TOWN OF WATERTOWN
WATERTOWN, CONNECTICUT

NOTICE OF BID

Bowers Street Culvert Replacement
Watertown Public Works Department

Sealed bids are invited and will be received by the Purchasing Agent of the Town of Watertown at the office of the Purchasing Agent, Town Hall Annex, 424 Main Street, Watertown, Connecticut, until 11:00 a.m., Tuesday, May 31, 2016 at which time and place they will be publicly opened and read aloud for furnishing materials, labor and equipment for the installation of a replacement box culvert on Bowers Street.

The Information for Bidders, Form of Bid, Form of Contract, Plans, Specifications, Performance and Payment Bonds, and other contract documents may be obtained or examined at the office of the Purchasing Agent, Town Hall Annex, 424 Main Street, Watertown, Connecticut 06795 or by accessing the Town of Watertown’s website at http://www.watertownct.org. Proposals must be submitted on the forms provided and in a sealed envelope plainly marked “Bid – Bowers Street Culvert Replacement”.

There will be a MANDATORY PRE-BID MEETING on Tuesday, May 24th 2016 at 10:00am. The meeting will be held on site.

To receive consideration bids must be in the hands of the Purchasing Agent or his authorized representative no later than the day and hour mentioned above.

The Purchasing Agent reserves the right to accept or reject any or all bids; to waive any informality; or to accept any bid deemed in the best interests of the Town of Watertown.

The Town of Watertown reserves the right to take into account the residency of bidders within the Town of Watertown and/or the location of the bidder’s business within the Town of Watertown in awarding this bid.

All bids will be considered valid for a period of sixty (60) days.

Jason Warner
Purchasing Agent
Town of Watertown
INFORMATION FOR BIDDERS

TOWN OF WATERTOWN
WATERTOWN, CONNECTICUT 06795

Bowers Street Culvert Replacement
Watertown Public Works Department

BID OPENING: 11:00 a.m., Tuesday, May 31, 2016

PROPOSALS RECEIVED

All bids must be in a sealed envelope and received prior to 11:00 a.m., Tuesday, May 31, 2016 at the office of the Purchasing Agent, 424 Main Street, Watertown, Connecticut 06795.

PREPARATION OF PROPOSALS

Proposals must be made upon forms contained herein. The blank spaces in the Proposal must be filled in correctly where indicated. The Bidder must state the prices for which he proposes to do each item of the work contemplated. In case of discrepancy where both words and the numerals are requested, the words shall govern. Ditto marks are not considered writing or printing and shall not be used. The Bidder shall sign his Proposal correctly. If the Proposal is made by an individual, his name, post office address and telephone number must be shown. If made by a firm, partnership, or corporation, the Proposal must be signed by an official of the firm, partnership, or corporation authorized to sign contracts, and must show the post office address and telephone number of the firm, partnership, or corporation. Failure to do so may disqualify the bid.

Each bid must be submitted in a sealed envelope bearing on the outside the name of the Bidder, post office address, and name of the project for which the bid is submitted. If forwarded by mail, the sealed envelope containing the bid must be enclosed in another envelope addressed to: The Purchasing Agent, Town Hall Annex, 424 Main Street, Watertown, CT 06795.

All information shall be entered in ink or by typewriter. Mistakes may be crossed out and corrections inserted before submission of your bid. The person signing the bid shall initial corrections in ink.

Corrections and/or modifications received after the closing time specified will not be accepted.

SUBMISSION OF PROPOSALS

All proposals and literature shall be submitted IN DUPLICATE on the proposal form, which is a part of these specifications.

Descriptive literature containing complete specifications must accompany each bid. If a bidder wishes to furnish additional information, more sheets may be added.
Adobe Acrobat® Reader is required to view electronic documents on-line. If you do not have Adobe Acrobat® Reader, you may download it for free from Adobe at http://www.adobe.com/products/acrobat/readstep.html.

Response summaries will be available online at http://www.watertownct.org on the day of the bid opening.

Responses delivered via fax are received subject to the following qualifications and limitations:

1. The Town is not responsible for the confidentiality of the information transmitted.

2. The Town cannot guarantee that its fax equipment will be operational and able to receive transmittals by a particular time and date. It is the Bidder’s responsibility to ensure that quotations are received in their entirety and on time at the required location. It is recommended that vendors be advised to call immediately after transmitting a document electronically to confirm complete and accurate receipt by the Town. The Town assumes no liability in the event that a bidder’s electronic transmission is not received by the Town in a timely fashion, or is not received either in its entirety or error-free.

3. Bids transmitted electronically which have a bond requirement are subject to the same submittal requirements as those responses delivered via traditional means, such as mail or hand delivery, or as otherwise stipulated by appropriate authority.

INCURRING COSTS
The Town of Watertown is not liable for any cost incurred for the preparation of proposals or submission of samples by the firms submitting proposals for the work requested in this bid document or request for proposals.

FAMILIARITY WITH THE WORK
Each bidder is considered to have examined the work to fully acquaint himself with the exact existing conditions relating to the work and has fully informed himself as to the work involved and the difficulties and restrictions attending the performance of this bid. Failure to do so will not relieve a bidder of his obligation to furnish all equipment, labor and materials necessary to carry out the work for the consideration set forth in this bid. The submission of a bid will be considered as conclusive evidence that the bidder has made such examination.

Where borings or other exploration data is shown on the Plans and/or specifications or made available to the Bidder, it is understood that such data where obtained in the usual manner and with reasonable care and are to be interpreted and used as the Bidder sees fit. There is no expressed or implied agreement that the data has been correctly indicated, and the Bidder is cautioned to take into account that conditions affecting the work may differ from those indicated.
The Owner assumes no responsibility whatsoever with respect to ascertaining for the Contractor such facts concerning physical characteristics relating to this project. The Bidder agrees that he shall make no claim for and has no right to additional payment or extension of time for completion of the work, or any other concession, because of any interpretations or misunderstanding on his part of this bid, or because of any failure on his part to fully acquaint himself with all conditions relating to the work. Permission for making borings, test pits, destructive tests or other investigations of subsurface conditions will be arranged for by the owner upon receipt of a written request therefor.

