineering staff.

To the cost of extra work done by the Contractor's own forces under (B) above (determined as stated above), the Contractor shall add ten (10) percent to cover their overhead, use of capital, the premium on the bonds as assessed upon the amount of this extra work, and profit.

In the case of extra work done under (B) above, by a subcontractor, the subcontractor shall compute, as above, their cost for the extra work, to which they shall add ten (10) percent in the case of the Contractor, and the Contractor shall be allowed an additional ten (10) percent of the subcontractor's cost for the extra work to cover the costs of the Contractor's overhead, use of capital, the premium on the bonds as assessed upon the amount of this extra work, and profit. Said subcontractor's cost must be reasonable and approved by the Engineer.

If extra work is done under (B) above, the Contractor and/or subcontractor shall keep daily records of such extra work. The daily record shall include the names of persons employed; the nature of the work performed, and hours worked materials and equipment incorporated, and machinery or equipment used, if any, in the prosecution of such extra work. This daily record, to constitute verification that the work was done, must be signed both by the Contractor's authorized representative and by the Engineer. A separate daily record shall be submitted for each extra work order. Extension of time on account of extra work shall, when applicable, be provided for under Article 1.09, 'Time Limits and Time Charge'.

4.26 CHANGES NOT TO AFFECT BONDS.

It is distinctly agreed and understood that any changes made in the work or the drawings or specifications therefore (whether such changes increase or decrease the amount thereof or the time required for its performance) or any changes in the manner or time of payments made by the Town to the Contractor, or any other modifications of the contract, shall in no way annul, release, diminish or affect the liability of the surety on the contract bonds given by the Contractor, it being the intent hereof that notwithstanding such changes, the liability of the surety on said bonds continue and remain in full force and effect.

4.27 CLAIMS FOR DAMAGES.

If the Contractor makes claim for any damages alleged to have been sustained by breach of contract or otherwise, they shall, within ten (10) days after occurrence of the alleged breach or within ten (10) days after such damages are alleged to have been sustained, whichever date is the earlier, file with the Engineer a written, itemized statement in triplicate of the details of the alleged breach and the details and amount of the alleged damages. The Contractor agrees that unless such statement is made and filed as so required, their claim for damages shall be deemed waived, invalid and unenforceable and that they shall not be entitled to any compensation for any such alleged damages within ten (10) days after the timely filing of such statement, the Engineer shall file with the Town one copy of the statement and shall file with the Town and the Contractor their determination thereon.

The Contractor shall not be entitled to claim any additional compensation for damages by reason of any direction, instruction, determination or decision of the Engineer, nor shall any such claims be considered, unless the Contractor shall have complied in all respects with the third paragraph of that article above, of this agreement titled 'Authority of the Engineer', including, but not limited to the filing of a written protest in the manner and within the time therein provided.

4.28 ABANDONMENT OF WORK OR OTHER DEFAULT.

If the work shall be abandoned, or any part thereof shall be sublet without previous written consent of the Town, or the contract or any monies payable hereunder shall be assigned otherwise than as herein specified, or if at any time the Engineer shall be of the opinion and shall so certify in writing, that the conditions herein specified as to rate of progress are not being complied with, or that the work or any part thereof is being unnecessarily or unreasonably delayed, or that the Contractor has violated or is in default under any of the provisions of the contract, or if the Contractor becomes bankrupt or insolvent or goes or is put into liquidation or dissolution, either voluntarily or involuntarily, or petitions for an arrangement or reorganization under the bankruptcy act, or makes a general assignment for the benefit of creditors or otherwise acknowledges insolvency, the happening of any of which shall be and constitute a default under the contract, the Town may notify the Contractor in writing, with a copy of such notice mailed to the surety, to discontinue all work or any part thereof. Thereupon, the Contractor shall discontinue such work or such part thereof as the Town may designate, and the Town may, upon giving such notice, by contract or otherwise as it may determine, complete the work of such part thereof and charge the entire cost and expense of so completing the work, the Town shall be entitled to reimbursement from the Contractor and the Contractor agrees to pay to the Town any losses, damages, costs and expenses, including attorneys' fees, sustained or incurred by the Town by reason of any of the foregoing causes. For the purpose of such completion, the Town may for itself or for any Contractors employed by the Town, take possession of and use or cause to be used, any and all materials, equipment, plant, machinery, appliances, tools, supplies and such other items of every description that may be found or located at the site of the work.

All costs, expenses, losses, damages, attorneys' fees, and any and all other charges incurred by the Town under this deducted and/or paid by the Town out of any monies due or article shall be charged against the Contractor and deducted and/or paid by the Town out of any monies due or payable or to become due or payable under the Contract to the Contractor. In computing the amounts chargeable to the Contractor, the Town shall not be held to a basis of the lowest prices for which the completion of the work or any part thereof might have been accomplished, but all sums actually paid or obligated therefore to effect its prompt completion shall be charged to and against the account of the Contractor. In case the costs, expenses, losses, damages, attorneys' fees and other charges together with all payments therefore made to and for the account of the Contractor are less than the sum which would have been payable under the contract if the work had

been properly performed and completed by the Contractor, the Contractor shall be entitled to receive the difference, and in case such costs, expenses, losses, damages, attorneys' fees and other charges, together with all payments, theretofore made to or for the account of the Contractor shall exceed the said sum, the Contractor shall pay the amount of the excess to the Town.

4.29 PRICES FOR WORK.

The Town shall pay and the Contractor shall receive the prices stipulated in the bid made a part hereof as full compensation for everything performed and furnished and for all risks and obligations undertaken by the Contractor under and as required by the contract.

4.30 MONIES MAY BE RETAINED.

The Town may at any time retain from any monies which would otherwise be payable hereunder so much thereof as the Town may deem necessary to complete the work hereunder and to reimburse it for all costs, expenses, losses, damage and damages chargeable to the Contractor hereunder. See articles 4.32 and 4.35.

4.31 USE OR PARTIAL PAYMENT NOT ACCEPTANCE.

It is agreed that this is an entire contract for one whole and complete work or result and that neither the Town's entrance upon or use of the work or any part thereof nor any partial payments by the Town shall constitute an acceptance of the work or any part thereof before its entire completion and final acceptance.

4.32 PROGRESS ESTIMATES.

Once a month, except as hereinafter provided, the Engineer shall make an estimate in writing of the total amount and value of the work done or any part thereof before its entire completion and final acceptance.

The Town shall retain five (5) percent of such estimated value as part of the security for fulfillment of the contract by the Contractor and shall deduct from the balance all previous payments made to the Contractor, all sums chargeable against the Contractor and all sums to be retained under the provisions of the contract.

The Town shall pay monthly to the Contractor, the balance not deducted and/or retained as aforesaid, except that payment may be withheld at any time if, in the judgment of the Engineer, the work is not proceeding in accordance with the contract. If the Town deems it expedient to do so, it may cause estimates and payments to be made more frequently than one in each month. No progress estimate or payment need to be made when, in the judgment of the Engineer, the total value of the work done since the last estimate amounts to less than One Thousand Dollars (\$1,000). Estimates of Lump-Sum items shall be based on a schedule dividing each such item into its appropriate component parts together with a quantity and a unit price for each part so that the sum of the products of prices and quantities will equal the contract Lump-Sum price for the item. This schedule shall be submitted by the Contractor for, and must have the approval of the Engineer before the first estimate becomes due.

If the Engineer determines that the progress of the work will be benefitted by the delivery to the site of certain materials and equipment, when available, in advance of actual requirement therefore, and if such materials, and equipment are delivered and properly stored and protected, the cost to the Contractor or subcontractor as established by invoices or other suitable vouchers satisfactory to the Engineer, less the retained percentages as above provided, may be included in the progress estimates, provided always that they be duly executed and delivered by the Contractor to the Engineer, at the same time a bill of sale in form satisfactory to the Town, transferring and assigning to the Town full ownership and title to such materials or equipment.

Prior to contract signing, the Contractor shall submit for review by the Engineer a Schedule of Values. The Contractor will use the approved schedule to submit for payment as items are completed and accepted by the Town. The schedule's values are to correspond to the cost breakdown of the project

submitted by the Contractor. At the project completion, the Contractor shall have submitted for payment, 98% of the project value, leaving two percent (2%) retainage for the warranty period of one year. The contract cannot be signed until the schedule and associated values has been approved by the Engineer.

The Contractor shall submit certified monthly payrolls in accordance with article 4.48. No progress payment will be processed until the payrolls submitted are current and up to date.

4.33 FINAL ESTIMATE AND PAYMENT.

As soon as practicable after the final completion and acceptance of the work by the Engineer, the Engineer shall make a final estimate in writing of the quantity of work done under the contract and the amount earned by the Contractor. The Engineer also shall fix the date of completion of the work and incorporate the same into the final estimate.

The Town shall pay to the Contractor, the entire amount found by the Engineer to be earned and due hereunder after deducting there from all previous payments, all charges against the Contractor as provided for hereunder, and all amounts to be retained under the provisions of the contract (see article 4.35). Except as in this article otherwise provided, such payment shall be made not later than fifteen (15) days after, but in no event before, the expiration of the time within which claims for labor performed or materials or equipment furnished must be filed under the applicable lien law, or if such time is not specified by law, the expiration of thirty (30) days after the completion of the Engineer's final estimate.

Final payment shall not be processed until the Contractor submits to the Town (A) an affidavit for final payment in the form attached hereto that payrolls, bills for materials, equipment, supplies and other indebtedness connected with the work has been paid or otherwise satisfied, and (B) consent of the surety to final payment has been furnished.

All quantities shown on progress estimates and all prior payments shall be subject to correction in the final estimate and payment.

4.34 GUARANTEE.

The Contractor guarantees that the work and services to be performed under the contract, and all workmanship, materials and equipment performed, furnished, used or installed in the construction of the same, shall be free from defects and flaws, and shall be performed and furnished in strict accordance with the drawings, specifications, and other contract documents, that the strength of all parts of all manufactured equipment shall be adequate and as specified and that the performance test requirements of the contract shall be fulfilled. This guarantee shall be for a period of one year from and after the date of completion and acceptance of the work as stated in the final estimate. The Contractor shall repair, correct or replace as required, promptly and without charge, all work, equipment and materials, or parts thereof, which fail to meet the above guarantee or which in any way fail to comply with or fail to be in strict accordance with the terms and provisions and requirements of the contract during such one-year period, and also shall repair, correct or replace all damage to the work resulting from such failure.

If the manufacturer's warrantee for equipment and materials installed is greater than the one-year period for warrantee specified above, the warrantee will be passed through to the Town. Upon completion of the project by the Contractor and acceptance by the Town, all warrantees will be passed through to the Town and all paperwork turned over to the Town.

CERTIFICATE FOR PAYMENT

TO: TOWN PROJECT NUMBER:
FROM:
CONTRACTOR:
TOWN PROJECT:
PREPARATION DATE:

CONTRACT NUMBER:
PAYMENT PERIOD TO:
PAYMENT NUMBER:

The Contractor is entitled to the present payment stated below for work substantially completed on the Subject Project. The Account tabulations are shown on the Attached sheets:

1. ORIGINAL CONTRACT AMOUNT\$ _____
2. NET CHANGE BY CONTRACT SUPPLEMENT NUMBER(s):\$ _____

3. TOTAL CONTRACT TO DATE\$ _____

4. TOTAL CONTRACT AMOUNT EARNED TO DATE..... \$ _____

5. LESS ____% RETAINAGE OF COMPLETED WORK ... (\$ _____)

6. LESS PREVIOUS CERTIFICATES FOR PAYMENT:

PAYMENT NUMBER 1 DATED: _____ (\$ _____)

PAYMENT NUMBER 2 DATED: _____ (\$ _____)

PAYMENT NUMBER 3 DATED: _____ (\$ _____)

PAYMENT NUMBER 4 DATED: _____ (\$ _____)

PAYMENT NUMBER 5 DATED: _____ (\$ _____)

PAYMENT NUMBER 6 DATED: _____ (\$ _____)

PAYMENT NUMBER 7 DATED: _____ (\$ _____)

7. PRESENT PAYMENT DUE CONTRACTOR\$ _____

8. BALANCE OF CONTRACT \$ _____

TOWN PROJECT REPRESENTATIVE / INSPECTOR'S CERTIFICATE FOR PAYMENT:

In accordance with the Contract Documents and based on on-site observations and the data comprising the above payment, I declare that the construction for which this payment is being made has been performed substantially in accordance with the Contract Drawings and Specifications and approved change orders. Construction is about _____ percent complete.

Prepared By: Project Representative/Date Checked By: _____ Date

Reviewed for Payment By: Project Mgr/Date Approved for Payment By: Chief Engineer Date

DISTRIBUTION:
GO 110

Page ____ of ____

AFFIDAVIT FOR FINAL PAYMENT

The undersigned, being duly sworn, deposed and says

1. That they are the _____ of the Contractor
(TITLE)

In the project hereinafter referred to and is authorized to execute this affidavit on behalf of the Contractor,

2. In connection with Contract Number _____,
the construction of Fire Protection Cistern at 50 Cutler Road Town Project No. 17-15, it is represented that:

- a) all payrolls, bills for service, materials, supplies, equipment and other indebtedness bills for service, materials, supplies and that there are no outstanding claims against the undersigned by any subcontractor or material supplier.
- b) the provisions of Section 4.48 of these specifications, Minimum Wages, have been complied with.

3. This Affidavit is made at the request of the Town of Greenwich for the purpose of inducing final payment and knowing that it will rely upon the truth of the representation herein made.

Subscribed and sworn to

Before me this _____ day

Of _____ 20 _____

(SIGNATURE OF PERSON
AUTHORIZED TO SIGN)

NOTARY PUBLIC

(TYPE OR PRINT NAME OF PERSON
AUTHORIZED TO SIGN)

GO 102

4.35 RETAIN MONEY FOR REPAIRS.

The Town shall retain out of the monies otherwise payable to the Contractor hereunder five (5) percent of the total construction cost for period of thirty (30) days after completion and acceptance of the work and two (2) percent of the total construction cost for the remainder of the one year guarantee period. The Town may expend said retainers, in the manner hereinafter provided, in making such repairs, corrections or replacements in the work as the Town, in its sole judgment, may deem necessary.

If at any time within the said period of guarantee any part of the work requires repairing, correction or replacement, the Town may notify the Contractor in writing to make the required repairs, corrections or replacements. If the Contractor neglects to commence making such repairs, corrections or replacements to the satisfaction of the Town within five (5) days from the date of receipt of such notice, or having commenced, fails to prosecute such work with diligence, the Town may employ other persons to make the same. The Town shall pay the cost and expense of the same out of the amounts retained for that purpose.

Upon the expiration of the said period of guarantee, provided that the work at that time is in good order, the Contractor will be entitled to receive the whole or such part of the sum last aforesaid, if any, as may remain after the cost and expense of making said repairs, corrections or replacements, in the manner aforesaid, have been paid there from.

4.36 APPLICATION OF MONIES RETAINED.

The Town may apply any monies retained hereunder to reimburse itself for any and all costs, expenses, losses, damage and damages, liabilities, suits, judgments and awards incurred, suffered or sustained by the Town and chargeable to the Contractor hereunder or as determined hereunder.

4.37 LIENS.

If at any time any notices of lien or other legal process are filed for labor performed or materials or equipment manufactured, furnished, or delivered to or for the work, the Contractor shall, at their own cost and expense, promptly discharge, remove or otherwise dispose of the same, and until such discharge, removal or disposition, the Town shall have right to retain from any monies payable hereunder an amount which, in its sole judgment, it deems necessary to satisfy such liens and pay the costs and expenses, including attorneys' fees of defending any actions brought to enforce the same, or incurred in connection therewith or by reason thereof.

4.38 CLAIMS.

If at any time there be any evidence of any claims for which the Contractor is or may be liable or responsible hereunder, the Contractor shall promptly settle or otherwise dispose of the same, and until such claims are settled or disposed of, the Town may retain from any monies which would otherwise be payable hereunder so much thereof as, in its sole judgment, it may deem necessary to settle or otherwise dispose of such claims and to pay the costs and expenses, including attorneys' fees, or defending any actions brought to enforce such claims or incurred in connection therewith or by reason thereof.

4.39 NO WAIVER.

Neither the inspection by the Town or the Engineer, nor any order, measurement, approval, determination, decision or certificate by the Engineer, nor any order by the Town for the payment of money, nor any payment for or use, occupancy, possession or acceptance of the whole or any part of the work by the Town, nor any extension of time, nor any other act or omission of the Town or of the Engineer shall constitute or be deemed to be an acceptance of any defective or improper work, materials, or equipment nor operate as a waiver of any requirements or provision of the contract, nor of any remedy, power or right to damages for breach of contract. Any and all rights and/or remedies provided for in the contract are intended and shall be construed to be cumulative and, in addition to each and every other right and remedy provided for herein or by law, the Town shall be entitled as of right to a writ of injunction against any breach or threatened breach of the contract by the Contractor, their subcontractors or by any other person or persons.

4.40 LIABILITY OF TOWN.

No person, firm or corporation, other than the Contractor, who signed this contract as such, shall have any interest herein or rights hereunder, no claim shall be made or be valid either against the Town or any agent of the Town and neither the Town nor any agent of the Town shall be liable for or be held to pay any money, except as herein provided. The acceptance by the Contractor of the payment as fixed in the final estimate shall operate as and shall be a full and complete release of the Town and of every agent of the Town of and from any and all claims, demands, and liabilities of, by or to the Contractor for anything done or furnished for or arising out of or relating to or by reason of the work or for or on account of any act or neglect of the Town or of any agent of the Town or of any other person, arising out of, relating to or by reason of the work, except the claim against the Town for the unpaid balance, if any there be, of the amounts retained as herein provided.

4.41 RETURN OF DRAWINGS.

All drawings furnished by the Town or the Engineer to the Contractor may be used only in connection with the prosecution of the work and shall be returned by the Contractor upon completion of the work.

4.42 CLEANING UP.

The Contractor at all times shall keep the site of the work free from rubbish and debris caused by their operations under the contract. When the work has been completed, the Contractor shall remove from the site of the work all of their plant, machinery, tools, construction equipment, temporary work and surplus materials so as to leave the work and the site clean and ready for use.

The Contractor shall keep all street and sidewalk pavements clear of stone, earth, mud, debris and other materials which may result from the Contractor's operation.

4.43 LEGAL ADDRESS OF CONTRACTOR.

The Contractor's business address and their office at or near the site of the work are both hereby designated as places to which communications shall be delivered. The depositing of any letter, notice or other communication in a postpaid wrapper directed to the Contractor's business address in a post office box regularly maintained by the post office department or the delivery at either designated address of any letter, notice or other communication by mail or otherwise shall be deemed sufficient service thereof upon the Contractor, and the date of such service shall be the date of receipt. The first-named address may be changed at any time by an instrument in writing executed and acknowledged by the Contractor and delivered to the Engineer. Service of any notices, letter, or other communication upon the Contractor personally shall likewise be deemed sufficient service.