CONSIDERATION OF PRIOR SERVICE
Previous performance, quality of service and merchandise will be considered.

ADDENDA AND INTERPRETATIONS & ALTERNATE PROPOSALS
Addenda information will be available online at http://www.watertownct.org. Adobe Acrobat® Reader may be required to view this document. We strongly suggest that you check for any addenda a minimum of forty eight hours in advance of the bid deadline.

At the time of the opening of bids each bidder will be presumed to have inspected the work and to have read and to be thoroughly familiar with all of the Contract Documents (including all addenda). The failure or omission of any bidder to receive or examine any form, instruction or document shall in no way relieve any bidder from any obligation in respect to his bid.

If any person contemplating submitting a proposal is in doubt as to the true meaning of any part of these specifications, he may submit a written request for an interpretation to the Purchasing Agent. No interpretations as to the meaning of the plans, specifications or other Contract Documents will be made to any bidder orally.

Every request for such interpretation should be emailed to the Town of Watertown, Purchasing Agent, Jason Warner, warner@watertownct.org and to be given consideration, must be received at least five (5) days prior to the date fixed for the opening of Bids. Any and all such interpretations and any supplementary instructions will be in the form of written Addenda to the Specifications which, if issued, will be emailed to all prospective bidders at the respective addresses furnished for such purposes, not later than three (3) days prior to the date fixed for the opening of bids. Failure of any bidder to receive any such Addendum or interpretations shall not relieve any bidder from any obligations under his bid as submitted. All Addenda so issued shall become part of the Contract Documents. Oral explanations will not be binding on the Town.

The specifications listed are to be interpreted as meaning the minimum acceptable by the Town of Watertown. Bidders are requested to submit quotations on the basis of these specifications. Alternative bids providing a broader scope and/or services than requested in these specifications may receive consideration providing such equipment and/or service is clearly explained. Any exceptions to the specifications requested herein must be clearly noted in writing and are to be included as a part of your bid proposal. If none are included it will be assumed that there are none.
Definition of the word "complete" means that each unit of the equipment proposed shall include all appurtenances, fasteners, parts, accessories, and services ordinarily catalogued.

An item equal to that named or described in the specifications may be furnished by the Bidder, except where expressly noted as “no substitutions.” The naming of any commercial name, trademark, or other identification shall not be construed to exclude any item of any manufacturer not mentioned by name, nor limit competition, but shall establish a standard of equality only. An item shall be considered equal to the item so named or described if:

A. It is at least equal in quality, durability, appearance, strength and design.

B. It will perform at least equally the function imposed by the design for the work being contracted for or the material being purchased.

C. It conforms substantially, even with deviations, to the detailed requirements for the item in the specifications.

The Bidder shall hold the Town of Watertown, its officers, agents, servants, and employees, harmless from liability of any nature or kind because of use of any copyrighted or uncopyrighted compositions, secret process, patented or unpatented inventions, articles or appliances furnished or used under this bid, and agrees to defend, at his own expense, any and all actions brought against the Town of Watertown or himself because of the unauthorized use of such articles.

QUOTATION LIMITATION
Bidders shall offer only ONE ITEM AND PRICE for each line item bid. If an or equal item is to be bid, the bidder is to select the brand and model that meets or exceeds the specified item, and submit his bid for that item.

ESTIMATE OF WORK
For bidding purposes, the work has been subdivided into unit price items. The quantities shown are to be considered as approximate only. The Purchasing Agent does not expressly or by implication agree that the actual quantity will correspond therewith, but reserves the right to increase or decrease the amount of any item or portion of the work as deemed necessary.

SAMPLES
Samples of articles, when required shall be furnished free of cost of any sort to the Town of Watertown. Samples received may be retained by the Town for future comparison. Samples which are not destroyed by testing, or which are not retained for future comparison will be returned upon request at the bidder's expense.
WITHDRAWAL OF BID

Bidders may withdraw their proposals at any time prior to the bid date. No agent/broker shall withdraw or cancel their proposal for a period of sixty (60) days after the bid closing date of 11:00 a.m., Tuesday, May 31, 2016. The successful agent/broker shall not withdraw, cancel or modify their proposal.

PERFORMANCE BONDS / PAYMENT BONDS

A performance bond is required and shall be in the amount of 100% of the bid award, in the name of the "Town of Watertown", in the form and with a surety company approved by the State Commissioner of banking and insurance, and issued within ten (10) calendar days of the bid award date. Surety companies executing Bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State of Connecticut. This financial instrument shall be for the faithful performance of the contract, and shall be used at the sole discretion of the Town of Watertown to pay liquidated Damages for failure or refusal to perform in accordance with the contract. No withdrawals shall be made until after five (5) calendar days notice of noncompliance with the contract is sent by certified U.S. Mail. This in no way limits further actions the Town of Watertown may take. NO BID BOND REQUIRED

POWER OF ATTORNEY

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

EXECUTION OF CONTRACT

The party to whom the Contract is awarded, or his authorized representative, will be required to attend at the office of the Purchasing Agent of the Town of Watertown, with the sureties offered by him or them, and a current certificate of Corporate good standing issued by the Office of the Secretary of State, in which the corporation is incorporated, and execute the Contract within five (5) days from the date of the award. If the party entering into this contract is a corporation, a Corporate Resolution duly executed by the President and Secretary of the Corporation authorizing the Corporation to enter into this Contract shall be provided. In case of his failure or neglect so to do, the Town may, at its option, determine that the Bidder has abandoned the Contract, and thereupon the Proposal and acceptance shall be null and void, and bid security accompanying the Proposal shall be forfeited as liquidated damages to the Town. If the party entering into this contract is a partnership, a partnership resolution duly executed by a majority of the general partners authorizing the partnership to enter into this contract shall be provided.
SUBCONTRACTORS
A. Each bidder contemplating the use of any subcontractor shall submit a list of subcontractors as listed on the Bid Form.
B. The apparent low bidder shall file with the Town of Watertown, within five (5) days after the date of bid opening, a complete list of the names and addresses of competent, responsible and qualified subcontractors who are actually to perform major portions of the work. This in no way restricts or limits the requirement that all subcontractors must be approved by the Town.
C. Subcontractors listed on the Bid Form or those previously approved may not be changed without the approval of the Town of Watertown.

Local subcontractors, material suppliers, and labor in the Town of Watertown should be considered and sought insofar, as is practical in the performance of this project.

QUALIFICATION OF BIDDER
In determining the qualifications of a bidder, the Town may consider his record in the performance of any contracts for similar work into which he may have previously entered; and the Town expressly reserves the right to reject the bid of such bidder if such record discloses that such bidder, in the opinion of the Town, has not properly performed such contracts or has habitually, and without just cause, neglected the payment of bills or has otherwise disregarded his obligations to subcontractors, suppliers, state or local codes, men or employees of subcontractors.

The Town may make such investigation as he deems necessary to determine the ability of the bidder to perform the work and the bidder shall furnish to the Town all such information and data for this purpose as the Town may request. The Town reserves the right to reject any bid if the evidence submitted by or the investigation of such bidder fails to satisfy the Town that such bidder is properly qualified, or that such bidder misrepresented material facts in the bid documents.

DISQUALIFICATION OF BIDDERS
More than one proposal from an individual, firm, partnership, corporation, or an association under the same or different names will not be considered. Reasonable grounds for believing that any Bidder is interested in more than one proposal for the work contemplated will cause the rejection of all proposals in which such Bidder is interested. Any or all proposals in which such Bidder is interested will be rejected if there is reason for believing that collusion exists among the Bidders and all participants in such collusion will not be considered in future proposals for the same work. Proposals in which the prices are obviously unbalanced may be rejected. No Contract will be awarded except to competent Bidders capable of performing the class of work contemplated.

DELIVERY
Inasmuch as this work concerns a needed public improvement, the provisions of this bid relating to the time of delivery, performance and completion of the work are of the essence of this bid.
Accordingly, the successful bidder shall commence work upon receipt of the signed Purchase Order unless the Town shall authorize or direct a further delay, and shall proceed with the work diligently so as to permit completion no later than ninety (90) calendar days after receipt of the Town's Purchase Order.

Time of delivery shall be stated as the number of calendar days following receipt of the Purchase Order by the Bidder to receipt of the goods or services by the Town of Watertown.

Prices quoted must include delivery to the Town of Watertown as specified on the Purchase Order. No charges will be allowed for parking, crating, freight, express or cartage unless specifically stated and included in this bid.

Time of delivery may be considered in the award.

PAYMENT
The successful bidder shall execute three (3) copies of the contract agreements. Monthly payments to the Bidder shall be made on ninety-five percent (95%) of the value of work completed, materials and supplies delivered to the site and properly stored. The successful Bidder for this project shall be required to submit a Mechanics Lien Waiver, acceptable to the Town, with each progress payment, and at time of final payment, prior to any payment made.

The Town, after inspection and acceptance of workmanship, and in consideration of the faithful performance by the Bidder of all and singular his covenants, promises, and agreements contained herein, agrees to pay the Bidder for the full completion by him of the work embraced in this Contract, within (30) Thirty Days of the receipt of the final invoice. When subcontractors or suppliers are utilized, the successful Bidder for this project shall be required to submit a Mechanics Lien Waiver, acceptable to the Town, with each progress payment and/or at time of final payment prior to any payment being made.

Time, in connection with any discount offered, will be computed from the date of delivery to the Town or from the date a correct invoice is received by the Town's Finance Department, if the latter date is later than the date of delivery.

Prices will be considered as NET, if no cash or payment discount is shown.

The successful bidder shall submit invoices to the following address:

Town of Watertown
Engineering Department
61 Echo Lake Rd.
Watertown, CT 06795
IT IS UNDERSTOOD AND AGREED THAT SHOULD A BID BE ACCEPTED, IT WILL AUTOMATICALLY BECOME THE CONTRACT OR AN ADDENDUM TO ANY CONTRACT AGREED UPON.

Notification of the bid award will be made by issuance of a purchase order. Bidders are to list their bids on the appropriate attached sheets. Bidders may attach a letter of explanation. A clear notification should be made on the standard bid sheets at the appropriate point of explanation that there is a letter of explanation attached. All bids must be NET prices.

The successful bidder shall submit an itemized invoice to the Town of Watertown for the work as described herein.

The bidder shall be required to submit a Mechanics Lien Waiver, acceptable to the Town of Watertown, with each progress payment and at time of final payment prior to any payment being made.

At the time of award the successful bidder shall be required to supply the Town of Watertown a Certificate of Good Standing, certifying that the corporation is in fact a valid corporation and presently licensed to conduct business in the State of Connecticut.

SALES TAX
Certain materials and supplies incorporated in the work of this project are exempt from Connecticut Sales Tax. The Bidder shall familiarize himself with current regulations of the State Tax Department. The tax on materials or supplies exempted by such regulations shall not be included as part of the bid. The Town will furnish the successful Bidder sales tax exemption authorization.

CARE AND PROTECTION OF PROPERTY
The Bidder shall take particular care to avoid damages to all private and public property and to private or public improvements within the Town's right of way. He shall make good any damages to the satisfaction of the Town. There shall be no additional compensation for the repair or restoration of private or public property improvements.