4.44 HEADINGS.

The headings or titles of any section, article, paragraph, provision or part of the contract documents shall not be deemed to limit or restrict the content, meaning or effect of such section, article, paragraph, provision or part.

4.45 MODIFICATION OR TERMINATION.

Except as otherwise expressly provided herein, the contract may not be modified or terminated except in writing, signed by the parties hereto.

4.46 GOVERNING LAW.

The laws of the State of Connecticut shall govern this Contract and any and all litigation related to this Contract. In the event of litigation related to this Contract, the exclusive forum shall be the State of Connecticut and the exclusive venue for such litigation shall be the Judicial District for Stamford/Norwalk at Stamford.

4.47 RESIDENT'S PREFERENCE.

The Contractor shall comply with the current provisions of Section 31-52 and 31-52a of the General Statutes of the State of Connecticut, a part of which is quoted below.

(A) PUBLIC BUILDINGS

"In the employment of labor to perform the work specified herein, preference shall be given to citizens of the United States, who are, and continuously for at least three months prior to the date hereof, have been residents of the labor market area, as established by the labor commissioner, in which such work is to be done, and if no such qualified person is available, then to citizens who have continuously resided in the county in which the work is to be performed for at least three months prior to the date hereof, and then to citizens of the State who have continuously resided in the State at least three months prior to the date hereof."

(B) PUBLIC WORKS PROJECTS OTHER THAN PUBLIC BUILDINGS

"In the employment of mechanics, laborers or workmen to perform the work specified herein, preference shall be given to residents of the State who are, and continuously for at least six months prior to the date hereof have been residents of this State, and if no such person is available then to residents of other states."

(C) The above provisions of Section 31-52 and 31-52a shall not apply where the State of Connecticut or any subdivision thereof may suffer the loss of revenue granted or to be granted from any agency or department of the Federal Government as a result of said sections or regulative procedures pursuant thereto.

4.48 PREVAILING WAGE RATES; CONSTRUCTION SAFETY AND HEALTH COURSE.

Projects shall be subject to the payment of minimum prevailing wages where the total cost of all work to be performed by all Contractors and Subcontractors in connection with new construction of any public works project is One Million Dollars (\$1,000,000) or more and where the total cost of all work to be performed by all Contractors and Subcontractors in connection with any remodeling, refinishing, refurbishing, rehabilitation, alteration or repair of any public works project is One Hundred Thousand Dollars (\$100,000) or more.

The Purchasing Department has the flexibility to request the minimum prevailing wages and include them in the Request for Bid (RFB) when a budgeted estimate is less than \$100,000 for renovation, or \$1,000,000 for new work, in the event that bids come in over the threshold for minimum prevailing rates.

The Purchasing Department is:

- responsible for requesting Prevailing Wage Rates from the State of Connecticut
- required to (upon receipt of the Prevailing Wage Rates) advertise the Requests for Bid (RFB) within twenty (20) calendar days of the date of the letter from the State
- required to attach the Prevailing Wages to the RFB as an exhibit

The minimum prevailing wages paid on a project, when applicable, shall be as shown on the State of Connecticut Labor Department, Wage and Workplace Standards Division, 'Schedule of Prevailing Rates'.

Except as noted below, the Contractor shall comply with the current provisions of Connecticut

General Statutes §31-53, a part of which is quoted as follows:

"The wages paid on an hourly basis to any mechanic, laborer or workman employed upon the work herein contracted to be done and the amount of payment or contribution paid or payable on behalf of each such employee to any employee or welfare fund, as defined in subsection (H) of section 31-53 of the General Statutes, shall be at a rate equal to the rate customary or prevailing for the same work in the same trade or occupation in the Town in which such public works project is being constructed. Any Contractor who is not obligated by agreement to make payment or contribution on behalf of such employees to any such employee welfare fund shall pay to each employee as part of his wages the amount of payment or contribution for his classification on each pay day."

For qualifying projects, all Contractors and Subcontractors shall submit certified weekly payrolls on forms furnished by the Town for all contracts meeting the stated monetary limits. The certified payrolls shall be submitted with the Contractor's monthly certificate for payment.

Public Act #02-69, "An Act Concerning Annual Adjustments to Prevailing Wages", passed and signed into law on October 1, 2002, is summarized below and shall be followed.

The prevailing wage rates applicable to any awarded contract or subcontract are subject to annual adjustments each July 1 for the duration of the project.

Each Contractor that is awarded a contract shall pay the annual adjusted prevailing wage rate that is in effect each July 1, as posted by the Department of Labor.

It is the Contractor's responsibility to obtain the annual adjusted prevailing wage rate increases directly from the Department of Labor web site. The annual adjustments will be posted on the Department of Labor's web page: www.ctdol.state.ct.us. Contractors without Internet access must contact the division listed below.

Contractor's questions can be directed to Contract Compliance Unit, Wage and Workplace Standards Division, Connecticut Department of Labor, 200 Folly Brook Blvd., Wethersfield, CT 06109 at 860-263-6790.

The Contractor shall also furnish proof with the weekly certified payroll for the first week each employee begins work that any person performing the work of a mechanic, laborer or worker has completed a course of at least ten (10) hours in duration in construction safety and health approved by the federal Occupational Safety and Health Administration in accordance with Connecticut General Statutes Section 31-53b and regulations adopted by the State of Connecticut Labor Commissioner.

4.49 PAYMENT OF SUBCONTRACTORS

As required by Section 49-41a of the Connecticut General Statutes, within thirty (30) days after payment to the Contractor by the Town for work under this contract, the Contractor shall pay any amount due any subcontractor, whether for labor performed or materials furnished when such labor or materials have been included in a requisition submitted by such Contractor and paid by the Town.

The general contractor shall include in each of its subcontracts, a provision requiring each subcontractor to pay any amounts due any of its subcontractors, whether for labor performed or materials furnished, within thirty days after such subcontractor receives a payment from the general contractor which encompasses labor or materials furnished by such subcontractor.

In witness whereof, the parties of this agreement have hereunto set their hands and seals as of the day and year first above written

TOWN OF GREENWICH, CONNECTICUT

BY

COMMISSIONER OF PUBLIC WORKS
(PARTY OF THE FIRST PART)

CONTRACTOR
(PARTY OF SECOND PART)

APPROVED AS TO LEGAL SUFFICIENCY

TOWN ATTORNEY

I hereby certify that the contract sum does not exceed the unencumbered balance of amounts duly appropriated and against which this contract is chargeable.

_____ 20_____

BY

COMPTROLLER

ATTEST

**CERTIFICATE OF ACKNOWLEDGEMENT OF CONTRACTOR
IF A CORPORATION
FOR AGREEMENT**

STATE OF _____

COUNTY OF _____

ON THIS _____ DAY OF _____ 20 _____,

BEFORE ME PERSONALLY CAME _____

TO ME KNOWN, WHO BEING BY ME FULLY SWORN, DID DEPOSE AND SAY AS FOLLOWS.

THAT THEY RESIDE AT _____

AND IS THE _____

OF _____

the corporation described in and which executed the foregoing instrument that they know the corporate seal of said corporation, that the seal affixed to the foregoing instrument is such corporate seal and it was so affixed by order of the board of directors of said corporation, and that by the like order, they signed thereto their name and official designation.

NOTARY PUBLIC (SEAL)

MY COMMISSION EXPIRES _____

**CERTIFICATE OF ACKNOWLEDGMENT OF CONTRACTOR
IF AN LLC
FOR AGREEMENT**

STATE OF _____

COUNTY OF _____

ON THIS _____ DAY OF _____ 20 _____,

BEFORE ME PERSONALLY CAME _____

TO ME KNOWN, WHO BEING BY ME FULLY SWORN, DID DEPOSE AND SAY AS FOLLOWS.

THAT THEY RESIDE AT _____

AND IS THE _____

OF _____

the LLC described in and which executed the foregoing instrument, that there is no seal for said LLC, and that by order of the members of said LLC, he signed thereto his name and official designation.

NOTARY PUBLIC (SEAL)

MY COMMISSION EXPIRES _____

**CERTIFICATE OF ACKNOWLEDGMENT OF CONTRACTOR
IF AN LLC
FOR AGREEMENT**

STATE OF _____

COUNTY OF _____

ON THIS _____ DAY OF _____ 20 _____,

BEFORE ME PERSONALLY CAME _____

TO ME KNOWN, WHO BEING BY ME FULLY SWORN, DID DEPOSE AND SAY AS FOLLOWS.

THAT THEY RESIDE AT _____

AND IS THE _____

OF _____

the LLC described in and which executed the foregoing instrument, that they know the seal of said LLC, that the seal affixed to the foregoing instrument is such LLC seal and it was so affixed by order of the board of directors of said LLC, and that by the like order, they signed thereto their name and official designation.

NOTARY PUBLIC (SEAL)

MY COMMISSION EXPIRES _____

SECTION 5

***** CONTRACT BOND *****

PERFORMANCE, MAINTENANCE AND PAYMENT BOND

BOND NO. _____

KNOW ALL PERSONS BY THESE PRESENTS, that we _____,
_____, as principal, and _____,
_____,

a corporation organized under the laws of the state of

_____ and authorized to do business in the State
of Connecticut as surety, are holden and firmly bound jointly and severally unto the TOWN OF
GREENWICH, CONNECTICUT, thereafter referred to as the Town, a territorial corporation

located in the County of Fairfield, in the penal sum of

_____ Dollars

(\$ _____), to be paid to it or its certain attorney, successors or assigns, to which payment
well and truly to be made, we the said obligors to bind ourselves, and each of us, our heirs, executors,
administrators and successors firmly by these presents.

IN WITNESS WHEREOF we have hereunto set or caused to be set our respective hands, names and seals
this _____ day of _____ 20____.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the above named principal has entered
into a certain written contract with the TOWN OF GREENWICH, CONNECTICUT, dated the
_____ day of _____ 20____, for construction of _____

according to the plans, specifications, and other contract documents prepared by the Engineering Division of
the Department of Public Works, which contract is hereby referred to and made a part hereof as fully and to
the same extent as if copied at length herein.

NOW, THEREFORE, if the said principal shall well and faithfully perform said contract according to its
provisions and fully indemnify and save harmless the Town from all cost and damages which the Town may
suffer by reason of failure so to do, and shall pay for all equipment, appurtenances, materials and labor
furnished, used or employed in the execution of said contract, and shall indemnify and save harmless the
Town from all suits or claims of any nature or description against the Town by reason of any injuries or
damages sustained by any person or persons on account of any act or omissions of said principal, their
servants or agents, or their subcontractors in the construction of the work or in guarding the work, or on
account of the use of faulty or improper materials, or by reason of claims under the workmen's
compensation laws or laws by any employee of the principal or their subcontractors or by reason of the use
of any patented material, machinery, device, equipment, process, method of construction or design in any
way involved in the work and shall indemnify the Town against such defective workmanship, material and
equipment as may be discovered within one (1) year after completion and final acceptance of the work, and
shall make good in such defective workmanship and material as may be discovered within said period of
one year, then this obligation shall be void, otherwise to remain in full force and effect.

The surety hereby stipulates and agrees that any modifications, omissions or additions in or to the terms of the aforesaid contract, or in or to the plans or specifications therefore, or any extension of time shall in no way affect the obligation of the surety under this bond, the surety hereby waiving any and all rights to any notice of any such modifications, omissions, changes, additions or extensions.

CONTRACTOR _____

By _____

SURETY _____

By _____

COUNTERSIGNED AT _____, CONNECTICUT

LOCAL RESIDENT AGENT

**CERTIFICATE OF ACKNOWLEDGEMENT OF CONTRACTOR
IF A CORPORATION
FOR CONTRACT BOND**

STATE OF _____

COUNTY OF _____

ON THIS _____ DAY OF _____ 20 _____,

BEFORE ME PERSONALLY CAME _____

TO ME KNOWN, WHO BEING BY ME FULLY SWORN, DID DEPOSE AND SAY AS FOLLOWS.

THAT THEY RESIDES AT _____

AND IS THE _____

OF _____

the corporation described in and which executed the foregoing instrument that they know the corporate seal of said corporation, that the seal affixed to the foregoing instrument is such corporate seal and it was so affixed by order of the board of directors of said corporation, and that by the like order, they signed thereto their name and official designation.

NOTARY PUBLIC (SEAL)

MY COMMISSION EXPIRES _____

**CERTIFICATE OF ACKNOWLEDGMENT OF CONTRACTOR
IF AN LLC
FOR CONTRACT BOND**

STATE OF _____

COUNTY OF _____

ON THIS _____ DAY OF _____ 20 _____,

BEFORE ME PERSONALLY CAME _____

TO ME KNOWN, WHO BEING BY ME FULLY SWORN, DID DEPOSE AND SAY AS FOLLOWS.

THAT THEY RESIDES AT _____

AND IS THE _____

OF _____

the LLC described in and which executed the foregoing instrument, that they know the seal of said LLC, that the seal affixed to the foregoing instrument is such LLC seal and it was so affixed by order of the board of directors of said LLC, and that by the like order, they signed thereto their name and official designation.

NOTARY PUBLIC (SEAL)

MY COMMISSION EXPIRES _____

**CERTIFICATE OF ACKNOWLEDGMENT OF CONTRACTOR
IF AN LLC
FOR CONTRACT BOND**

STATE OF _____

COUNTY OF _____

ON THIS _____ DAY OF _____ 20 _____,

BEFORE ME PERSONALLY CAME _____

TO ME KNOWN, WHO BEING BY ME FULLY SWORN, DID DEPOSE AND SAY AS FOLLOWS.

THAT THEY RESIDES AT _____

AND IS THE _____

OF _____

the LLC described in and which executed the foregoing instrument, that there is no seal for said LLC, and that by order of the members of said LLC, he signed thereto his name and official designation.

NOTARY PUBLIC (SEAL)

MY COMMISSION EXPIRES _____

SECTION 6
GENERAL CONDITIONS

<u>TITLE</u>	<u>ARTICLE</u>
INTRODUCTION TO THE TECHNICAL SPECIFICATIONS.....	6.1
DEFINITIONS	6.2
ABBREVIATIONS.....	6.3
HANDLING AND DISTRIBUTION	6.4
MATERIALS - SAMPLES – INSPECTIONS APPROVAL	6.5
INSPECTION OF WORK AWAY FROM SITE	6.6
CONTRACTOR'S SHOP AND WORKING DRAWINGS	6.7
OCCUPYING PRIVATE LAND.....	6.8
INTERFERENCE WITH AND PROTECTION OF STREETS	6.9
STORAGE OF MATERIALS AND EQUIPMENT	6.10
INSUFFICIENCY OF SAFETY PRECAUTIONS	6.11
SANITARY REGULATIONS	6.12
LINES, GRADES AND MEASUREMENT	6.13
DIMENSIONS OF EXISTING STRUCTURES.....	6.14
WORK TO CONFORM	6.15
COMPUTATION OF QUANTITIES	6.16
PLANNING AND PROGRESS SCHEDULES	6.17
PRECAUTIONS OF ADVERSE WEATHER.....	6.18
UNDERGROUND INSTALLATIONS	6.19

6.1 INTRODUCTION TO THE TECHNICAL SPECIFICATIONS

The following Technical Specifications shall apply to the various items of work which constitute the construction contemplated under this Contract except as supplemented and/or amended by Supplemental Technical Specifications. In cases of conflict between the Technical Specifications and the Supplemental Technical Specifications, the provisions of the Supplemental Technical Specifications shall apply.

To avoid excessive overlapping and repetition, there are certain sections and items that referred to in other sections. In these cases, it is understood that the words such as culvert and sewer; sanitary and storm; utility and sewer; manhole and catch basins; structure and culvert; etc., are interchangeable. In cases where references are not given and the need arises for a specification, similar sections or related items shall govern.

Further, it is provided that whenever anything is, or is to be, done if, as, or, when, or where "contemplated, required, determined, directed, specified, authorized, ordered, given, designated, indicated, considered necessary, deemed necessary, permitted reserved, suspended, established, approved, disapproved, acceptable, unacceptable, suitable, accepted, satisfactory, unsatisfactory, sufficient, insufficient, rejected, or condemned", it shall be understood as if the expression were followed by the words "by the Engineer" or "to the Engineer".

Within the Technical and/or Supplemental Technical Specifications of this Contract the following definitions shall apply:

1. **STANDARD SPECIFICATIONS:** Shall mean the State of Connecticut, Department of Transportation, Bureau of Highways, "Standard Specifications for Roads, Bridges and Incidental Construction, Form 817, dated 2016, as amended to date. All standard specifications that are referred to in the "**DESCRIPTION**" and/or "**MATERIALS**" and/or "**CONSTRUCTION METHODS**" and/or "**METHOD OF MEASUREMENT**" and/or "**BASIS OF PAYMENT**" section of this Contract's Technical and/or Supplemental Technical Specifications, not supplemented and/or amended therein, shall apply. Within the referred to portions of the Standard Specifications wherein the following terms are used they shall mean respectively;

State, Town, Owner,
Department, Commissioner

The Commissioner of Public Works
The Town of Greenwich, Connecticut
or other duly authorized representative

Architect and/or Engineer

The Chief Engineer
Department of Public Works
Engineering Division
The Town of Greenwich, Connecticut
or other duly authorized representative

Inspector

Resident Project Representative of
the Department of Public Works
Engineering Division
The Town of Greenwich, Connecticut
or other duly authorized representative

Laboratory

Laboratory designed by the Engineer

Special Provisions

Supplemental Technical Specifications

2. **APPLICABLE SAFETY CODES:** Shall mean the latest edition including any and all amendments, revisions and additions thereto of the Federal Department of Labor. Occupational safety and Health Administration's "Occupational Safety and Health standards" and "Safety and health Regulations for Construction", the State of Connecticut, Labor Department, "Construction Safety Code", or State of Connecticut "Building Code", whichever is the more stringent for the applicable requirements.

3. **ITEMS**: Reference within the text of these Specifications to items **without** a number but title only are Technical Specification Items within this contract. Sections for Articles referred to with a number refer to the State of Connecticut Department of Transportation, Bureau of High ways specification Sections or Articles.
4. **LOCAL REGULATORY AGENCY(IES)**: Local Regulatory Agency(ies) shall be defined as the governing body or authority having jurisdiction over or responsibility for a particular activity within the scope of this Contract.
5. **"THESE SPECIFICATIONS"**: Where used in the text of the Technical Specifications items shall mean the Technical Specifications for this contract.
6. **BID PROPOSAL ITEMS**: Payment will **only** be made for items in the **Bid Proposal**. Other items may be included in the specifications but payment for items not listed in the Bid Proposal will be included in the cost of other items of work. Bid Proposal items shall have the same basic alpha-numeric designation as the same items in the specifications with significant suffixes added as required.

6.2 DEFINITIONS.

Wherever the words defined in this section or pronouns used in their stead occur in the specifications, they shall have the meanings herein given.

AS DIRECTED, AS REQUIRED, ETC.