COMPLIANCE WITH FEDERAL, STATE AND LOCAL CODES
The Bidder shall be responsible for full compliance with any Federal, State and/or Local codes, laws, regulations and standards, as applicable.

AWARD
The Town of Watertown reserves the right to accept or reject any bid to best serve its interests, or to hold the bids for sixty (60) days before decision.

The Town reserves the right to reject any and all bids (or any part thereof), to waive defects in proposals, or to accept any proposal deemed to be in its best interest.
Exceptions will be considered to the specification provided, providing they are listed and fully explained on a separate page entitled "EXCEPTIONS TO SPECIFICATIONS"

Each exception will be considered as to its degree of impact and total effect on the bid. The purchaser shall determine which (if any taken) exceptions are acceptable, and this determination shall be final.

The Town of Watertown reserves the right:

1) To award bids received on the basis of individual items, or groups of items, or on the entire list of items.

2) To reject any or all bids, or any part thereof.

3) To waive any informality in the bids.

4) The Town of Watertown reserves the right to take into account the residency of bidders within the Town of Watertown and/or the location of the bidders business within the Town of Watertown in awarding this bid.

5) To accept the bid that is in the best interest of the Town of Watertown. The Purchasing Agent's decision shall be final.

INSURANCE
A. General:

The Bidder shall be responsible for maintaining insurance coverage in force for the life of the contract of the kinds and adequate amounts to secure all of the Bidder's obligations under the contract with an insurance company with an AM Best Rating of A - VII or better licensed to write such insurance in Connecticut and acceptable to the Town of Watertown.

The insurer shall provide the Town of Watertown with Certificates of Insurance signed by an authorized representative of the insurance company(ies) prior to the performance of this contract describing the coverage and providing that the insurer shall give the Town of Watertown written notice at least thirty (30) days in advance of any termination, expiration, or any and all change in coverage.

Such insurance or renewals or replacements thereof shall remain in force during the Bidder's responsibility under this agreement.
The Bidder at his own cost and expense shall procure and maintain all insurance required and shall name the Town of Watertown as an additional insured on all contracts except Worker’s Compensation and Professional Errors & Omissions coverage.

In order to facilitate this requirement for insurance, it is recommended that the bidder forward a copy of this exhibit to the bidder’s insurance representative(s).

B. Specific Requirements:

(1) Workers’ Compensation Insurance

The Bidder shall provide Workers’ Compensation Insurance required by law and the Employer’s Liability Insurance for at least the amounts of liability for Bodily Injury by accident of $100,000 each accident; Bodily Injury by Disease each employee of $100,000; Bodily Injury by Disease, policy limit of $500,000.

(2) Commercial General Liability Insurance

The Bidder shall carry Commercial General Liability policy (Insurance Services Office Incorporated Form CG-0001 or equivalent). A per occurrence limit of $1,000,000 is required. The Aggregate Limit will be not less than $1,000,000.

(3) Business Automobile Liability Insurance

The Bidder shall carry Business Automobile Liability Insurance. (Insurance Services Office Incorporated Form CA-00001 or equivalent). A per occurrence limit of $1,000,000 is required. “Any Auto” (symbol 1 or equivalent) is required.

C. Hold Harmless & Subcontractor’s Requirements:

The Bidder shall require the same insurance that it is required to carry by the Town of Watertown to be carried by any subcontractors and independent contractors hired by the Bidder and to obtain Certificates of Insurance before subcontractors and independent contractors are permitted to begin work.

The Bidder shall require that the Town of Watertown be named as Additional Insured on all subcontractor’s and independent contractor’s policies before they are permitted to begin work.

The Bidder and all subcontractors and independent contractors and their insurers shall waive all rights of subrogation against the Town of Watertown, and its officers, agents, servants and employees for losses arising from the work performed by each on this contract.
The Bidder assumes and agrees to hold harmless, indemnify, protect and defend the Town of Watertown against any and all liability for injuries and damages to Bidder and to Bidder’s employees, agents, subcontractors and guests, third parties or otherwise incident to or resulting from any and all operations performed by a contractor under any terms of this contract.

D. Other Data:

NOTE 1: If Bidder is only a vendor shipping goods via Common Carrier only, General Liability is required.

NOTE 2: If Bidder is a Professional, Errors & Omission coverage will be required.

NOTE 3: The Town reserves the right to amend amounts of coverage required and the types of coverage provided based on work or service to be performed.

GUARANTEE
The bidder shall unconditionally guarantee for a period of one (1) year from the date of acceptance, all materials, supplies, equipment, and services; including but not limited to its workmanship, delivery and installation. If within the guarantee period there are any defects or signs of deterioration the bidder shall repair, adjust or replace the item(s) to the complete satisfaction of the Town. These repairs, adjustments, or replacements are at the sole expense of the bidder and shall be made at such times that are agreeable to the Purchasing Agent so that it is least detrimental to instructional programs.

PERMITS

When required all licenses and permits for complying with any applicable Federal, State, and Municipal laws, codes, regulations in connection with the prosecution of the work shall be obtained by the Bidder, at no additional cost to the Town. The cost of local building permits will be assessed at sixteen cents per one thousand dollars of construction value as declared on the building permit application pursuant to State of Connecticut Statute Sec. 29-263 by the Town of Watertown. The successful contractor will be responsible for payment to the Town of Watertown Building Inspection Department.
PREVAILING WAGE RATES
The Town of Watertown shall require the payment of prevailing rates of wages in accordance with the wage section of the Connecticut General Statutes 31-53, 93-392 and shall institute such investigations and periodic monitoring procedures as deemed necessary to determine compliance with labor standard provisions and the Federal requirements of the Statutes as amended.

NONDISCRIMINATION IN EMPLOYMENT
The successful bidder shall agree and warrant that, in the performance of this contract, he will not discriminate or permit discrimination against any person or group of persons on the grounds of race, color, sex, religion, or national origin in any manner prohibited by State, Federal, County, or Municipal law. A certification of Nonsegregated Facilities and a Certification Regarding Equal Employment Opportunity shall be considered a part of this contract.

DISPUTE RESOLUTION
1. Mandatory Negotiation.

The parties agree that they will attempt to negotiate in good faith any dispute of any nature arising under this agreement. The parties shall negotiate in good faith at not less than two (2) negotiation sessions prior to seeking any resolution of any dispute by any means under Dispute Resolution provisions contained herein below. Each party shall have the right to legal representation at any such negotiation session.

2. Mandatory Mediation.

Any dispute or question arising under the provisions of this agreement, which has not been resolved under the mandatory negotiation provision, shall be submitted to non-binding mediation before one (1) mediator agreed upon by the parties or appointed by the American Arbitration Association. Mediation proceedings shall take place at any suitable location in Watertown, Connecticut and shall be conducted in accordance with the rules and procedures of the mediation then applicable of the American Arbitration Association. If an independent mediator is agreed upon by the parties, said independent mediator shall establish the rules of such mediation. Each party shall pay one half of all costs and expenses of such mediation. The parties shall use their best efforts to reach a good faith resolution of said dispute within ninety (90) days after the commencement of the mediation proceedings. Any decision of the mediator shall not be binding upon the parties except by agreement of the parties.
3. **Election to Begin Court Proceedings.**

Provided the parties have completed the mandatory negotiation proceedings and the foregoing provisions with respect to mediation notwithstanding, if either party determines that mediation is not an appropriate means to settle any such dispute, such party shall have the right to commence judicial proceedings for the purpose of settling any such dispute.

**MECHANICS LIEN WAIVERS**

The successful Bidder shall be required to submit a Mechanics Lien Waiver, acceptable to the Town of Watertown, with each progress payment, and/or at time of final payment, prior to any payment made.

For further technical or administrative information contact Mr. Jason Warner, Purchasing Agent at (860) 945-5260 or via email at warner@watertownct.org.
TOWN OF WATERTOWN  
WATERTOWN, CONNECTICUT  

GENERAL REQUIREMENTS  

Bowers Street Culvert Replacement  
Watertown Public Works Department  

Scope of Work  
The Contractor shall provide all labor, superintendence, materials, plant, tools and equipment necessary for properly constructing the specified drainage improvements and all other work necessary for the proper completion of the project as shown on the Contract Drawings and specified herein within the time stipulated.  

Standards  
Whenever reference is made in this Contract to the Standard of any technical society or other recognized organization, these shall be construed to mean the latest standard adopted and published at the date of the advertisement for bids.  

Abbreviations are defined as follows:  

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ASTM</td>
<td>American Society for Testing and Materials</td>
<td></td>
</tr>
<tr>
<td>ANSI</td>
<td>American National Standards Institute</td>
<td></td>
</tr>
<tr>
<td>ASA</td>
<td>American Standards Association</td>
<td></td>
</tr>
<tr>
<td>ACI</td>
<td>American Concrete Institute</td>
<td></td>
</tr>
<tr>
<td>AASHTO</td>
<td>American Association of State Highway and Transportation Officials</td>
<td></td>
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<tr>
<td>ASME</td>
<td>American Society of Mechanical Engineers</td>
<td></td>
</tr>
<tr>
<td>IEEE</td>
<td>Institute of Electrical and Electronics Engineers</td>
<td></td>
</tr>
<tr>
<td>AWWA</td>
<td>American Water Works Association</td>
<td></td>
</tr>
<tr>
<td>ACPA</td>
<td>American Concrete Pipe Association</td>
<td></td>
</tr>
</tbody>
</table>

Lines and Grades  
The Engineer will establish all principal benchmarks and lines and grades required for the work and will make the surveys and measurements necessary for determining pay quantities. All intermediate lines, grades, and measurements required for the construction details shall be laid out by the Contractor and he shall be responsible for their accuracy. The Contractor shall provide such facilities and men as may be necessary for the Engineer to check lines and grade points placed by the Contractor. All material required for grade stakes shall be furnished by the Contractor and after the required lines and grades have been established thereon, they shall be properly protected to prevent movement or displacement. The Contractor shall keep a transit and leveling instrument on or near the site at all times and a skilled instrument man, employed or obtained whenever necessary, for layout of all locations, dimensions, and levels, and no data, other than the information contained in
the Drawings, Specifications, and written orders of the Engineer, shall justify departure from the
dimensions and levels required by the Drawings.

**Contract Drawings and Working Drawings**
The work is shown on the accompanying Contract Drawings. Such additional working drawings, as
required because of changes or to provide greater detail, will be provided by the Engineer.

**Alterations**
The Engineer may make alterations to the line, grade, plan, form, dimension, or materials of the
work, or any part thereof, either before or after the commencement of the work. If such alterations
increase the quantity of work, such increase will be paid for according to the quantity of such extra
work actually done and at the prices stipulated for such work under unit price items of the Contract.
In case no unit price is applicable, the alterations will be paid for as extra work defined in the
Contract under the section entitled **Extra Work**.

**Planimeter**
The use of the planimeter shall be considered satisfactory for estimating quantities where geometric
and analytic methods would be comparatively laborious.

**Contractor's Schedule of Operations**
The Contractor shall submit, within then (10) days of the date of the Notice to Proceed, a preliminary
schedule of operations for the project to the Engineer for approval. The approved preliminary
schedule shall be used to prepare a detailed schedule of the principal construction events including
all proposed purchase and delivery dates for items with critical delivery times. A supplemental bar
graph shall also be prepared based on this construction schedule. The detailed schedule and
supplemental bar graph shall be submitted within ten (10) days of the date of the Notice to Proceed.