Wherever in the specifications, or on the drawings, the words 'As Directed', 'As Required', 'As Ordered', 'As Permitted', or words of like import are used, it shall be understood that the direction, order, request, requirements, or permission of the Engineer is intended. Similarly, the words 'Approved', 'Acceptable', 'Satisfactory', and words of like import shall mean approved by, acceptable to, or satisfactory to the Engineer.

ELEVATION

The figures given on the drawings or in the other contract documents after the word 'Elevation' or abbreviation of it shall mean the distance in feet above datum adopted by the Engineer.

ROCK

The word 'Rock' wherever used as the name of any excavated material or material to be excavated, shall mean only boulders and pieces of concrete or masonry exceeding one (1) cubic yard in volume, or solid ledge rock which, in the opinion of the Engineer, requires, for its removal, drilling and blasting, wedging, sledging, barring or breaking up with a power operated tool. No soft or disintegrated rock which can be removed with a hand pick or power-operated excavator or shovel, no loose, shaken or previously blasted rock or broken stone in rock fillings or elsewhere, and no rock exterior to the maximum limits of measurement allowed, which may fall into the excavation, will be measured or allowed as 'Rocks'.0

EARTH

The word 'Earth', wherever used as the name of an excavated material or material to be excavated, shall mean all kinds of material other than rock as above defined.

6.3 ABBREVIATIONS.

Where any of the following abbreviations are used in the specifications, they shall have the meaning set forth opposite each.

AASHO	AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIALS
ACI	AMERICAN CONCRETE INSTITUTE
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
ASA	AMERICAN STANDARDS ASSOCIATION
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERING
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
NEC	NATIONAL ELECTRICAL CODE, LATEST EDITION
CONN-DOT	STATE OF CONNECTICUT, DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS, FORM 817, 2016

6.4 HANDLING AND DISTRIBUTION.

The Contractor shall handle, haul and distribute all materials and all surplus material on the different portions of the work, as necessary or required, shall provide suitable and adequate storage room for materials and equipment during the progress of the work, and be responsible for the protection, loss of, or damage to materials and equipment furnished by them, until the final completion and acceptance of the work.

Storage and demurrage charges by transportation companies and vendors shall be borne by the Contractor.

6.5 MATERIALS.

Samples - inspection - approval. Unless otherwise expressly provided on the drawings or in any of the other contract documents, only new material and equipment shall be incorporated in the work. All material and equipment furnished by the Contractor to be incorporated in the work shall be subject to the inspection and approval of the Engineer. No material shall be processed or fabricated for the work or delivered to the work site without prior approval of the Engineer.

As soon as possible after execution of the agreement, the Contractor shall submit to the Engineer the names and addresses of the manufacturers and suppliers of all materials and equipment they propose to incorporate into the work. When shop and working drawings are required as specified below, the Contractor shall submit prior to the submission of such drawings, data in sufficient detail to enable the Engineer to determine whether the manufacturer and/or supplier have the ability to furnish a product meeting the specifications. As requested, the Contractor shall also submit data relating to the materials and equipment they propose to incorporate into the work in sufficient detail to enable the Engineer to identify and evaluate the particular product and to determine whether it conforms to the contract requirements. Such data shall be submitted in a manner similar to that specified for submission of shop and working drawings.

Facilities and labor for the storage, handling and inspection of all materials and equipment shall be furnished by the Contractor. Defective materials and equipment shall be removed immediately from the site of the work.

If the Engineer so requires, either prior to or after commencement of the work, the Contractor shall submit samples of materials for such special tests as the Engineer deems necessary to demonstrate that they conform to the specifications. Such samples, including concrete test cylinders, shall be furnished, taken, stored, packed and shipped by the approved molds for making concrete test cylinder. Except as otherwise expressly specified, with technical specifications, the Town shall make arrangements for, and pay for the tests.

All samples shall be packed so as to reach their destination in good condition, and shall be labeled to indicate the material represented, the name of the building or work and location for which the material is intended and the name of the Contractor submitting the sample. To ensure consideration of samples, the Contractor shall notify the Engineer by letter that the samples have been shipped and shall properly describe the samples in the letter. The letter of notification shall be sent separate from and should not be enclosed with the samples.

The Contractor shall submit data and samples, or place their orders, sufficiently early to permit consideration, inspection, testing and approval before the materials and equipment are needed for incorporation in the work. The consequence of their failure to do so shall be the Contractor's sole responsibility

When required, the Contractor shall furnish to the Engineer triplicate sworn copies of manufacturer's shop or mill tests (or reports from independent testing laboratories) relative to materials, equipment, performance rating and concrete data.

After approval of the samples, data, etc., the materials and equipment used on the work shall in all respects conform therewith.

6.6 INSPECTION OF WORK AWAY FROM THE SITE.

If work to be done away from the construction site is to be inspected on behalf of the Town during its fabrication, manufacture, or testing, or before shipment, the Contractor shall give notice to the Engineer of the place and time where such fabrication, manufacture, testing, or shipping is to be done. Such notice shall be in writing and delivered to the Engineer in ample time so that the necessary arrangements for the inspection can be made.

6.7 CONTRACTOR'S SHOP AND WORKING DRAWINGS.

The Contractor shall submit for approval (in reproducible form unless otherwise specified) shop and working drawings of concrete reinforcement, structural details, piping layout, wiring, materials fabricated especially for the contract and materials and equipment for which such drawings are specifically requested.

Such drawings shall show the principal dimensions, weight, structural and operating features, space required, clearances type and/or brand of finish or shop coat, grease fittings, etc., depending on the subject of the drawing, when it is customary to do so. When the dimensions are of particular importance, or when so specified, the drawings shall be certified by the manufacturer or fabricator as correct for the contract.

When so specified or if considered by the Engineer to be acceptable, manufacturer's specifications, catalog data, descriptive matter, illustrations, etc., may be submitted for approval in place of shop and working drawings. In such case for requirements shall be as specified for shop and working drawings, insofar as applicable, except that the submission shall be in quadruplicate.

The Contractor shall be responsible for the prompt and timely submittal of all shop and working drawings so that there shall be no delay to the work due to the absence of such drawings.

No material or equipment shall be purchased or fabricated especially for the contract until the required shop and working drawings have been submitted as hereinabove provided as conforming to the contract requirements. All such materials and equipment and the work involved in their installation or incorporated into the work shall then be as shown in and represented by said drawings.

Until the necessary approval has been given, the Contractor shall not proceed with any portion of the work (such as the construction of foundations), the design or details of which are dependent upon the design or details of work, materials, equipment or other features for which approval is required.

All shop and working drawings shall be submitted to the Engineer by and/or through the Contractor, who shall be responsible for obtaining shop and working drawings from their subcontractors and returning approved drawings to them. Unless otherwise approved, all shop and working drawings shall be prepared on standard size, 24 inch by 36 inch sheets, except those which are made by changing existing standard shop or working drawings. All drawings shall be clearly marked with the names of the Town, Contractor and building, equipment, or structure to which the drawings apply, and shall be accompanied by a letter of transmittal giving a list of the drawing numbers and the names mentioned above.

Only drawings which have been checked and corrected by the fabricator should be submitted to the Contractor by their subcontractors and vendors. Prior to submitting drawings to the Engineer, the Contractor shall check thoroughly all such drawings to satisfy themselves that the subject matter thereof conforms to the drawings and specifications in all respects. All drawings which are correct shall be marked with the date, checker's name and indication of the Contractor's approval, and then shall be submitted to the Engineer. Other drawings shall be returned for correction.

The approval of shop and working drawings, etc., will be general only and shall not relieve or in any respect diminish the responsibility of the Contractor for details of design, dimensions, etc., necessary for proper fitting and construction of the work as required by the contract and for achieving the result and performance specified hereunder.

Should the Contractor submit for approval, equipment that requires modifications to the structures, piping, layout, etc., they shall also submit for approval, details of the proposed modifications. If such equipment and modifications are approved, the Contractor, at no additional cost to the Town, shall do all work necessary to make such modifications.

The marked-up reproducible of the shop and working drawings or one marked-up copy of catalog cuts will be returned to the Contractor. The Contractor shall furnish additional copies of such drawings or catalog cuts when so requested.

6.8 OCCUPYING PRIVATE LAND.

The Contractor shall not (except after written consent from the proper parties) enter or occupy with persons, tools, materials, or equipment, any land outside the right-of-way or property of the Town. A copy of the written consent shall be given to the Engineer.

6.9 INTERFERENCE WITH AND PROTECTION OF STREETS.

The Contractor shall not close or obstruct any portion of a street, road or private way without obtaining permits therefore from the proper authorities. If any street, road or private way shall be rendered unsafe by the Contractor's operations, they shall make such repairs or provide such temporary ways or guards as shall be acceptable to the Engineer and to the proper authorities. See 'Agreement', Article 4.42, 'Clean Up'.

Streets, roads, private ways and walks not closed shall be maintained passable and safe by the Contractor, who shall assume and have full responsibility for the adequacy and safety of provisions made therefore.

The Contractor shall, at least 24 hours in advance, notify the Police and Fire Department in writing, with a copy to the Engineer, if the closure of a street or road is necessary. They shall cooperate with the Police Department in the establishment of alternate routes and shall provide adequate detour signs, plainly marked and well-lighted, in order to minimize confusion.

6.10 STORAGE OF MATERIALS AND EQUIPMENT.

All excavated materials, construction equipment and materials and equipment to be incorporated in the work shall be placed so as not to injure any part of the work or existing facilities and so that free access can be had at all times to all parts of the work and to all public utility installations in the vicinity of the work. Materials and equipment shall be kept neatly piled and compactly stored in such locations as will cause a minimum of inconvenience to public travel and adjoining owners, tenants and occupants.

6.11 INSUFFICIENCY OF SAFETY PRECAUTIONS.

If at any time, in the sole judgment of the Engineer, the work is not properly lighted, barricaded, or in any other respects safe in regard to public travel, persons on or about the work, or public or private property, the Engineer shall have the right to order such safeguards to be erected and such precautions to be taken as they deem advisable and the Contractor shall comply promptly with such orders. If, under such circumstances, the Contractor does not or cannot immediately put the work and the safeguards into proper and approved condition or if the Contractor or their representative is not upon the site so that they can be notified immediately of the insufficiency of safety precautions, the Engineer may put the work into such a condition that it shall be, in their opinion, in all respects safe. The Contractor shall pay all costs and expenses incurred by the Engineer or Town in so doing. Such action of the Engineer, or their failure to take such action, shall in no way relieve or diminish the responsibility of the Contractor for any and all costs, expenses, losses, liability, claims, suits, proceedings, judgments, awards or damages resulting from, by reason of or in connection with any failure to take safety precautions or the insufficiency of the safety precautions taken by them or by the Engineer acting under authority of this article or for failure to comply with the provisions of any state or federal occupational safety and health laws, rules or regulations.

6.12 SANITARY REGULATIONS.

When deemed necessary by the Engineer, the suitable Contractor shall provide sanitary facilities for the use of those employed on the work. Such facilities shall be made available when the first employees arrive on the site of the work, shall be properly secluded from public observation and shall be constructed and maintained during the progress of the work in suitable numbers and at such points and in such manner as may be required or approved.

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

The Town and the Engineer shall have the right to inspect such facilities at all times to determine whether or not they are being properly and adequately maintained.

6.13 LINES, GRADES AND LAYOUT OF WORK.

The Town shall provide the Contractor with a convenient base line and bench mark and it shall be the Contractor's responsibility to lay out their work as required to construct the work and/or as directed by the Engineer. The layout plan shall be prepared by the Engineer and provided to the Contractor prior to construction.

6.14 DIMENSIONS OF EXISTING STRUCTURES.

Where the dimensions and locations of existing structures are of importance in the installation or connection of any part of the work, the Contractor shall verify such dimensions and locations in the field before the fabrication of any material or equipment which is dependent on the correctness of such information.

6.15 WORK TO CONFORM.

During its progress, and on its completion, the work shall conform truly to the lines, levels and grades indicated on the drawings or given by the Engineer and shall be built in a thoroughly substantial and workmanlike manner, in strict accordance with the drawings, specifications and other contract documents and the directions given from time to time by the Engineer.

All work done without instructions having been given therefore by the Engineer, without proper lines or levels, or performed during the absence of the Engineer, will not be estimated or paid for except when such work is authorized in writing by the Engineer. Work, not so authorized, may be ordered uncovered or taken down, removed and replaced at the Contractor's expense.

6.16 COMPUTATION OF QUANTITIES.

For estimating quantities in which the computation of areas by geometric methods would be comparatively laborious, it is agreed that the planimeter shall be considered an instrument precision adapted to the measurement of such areas.

It is further agreed that the computation of the volume prismsoids shall be by the method of average end areas.

6.17 PLANNING AND PROGRESS SCHEDULES.

Before starting the work and from time to time during its progress, as the Engineer may request, the Contractor shall submit to the Engineer a written description of the methods they plan to use in doing the work and the various steps they intend to take.

Within two (2) days after the date of starting work, the Contractor shall prepare and submit to the Engineer (A) a written schedule fixing the respective dates for the start and completion of various parts of the work. Each such schedule shall be subject to review, approval and change by the Engineer from time to time during the progress of the work.

6.18 PRECAUTIONS DURING ADVERSE WEATHER.

During adverse weather and against the possibility thereof, the Contractor shall take all necessary precautions so that the work may be properly done and satisfactory in all respects. When required, protection shall be provided by use of plastic sheets, tarpaulins, wood and building-paper shelters or other approved means.

The Engineer may suspend construction operations at any time when, in their sole judgment, the conditions are unsuitable or the proper precautions are not being taken, whatever the weather may be, in any season.

6.19 UNDERGROUND INSTALLATIONS

Prior to opening an excavation, effort shall be made to determine whether underground installations, i.e., sewer, water, fuel, electric lines, etc. will be encountered and, if so, where such underground installations are located. When the excavation approaches the estimated location of such an installation, the exact location shall be determined by careful probing or hand digging, and when it is uncovered, proper support shall be provided for the existing installation. Utility companies shall be contacted and advised of proposed work prior to the start of actual excavation.

"CALL BEFORE YOU DIG," toll free, statewide, 1-800-922-4455 at least 24 hours in advance of performing any excavation.

SECTION 7
TECHNICAL PROVISIONS

ITEM 2020

UNCLASSIFIED EXCAVATION, BACKFILL, FORMATION OF EMBANKMENTS AND DISPOSAL OF SURPLUS AND UNSUITABLE MATERIAL

PART 1 – GENERAL

1.01 SCOPE OF WORK

- A. Furnish all labor, materials and equipment required to perform unclassified excavation, backfill, formation of embankments and disposal of surplus material which shall consist of clearing and grubbing and necessary unclassified excavating those areas designated for installation for a fire protection cistern system and associated piping, fittings and dry hydrant system, the crushed stone pull-off area, and related work and satisfactory disposal of all material of whatever nature, and backfilling and compaction of suitable backfill material, fine grading and the disposal of all surplus and unsuitable material, all necessary for the construction of the work within the Project Site as shown on the Contract Drawings, directed by the Engineer, all in accordance with these Specifications.
- B. All work shall be in accordance with any permit obtained from town of Greenwich Inland Wetlands & Watercourses Agency and any work on private property is subject to the terms of Easement (G.L.R. Book 7426, Page 166) and Easement Map (G.L.R. Map No. 9030) filed with Greenwich Land Records and Right-of-Entry agreement on file in town of Greenwich Engineering Division office.

1.02 RELATED WORK

- A. Rock Excavation is included in Item 2021
- B. Storage Tank Bedding and Backfill is included in Item 2170

1.03 SUBMITTALS (NOT USED)

1.04 REFERENCE STANDARDS

- A. Sections 2.01, 2.02, 2.03 and 2.05 of the Standard Specifications.
- B. Occupational Safety and Health Administration (OSHA).
- C. Where reference is made to one of the above standards, the revision in effect at the time of bid opening shall apply.

1.05 QUALITY ASSURANCE

- A. All material shall be new and unused.
- B. Materials' quality, manufacturing process and finished sections are subject to inspection and approval by Engineer or other Owner representative. Inspection may be made at place of manufacture, at work site following delivery, or both.
- C. Materials will be examined for compliance with standards referenced above.
- D. Materials shall be rejected for failure to meet any requirements specified herein. Rejection may occur at place of manufacture, at work site, or following installation. Mark for identification rejected materials and remove from work site immediately. Rejected materials shall be replaced at no cost to Owner.
- E. Repair minor damage by approved method, if repair is authorized by Engineer.

PART 2 – PRODUCTS

2.01 GENERAL

- A. Like items of materials/equipment shall be the end products of one manufacturer in order to provide standardization for appearance, operation, maintenance, spare parts and manufacturer's service.

PART 3 – EXECUTION

3.01 INSTALLATION

- A. Construction methods shall be in accordance with applicable provisions of Sections 2.01, 2.02, 2.03 and 2.05 of the Standard Specifications. The Contractor shall provide their own disposal site for surplus and unsuitable materials.
- B. Work shall be performed in accordance with notes and dimensions shown on the Contract Drawings.

PART 4 – MEASUREMENT AND PAYMENT

4.01 MEASUREMENT

- A. Before the preconstruction meeting, the Contractor shall submit to the Engineer a schedule of values allocated to various portions of the work, prepared in such form, and supported by such data to substantiate its accuracy, as the Engineer may require. This schedule, unless objected to by the Engineer, will be used as a basis for reviewing the Contractor's Applications for Payment.
- B. Monthly payments will be made under this Item in proportion to the amount of work done as determined by the Engineer for the Lump Sum Price Bid.
- C. Should the project be increased in scope due to construction changes beyond the requirements hereinabove, any additional work required will be paid for as Extra Work. Should the project be decreased in scope, a suitable credit, mutually agreed upon based on the reduction in actual work or scope will be taken by the Town.

4.02 PAYMENT

- A. This work will be paid for at the LUMP SUM bid price for ITEM 2020

<u>Item No.</u>	<u>Pay Item</u>	<u>Pay Unit</u>
2020	Unclassified Excavation, Backfill, Formation of Embankments and Disposal of Surplus and Unsuitable Material	Lump Sum

- B. Rock excavation, if any, shall be measured and paid for under Item 2021
- C. Bedding and backfill for storage tank shall be paid for under Item 2170

END OF SECTION

ITEM 2021

ROCK EXCAVATION

PART 1 – GENERAL

1.01 SCOPE OF WORK

- A. Furnish all labor, materials and equipment required to perform rock excavation which shall consist of the excavation of rock and the removal of boulders in the excavation, including the disposal of the excavated rock and furnishing and placing of a compacted suitable material to the limits of the rock removal.
- B. All work shall be in accordance with any permit obtained from town of Greenwich Inland Wetlands & Watercourses Agency and any work on private property is subject to the terms of Easement (G.L.R. Book 7426, Page 166) and Easement Map (G.L.R. Map No. 9030) filed with Greenwich Land Records and Right-of-Entry agreement on file in town of Greenwich Engineering Division office.

1.02 RELATED WORK

- A. Unclassified Excavation, Backfill, Formation of Embankments and Disposal of Surplus and Unsuitable Material is included in Item 2020.

1.03 SUBMITTALS (NOT USED)

1.04 REFERENCE STANDARDS

- A. Sections 2.02 of the Standard Specifications.
- B. Occupational Safety and Health Administration (OSHA).
- C. Where reference is made to one of the above standards, the revision in effect at the time of bid opening shall apply.

1.05 QUALITY ASSURANCE

- A. All material shall be new and unused.
- B. Materials' quality, manufacturing process and finished sections are subject to inspection and approval by Engineer or other Owner representative. Inspection may be made at place of manufacture, at work site following delivery, or both.
- C. Materials will be examined for compliance with standards referenced above.
- D. Materials shall be rejected for failure to meet any requirements specified herein. Rejection may occur at place of manufacture, at work site, or following installation. Mark for identification rejected materials and remove from work site immediately. Rejected materials shall be replaced at no cost to Owner.
- E. Repair minor damage by approved method, if repair is authorized by Engineer.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.01 INSTALLATION

- A. Construction methods shall be in accordance with applicable provisions of Sections 2.02 of the Standard Specifications. The Contractor shall provide their own disposal site for excavated rock.
- B. The rock shall be taken out to a depth of twelve inches (12”) below subgrade and refilled to subgrade with a suitable material, well compacted.

- C. No soft or disintegrated rock exterior of the lines specified, which it is practical to excavate with a pick, will be allowed as rock. Boulders one-quarter (1/4) cubic yard and over, where a power shovel is not used, will be classified as rock, but where a power shovel is used and only boulders of one (1) cubic yard or over will be classified as rock.
- D. The Engineer shall be notified when subgrade rock is ready for measurement and the same will be measured before and after rock removal.
- E. Blasting will not be allowed for this Contract.
- F. Work shall be performed in accordance with notes and dimensions shown on the Contract Drawings.

PART 4 – MEASUREMENT AND PAYMENT

4.01 MEASUREMENT

- A. Pay lines for rock-in-trench excavation shall be twelve inches (12”) below and/or beyond any excavation shown on the drawings or excavation required for other Items of this contract, to the surface of the rock removed.

4.02 PAYMENT

- A. This work will be paid for at the CUBIC YARD bid price for ITEM 2021

<u>Item No.</u>	<u>Pay Item</u>	<u>Pay Unit</u>
2021	Rock Excavation	Cubic Yard

- C. Rock was not present in soil borings performed within tank limits and is not anticipated. Payment will only be made for removal of rock encountered during excavation.

END OF SECTION

ITEM 2100

WATER POLLUTION CONTROL, SOIL EROSION AND SEDIMENTATION CONTROL SYSTEMS

PART 1 – GENERAL

1.01 SCOPE OF WORK

- A. Furnish all labor, materials and equipment required to bypass or otherwise control surface flows and ground water to perform and not damage the construction. A system of sedimentation control shall be furnished, placed, maintained, and removed as approved by the Engineer.
- B. Furnish all labor, materials and equipment required for the construction of all cofferdams, pumping facilities, etc.; the necessary dewatering of trenches, as may be required for the execution of the work, and the subsequent removal of cofferdams and pumping facilities.
- C. Furnish all labor, materials and equipment required for the placing, maintaining and removal of sedimentation control as shown on the Contract Drawings or as directed by the Engineer.
- D. The work called for under this contract is located within an area of high ground water.
- E. It is expressly understood that the Town is not responsible for any flooding, high water tables, underground water, or any other water problems, which may be encountered on any portion of the work, called for under this Contract.
- F. All work shall be in accordance with any permit obtained from town of Greenwich Inland Wetlands & Watercourses Agency and any work on private property is subject to the terms of Easement (G.L.R. Book 7426, Page 166) and Easement Map (G.L.R. Map No. 9030) filed with Greenwich Land Records and Right-of-Entry agreement on file in town of Greenwich Engineering Division office.

1.02 RELATED WORK

- A. Temporary 6' High Chain Link Construction Fencing is included in Item 9130.

1.03 SUBMITTALS

- A. Submit to the Engineer, in accordance with Section 6.7, shop drawings, product data, materials and details of construction. Submittals shall include at least the following:
 - 1. The Contractor shall submit two copies of his control of water and soil erosion plan to the Engineer for the review and approval prior to work beginning under this Contract.
 - 2. Broken or crushed stone for Stabilized Construction Entrance
 - 3. Sediment control fabric for Silt Fence
 - 4. Sediment filter bag

1.04 REFERENCE STANDARDS

- A. Sections 2.04, 2.10, 2.11 and 2.19 of the Standard Specifications.
- B. Occupational Safety and Health Administration (OSHA)
- C. Where reference is made to one of the above standards, the revision in effect at the time of bid opening shall apply.

1.05 QUALITY ASSURANCE

- A. All material shall be new and unused.
- B. Materials' quality, manufacturing process and finished sections are subject to inspection and approval by Engineer or other Owner representative. Inspection may be made at place of manufacture, at work site following delivery, or both.
- C. Materials will be examined for compliance with standards referenced above.

- D. Materials shall be rejected for failure to meet any requirements specified herein. Rejection may occur at place of manufacture, at work site, or following installation. Mark for identification rejected materials and remove from work site immediately. Rejected materials shall be replaced at no cost to Owner.
- E. Repair minor damage by approved method, if repair is authorized by Engineer.

PART 2 – PRODUCTS

2.01 GENERAL

- A. Reference to a manufacturer's name and model or catalog number is for the purpose of establishing the standard of quality and general configuration desired.
- B. Like items of materials/equipment shall be the end products of one manufacturer in order to provide standardization for appearance, operation, maintenance, spare parts and manufacturer's service.
- C. It is expressly understood that the Town is not responsible for any flooding, high water tables, underground water, or any other water problems, which may be encountered on any portion of the work, called for under this Contract.
- D. The Contractor shall provide all necessary pumps, dams, drains, ditches, flumes, well points and other means of excluding and removing groundwater or water from any other source, from the areas of the work and for preventing the channel slopes from sliding or caving. He shall sufficiently dewater all excavations to completely dry out and solidify the bottom of the excavation to whatever depth is necessary below said bottom in order to install/construct the fire protection storage tank, dry hydrant, piping and other miscellaneous construction.

2.02 Sediment Filter Bag

- A. Sediment Filter Bag shall be at least 10' x 15' in size.

2.03 Silt Fence

- A. Filter fabric for Silt Fence shall be Amoco Propex sediment control fabric, or approved equal.

2.04 Stabilized Construction Entrance

- A. Stone for Stabilized Construction Entrance shall be CTDOT (2" to 4") broken or crushed stone.

PART 3 – EXECUTION

3.01 INSTALLATION

- A. Construction methods shall be in accordance with applicable provisions of Sections 2.04, 2.10, 2.11 and 2.19 of the Standard Specifications. The Contractor shall provide their own disposal site for surplus and unsuitable materials.
- B. Work shall be performed in accordance with notes and dimensions shown on the Contract Drawings. Silt Fence shall be installed adjacent to all Temporary 6' High Chain Link Construction Fencing and interior to the work area.
- C. Sediment Filter Bag shall be placed downhill of excavation at the perimeter of the work zone.
- D. Filter fabric shall be mounted on posts with or without fence backing as recommended by the fabric manufacturer. On the uphill side, the bottom six inches of the fabric shall be buried by trenching, laying the six-inch section horizontally across the trench and burying or by laying the six-inch section horizontally on the ground and burying by ramping the soil up to the control fence.
- E. Hay bale systems shall be allowed to remain in toe of slope areas unless ordered removed by the Engineer.
- F. The installations shall be maintained or replaced until they are no longer necessary for the purpose intended or are ordered removed by the Engineer.

- G. The filter fabric fence systems shall be completely removed from the project at the completion of the project, unless specifically authorized by the Engineer to be left in place.

PART 4 – MEASUREMENT AND PAYMENT

4.01 MEASUREMENT

- A. Before the preconstruction meeting, the Contractor shall submit to the Engineer a schedule of values allocated to various portions of the work, prepared in such form, and supported by such data to substantiate its accuracy, as the Engineer may require. This schedule, unless objected to by the Engineer, will be used as a basis for reviewing the Contractor’s Applications for Payment.
- B. Monthly payments will be made under this Item in proportion to the amount of work done as determined by the Engineer for the Lump Sum Price Bid.
- C. Should the project be increased in scope due to construction changes beyond the requirements hereinabove, any additional work required will be paid for as Extra Work. Should the project be decreased in scope, a suitable credit, mutually agreed upon based on the reduction in actual work or scope will be taken by the Town.

4.02 PAYMENT

- A. This work will be paid for at the LUMP SUM bid price for ITEM 2100

<u>Item No.</u>	<u>Pay Item</u>	<u>Pay Unit</u>
2100	Water Pollution Control, Soil Erosion and Sedimentation Control Systems	Lump Sum

END OF SECTION

ITEM 2170

STORAGE TANK BEDDING AND BACKFILL

PART 1 – GENERAL

1.01 SCOPE OF WORK

- A. Furnish all labor, materials and equipment required for placing and compacting of screened gravel or crushed stone used for storage tank bedding and vertical column for storage tank leak-off.
- B. Furnish all labor, materials and equipment required for placing and compacting suitable excavated material or borrow for storage tank backfill. Borrow shall be obtained by the Contractor at their own expense when the amount of usable material excavated within the work contracted for is not sufficient from the excavated areas or other features of the work.
- C. Work under this item shall include all labor, materials and equipment required for placing geotextile fabric.
- D. All work shall be in accordance with any permit obtained from town of Greenwich Inland Wetlands & Watercourses Agency and any work on private property is subject to the terms of Easement (G.L.R. Book 7426, Page 166) and Easement Map (G.L.R. Map No. 9030) filed with Greenwich Land Records and Right-of-Entry agreement on file in town of Greenwich Engineering Division office.

1.02 RELATED WORK

- A. Unclassified Excavation, Backfill, Formation of Embankments and Disposal of Surplus and Unsuitable Material is included in Item 2020.
- B. Rock Excavation is included in Item 2021.

1.03 SUBMITTALS

- A. Submit to the Engineer, in accordance with Section 6.7, shop drawings, product data, materials and details of construction. Submittals shall include at least the following:
 - 1. Screened gravel for storage tank bedding and vertical column for storage tank leak-off.
 - 2. Borrow for storage tank backfill.
 - 3. Geotextile fabric.

1.04 REFERENCE STANDARDS

- A. Sections 2.07, 7.55, M.01 and M.02 of the Standard Specifications.
- B. Occupational Safety and Health Administration (OSHA).
- C. Where reference is made to one of the above standards, the revision in effect at the time of bid opening shall apply.

1.05 QUALITY ASSURANCE

- A. All material shall be new and unused.
- B. Materials' quality, manufacturing process and finished sections are subject to inspection and approval by Engineer or other Owner representative. Inspection may be made at place of manufacture, at work site following delivery, or both.
- C. Materials will be examined for compliance with standards referenced above.
- D. Materials shall be rejected for failure to meet any requirements specified herein. Rejection may occur at place of manufacture, at work site, or following installation. Mark for identification rejected materials and remove from work site immediately. Rejected materials shall be replaced at no cost to Owner.
- E. Repair minor damage by approved method, if repair is authorized by Engineer.

- F. Screened gravel shall be sound, durable stone, angular in shape, and free of any foreign material, structural defects and chemical decay.

PART 2 – PRODUCTS

2.01 GENERAL

- A. Reference to a manufacturer's name and model or catalog number is for the purpose of establishing the standard of quality and general configuration desired.
- B. Like items of materials/equipment shall be the end products of one manufacturer in order to provide standardization for appearance, operation, maintenance, spare parts and manufacturer's service.

2.02 Screened Gravel

- A. Screened Gravel shall meet the following requirements:

- 1. Shall be composed of hard, durable particles of stone, washed and thoroughly clean, and shall be free from an excess of thin or elongated pieces, frozen lumps, organic or other deleterious matter. Gradation shall conform to the following:

<u>SQUARE MESH SIEVES</u>	<u>PERCENT PASSING BY WEIGHT</u>
1/2" sieve	100
3/8" sieve	85-100
#4 sieve	5-30
#8 sieve	0-10
#100 sieve	0-1.5

- 2. Graded crushed stone shall conform to the grading requirements of Section M.01.01 of the Standard Specifications for the 1/2 inch gradations (No. 8). Quality, Soundness and Loss on Abrasion shall conform to the requirements of Section M.02.02 of the Standard Specifications.

2.03 Borrow

- A. Borrow shall meet the following requirements:

- 1. Shall consist of inorganic granular soils and/or rock having not more than 20 percent by weight passing the No. 200 sieve. The maximum stone size shall be 1-½ inches for use as trench backfill or 6 inches for construction of embankments and the material shall be well graded throughout the entire size range. Borrow shall be free from roots, leaves, and other organic materials. Rubbish, garbage or trash in any quantity shall not constitute a part of the borrow. Borrow shall also be free of ice or frost and no aggregations of soil particles shall be frozen. The moisture content of the borrow shall be within +/-3 percent of its optimum moisture content at the borrow source.

2.04 Geotextile

- A. Fabric for Geotextile shall be 0.08" thick and conform to the requirements of ASTM D-751 (puncture strength - 125 lb.), ASTM D-1117 (Mullen Burst Strength - 400 psi), and ASTM D-1682 (Tensile Strength - 300 lb.)

PART 3 – EXECUTION

3.01 INSTALLATION

- A. Construction methods shall be in accordance with applicable provisions of Sections 2.07 and 7.55 of the Standard Specifications. The Contractor shall provide their own disposal site for surplus and unsuitable materials.

- B. Work shall be performed in accordance with notes and dimensions shown on the Contract Drawings.
- C. Screened gravel shall be deposited in layers not over 6 inches thick and each layer shall be thoroughly compacted before the addition of other layers.
- D. Borrow will be permitted only to the extent necessary to complete the embankments, backfill trenches and similar construction and only after all usable material from the excavation Items has been placed. With the prior written approval of the Engineer, the Contractor may be permitted to place borrow before the excavations are completed; however, the Contractor will be held responsible for the proper placing of all suitable excavated materials, and no payment will be allowed for any Borrow placed in lieu of suitable excavated materials. This permission may be revoked by the Engineer at any time if, in his opinion, satisfactory progress is not maintained on other operations.
- E. Geotextile fabric shall be placed as shown on the Contract Drawings or as ordered by the Engineer.

3.02 TESTING

- A. The Contractor shall obtain representative samples of borrow for use on-site. Pay for a certified report(s) as required by an approved laboratory showing the mechanical analysis and organic content of the borrow. Submit test results to the Engineer for review and approval.

PART 4 – MEASUREMENT AND PAYMENT

4.01 MEASUREMENT

- A. Before the preconstruction meeting, the Contractor shall submit to the Engineer a schedule of values allocated to various portions of the work, prepared in such form, and supported by such data to substantiate its accuracy, as the Engineer may require. This schedule, unless objected to by the Engineer, will be used as a basis for reviewing the Contractor’s Applications for Payment.
- B. Monthly payments will be made under this Item in proportion to the amount of work done as determined by the Engineer for the Lump Sum Price Bid.
- C. Should the project be increased in scope due to construction changes beyond the requirements hereinabove, any additional work required will be paid for as Extra Work. Should the project be decreased in scope, a suitable credit, mutually agreed upon based on the reduction in actual work or scope will be taken by the Town.

4.02 PAYMENT

- A. This work will be paid for at the LUMP SUM bid price for ITEM 2170

<u>Item No.</u>	<u>Pay Item</u>	<u>Pay Unit</u>
2170	Storage Tank Bedding and Backfill	Lump Sum

END OF SECTION

ITEM 5000

10,000 GALLON PRECAST CONCRETE CISTERN TANK, DRY HYDRANT AND PIPING

PART 1 – GENERAL

1.01 SCOPE OF WORK

- A. Furnish all labor, materials and equipment required for preparation and installation of 10,000 gallon precast concrete underground storage tank for fire protection, polyvinyl chloride and ductile iron piping, all necessary couplings and fittings, and appurtenances as necessary to complete this Item of work where indicated on the Contract Drawings or where directed by the Engineer.
- B. This work further includes furnishing all labor, materials and equipment required for the installation of a dry hydrant consisting of thickness Class 53 ductile iron pipe, pipe fittings, couplings, jointing materials and accessories; inlet screen; fire hose attachment assembly; and other materials incidental to the installation of dry hydrant and all other appurtenant work associated with the installation of dry hydrant whether such work is shown on the Contract Drawings or not. The dry hydrant shall be constructed to the lines and grades as indicated and/or as directed, complete in place in accordance with the drawings or as ordered by the Engineer.
- C. All work shall be in accordance with any permit obtained from town of Greenwich Inland Wetlands & Watercourses Agency and any work on private property is subject to the terms of Easement (G.L.R. Book 7426, Page 166) and Easement Map (G.L.R. Map No. 9030) filed with Greenwich Land Records and Right-of-Entry agreement on file in town of Greenwich Engineering Division office.

1.02 RELATED WORK

- A. Unclassified Excavation, Backfill, Formation of Embankments and Disposal of Surplus and Unsuitable Material is included in Item 2020.
- B. Rock Excavation is included in Item 2021.
- C. Water Pollution Control, Soil Erosion and Sedimentation Control Systems is included in Item 2100.
- D. Storage Tank Bedding and Backfill is included in Item 2170.
- E. 4' Diameter Precast Concrete Riser Cone with Manhole Frame and Cover is included in Item 5070.
- F. Excavation Support System is included in Item 7160.
- G. Temporary 6' High Chain Link Construction Fencing is included in item 9130.
- H. Crushed Stone Pull-Off Area is included in Item 9220.
- I. 6" Topsoil, Seed and Shredded Straw Mulch is included in Item 9440.
- J. Contingencies and Extra Work is included in Item 9999.