The status of the project shall be evaluated monthly by the Contractor and shall be compared to the
original schedule which shall be revised, if necessary, and reissued.

**Coordination with Other Contractors and Utilities**
During the progress of the work, other contractors and/or utilities may be engaged in performing
work in the area. The Contractor shall coordinate the work to be done under this Contract with the
work of others.

**Cost Breakdown**
Prior to the first estimate for payment to the Contractor, the Contractor shall submit to the Engineer
for approval a detailed cost breakdown of the various amounts to be paid for within each Lump Sum
Item, as applicable. It shall also include, but not necessarily be limited to, proportional amounts of
bonds, insurance, and miscellaneous works which are to be paid for throughout the life of the
Contract, and which are not specifically included for payment under other Items and/or Division of
the Contract.
Estimated Quantities
To aid the Engineer in determining quantities to be paid for, the Contractor shall, whenever requested, give the Engineer access to the proper invoices, bills of lading, or other pertinent documents and shall provide methods and assistance necessary for weighing or measuring materials.

Payment for Miscellaneous Work
No direct payment will be made to the Contractor for furnishing and providing miscellaneous temporary works, plant, and services, including Contractor’s office, sanitary requirements, water supply, power, tools, equipment, lighting, telephone systems, store houses, store yards, safety devices, permits, insurances, bonds, watchmen, clean up, and the like, or other items specified under these General Requirements, unless payment therefor has been specifically provided. Compensation for the same is understood to be included in the scheduled prices hereinbefore given for the various kinds of work contemplated.

Drawings and Information to be Furnished by the Contractor
For materials and equipment not supplied by the Owner, the Contractor shall promptly furnish to the Engineer, for his information, three (3) copies of drawings in detail of the materials, equipment, piping, and structural details for any part of the work for which Drawings are not to be issued by the Engineer. Before placing orders for any manufactured item or part of structure, he shall also submit three (3) copies, for approval, of detailed lists and descriptions of the various materials, fixtures, fittings, supplies which he proposes to use in the work, and also the names of individuals or companies who propose to furnish or manufacture the same. Copies of results of all tests of materials and equipment shall be furnished by the Contractor immediately following the performance of required tests.

Prior to the submittal of shop drawings, the Contractor shall check, approve, initial, and date the drawings and shall also indicate by reference the Specification and/or Plan which covers the item. Submittals will be returned to the Contractor if they have not been properly processed by him.

Approval by the Engineer of shop drawings for any material, apparatus, device, and layout shall not relieve the Contractor from the responsibility of furnishing same of proper dimension, size, quality, quantity, and all performance characteristics to efficiently perform the requirements and intent of the Contract Documents. Approval shall not relieve the Contractor from the responsibility for errors of any sort on the shop drawings. If the shop drawings deviate from the Contract Documents, the Contractor shall advise the Engineer of the deviations in writing, including the reasons for the deviation.

In the event the Contractor obtains the Engineer’s approval for the material, manufactured items, or equipment, other than that which is shown on the Plans or specified herein, the Contractor shall, at his own expense, make any changes as required in the structures, buildings, piping, or any other portion of the work necessary to accommodate the approved material, manufactured item, or equipment.
Contract Limits
The Contractor shall confine his activities to within street lines, easements, and rights-of-way.

The Contractor shall take particular care to protect trees and shrubs and private personal property. He shall make good any damage to the satisfaction of the Engineer.

The Contractor shall not enter upon or make use of any private property along the line of work, outside the limits of the rights-of-way, except when written permission is secured from the owner of said property and a copy delivered to the Engineer. The Contractor shall be held responsible for all damages or injury, done by himself or those in his employ, to any private or public property of any character during the prosecution of the work. The Contractor shall restore or repair at his own expense, in a manner satisfactory to the Engineer, such property as may be damaged by his operations during the prosecution of the work.

In case of failure on the part of the Contractor to restore or repair such property in a manner satisfactory to the Owner, the Owner may, upon 48 hours notice to the Contractor, proceed with such restoration or repair. The expense of such restoration or repair shall be deducted from any monies, which are due or may become due the Contractor under this Contract.

The Owner will obtain photographs and/or video tape recordings of the site prior to the start of work under this Contract and Agreement. These photographs and/or recordings will be used to judge the conditions of the site during the course of the work and the adequacy of restoration of the site after completion of the work.

Cleaning up Site
During the progress of the work, the Contractor shall keep the construction area in a neat condition, free from accumulations of waste materials and rubbish. Lunch papers, bottles, lumber cut-offs, drinking cups, and like rubbish shall be removed from the site daily. No alcoholic beverages will be permitted at the construction site(s).

On or before completion of the work and before acceptance and final payment shall be made, the Contractor shall clean and remove from the site and adjacent property all surplus and discarded materials, rubbish and temporary structures, and restore all property in an acceptable manner and leave the whole area in a neat and presentable condition.

Storage of Materials
Materials shall be stored so as to insure the preservation of their quality and fitness for the work. When considered necessary, they shall be placed on wooden platforms and covered or stored in a suitable building, as directed by the Engineer. Stored materials shall be located so as to facilitate prompt inspections.

Materials and equipment supplied by the Owner shall be jointly inspected by the Owner and the Contractor and shall, upon acceptance by the Contractor, become the Contractor’s responsibility to
make good any damage to the materials and equipment until they have been incorporated and accepted in the work.

**Removal of Condemned Materials**
The Contractor shall immediately remove all rejected and condemned materials of any kind brought to or incorporated in the work from the site of the work. No such rejected or condemned materials shall again be offered for use by the Contractor.