1.03 SUBMITTALS

- A. Submit to the Engineer, in accordance with Section 6.7, shop drawings, product data, materials and details of construction. Submittals shall include at least the following:
 - 1. 10,000 Gallon Precast Concrete Cistern Tank
 - 2. Ladder Rungs
 - 3. Anti-Vortex Plate Assembly
 - 4. Link Seal for Pipe Penetrations
 - 5. Dry Hydrant Draft and Fill Connections
 - 6. Draft/Fill Ductile Iron Pipe and Fittings
 - 7. Vent Polyvinyl Chloride Pipe, Vent Cap, Vent Screen and Fittings
 - 8. Polyvinyl Chloride Rigid and Flexible Pipe, Adapter and Strainer
 - 9. Inspection Port Cover
 - 10. Bollards
 - 11. Flexible Hydrant Marker

12. Method of repair for minor damage to precast concrete sections

1.04 REFERENCE STANDARDS

- A. Sections 5.07, 5.13 and 6.51 of the Standard Specifications.
- B. American Society for Testing and Materials (ASTM)
 - 1. ASTM A48 - Standard Specification for Gray Iron Castings.
 - 2. ASTM C32 - Standard Specification for Sewer and Manhole Brick (Made from Clay or Shale).
 - 3. ASTM C33 - Standard Specification for Concrete Aggregates.
 - 4. ASTM C62 - Standard Specification for Building Brick (Solid Masonry Units Made from Clay or Shale)
 - 5. ASTM C150 - Standard Specification for Portland Cement
 - 6. ASTM C207 - Standard Specification for Hydrated Lime for Masonry Purposes
 - 7. ASTM C443 - Standard Specification for Joints for Circular Concrete Sewer and Culvert Pipe, Using Rubber Gaskets
 - 8. ASTM C478 - Standard Specification for Precast Reinforced Concrete Manhole Sections
 - 9. ASTM C990 - Standard Specification for Joints for Concrete Pipe, Manholes, and Precast Box Sections using Preformed Flexible Joint Sealant.
 - 10. ASTM D4101 - Standard Specification for Propylene Plastic Injection and Extrusion Materials
- C. American Concrete Institute (ACI)
 - 1. ACI 318 - Building Code Requirements for Structural Concrete
 - 2. ACI 350 - Code Requirements for Environmental Engineering Concrete Structures
- D. Ductile-Iron Pipe and Fittings (AWWA Manual M41)
- E. Occupational Safety and Health Administration (OSHA).
- F. Where reference is made to one of the above standards, the revision in effect at the time of bid opening shall apply.

1.05 QUALITY ASSURANCE

- A. All material shall be new and unused.
- B. Materials' quality, manufacturing process and finished sections are subject to inspection and approval by Engineer or other Owner representative. Inspection may be made at place of manufacture, at work site following delivery, or both.
- C. Materials will be examined for compliance with standards referenced above.
- D. Materials shall be rejected for failure to meet any requirements specified herein. Rejection may occur at place of manufacture, at work site, or following installation. Mark for identification rejected materials and remove from work site immediately. Rejected materials shall be replaced at no cost to Owner.
- E. Repair minor damage by approved method, if repair is authorized by Engineer. Epoxy mortar may be utilized for repairs subject to the approval of the Engineer.

PART 2 – PRODUCTS

2.01 GENERAL

- A. Reference to a manufacturer's name and model or catalog number is for the purpose of establishing the standard of quality and general configuration desired.
- B. Like items of materials/equipment shall be the end products of one manufacturer in order to provide standardization for appearance, operation, maintenance, spare parts and manufacturer's service.
- C. Provide lifting lugs or holes in each precast section for proper handling.
- D. Cement shall conform to ASTM C150, Type II cement or equal.

- E. Precast concrete sections shall be properly cured prior to shipping. Precast concrete sections shall not be shipped before concrete has attained 3,000 psi compressive strength.
- F. Mark date of manufacture, name and trademark of manufacturer on the inside of each precast section.

2.02 10,000 Gallon Precast Concrete Cistern Tank

A. 10,000 Gallon Precast Concrete Cistern Tank shall meet the following requirements:

- 1. The tank shall be constructed in accordance with requirements of NFPA 22 – Standard for Water Tanks for Private Fire Protection and be manufactured by United Concrete Products Inc., Yorkville, CT or approved equal.
- 2. The tank shall have internal dimensions of 10’ wide by 17’ long by 8’ deep and shall have nominal capacity of 10,000 gallons per the Contract Drawings. The Tank top slab shall be constructed per dimensions shown on the Contract Drawings. All tank components shall be reinforced precast concrete with the following requirements:
 - a. Internal Load – Tank shall withstand a 5-psig air-pressure test with 5:1 safety factor.
 - b. Vacuum Test – the tank shall be designed to withstand a vacuum test to 11.5" of mercury.
 - c. Surface Loads – Tank shall withstand surface H-20 axle loads (32,000 lbs/axle) when properly installed according to tank manufacturer's current guidelines.
 - d. External Hydrostatic Pressure – Tank shall be capable of being buried in ground with 5' of overburden over the top of the tank, the hole fully flooded and a safety factor of 5:1 against general buckling.
 - e. Product Storage – Tank shall be capable of storing liquid products with specific gravity up to 1.1 and shall be vented to atmospheric pressure.
 - f. Damproofing – Two coats of bituminous waterproofing material applied to the exterior surfaces of structures by brush or spray and in accordance with the manufacturer’s recommendations. Damproofing shall be Hydrocide 648 by Sonneborn Building Products; Dehydratine 4 by A.C. Horn Inc; RIW Marine Liquid by Toch Brothers or equal.
 - g. Joint Sealant – Joint sealant shall be butyl rubber mastic type seal in conformance with latest AASHTO specification M-198 and Federal specification SS-S-0021 (210-A).
- 3. Tank design shall conform to latest ASTM designation C913.
- 4. Reinforcing steel deformed bars shall conform to latest ASM specification A615.
- 5. Concrete compressive strength shall be a minimum of 4,000 PSI at 28 days.
- 6. Method of tank manufacturing shall be wet cast weight chart.

2.03 Ladder Rungs

A. Ladder Rungs shall meet the following requirements:

- 1. Steps shall be aligned vertically per the Contract Drawings and be equal to Pattern No. 2593, manufactured by Campbell Foundry Company, Harrison, N.J.

2.04 Anti-Vortex Plate Assembly

A. Anti-Vortex Plate Assembly shall meet the following requirements:

- 1. Plate assembly shall be equal to Part No. AVPLATE6SSKIT, manufactured by Neptune-Benson Inc., Coventry, R.I.

2.05 Link Seal for Pipe Penetrations

A. Link Seal shall meet the following requirements:

1. Link Seal shall be manufactured by GPT (an EnPro Industries company) or approved equal.
2. Model shall be determined by pipe and opening sizes.

2.06 Dry Hydrant Draft and Fill Connections

A. Dry Hydrant Draft and Fill Connections shall meet the following requirements:

1. Draft and fill piping and fittings shall be ductile iron pipe, thickness class 53 conforming to the requirements of AWWA/ANSI C151/A21.51 and C110/A21.10.
2. Fire Department Draft Connection: Shall be aluminum adapter and connection components manufactured by the Kocheck Company, Inc., Putnam, Connecticut (800-420-4673) or an approved equal. The draft connection shall be a six (6) inch National Standard Thread (NST) female swivel type connection (Part No. DHF 61, Color-Red). The connection shall be equipped with protection cap and retainer chain or cable.
3. Fire Department Fill Connection: Shall be aluminum adapter and connection components manufactured by Fire End & Croker Corporation, Elmsford, New York (800-759-3473) or an approved equal. The fill connection shall be a K-Brite aluminum adapter with 90 degree STORZ inlet, female National Pipe Thread (NPT) outlet, Figure No. 6371, Size – FNPT6 x 5STORZ. Color-Green.

2.07 Draft/Fill Ductile Iron Pipe and Fittings

A. Draft/Fill Ductile Iron Pipe and Fittings shall meet the following requirements:

1. Draft and fill piping and fittings shall be ductile iron pipe thickness class 53 conforming to the requirements of AWWA/ANSI C151/A21.51 and C110/A21.10. Paint all exposed (above finished grade) pipe and fittings with a water based, acrylic or latex paint formulated for exterior use, Draft Color-Red, Fill Color-Green.
2. Concrete anchors for ductile iron pipe shall be Class C concrete with a 28-day compressive strength of 3000 psi and shall conform to the requirements of Section M.03.01 of the Standard Specifications.
3. Draft pipe shall terminate 6” from the bottom of the tank. Anti-vortex steel plate shall be bolted 6” off tank floor.
4. Fill pipe shall terminate within 2” of bottom of tank top slab.

2.08 Vent Polyvinyl Chloride Pipe, Vent Cap, Vent Screen and Fittings

A. Vent Polyvinyl Chloride Pipe, Vent Cap, Vent Screen and Fittings shall meet the following requirements:

1. Vent piping and fittings shall be schedule 40 polyvinyl chloride plastic pipe conforming to the requirements of ASTM D1785 and ASTM D 2466.
2. Paint all exposed (above finished grade) pipe and fittings with a water based, acrylic or latex paint formulated for exterior use, Vent Color-Green.
3. Vent aluminum well cap shall be a locking type cap secured to the vent riser piping with a covered set screw assembly to prevent unauthorized removal.
4. Vent opening screen shall be a plastic or metal screen assembly secured to the end of the vent down pipe opening.
5. Vent pipe shall terminate within 2” of bottom of tank top slab.

2.09 Polyvinyl Chloride Rigid and Flexible Pipe, Adapter and Strainer

A. Polyvinyl Chloride Rigid and Flexible Pipe, Adapter and Strainer shall meet the following requirements:

1. Rigid and flexible piping and fittings shall be schedule 40 polyvinyl chloride plastic pipe conforming to the requirements of ASTM D1785 and ASTM D 2466.

2. Strainer shall be equal to Model No. 1P690, manufactured by Dayton and supplied by Grainger

2.10 Inspection Port Cover

A. Inspection Port Cover shall meet the following requirements:

1. Cover shall be equal to pattern 4173, manufactured by Campbell Foundry Company, Harrison, N.J.

2.11 Bollards

A. Bollards shall meet the following requirements:

1. Bollards shall be 4" (4 1/2" OD) steel diameter steel pipe as manufactured by DuMor, Inc. PO box 142 Mifflintown, PA 17059-0142, or approved equal. Steel members shall be coated w/zinc rich epoxy the finished w/polyester powder coating - red.

2.12 Flexible Hydrant Marker

A. Flexible Hydrant Marker shall meet the following requirements:

1. Marker shall be equal to "Patriot" model, manufactured by Hy-Viz Inc., Lodi, New Jersey

PART 3 – EXECUTION

3.01 INSTALLATION

- A. Construction methods shall be in accordance with applicable provisions of Sections 5.07, 5.13 and 6.51 of the Standard Specifications. The Contractor shall provide their own disposal site for surplus and unsuitable materials.
- B. Work shall be performed in accordance with notes and dimensions shown on the Contract Drawings. Prior to installation of the tank, the Engineer shall perform an inspection of the excavated area and provide approval for elevation of bedding material.
- C. Place tank top slab on joint sealant atop storage tank riser section.
- D. All piping exterior to the tank shall be installed in accordance with the applicable sections of the Standard Specifications. Piping in trenches shall not be covered or backfilled until it has been inspected by the Engineer and a duly authorized representative of the Fire Department. Pipe testing shall be in conformance with the National Fire Protection Association (NFPA) standard NFPA 1142 "Standard on Water Supplies for Suburban and Rural Fire Fighting".
- E. Warning Tape - Install a brightly colored polyethylene tape manufactured specifically for warning and identification of buried utility lines buried 6 inches below the ground surface along the entire length of ductile iron pipe from the underground cistern to the dry hydrant outlet. Tape shall be provided in rolls, 6-inches minimum width, with warning and identification imprinted in bold black letters continuously and repeatedly over entire tape length. Warning and identification shall be "CAUTION BURIED PIPE BELOW" or similar wording. Code and letter coloring shall be permanent, unaffected by moisture and other substances contained in the trench backfill material.

3.02 TESTING

- A. The tank shall be tested according to the current installation and operating requirements of the tank manufacturer for the installation of pre-cast reinforced concrete underground storage tanks. Two original copies of the test results shall be given to the Engineer.
- B. Town of Greenwich Fire Department shall fill and perform test of dry hydrant. Written acceptance shall be obtained from Fire Department prior to final acceptance of work.

PART 4 – MEASUREMENT AND PAYMENT

4.01 MEASUREMENT

- A. Before the preconstruction meeting, the Contractor shall submit to the Engineer a schedule of values allocated to various portions of the work, prepared in such form, and supported by such data to substantiate its accuracy, as the Engineer may require. This schedule, unless objected to by the Engineer, will be used as a basis for reviewing the Contractor’s Applications for Payment.
- B. Monthly payments will be made under this Item in proportion to the amount of work done as determined by the Engineer for the Lump Sum Price Bid.
- C. Should the project be increased in scope due to construction changes beyond the requirements hereinabove, any additional work required will be paid for as Extra Work. Should the project be decreased in scope, a suitable credit, mutually agreed upon based on the reduction in actual work or scope will be taken by the Town.

4.02 PAYMENT

- A. This work will be paid for at the LUMP SUM bid price for ITEM 5000

<u>Item No.</u>	<u>Pay Item</u>	<u>Pay Unit</u>
5000	10,000 Gallon Precast Concrete Cistern Tank, Dry Hydrant and Piping	Lump Sum

Which price shall include the furnishing and installation of the underground fire protection storage tank with all appurtenances, polyvinyl chloride and ductile pipe, all required pipe fittings and couplings, concrete, and all materials, equipment, tools, labor and work necessary for or incidental to the completion of the Item.

- B. Excavation and backfilling operations will not be measured nor paid for under this Item, but shall be included in the appropriate items Item below:
 - a. Item 2020 – Unclassified Excavation, Backfill, Formation of Embankments and Disposal of Surplus and Unsuitable Material
 - b. Item 2021 – Rock Excavation
 - c. Item 2170 – Storage Tank Bedding and Backfill

END OF SECTION

ITEM 5070

4' DIAMETER PRECAST CONCRETE RISER CONE WITH MANHOLE FRAME AND COVER

PART 1 – GENERAL

1.01 SCOPE OF WORK

- A. Furnish all labor, materials and equipment required to install 4' diameter precast concrete riser cone, manhole frame and cover and appurtenances as shown on the Contract Drawings and as specified herein.
- B. All work shall be in accordance with any permit obtained from town of Greenwich Inland Wetlands & Watercourses Agency and any work on private property is subject to the terms of Easement (G.L.R. Book 7426, Page 166) and Easement Map (G.L.R. Map No. 9030) filed with Greenwich Land Records and Right-of-Entry agreement on file in town of Greenwich Engineering Division office.

1.02 RELATED WORK

- A. 10,000 Gallon Precast Concrete Cistern Tank, Dry Hydrant and Piping is included in Item 5000

1.03 SUBMITTALS

- A. Submit to the Engineer, in accordance with Section 6.7, shop drawings, product data, materials and details of construction. Submittals shall include at least the following:
 - 1. 4' Diameter Precast Concrete Riser Cone
 - 2. Ladder Rungs
 - 3. Manhole Frame & Cover
 - 4. Brick, Masonry or Reinforced Concrete Grade Rings
 - 5. Method of repair for minor damage to precast concrete sections

1.04 REFERENCE STANDARDS

- A. Section 5.07 of the Standard Specifications.
- B. American Society for Testing and Materials (ASTM)
 - 1. ASTM A48 - Standard Specification for Gray Iron Castings.
 - 2. ASTM C32 - Standard Specification for Sewer and Manhole Brick (Made from Clay or Shale).
 - 3. ASTM C33 - Standard Specification for Concrete Aggregates.
 - 4. ASTM C62 - Standard Specification for Building Brick (Solid Masonry Units Made from Clay or Shale)
 - 5. ASTM C150 - Standard Specification for Portland Cement
 - 6. ASTM C207 - Standard Specification for Hydrated Lime for Masonry Purposes
 - 7. ASTM C443 - Standard Specification for Joints for Circular Concrete Sewer and Culvert Pipe, Using Rubber Gaskets
 - 8. ASTM C478 - Standard Specification for Precast Reinforced Concrete Manhole Sections
 - 9. ASTM C990 - Standard Specification for Joints for Concrete Pipe, Manholes, and Precast Box Sections using Preformed Flexible Joint Sealant.
 - 10. ASTM D4101 - Standard Specification for Propylene Plastic Injection and Extrusion Materials
- C. American Concrete Institute (ACI)
 - 1. ACI 318 - Building Code Requirements for Structural Concrete
 - 2. ACI 350 - Code Requirements for Environmental Engineering Concrete Structures

- D. Occupational Safety and Health Administration (OSHA).
- E. Where reference is made to one of the above standards, the revision in effect at the time of bid opening shall apply.

1.05 QUALITY ASSURANCE

- A. All material shall be new and unused.
- B. Materials' quality, manufacturing process and finished sections are subject to inspection and approval by Engineer or other Owner representative. Inspection may be made at place of manufacture, at work site following delivery, or both.
- C. Materials will be examined for compliance with standards referenced above.
- D. Materials shall be rejected for failure to meet any requirements specified herein. Rejection may occur at place of manufacture, at work site, or following installation. Mark for identification rejected materials and remove from work site immediately. Rejected materials shall be replaced at no cost to Owner.
- E. Repair minor damage by approved method, if repair is authorized by Engineer. Epoxy mortar may be utilized for repairs subject to the approval of the Engineer.

PART 2 – PRODUCTS

2.01 GENERAL

- A. Reference to a manufacturer's name and model or catalog number is for the purpose of establishing the standard of quality and general configuration desired.
- B. Like items of materials/equipment shall be the end products of one manufacturer in order to provide standardization for appearance, operation, maintenance, spare parts and manufacturer's service.
- C. Provide lifting lugs or holes in each precast section for proper handling.
- D. Cement shall conform to ASTM C150, Type II cement or equal.
- E. Precast concrete sections shall be properly cured prior to shipping. Precast concrete sections shall not be shipped before concrete has attained 3,000 psi compressive strength.
- F. Mark date of manufacture, name and trademark of manufacturer on the inside of each precast section.

2.02 4' Diameter Precast Concrete Riser Cone

- A. 4' Diameter Precast Concrete Riser Cone shall conform to ASTM C478 and meet the following requirements:
 - 1. Design precast riser for its own weight, weight of soil at 130 pcf, and a live load equal to AASHTO H-20 truck loading applied at finished grade.
 - 2. Wall thickness shall be no less than 5-inches.
 - 3. Construct precast concrete bases as shown on the Contract Drawings.

2.03 Ladder Rungs

- A. Ladder Rungs shall meet the following requirements:
 - 1. Steps shall be equal to Pattern No. 2593, manufactured by Campbell Foundry Company, Harrison, N.J.

2.04 Manhole Frame and Cover

- A. Manhole Frame and Cover shall meet the following requirements:
 - 1. Manhole frames and covers shall be of good quality, strong, tough, even grained cast iron, smooth, free from scale, lumps, blisters, sand holes and defects of any kind which render them unfit for the service for which they are intended. Manhole covers and frame seats shall be machined to a true surface.

Castings shall be thoroughly cleaned and subject to hammer inspection. Cast iron shall conform to ASTM A48, Class 30 and AASHTO Designation: M 105-49, Class 30, latest revision.

2. Casting and cover shall be equal to pattern 1224A, manufactured by Campbell Foundry Company, Harrison, N.J. Covers shall not have vented lids. Unless otherwise specified, the word "CISTERN" shall be cast in the cover.
3. Manhole cover shall have a notch and the manhole frame shall have a key.
4. The date (e.g, 07-17-16) shall be cast into each casting, both the frame and cover.

2.05 Brick, Masonry or Reinforced Concrete Grade Rings

A. Brick, Masonry or Reinforced Concrete Grade Rings shall meet the following requirements:

1. Bricks shall be sound, hard, uniformly burned, regular and uniform in shape and size. Underburned or salmon brick shall not be acceptable. Only whole brick shall be used.
2. Bricks for raising manhole frames to finished grade shall conform to ASTM C62.
3. Mortar shall be composed of 1 part Portland cement, 2 parts sand, and hydrated lime not to exceed 10-lbs to each bag of cement. Portland cement shall be ASTM C150, Type II; hydrated lime shall conform to ASTM C207.
4. Sand shall be washed, cleaned, screened, well graded with all particles passing a No. 4 sieve and conform to ASTM C33.
5. Reinforced Concrete Grade Rings shall meet the following requirements:
 - a. Reinforcing steel welded wire fabric shall conform to latest ASTM specification A185
 - b. Reinforcing steel deformed bars shall conform to latest ASTM specification A615
 - c. Concrete compressive strength shall be a minimum of 4,000 PSI at 28 days.
 - d. Method of manufacturing shall be wet cast

2.06 Damproofing & Joint Sealant

A. Damproofing and Joint Sealant shall meet the following requirements:

1. Two coats of bituminous waterproofing material applied to the exterior surfaces of structures by brush or spray and in accordance with the manufacturer's recommendations. Dampproofing shall be Hydrocide 648 by Sonneborn Building Products; Dehydratine 4 by A.C. Horn Inc; RIW Marine Liquid by Toch Brothers or equal.
2. Joint sealant shall be butyl rubber mastic type seal in conformance with latest AASHTO specification M-198 and Federal specification SS-S-0021 (210-A).

PART 3 – EXECUTION

3.01 INSTALLATION

- A. Construction methods shall be in accordance with applicable provisions of Section 5.07 of the Standard Specifications. The Contractor shall provide their own disposal site for surplus and unsuitable materials.
- B. Work shall be performed in accordance with notes and dimensions shown on the Contract Drawings.
- C. 4' Diameter Precast Concrete Riser Cone
 1. Riser shall be constructed to the dimensions shown on the Drawings and as specified herein. Costs incurred resulting from changes to dimensions shall be at the cost of the Contractor. Protect all work against flooding and floatation.
 2. Place riser on joint sealant atop storage tank top slab. Set riser grade so that a maximum grade adjustment of 12-in is required to bring the manhole frame and cover to final grade.
 3. Use precast concrete grade rings or brick and non-shrink mortar to adjust manhole frame and cover to final grade.

4. Allow joints to set for 14 hours before backfilling unless the Engineer specifically approves a shorter period.
5. Plug holes in the concrete barrel sections required for handling with a non-shrinking grout or non-shrinking grout in combination with concrete plugs. Finish flush on the inside.
6. Backfill carefully and evenly around manhole sections.

D. Brickwork

1. Mix mortar only in such quantity as may be required for immediate use. Use mortar before initial set has taken place. Mortar shall be used within 1-1/2 hours and shall be constantly worked with hoe or shovel until used. Anti-freeze mixtures shall not be included in the mortar. Install masonry when the outside temperature is above 40 degrees F unless provisions are made to protect the mortar, bricks and finished work from frost by heating and enclosing the work with tarpaulins or other suitable material. Engineer's decision regarding the adequacy of protection against freezing shall be final.

E. Setting Manhole Frame and Cover

1. Set manhole frame and cover in a full mortar bed. Utilize bricks or concrete grade rings, a maximum of 12-in thick, to assure frame and cover are set to the finished grade. Set manhole frame and cover to final grade prior to placement of topsoil and seed.

F. Dampproofing

1. Paint outer surfaces of precast riser with two coats of bituminous dampproofing at the rate of 30 to 60 sq ft per gallon, in accordance with manufacturer's instructions.

3.02 TESTING

A. Leakage Tests for Precast Riser

1. The Engineer will visually inspect drain manholes and catch basins for possible leaks before backfilling is allowed. All joints shall be sealed to the satisfaction of the engineer.
2. The Engineer may require an exfiltration test as described for drain manholes on any structure for which he/she deems appropriate.

3.03 CLEANING

- A. Thoroughly clean all new manholes, catch basins, and junction chambers of all silt, debris and foreign matter of any kind, prior to final inspections.

PART 4 – MEASUREMENT AND PAYMENT

4.01 MEASUREMENT

- A. Before the preconstruction meeting, the Contractor shall submit to the Engineer a schedule of values allocated to various portions of the work, prepared in such form, and supported by such data to substantiate its accuracy, as the Engineer may require. This schedule, unless objected to by the Engineer, will be used as a basis for reviewing the Contractor's Applications for Payment.
- B. Monthly payments will be made under this Item in proportion to the amount of work done as determined by the Engineer for the Lump Sum Price Bid.
- C. Should the project be increased in scope due to construction changes beyond the requirements hereinabove, any additional work required will be paid for as Extra Work. Should the project be decreased in scope, a suitable credit, mutually agreed upon based on the reduction in actual work or scope will be taken by the Town.

4.02 PAYMENT

A. This work will be paid for at the LUMP SUM bid price for ITEM 5070

<u>Item No.</u>	<u>Pay Item</u>	<u>Pay Unit</u>
5070	4' Diameter Precast Concrete Riser Cone with Manhole Frame and Cover	Lump Sum

END OF SECTION

ITEM 7160

EXCAVATION SUPPORT SYSTEM

PART 1 – GENERAL

1.01 SCOPE OF WORK

- A. Furnish all labor, materials and equipment required for preparation, installation and removal of temporary excavation support system required for installation of precast concrete cistern tank, as shown on the Contract Drawings and as specified herein. The Contractor shall design, furnish, install, and maintain a system of supports, including all bracing and associated items, to retain excavations in a safe manner and to control ground movements. Upon completion of the required construction the system of supports shall be completely removed and the excavation and staging area sites restored as discussed herein.
- B. Retain the services of a Professional Engineer registered in the State of Connecticut to prepare excavation support and protection system designs and submittals described herein.
- C. All work shall be in accordance with any permit obtained from town of Greenwich Inland Wetlands & Watercourses Agency and any work on private property is subject to the terms of Easement (G.L.R. Book 7426, Page 166) and Easement Map (G.L.R. Map No. 9030) filed with Greenwich Land Records and Right-of-Entry agreement on file in town of Greenwich Engineering Division office.

1.02 RELATED WORK

- A. Unclassified Excavation, Backfill, Formation of Embankments and Disposal of Surplus and Unsuitable Material is included in Item 2020.
- B. Rock Excavation is included in Item 2021.

1.03 SUBMITTALS

- A. Submit to the Engineer, in accordance with Section 6.7, shop drawings, product data, materials and details of construction. Submittals shall include at least the following:
 - 1. Method of temporary support and design of temporary support system shall be signed and sealed by a Connecticut licensed Professional Engineer and submitted for approval by the Engineer. The submittal shall include the following, as a minimum:
 - a. Provide overall plan layout of the system, indicating clearances, dimensions, material properties, member sizes, locations, spacing and penetration depth of all members, locations of various types of lateral supports. Indicate existing and proposed utilities, structures or other obstructions, location and type of instrumentation and monitoring points within the area of influence of the excavation.
 - b. Provide wall elevations and locations of all bracing.
 - c. Show the method and overall sequence of installation and removal of excavation support and bracing, indicating levels to which the work will be carried out before bracing is installed or removed.
 - d. Method of preloading bracing (if required) and the preload for each member, and the method of locking-off the preload. Include detailed drawings of the connections, jacking supports and method of shimming.
 - e. Details, layout, arrangement, equipment requirements, and method of construction of the proposed excavation support system.
 - f. Procedures for resolving difficulties arising from misalignment of members exposed during excavation, and criteria for implementing those procedures.
 - g. A plan of deformation monitoring points to monitor the performance of the excavation support system in accordance with Section 02495. Submit excavation monitoring data with horizontal and vertical deflections of support within 24 hours of each survey along with all previous survey data.

- h. Design calculations, including the following:
 - i. Loads on the excavation support system for all stages of excavation, bracing removal, and concrete placement, including material, hydrostatic and equipment loads on adjacent ground during construction.
 - ii. Design of wall and all bracing members including all details for all stages of construction.
 - iii. Theoretical deflections of excavation support system and deformation of structures, pipelines, and other improvements located within the area of influence of the excavation.
- 2. Submit to the Engineer for review and acceptance, a plan of action to be implemented in the event any deformation exceeds the calculated theoretical deflections. The plan of actions shall be positive measures by the Contractor to limit further movement of the wall including but not limited to trenching for struts and wales, placement of granular earth berms against the wall, installation of additional struts, or combinations thereof. The details of the mitigating measures shall include a schedule of implementation, location and/or availability of materials, structural details for all connections to the wall and support elements, and a detailed description of the method of implementation. The Contractor shall be prepared to work 24 hours per day to implement such measures. The remedial work/mitigating measures shall be at no additional cost to the Owner.
- 3. Submit quality control measures as required to ensure that the performance of the excavation support system is consistent with the approved shop drawings and the requirements herein.
- 4. Submit welder qualifications and weld procedures in accordance with AWS D1.1.
- 5. Submit Contractor's and Contractor's Design Engineer's qualifications as described herein.
- 6. At least one copy of the design shall be maintained at the job site during excavation that includes a plan indicating the sizes, types, and configurations of the materials to be used in the protective system, and the identity of the registered engineer who approved the design.
- 7. Do not proceed with any support of excavation or protection activities until the submittal has been approved by the Engineer.
- 8. Contractor's Design Engineer's documentation shall include:
 - a. On-site inspections of excavation support system as the systems are constructed.
 - b. Review of quality control measures and performance data.
 - c. Certification that the excavation support system is constructed per the applicable design following completion of each support system and following any modifications by Contractor during construction.

1.04 REFERENCE STANDARDS

- A. Section 7.16 of the Standard Specifications.
- B. Occupational Safety and Health Administration (OSHA).
- C. All excavations and support systems shall conform to applicable OSHA excavation, trenching, and shoring standards which are contained in the U.S. Code of Federal Regulations 29 (C.F.R.) 1926.650-1926.653, and all other federal, state or local requirements. In the event of a conflict between regulations, comply with the more restrictive applicable requirements.
- D. Where reference is made to one of the above standards, the revision in effect at the time of bid opening shall apply.

1.05 QUALITY ASSURANCE

- A. Materials' quality, manufacturing process and finished sections are subject to inspection and approval by Engineer or other Owner representative. Inspection may be made at place of manufacture, at work site following delivery, or both.
- B. Materials will be examined for compliance with standards referenced above.
- C. Materials shall be rejected for failure to meet any requirements specified herein. Rejection may occur at place of manufacture, at work site, or following installation. Mark for identification rejected materials and remove from work site immediately. Rejected materials shall be replaced at no cost to Owner.

- D. Repair minor damage by approved method, if repair is authorized by Engineer.
- E. Regulations: Perform all work in accordance with current applicable regulations and codes of all Federal, State and local agencies.
- F. The Contractor shall have at least 5 years of experience with work comparable to the work shown and specified, employing labor and supervisory personnel who are similarly experienced in this type of work.
- G. The Contractor's Design Engineer shall be a Registered Professional Engineer in the State of Connecticut with at least 5 years professional experience in the design and construction of support of excavation systems and shall have completed not less than 5 successful excavation support projects of equal type, size, and complexity to that required for the work.

PART 2 – PRODUCTS

2.01 GENERAL

- A. Reference to a manufacturer's name and model or catalog number is for the purpose of establishing the standard of quality and general configuration desired.
- B. Like items of materials/equipment shall be the end products of one manufacturer in order to provide standardization for appearance, operation, maintenance, spare parts and manufacturer's service.
- C. Soldier piles and structural steel members shall conform to ASTM A572 or ASTM A242 unless approved otherwise. All steel conforming to ASTM A572 shall be Grade 50 or better. No members with permanent deformations are to be provided. Members shall not be spliced unless approved by the Engineer.
- D. Pipe piles used as soldier piles shall conform to ASTM A252, Grade 3, or better unless approved otherwise.
- E. Steel sheet piling shall conform to ASTM A328 or ASTM A572 or ASTM A690, unless approved otherwise. All steel sheet piling conforming to ASTM A 572 shall be Grade 50 or better.
- F. Concrete shall conform to ASTM C33 and ASTM C150 unless otherwise approved.
- G. All timber shall be structural grade with a minimum allowable flexural strength of 1100 psi. Timber lagging shall be at least 3 inches thick and free of large or loose knots.

PART 3 – EXECUTION

3.01 INSTALLATION

- A. Construction methods shall be in accordance with applicable provisions of Section 7.16 of the Standard Specifications. The Contractor shall provide their own disposal site for surplus and unsuitable materials.
- B. Work shall be performed in accordance with notes and dimensions shown on the Contract Drawings. Contractor must strictly adhere to allowable limit of excavation shown on the Contract Drawings.
- C. Commence installation of support system and excavations only after shop drawings have been reviewed and accepted by the Engineer.
- D. Methods of construction for excavations shall be such as to ensure the safety of the work, Contractor's employees, Engineer, and Owner's employees and inspectors, the public and adjacent property and improvements, whether public or private.
- E. Install excavation support systems in accordance with the approved shop drawings and applicable permits.
- F. If the Engineer is of the opinion that at any point sufficient or proper supports have not been provided, he may order additional supports placed at no additional cost to the Owner. Compliance with such order shall not relieve the Contractor from his responsibility for the sufficiency of such supports.
- G. Care shall be taken to prevent voids outside of the excavation support system, but if voids are formed, they shall be immediately filled with common fill material. Voids in locations that cannot be properly compacted upon backfilling shall be filled with lean concrete or other material as approved by the Engineer.
- H. If unstable material is encountered during excavation, all necessary measures shall be taken immediately to contain it in place and prevent ground displacement.
- I. Sufficient quantity of material shall be maintained on site for protection of work and for use in case of accident or emergency.
- J. All welding shall conform to the applicable provisions of ANSI/AWS D1.1.

3.02 REMOVAL OF EXCAVATION SUPPORT

- A. Except where specified on the Drawings or elsewhere in the Specifications, all excavation and support systems shall be carefully removed in such manner as not to endanger the construction of other structures, utilities, or property, whether public or private.
- B. Do not remove internal bracing and transfer loads to the permanent structure without prior acceptance of the Engineer.
- C. Removal shall begin at and progress from the bottom of the excavation. Members shall be released slowly as to note any indication of possible failure of the remaining members or possible cave-in of the sides of the excavation.
- D. Backfilling shall progress together with the removal of support systems from excavations.
- E. Unless otherwise indicated, remove all portions of excavation support.
- F. All voids left after withdrawal of excavation support systems shall be immediately refilled with lean concrete or well-graded cohesionless sand by ramming with tools specially adapted to that purpose or otherwise as directed.
- G. No wood shall remain as part of the abandoned portion of the work.
- H. When removing the excavation support system, do not disturb or damage adjacent buildings, structures, waterproofing material, or utilities. Fill voids immediately with lean concrete or well-graded cohesionless sand, as indicated or as directed by the Engineer.
- I. Remove excavation support system materials from the site immediately.
- J. No payment will be given for sheeting which has been left in the excavation or trench for the convenience of the Contractor.

PART 4 – MEASUREMENT AND PAYMENT

4.01 MEASUREMENT

- A. Before the preconstruction meeting, the Contractor shall submit to the Engineer a schedule of values allocated to various portions of the work, prepared in such form, and supported by such data to substantiate its accuracy, as the Engineer may require. This schedule, unless objected to by the Engineer, will be used as a basis for reviewing the Contractor's Applications for Payment.
- B. Monthly payments will be made under this Item in proportion to the amount of work done as determined by the Engineer for the Lump Sum Price Bid.
- C. Should the project be increased in scope due to construction changes beyond the requirements hereinabove, any additional work required will be paid for as Extra Work. Should the project be decreased in scope, a suitable credit, mutually agreed upon based on the reduction in actual work or scope will be taken by the Town.

4.02 PAYMENT

- A. This work will be paid for at the LUMP SUM bid price for ITEM 7160

<u>Item No.</u>	<u>Pay Item</u>	<u>Pay Unit</u>
7160	Excavation Support System	Lump Sum

END OF SECTION

ITEM 9130

TEMPORARY 6' HIGH CHAIN LINK CONSTRUCTION FENCING

PART 1 – GENERAL

1.01 SCOPE OF WORK

- A. Furnish all labor, materials and equipment required for preparation and installation of Temporary 6' High Chain Link Construction Fencing as shown on the Contract Drawings or as directed by the Engineer.
- B. All work shall be in accordance with any permit obtained from town of Greenwich Inland Wetlands & Watercourses Agency and any work on private property is subject to the terms of Easement (G.L.R. Book 7426, Page 166) and Easement Map (G.L.R. Map No. 9030) filed with Greenwich Land Records and Right-of-Entry agreement on file in town of Greenwich Engineering Division office.

1.02 RELATED WORK

- A. Water Pollution Control, Soil Erosion and Sedimentation Control Systems is included in Item 2100.

1.03 SUBMITTALS

- A. Submit to the Engineer, in accordance with Section 6.7, shop drawings, product data, materials and details of construction. Submittals shall include at least the following:
 - 1. Temporary 6' High Chain Link Construction Fencing

1.04 REFERENCE STANDARDS

- A. Sections 9.13 and M.10.05 of the Standard Specifications.
- B. Occupational Safety and Health Administration (OSHA).
- C. Where reference is made to one of the above standards, the revision in effect at the time of bid opening shall apply.

1.05 QUALITY ASSURANCE

- A. Materials' quality, manufacturing process and finished sections are subject to inspection and approval by Engineer or other Owner representative. Inspection may be made at place of manufacture, at work site following delivery, or both.
- B. Materials will be examined for compliance with standards referenced above.
- C. Materials shall be rejected for failure to meet any requirements specified herein. Rejection may occur at place of manufacture, at work site, or following installation. Mark for identification rejected materials and remove from work site immediately. Rejected materials shall be replaced at no cost to Owner.
- D. Repair minor damage by approved method, if repair is authorized by Engineer.

PART 2 – PRODUCTS

2.01 GENERAL

- A. Reference to a manufacturer's name and model or catalog number is for the purpose of establishing the standard of quality and general configuration desired.
- B. Like items of materials/equipment shall be the end products of one manufacturer in order to provide standardization for appearance, operation, maintenance, spare parts and manufacturer's service.
- C. Materials for this Item shall conform to the Standard Specifications, Section M.10.05 for galvanized steel.

- D. Fabric Wire Fencing shall be composed of woven wire of the chain link type. It shall be not less than the height specified on the drawings and shall be constructed of not smaller than No. 9 gage wire. The wire shall be woven to form a continuous fabric having 2-inch mesh. The chain link fabric shall have a knuckled finish on both edges.
- E. Fence posts, gate frames, and panel stands shall be composed of a minimum of 1-3/8" outside diameter tubing braced with rods, bars or angles and filled with wire mesh.