**Hauling Materials**
Before starting any work the Contractor shall arrange for the use of routes of travel for hauling materials, including surplus earth and rock, with the Municipal or State Officials having jurisdiction that will result in minimum inconvenience to the traveling public. Routs of travel so scheduled shall be adhered to throughout the course of the work, unless otherwise approved.

**Accommodation of Traffic**
During the progress of the work, all streets shall be kept open for the passage of traffic and pedestrians and shall not be obstructed unless authorized by the authority having jurisdiction over same. Driveways, sidewalks, and areas of roadway shall be closed as short a time as possible while work is in progress and passage shall be restored by the close of work every day, by properly placed backfill or approved bridging. The Contractor shall take such measures at his own expense as may be necessary to keep the street open for traffic and shall give advance notice to the Fire and Police Departments, and the Board of Education of his proposed street operations. He further agrees to be responsible for all legal notices to the public concerning the state of the roads while the work is in progress.

Warning signs shall be provided along all streets while work is in progress and, where traffic direction is required, flagmen shall be designated by the Contractor to direct traffic past the equipment, machinery, or construction operations. Barricades and lights shall be provided as required to protect life and property. Where trenches have been cut in streets on which traffic may pass at times, warning signs shall be placed at frequent intervals and maintained until the street is safe for travel. All such work and operations shall be in accordance with requirements of the Owner and the Specification herein. The use of unauthorized or unapproved signs, barricades, or traffic delineators will not be permitted.

The Contractor shall construct and maintain, without extra compensation, such adequate and proper bridges over excavations as may be necessary or directed for the purpose of accommodating pedestrians and vehicles. Ingress and egress to private property, satisfactory to the Engineer, shall be continuously provided.

Should the Contractor or his employees neglect to set out and maintain barricades or lights, as required in the Specifications, the Engineer may immediately and without notice arrange for furnishing, installing and maintaining barricades or lights and any other precaution deemed necessary. The cost thereof shall be borne by the Contractor and may be deducted from any amount
due or to become due to the Contractor under this Contract.

The Contractor shall be held responsible for any damages that may have to be paid as a consequence of the Contractor's failure to protect the public.

Then Engineer and the Chief of Police will determine the need for uniformed police officers for traffic control. If uniformed police officers are deemed necessary, the cost of the officers will be borne by the Town, unless otherwise specified.

Temporary Roads
The Contractor shall be responsible for providing and maintaining such temporary access roads, to and along right-of-way, as are necessary for transportation of materials and equipment. Where such roads are on private property he shall obtain permission for their construction and use and pay all costs pertaining thereto.

Dust Control
The Contractor shall take all necessary precautions to prevent and abate nuisance caused by dust arising from his operations. Approved methods applicable to various parts of the work, such as application of water spray or calcium chloride, shall be employed. This also applies to maintaining temporary paving nuisance-free until permanent paving is placed. The area of construction along roadways shall be broom swept each day after completion of the day's work and the application of water as necessary, all at no additional cost to the Owner.

Working Conditions
In prosecuting the work of this Contract, the Contractor shall provide working conditions on each operation that shall be as safe and healthful as the nature of the operation permits. He shall comply with all safety and sanitary rules, laws and regulations.

Work in Inclement Weather
During freezing, stormy or inclement weather, no work shall be performed except such as can be done satisfactorily and in such manner as to secure first-class construction throughout.

Working Hours
The Contractor's working schedule shall be confined between the hours of 7:00 a.m. and 6:00 p.m. current local time. Weekend work shall be permitted.

Unless otherwise especially permitted, no work shall be done between the hours of 6:00 p.m. and 7:00 a.m. except as necessary or the proper care and protection of the work already performed. If it shall become absolutely necessary to perform work at night, the Engineer shall be informed at least 24 hours in advance of the beginning of the performance of such work. Only such work shall be done at night as can be done satisfactorily and in a first-class manner. Good lighting and all other necessary facilities for carrying out and inspecting the work shall be provided and maintained at all points where such work is being done.
Emergency Work
The Contractor shall file, with the Public Works, Fire and Police Departments of the Town of Watertown, the name and telephone number of a person authorized by him who may be contacted regarding emergency work at the job site that may be required during non-working hours for reasons of public safety. This person shall be readily available and have full authority to deal with any emergency that may occur.

The Contractor shall be solely responsible for site safety and compliance with all applicable regulations with regard to work related activities.

Environmental Compliance
A. General
This section of the Contract is provided to identify those construction activities or other activities under the Town’s control or jurisdiction which may have a negative effect on the environment, including the Town’s native waters and natural resources, and to prevent or minimize any damage to the environment which might result from such activities, both during and following the completion of any transportation project.

This section reinforces those environmental protection requirements which the Contractor is bound to meet under the terms of the Contract, or under Federal, State or Local laws and regulations. If a Contractor fails to comply with environmental provisions of the Contract or law, the Contractor shall be penalized as provided in this Section and as provided elsewhere in this Contract.

B. Compliance with Laws and Regulations.
The Contractor shall at all times conduct his operations in conformity with all Federal, State and Local permit requirements concerning water, air or noise pollution or the disposal of contaminated or hazardous materials. Permit requirements include but are not limited to those established by regulations administered by the United States Coast Guard, the U.S. Army Corps of Engineers and the U.S. Environmental Protection.

Appropriate permits shall be required for all activities associated with or incidental to the Contractor’s operations including, but not limited to, those on the Project site and in all adjacent areas, waste and disposal areas, borrow and gravel banks, storage areas, haul roads, access roads, detours, field offices, and any other temporary staging areas. The Contractor shall be responsible for, and hold the Town harmless from, any penalties or fines which may be assessed by any authority due to the Contractor’s failure to comply with the terms of all applicable permit requirements.