PART 3 – EXECUTION

3.01 INSTALLATION

- A. Construction methods shall be in accordance with applicable provisions of Section 9.13 of the Standard Specifications. The Contractor shall provide their own disposal site for surplus and unsuitable materials.
- B. Work shall be performed in accordance with notes and dimensions shown on the Contract Drawings. Temporary 6' High Chain Link Construction Fencing shall be installed adjacent to all Silt Fence at the exterior of the work area.
- C. The fencing shall be installed prior to commencement of excavation for the tank installation, and shall be maintained until the tank excavation has been completely backfilled to the proposed grades shown on the Contract Drawings. Removal of the fencing shall only be directed by the Engineer.
- D. All fence panels shall be set vertically and to the required grade and alignment. Fence fabric shall be firmly attached to the post frames and braces in the manner indicated. All fence fabric shall be stretched taut and installed to the required elevations.
- E. The fencing shall generally follow the contour of the ground, with the bottom of fence fabric no less than 2 inch or more than 6 inch from the ground surface.
- F. The Contractor shall modify, reset, relocate the portable fencing as required in order to perform the work called for under this Contract. Any damaged sections of fence shall be immediately replaced by the Contractor at no additional cost to the Town.

PART 4 – MEASUREMENT AND PAYMENT

4.01 MEASUREMENT

- A. Before the preconstruction meeting, the Contractor shall submit to the Engineer a schedule of values allocated to various portions of the work, prepared in such form, and supported by such data to substantiate its accuracy, as the Engineer may require. This schedule, unless objected to by the Engineer, will be used as a basis for reviewing the Contractor's Applications for Payment.
- B. Monthly payments will be made under this Item in proportion to the amount of work done as determined by the Engineer for the Lump Sum Price Bid.
- C. Should the project be increased in scope due to construction changes beyond the requirements hereinabove, any additional work required will be paid for as Extra Work. Should the project be decreased in scope, a suitable credit, mutually agreed upon based on the reduction in actual work or scope will be taken by the Town.

4.02 PAYMENT

- A. This work will be paid for at the LUMP SUM bid price for ITEM 9130

<u>Item No.</u>	<u>Pay Item</u>	<u>Pay Unit</u>
9130	Temporary 6' High Chain Link Construction Fencing	Lump Sum

END OF SECTION

ITEM 9220

CRUSHED STONE PULL-OFF AREA

PART 1 – GENERAL

1.01 SCOPE OF WORK

- A. Furnish all labor, materials and equipment required for preparation and installation of Crushed Stone Pull-Off Area as shown on the Contract Drawings or as directed by the Engineer.
- B. All work shall be in accordance with any permit obtained from town of Greenwich Inland Wetlands & Watercourses Agency and any work on private property is subject to the terms of Easement (G.L.R. Book 7426, Page 166) and Easement Map (G.L.R. Map No. 9030) filed with Greenwich Land Records and Right-of-Entry agreement on file in town of Greenwich Engineering Division office.

1.02 RELATED WORK

- A. Unclassified Excavation, Backfill, Formation of Embankments and Disposal of Surplus and Unsuitable Material is included in Item 2020.
- B. Rock Excavation is included in Item 2021.

1.03 SUBMITTALS

- A. Submit to the Engineer, in accordance with Section 6.7, shop drawings, product data, materials and details of construction. Submittals shall include at least the following:
 - 1. Crushed Stone
 - 2. Processsed Aggregate

1.04 REFERENCE STANDARDS

- A. Sections 2.09, 3.04, M.01, M.02 and M.05 of the Standard Specifications.
- B. Occupational Safety and Health Administration (OSHA).
- C. Where reference is made to one of the above standards, the revision in effect at the time of bid opening shall apply.

1.05 QUALITY ASSURANCE

- A. All material shall be new and unused.
- B. Materials' quality, manufacturing process and finished sections are subject to inspection and approval by Engineer or other Owner representative. Inspection may be made at place of manufacture, at work site following delivery, or both.
- C. Materials will be examined for compliance with standards referenced above.
- D. Materials shall be rejected for failure to meet any requirements specified herein. Rejection may occur at place of manufacture, at work site, or following installation. Mark for identification rejected materials and remove from work site immediately. Rejected materials shall be replaced at no cost to Owner.
- E. Repair minor damage by approved method, if repair is authorized by Engineer.
- F. Crushed stone shall be sound, durable stone, angular in shape, and free of any foreign material, structural defects and chemical decay.

PART 2 – PRODUCTS

2.01 GENERAL

- A. Reference to a manufacturer's name and model or catalog number is for the purpose of establishing the standard of quality and general configuration desired.
- B. Like items of materials/equipment shall be the end products of one manufacturer in order to provide standardization for appearance, operation, maintenance, spare parts and manufacturer's service.

2.02 Crushed Stone

- A. Crushed Stone shall meet the following requirements:
 - 1. Shall be composed of hard, durable particles of stone, washed and thoroughly clean, and shall be free from an excess of thin or elongated pieces, frozen lumps, organic or other deleterious matter.
 - 2. Graded crushed stone shall conform to the grading requirements of Section M.01.01 of the Standard Specifications for the 3/4 inch gradations (No. 6). Quality, Soundness and Loss on Abrasion shall conform to the requirements of Section M.02.02 of the Standard Specifications.

2.03 Processed Aggregate

- A. Processed Aggregate shall meet the following requirements:
 - 1. Processed Aggregate shall conform to the requirements of the Section M.05.01 of the Standard Specifications.

PART 3 – EXECUTION

3.01 INSTALLATION

- A. Construction methods shall be in accordance with applicable provisions of Sections 2.09, 3.04 of the Standard Specifications. The Contractor shall provide their own disposal site for surplus and unsuitable materials.
- B. Work shall be performed in accordance with notes and dimensions shown on the Contract Drawings.

PART 4 – MEASUREMENT AND PAYMENT

4.01 MEASUREMENT

- A. Before the preconstruction meeting, the Contractor shall submit to the Engineer a schedule of values allocated to various portions of the work, prepared in such form, and supported by such data to substantiate its accuracy, as the Engineer may require. This schedule, unless objected to by the Engineer, will be used as a basis for reviewing the Contractor’s Applications for Payment.
- B. Monthly payments will be made under this Item in proportion to the amount of work done as determined by the Engineer for the Lump Sum Price Bid.
- C. Should the project be increased in scope due to construction changes beyond the requirements hereinabove, any additional work required will be paid for as Extra Work. Should the project be decreased in scope, a suitable credit, mutually agreed upon based on the reduction in actual work or scope will be taken by the Town.

4.02 PAYMENT

- A. This work will be paid for at the LUMP SUM bid price for ITEM 9220

<u>Item No.</u> 9220	<u>Pay Item</u> Crushed Stone Pull-Off Area	<u>Pay Unit</u> Lump Sum
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END OF SECTION

ITEM 9440

6" TOPSOIL, SEED AND SHREDDED STRAW MULCH

PART 1 – GENERAL

1.01 SCOPE OF WORK

- A. Furnish all labor, materials and equipment required for furnishing, hauling, placing, spreading, and shaping topsoil from approved offsite areas. The topsoil shall be placed on prepared areas in conformance with the lines, grades and thickness shown on the Contract Drawings or as directed by the Engineer. The topsoil will be placed to a minimum depth of 6 inches unless otherwise shown on the Contract Drawings.
- B. Furnish all labor, materials and equipment required for furnishing and placing agricultural dolomitic limestone, fertilizer, seed and mulch at the rates and in the manner as specified elsewhere, on those areas designated to be seeded by the Engineer, shown on the Contract Drawings, or described elsewhere in the Contract Documents.
- C. All work shall be in accordance with any permit obtained from town of Greenwich Inland Wetlands & Watercourses Agency and any work on private property is subject to the terms of Easement (G.L.R. Book 7426, Page 166) and Easement Map (G.L.R. Map No. 9030) filed with Greenwich Land Records and Right-of-Entry agreement on file in town of Greenwich Engineering Division office.

1.02 RELATED WORK (NOT USED)

1.03 SUBMITTALS

- A. Submit to the Engineer, in accordance with Section 6.7, shop drawings, product data, materials and details of construction. Submittals shall include at least the following:
 - 1. Topsoil
 - 2. Seed

1.04 REFERENCE STANDARDS

- A. Sections 9.44, 9.46, 9.49 and 9.50 of the Standard Specifications.
- B. Occupational Safety and Health Administration (OSHA).
- C. Where reference is made to one of the above standards, the revision in effect at the time of bid opening shall apply.

1.05 QUALITY ASSURANCE

- A. All material shall be new and unused.
- B. Materials' quality, manufacturing process and finished sections are subject to inspection and approval by Engineer or other Owner representative. Inspection may be made at place of manufacture, at work site following delivery, or both.
- C. Materials will be examined for compliance with standards referenced above.
- D. Materials shall be rejected for failure to meet any requirements specified herein. Rejection may occur at place of manufacture, at work site, or following installation. Mark for identification rejected materials and remove from work site immediately. Rejected materials shall be replaced at no cost to Owner.
- E. Repair minor damage by approved method, if repair is authorized by Engineer.

PART 2 – PRODUCTS

2.01 GENERAL

- A. Reference to a manufacturer's name and model or catalog number is for the purpose of establishing the standard of quality and general configuration desired.
- B. Like items of materials/equipment shall be the end products of one manufacturer in order to provide standardization for appearance, operation, maintenance, spare parts and manufacturer's service.

2.02 Topsoil

A. Topsoil shall meet the following requirements:

1. Topsoil shall consist of friable loam reasonably free of subsoil, clay lumps, brush, roots, weeds, or other objectionable vegetation, stones or similar objects larger than 2 inches. Brush and other vegetation that will not be incorporated with the soil during handling operations shall be cut and removed prior to stripping.
2. Ordinary sods and herbaceous growth such as grass and weeds are not to be removed but shall be thoroughly broken up and intermixed with the soil during handling operations.
3. The topsoil, unless otherwise specified or approved, shall have an acidity range of approximately 5.5 pH to 7.6 pH.
4. The organic content shall be not less than 3% or more than 20% as determined by the wet combustion method (chronic acid reduction).
5. There shall be not less than 20% nor more than 80% passing the 200-mesh sieve as determined by the wash test made in accordance with the standard test ASTM D1140.
6. All topsoil from offsite sources and its source will be inspected and approved by the Engineer before the material is delivered to the project site. All topsoil testing to determine conformance with these specifications shall be at the expense of the Contractor.
7. All material delivered to the project which does not meet these specifications, or which has become mixed with undue amounts of subsoil during any operation at the source or during placing or spreading, will be rejected and shall be replaced by the Contractor with acceptable material at the Contractor's expense.
8. Topsoil shall not have been treated with a residual insecticide or herbicide within one (1) year of delivery for use on the project site.
9. The Town reserves the right to modify the required topsoil specification based on other written agreements with the property owner, at no additional expense to the Town.

2.03 Liming, Fertilizing, Seeding and Mulching

A. Liming, Fertilizing, Seeding and Mulching shall meet the following requirements:

1. Materials for this work shall conform to all applicable State and Federal Regulations and the following requirements and the Engineer reserves the right to draw such samples and perform such tests as he deems necessary to assure that these specifications are met.
2. All materials shall be delivered to the project in new, clean, sealed containers which bear a label fully describing the brand, name and address of the manufacturer, net weight, contents, chemical analysis, grade, etc., and shall be accompanied by a properly executed affidavit meeting all existing State and Federal regulations.
 - a. Agricultural Ground Dolomitic Limestone – Agricultural ground dolomitic limestone shall conform to the standards of the Association of Official Agricultural Chemists and the following gradation:

<u>Square Mesh Sieves</u>	<u>Percent Passing by Weight (Min.)</u>
Pass #10	100
Pass #20	90
Pass #100	50
The minimum calcium and magnesium carbonate equivalent	90

- b. Fertilizer: Unless otherwise specified or recommended, fertilizer shall be commercial grade 5-10-5 fertilizer.
- c. Grass Seed: Unless otherwise specified, the seed mixture shall conform to the following:

Grass	Proportion by	Minimum Purity	Minimum. Germination
<u>Type</u>	<u>Weight Percent</u>	<u>Percent</u>	<u>Percent</u>
Kentucky Bluegrass	30	90	80
Merion Bluegrass	30	90	80
Red Fescue	30	98	85
Italian Ryegrass	10	98	90

Seed shall be subject to the testing provisions of the Association of Official Seed Analysts.

The Town reserves the right to modify the required seed specification based on other written agreements with the property owner, at no additional expense to the Town.

- d. Mulch: Mulch materials shall consist of hay or wood fiber mulch.
 - i. Hay shall be from acceptable grass or legume mowings, free from weeds, reeds, twigs, coarse or wood material, debris or other objectionable material. It shall be free from rot or mold, and shall be well cured to have a moisture content of not more than 15 percent when delivered to the project.
 - ii. Wood fiber mulch or wood cellulose fiber shall be material manufactured for mulching seeded are material may be made from coniferous or hardwood trees shall be free from shavings, rot, mold, foreign mater debris. It shall be of uniform texture. It may contain nontoxic marking dye. The moisture content of the mulch when delivered to the project shall not be more than 12% by weight. It must be material capable of forming a homogeneous slurry when mixed in water with seed and fertilizer and agitated.
 - iii. Material other than pure live seed shall only nonviable seed, chaff, hulls, live seed of crop plants other than those specified, harmless inert matter and seeds except that weed seeds other than seeds of noxious will be permitted up to 1% of the gross weight of each of seed.

PART 3 – EXECUTION

3.01 INSTALLATION

- A. Construction methods shall be in accordance with applicable provisions of Sections 9.44, 9.46, 9.49 and 9.50 of the Standard Specifications. The Contractor shall provide their own disposal site for surplus and unsuitable materials.
- B. Work shall be performed in accordance with notes and dimensions shown on the Contract Drawings.
- C. Topsoil
 - 1. The areas on which the topsoil is to be placed shall be excavated and/or brought to grade as necessary such that on placement of the specified topsoil depths, the surface will be within reasonably close conformity to the lines, grades and cross sections specified or required.

D. Liming, Fertilizing, Seeding and Mulching

1. Construction methods shall be those established as agronomically acceptable and feasible and which are approved by the Engineer and in accordance with Section 9.50.03 of the Standard Specifications as amended hereafter.
2. Topsoil samples taken by the Engineer from those areas to be fertilized, seeded and mulched will be submitted to an Agricultural Experiment Station or Testing Laboratory in order that recommendations for liming, fertilizing and seeding can be obtained. These recommendations will be sent directly to the Engineer.
3. In the Standard Specifications, all references to Seed Mixtures shall be deleted. Seed Mixture shall be as specified herein and seeding dates shall be as specified in Section 9.50.03-2 "Seeding Season" of the Standard Specifications unless otherwise approved by the Engineer.
4. Preparation of the seedbed shall conform to Section 9.50.03-1 of the Standard Specifications. In addition, all stones and other objectionable material over one (1") inch in any dimension shall be removed and disposed of.
5. Application rates of lime and fertilizer shall be as follows unless otherwise specified:

Agricultural Limestone	75 pounds per 1000 square yard
Fertilizer	25-50 pounds per 1000 square yard

6. Section 9.50.03-3 "Seeding Methods" of the Standard Specifications is modified as follows:
 - a. Unless otherwise specified, the seeding rate shall be 25 pounds pure live seed per 1000 square yard.
7. Delete Section 9.50.03-6 "Establishment" and substitute the following:
 - a. Establishment: Work under this Item shall not be complete until all stones over one (1) inch in diameter, glass, cables, bale wire, and other debris have been removed from the seeded areas. Clean up shall include the removal of all debris resulting from the seeding or planting operations on shoulders, pavement or adjacent property, public and private. The Contractor shall be required to shape, grade and establish vegetative cover in accordance with the specifications and Contract Drawings on all areas disturbed outside the normal limits of construction. The Contractor shall be required to maintain and water as required the grass through the second cutting. Periods of cutting shall be as ordered or approved by the Engineer or when the grass reaches four inches in height.
8. The Contractor shall be required to replant, at no additional cost to the owner, using full amounts of all specified materials, those areas damaged by wind, washout, fire, equipment, pedestrian traffic or other natural or man-made occurrences, to the satisfaction of the Engineer.
9. Unless otherwise specified or ordered by the Engineer, herbicides will not be used.
10. Areas seeded shall be mulched unless otherwise ordered by the Engineer. Wood-chip mulch shall not be used on seeded areas; unless otherwise shown on the Contract Drawings or called for elsewhere in the Contract Documents, hay mulch or wood fiber mulch (only when hydraulic seeding methods are specified) will be used.
11. Hay (where used) shall be uniformly applied by an approved method to a placed depth of two (2) inches (at a rate of two tons per acre). Hay shall be held in place by one uniform application of asphalt emulsion Type SS-I, applied at the rate of 0.08 gallons per square yard. The emulsion shall have a temperature range within 50-120 degrees F. at the time of the application. The emulsion may be applied during or immediately after the application of the mulch.
12. If wood fiber mulch is called for on the Contract Drawings, the mulch shall be applied in water slurry with seed and fertilizer. The wood fiber mulch shall be uniformly applied at the rate of 2000 pounds per acre, in one or more applications.

13. Should the tank installation and backfill be completed outside of planting or seeding season, the entire area of disturbance shall be adequately stabilized to prevent erosion to the satisfaction of the Engineer.

PART 4 – MEASUREMENT AND PAYMENT

4.01 MEASUREMENT

- A. This work shall be measured for payment by the number of square yards, surface area, actually covered by furnishing and placing of topsoil, liming, fertilizing, seeding and mulching as specified, completed and accepted.

4.02 PAYMENT

- A. This work will be paid for at the SQUARE YARD bid price for ITEM 9440

<u>Item No.</u>	<u>Pay Item</u>	<u>Pay Unit</u>
9440	6" Topsoil, Seed and Shredded Straw Mulch	Square Yard

END OF SECTION

APPENDIX A
SOIL BORING LOGS

SOIL TESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: Town of Greenwich	SHEET <u>1</u> OF <u>1</u>
	PROJECT NO. G79-0989-18	HOLE NO. B-1
FOREMAN - DRILLER BD/mk	PROJECT NAME 50 Culter Road	BORING LOCATIONS per Plan
INSPECTOR	LOCATION Greenwich, CT	
GROUND WATER OBSERVATIONS AT <u>56</u> FT AFTER <u>0</u> HOURS AT <u> </u> FT AFTER <u> </u> HOURS	CASING TYPE HSA	OFFSET
	SAMPLER SS	DATE START 4/30/18
	SIZE I.D. 4 1/4"	DATE FINISH 4/30/18
	HAMMER WT. 140#	SURFACE ELEV.
	HAMMER FALL 30"	GROUND WATER ELEV.

DEPTH	CASING BLOWS PER FOOT	SAMPLE					BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE)			CORE TIME PER FT (MIN)	DENSITY OR CONSIST	STRATA CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		NO	Type	PEN	REC	DEPTH @ BOT	0 - 6	6 - 12	12 - 18				
5		1	ss	24"	14"	2'0"	2	1		moist	3'0"	Brn SILT, sm F sand	
							1	2					
10		2	ss	24"	17"	7'0"	13	11		wet compact		Brn FMC SAND & F GRAVEL	
							13	14					
15		3	ss	24"	0"	12'0"	14	12		wet compact		No Recovery	
							5	8					
20		4	ss	24"	14"	17'0"	5	4		wet loose		Brn Gry FM SAND, sm silt, F gravel	
							6	5					
25		5	ss	24"	17"	22'0"	12	11		wet compact	22'0"	Gry FMC SAND, sm silt, F gravel, tr C sand	
							14	15					
30												E.O.B. 22'0" Installed 1" SCH 40 PVC Observation Well with 10' Screen Length to 20' depth and 2' above grade	
35													
40													

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____ FT. USED _____ CASING THEN _____ CASING TO _____ FT.	HOLE NO. B-1
A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST	
WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS C = COARSE	
SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER M = MEDIUM	
PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND = 35 - 50%	F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: Town of Greenwich	SHEET <u>1</u> OF <u>1</u>
	PROJECT NO. G79-0989-18	HOLE NO. B-2
	PROJECT NAME 50 Culter Road	BORING LOCATIONS per Plan
FOREMAN - DRILLER BD/mk	LOCATION Greenwich, CT	
INSPECTOR	CASING TYPE HSA	SAMPLER SS
GROUND WATER OBSERVATIONS AT <u>7</u> FT AFTER <u>0</u> HOURS AT <u> </u> FT AFTER <u> </u> HOURS	SIZE I.D. 4 1/4"	CORE BAR 1 3/8"
	HAMMER WT. 140#	BIT 30"
	HAMMER FALL	OFFSET
		DATE START 4/30/18
		DATE FINISH 4/30/18
		SURFACE ELEV.
		GROUND WATER ELEV.

DEPTH	CASING BLOWS PER FOOT	SAMPLE					BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE)			CORE TIME PER FT (MIN)	DENSITY OR CONSIST	STRATA CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		NO	Type	PEN	REC	DEPTH @ BOT	0 - 6	6 - 12	12 - 18				
5		1	ss	24"	16"	2'0"	2	1		moist v loose	3'0"	Brn SILT & F SAND	
						3	5						
10		2	ss	24"	16"	7'0"	12	14		moist compact		Brn FMC SAND & F GRAVEL, COBBLES, BOULDERS	
						15	17						
15		3	ss	24"	13"	12'0"	12	13		v moist compact		Gry FM SAND & SILT, sm F gravel	
						9	8						
20		4	ss	24"	17"	17'0"	12	18		wet dense		Gry FM SAND & SILT, F GRAVEL	
						25	34						
25		5	ss	24"	20"	22'0"	22	19		wet dense	22'0"	Brn FMC SAND, sm F gravel, tr silt	
						18	20						
30												E.O.B. 22'0"	
35													
40													

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____ FT. USED _____ CASING THEN _____ CASING TO _____ FT.	HOLE NO. B-2
A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST	
WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS C = COARSE	
SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER M = MEDIUM	
PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND = 35 - 50%	F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: Town of Greenwich	SHEET <u>1</u> OF <u>1</u>
	PROJECT NO. G79-0989-18	HOLE NO. B-3
	PROJECT NAME 50 Culter Road	BORING LOCATIONS per Plan
FOREMAN - DRILLER BD/mk	LOCATION Greenwich, CT	
INSPECTOR	CASING TYPE HSA	SAMPLER SS
GROUND WATER OBSERVATIONS AT <u>13</u> FT AFTER <u>0</u> HOURS AT <u> </u> FT AFTER <u> </u> HOURS	SIZE I.D. 4 1/4"	CORE BAR 1 3/8"
	HAMMER WT.	BIT
	HAMMER FALL	30"
		OFFSET
	DATE START	4/30/18
	DATE FINISH	4/30/18
	SURFACE ELEV.	
	GROUND WATER ELEV.	

DEPTH	CASING BLOWS PER FOOT	SAMPLE					BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE)			CORE TIME PER FT (MIN)	DENSITY OR CONSIST	STRATA CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		NO	Type	PEN	REC.	DEPTH @ BOT	0 - 6	6 - 12	12 - 18				
5		1	ss	24"	9"	2'0"	3	2		moist	3'0"	Brn SILT (Topsoil)	
							3	3					
10		2	ss	24"	17"	7'0"	12	15		moist dense		Brn FMC SAND & FC GRAVEL	
							16	16					
15		3	ss	24"	18"	12'0"	12	17		v moist dense		Gry FM SAND, sm silt, F gravel	
							14	16					
20		4	ss	24"	16"	17'0"	12	11		wet compact		Gry FM SAND & SILT, sm F gravel	
							10	11					
25		5	ss	24"	24"	22'0"	15	16		wet dense	22'0"	SAME	
							16	17					
30												E.O.B. 22'0"	
35													
40													

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____ FT. USED _____ CASING THEN _____ CASING TO _____ FT.	HOLE NO. B-3
A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST	
WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS C = COARSE	
SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER M = MEDIUM	
PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND = 35 - 50% F = FINE	

APPENDIX B
WETLANDS PERMIT

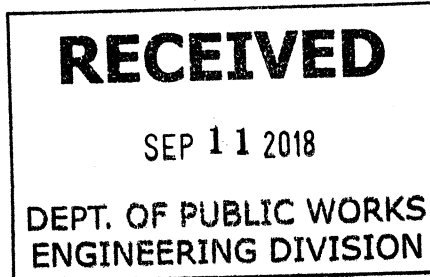


TOWN OF GREENWICH

Town Hall • 101 Field Point Road • Greenwich, CT 06830

Inland Wetlands
and
Watercourses Agency
(203) 622-7736
(Fax) (203) 622-7764

Patricia M.P. Sesto
Director



September 6, 2018

Jim Michel
Deputy Commissioner DPW
Town of Greenwich
101 Field Point Road
Greenwich, CT 06830

RE: Application #2018-104 to conduct regulated activities at 50 Cutler Road
Permit #2018-103

Dear Mr. Michel:

A duly authorized agent of the Inland Wetlands and Watercourses Agency has reviewed the application record and found the proposed activities in the above mentioned application are consistent with the purposes and policies of the Inland Wetland and Watercourses Regulations. Accordingly, the agent GRANTED the enclosed permit with conditions.

Your attention is directed to the special and standard conditions because those in **BOLD** require action either prior to the start of clearing or construction activities or within a specific time period after the receipt of the permit.

The effective date of the permit is the date of issue. The permit expires 24 months from the effective date, but when deemed necessary, the Agency may extend the period according to the provisions in Section 11.11 of the Regulations.

If you have any questions concerning this permit or the functions and values of wetlands in Greenwich, please let me know.

Sincerely,

Patricia Sesto
Director

cc: Thomas F. and Virginia C. Daly

Issued to: Jim Michel
Deputy Commissioner DPW
Town of Greenwich
101 Field Point Road
Greenwich, CT 06830

Date Issued: September 6, 2018

Following a review by a duly authorized agent of the Inland Wetlands & Watercourses Agency, regulated activities are APPROVED on the property Thomas F. and Virginia C. Daly at 50 Cutler Road, Tax #10-2109. The permitted activity consists of installation of underground 10,000 gal. precast concrete fire protection cistern and hydrant piping 43' from wetlands, as further described in the following documents.

1. Completed application with supporting documentation signed by James Michel, Deputy Commissioner of Public Works, dated August 15, 2018.
2. Plans entitled "Fire Protection Cistern at 50 Cutler Road" prepared by Town of Greenwich Department of Public Works Engineering Division – Title Sheet – Site & Grading Plans – Cross Sections – Construction Details – Soil Erosion & Sediment Control Details – Soil Boring Logs – Easement Map – dated August 2018.
3. Soils report prepared by Paul J. Jaehnig dated April 24, 2018.
4. "Staff Report," dated August 31, 2018, prepared by Robert Clausi, Senior Inland Wetlands Analyst.

After a full review of the considerations set forth in Section 10 of the Regulations and other pertinent factors, this permit is issued with the following special and standard conditions:

SPECIAL CONDITIONS:

Conditions in bold require action either prior to the start of regulated activities or within a specified time period after the receipt of the permit.

- 1. Final construction designs and locations shall be submitted for Wetlands Agency staff review and approval prior to the start of site activities. If there is any change from the approved plan for the fire protection cistern, the revised plans shall be submitted in both paper and digital formats.**
2. Areas within the disturbance envelope where the soil is compacted during construction shall be restored to their original properties and porosity by incorporation of compost per recognized guidelines, such as the Virginia DEQ Stormwater Design Specification No. 4 "Soil Compost Amendment".

STANDARD CONDITIONS:

All Greenwich Inland Wetlands and Watercourses Agency permits are subject to the following Standard Conditions:

1. This permit expires on September 6, 2020. If the authorized activity is not completed on or before this date, said activity shall cease and, if not previously revoked or specifically extended, this permit shall be null and void.
2. **Prior to the commencement of any on-site permit related activity, the attached compliance statement shall be signed by the contractor engaged to perform the regulated activities and then returned to the Agency office. This form shall serve as written notice to the Agency as to when work is planned to commence.** The permittee shall also provide written notice to the Agency upon completion of the regulated activities.
3. The permittee shall employ best management practices, consistent with the terms and conditions of this permit and provisions of the *Connecticut Guidelines for Soil Erosion and Sediment Control* (2002, as revised), to control storm water discharges, to prevent erosion and sedimentation and to otherwise prevent pollution of wetlands or watercourses. For information and technical assistance, contact the Agency staff. The permittee shall immediately inform the Agency of any problems involving wetlands or watercourses which develop during the course of, or which are caused by, the authorized work.
4. Any material, man-made or natural, which is in any way disturbed and/or utilized during work authorized herein, shall not be deposited in any wetland or watercourse, either on or off site, unless specifically authorized in this permit
5. Fuel oil tanks shall be installed above ground or within the structure unless specifically approved otherwise by the Agency or its staff.
6. This permit shall not be assigned or transferred by the permittee to any other party without the written consent of the Greenwich Inland Wetlands and Watercourses Agency.
7. This permit may be revoked or suspended if the permittee exceeds the conditions or limitations of this permit, or has secured this permit through deception or inaccurate information.
8. This permit does not obviate the permittee's obligation to obey all other applicable federal, state and local laws or to obtain any applicable federal, state and local permits.



INLAND WETLANDS AND WATERCOURSES AGENCY

Permit #2018-103
Application #2018-104
September 6, 2018

As the contractor engaged by _____ Town of Greenwich - DPW _____ to perform regulated activities as described in the Greenwich Inland Wetlands and Watercourses Permit #2018-103 at 50 Cutler Road, I am familiar with the IWWA regulations and have read the permit referenced herein and agree to comply with both.

Work will commence on or about _____ and will be completed in _____ months/weeks.

Contractor Name

Street Address, City, State, Zip Code

Phone

Email Address

Signature

Mail to: IWWA
101 Field Point Road
Greenwich, CT 06830
or

Email to: wetlands@greenwichct.org

LEGAL NOTICE

Pursuant to the provisions of the Inland Wetlands and Watercourses Regulations of the Town of Greenwich, Connecticut, effective December 28, 1973 and as amended, notice is hereby given on actions taken by an authorized agent of the Inland Wetlands and Watercourses Agency of the Town of Greenwich.

GRANTED with Conditions IWWA #2018-104 - 50 Cutler Road – To Town of Greenwich for installation of underground 10,000 gal. precast concrete fire protection cistern and hydrant piping 43' from wetlands.

Patricia Sesto
Director

Dated: September 6, 2018

TO BE PUBLISHED ONCE ON SEPTEMBER 14, 2018.

BILL TO THE GREENWICH INLAND WETLANDS AND WATERCOURSES AGENCY AND PROVIDE AN AFFIDAVIT OF PUBLICATION

APPENDIX C
EASEMENT

EASEMENT

KNOW ALL MEN BY THESE PRESENTS, that THOMAS F. DALY III AND VIRGINIA C. DALY ("Grantors"), the owners of all that certain piece or parcel of and together with the buildings and improvements thereon, situated in the Town of Greenwich, County of Fairfield and State of Connecticut located at 50 CUTLER ROAD, known and designated as LOT NO. 9 on a certain map entitled, "MAP OF PROPERTY BELONGING TO YALE UNIVERSITY TO BE CONVEYED TO JOHN C. & VIVIAN WHELAN", prepared November 1952 and revised January 23, 1953 by CHAS H. SELLS INC., Civil Engineers & Surveyors, Pleasantville, N.Y. on file in the office of the Town Clerk of the Town of Greenwich as Map Number 2949, reference thereto being had for a more particular description of said premises ("Premises") for the consideration of One and 00/100 Dollar (\$1.00) received to the full satisfaction from the TOWN OF GREENWICH ("Grantee"), a municipality of the State of Connecticut, with principal offices located at Town Hall, 101 Field Point Road, Greenwich, Connecticut 06830, do hereby grant and release to the said Grantee and to the said Grantee's successors and assigns forever the right, privilege and easement to construct, maintain, use, repair and reconstruct a ten thousand (10,000) gallon underground cistern which includes a dry hydrant pipe within the area ("Easement Area") shown and designated on that certain map entitled "Easement Map for Fire Protection Cistern at 50 Cutler Road on Lands N/F Thomas F. Daly III and Virginia C. Daly, Prepared for the Town of Greenwich" and on file in the office of the Town Clerk of the Town of Greenwich as Map Number 9030.

And Grantors for themselves, their successors and assigns covenant and agree that they will never construct or maintain any building or other structure within the Easement Area.

This easement is given and accepted upon the following covenants and agreements of the Grantee:

1. The construction and installation of the underground cistern and dry hydrant, will be done in a good and workmanlike manner and expeditiously completed; the underground cistern and dry hydrant will be kept in good order and repair, upon completion of the initial installation of the cistern and dry hydrant and at each and every time Grantee enters upon the Easement Area to replace or repair the cistern and dry hydrant, the disturbed area shall be properly filled, compacted, graded and a suitable ground cover will be reestablished in good condition to the reasonable satisfaction of Grantors.
2. Following the satisfactory completion of the installation of the underground cistern and dry hydrant, the Grantee shall maintain said cistern and dry hydrant at its sole cost and expense. Grantee will also install plantings to the reasonable satisfaction of Grantors to provide screening for the cistern tank cover.
3. Grantee's contractor shall name the Grantors as additionally insured on their general liability policy.

This easement shall be recorded in the land records of the Grantee and shall run with the land described herein. The benefits and the burdens of this grant of easement shall inure to and be binding upon the Grantee and the Grantors hereunder and their respective successors and assigns forever to their own proper use and behoof.

IN WITNESS WHEREOF, Grantors and Grantee have hereunto caused this instrument to be signed and sealed this 19 day of August 2018.

Witnesses:

Marcia K. Carroll
Mary R. Carroll

GRANTOR

By: [Signature]
Thomas F. Daly III
Owner, 50 Cutler Road

Witnesses:

Marcia R. Carroll
Mary R. Carroll

GRANTOR

By: [Signature]
Virginia C. Daly
Owner, 50 Cutler Road

Witnesses:

Dana L Arnold
Juliana Grozdear

GRANTEE
TOWN OF GREENWICH

By: [Signature]
Amy Siebert
Commissioner of Public Works

STATE OF CONNECTICUT)
) ss. Greenwich
COUNTY OF FAIRFIELD)

Personally appeared, THOMAS F. DALY III, to me know and known by me to be the signer and sealer of the foregoing instrument, and acknowledged the same to be his free act and deed
this 19 day of AUGUST 2018.

DONALD A. CASSONE
Notary Public, State of New York
No. 01CA6061097
Qualified in Westchester County
Commission Expires July 9, 2019

Donald A Cassone
Notary Public
Commissioner of Superior Court

STATE OF CONNECTICUT)
) ss. Greenwich
COUNTY OF FAIRFIELD)

Personally appeared, VIRGINIA C. DALY, to me know and known by me to be the signer and sealer of the foregoing instrument, and acknowledged the same to be her free act and deed
19 day of AUGUST 2018.

DONALD A. CASSONE
Notary Public, State of New York
No. 01CA6061097
Qualified in Westchester County
Commission Expires July 9, 2019

Donald A Cassone
Notary Public
Commissioner of Superior Court

STATE OF CONNECTICUT)
) ss. Greenwich
COUNTY OF FAIRFIELD)

RECEIVED FOR RECORD
SEP 04, 2018 01:35:08 PM
CARMELLA C. BUDKINS
Town Clerk
GREENWICH, CT

Personally appeared, AMY SIEBERT, Commissioner of Public works of the Town of Greenwich, to me know and known by me to be the signer and sealer of the foregoing instrument, and she acknowledged the same to be her free act and deed on behalf of the Town of Greenwich
this 29th day of August 2018.

DAWN V. ZIMMERMAN
NOTARY PUBLIC
MY COMMISSION EXPIRES APR. 30, 2019

Dawn Zimmerman
Notary Public
Commissioner of Superior Court



APPENDIX D
EASEMENT MAP

APPENDIX E
RIGHT-OF-ENTRY AGREEMENT



AMY J. SIEBERT, P.E.
COMMISSIONER

JAMES W. MICHEL, P.E.
DEPUTY COMMISSIONER

- BUILDING INSPECTION
- BUILDING MAINTENANCE
- ENGINEERING
- HIGHWAY
- SEWER
- WASTE DISPOSAL

DEPARTMENT OF PUBLIC WORKS

RIGHT-OF-ENTRY AGREEMENT

In reference to the property owned by THOMAS + VIRGINIA DALY, the undersigned at 50 Cutler Road, Greenwich, Connecticut, entrance upon which will be required for the installation of a 10,000 gallon underground precast concrete cistern tank, associated site work and dry hydrant piping within a limited area of the property for use by the Town of Greenwich Fire Department.


I, the undersigned, do hereby grant permission to the Town of Greenwich, Department of Public Works, its contractors or agents, to enter upon the said premises for the purpose of performing the aforementioned work. The work will occur within an area noted as "Limits of Disturbance" as shown on a plan entitled, "Site & Grading Plans, Fire Protection Cistern at 50 Cutler Road, Project Number 17-15", prepared by The Town of Greenwich Department of Public Works Engineering Division for Engineering Project No. 17-15, dated August 2018 and on file in the Town's Engineering Office.


It is further understood that the work will be done in a good and workmanlike manner by the Town and its agents. Upon completion of the work, the contractor will restore the area to its original character and leave the general area in a clean and workmanlike condition. In addition, the Town will coordinate with said owner for reasonably acceptable landscape screening of the area. It is also understood the Town will pay all costs for the work.

The owner, his successors or assignees, waive any compensation from the Town of Greenwich for the right of entry and the right to perform the above-described work.

This permission is given without prejudice to our rights under the laws covering damages which may occur to our property.

Property Owner:  (signature) Date: 8/19/18

Witness: RB CARROLL (print)  (signature) Date: 8/19/18

Accepted by:  Date: 8/29/18
James W. Michel, P.E.
Deputy Commissioner