The Town will submit all applications and obtain all permits required for Contract work within the limits shown on the plans or identified elsewhere in the Contract documents. The Contractor shall transfer the Watertown Conservation permit from the name of the Town to his own name. A copy of the permit application and the permit are attached.
Any request by the Contractor for authorization of activities or methods not specifically called for by the Contract, plans, applications submitted or applicable permits issued for the Project must be submitted by the Contractor in writing to the Engineer, and must include a detailed description of the proposed activities or methods, the justification for those activities and supporting documentation showing the proposed activity or method will not create risks of damage to the environment. If such proposal is accepted by the Engineer, the Town will process an application to the appropriate regulatory agency or agencies for any permit amendment, modification, revision or new permit required for the Contractor to carry out the additional activities or implement the changed methods on the Project. The Town does not, however, guarantee that it will be able to obtain the desired permit amendment, modification or revision, and the Town will not be liable for the effects of any inability to do so. No extension of time will be granted as a result of the contractor’s request to perform work not authorized as part of the established permit requirements. If the amendment, modification, or revision of the permit is not necessary for the Contractor to perform the work as required by the original Contract or as subsequently ordered by the Engineer, then no claim may be made by the Contractor based on the amount of time taken by the Town to review the Contractor’s proposal, or to apply for or secure the permit amendment, modification or revision. No such proposed additional activity shall commence, nor shall such a changed method be implemented until and unless the Engineer approves in writing the Contractor’s request.

In case of failure on the part of the Contractor to perform pollution control work as determined by the Engineer, the Engineer may, upon 24 hours written notice, arrange for the performance of the work by approved forces and the cost thereof will be deducted from any monies due or which may become due the Contractor under the Contract or under any other State contract.

C. Water Pollution Control

1. The Contractor shall, throughout the life of the contract, control and abate siltation, sedimentation and pollution of all waters, under ground water systems, inland wetlands, and navigable waters for work appearing on the plans. Temporary construction methods proposed by the Contractor shall also conform to all application or permit requirements. The Contractor shall assume responsibility for all obligations and costs incurred under the terms and conditions of such permit applications or permits.

The Contractor shall obtain any permits and pay any fees required for the performance of work which is not included in the original Contract or which is to be done outside the Project limits but which is proposed in the fulfillment of his Contract obligations including, but no limited to, the removal of material from, deposition of materials in, obstruction of, construction within, alteration or pollution of any inland wetland, navigable water, streams, ponds, lakes, water supplies or other water bodies.

2. The following items may be superseded by specific permits from the Connecticut Department of Environmental Protection (DEP) or the Watertown Conservation Agency (WCA). The Contractor shall not make any design changes in the Contract work which requires a variance form the requirements of the following items until and unless the Contractor has first submitted a detailed
written proposal for such changes to the Engineer for review by the Department and for transmittal to and review by the DEP and/or the WCA and then received approval form the Town of the proposed variances.

BEST MANAGEMENT PRACTICES

1. No construction shall proceed until erosion and sedimentation control plans, prepared by the Contractor, have been submitted in writing and approved by the Engineer, and until such controls have been installed as the Engineer directs. Such plans shall be consistent with the Connecticut Council On Soil & Water Conservation document “Connecticut Guidelines for Soil Erosion and Sediment Control,” as revised, which is available form the Connecticut Department of Environmental Protection, and with the Department document “On Site Mitigation for Construction Activities,” as revised.

2. Refueling of equipment or machinery within 8 m of any wetland or watercourse shall be allowed only with the approval of the Engineer.

3. No construction shall proceed until a written proposal of methods to prevent construction debris, paint, spent blast materials, or other materials from entering the wetland or watercourse has been submitted by the Contractor to the Engineer and approved by the Engineer, and such methods have been implemented as the Engineer directs. These materials shall be collected and disposed of in an environmentally safe manner in accordance with all applicable Federal, State and local laws and regulations. The Engineer may order the Contractor to cease such activity temporarily if, in the judgement of the Engineer, wind or storm conditions threaten to cause the deposit of such materials into a waterway.

4. No materials resulting from construction activities shall be placed in or allowed to contribute to the degradation of an adjacent wetland or watercourse. Disposal of any material shall be in accordance with Connecticut General Statutes, including but not limited to Sections 22a-207 through 22a-209.

5. Fording of streams with equipment shall be prohibited, except as approved by the Engineer and as permitted by the WCA. Such equipment travel shall be minimized. Where frequent equipment travel on stream banks and beds is necessary, washed stone shall be placed to minimize erosion, sour, and turbidity, provided no significant grade change will be required for any haul road or temporary structure placed in wetlands or watercourses.

6. All off-site disposal locations for material and debris resulting from the progress of the Project shall be submitted in writing to the Engineer who shall determine whether or not they are acceptable. The Contractor shall ensure that these locations are outside of designated wetlands or watercourses, unless otherwise approved by local, state, or federal agencies with jurisdiction over the matter.

7. A construction sequencing plan and a water handling plan including a contingency plan for flood events must be submitted in writing to the Engineer and approved by the Engineer prior to the commencement of any construction in a waterway. Water shall be kept deep enough in the channel to allow for the passage of fish and the continuous flow of the watercourse as required by the Engineer.
8. When dewatering is necessary, pumps shall not discharge directly into the wetland or watercourse. Prior to dewatering, the Contractor must submit to the Engineer a written proposal for specific methods and devices to be used, and obtain the Engineer's approval of such methods and devices to be used for dewatering activities, including, but not limited to, pumping the water into a temporary sedimentation bowl, providing surge protection at the inlet and outlet of pumps, or floating the intake of the pump, or other methods to minimize and retain the suspended solids. If the Engineer determines that the pumping operation is causing turbidity problems, said operation shall cease until such time as a means of controlling turbidity is submitted by the Contractor, approved by the Engineer and implemented by the Contractor.

9. Work within or adjacent to watercourses shall be conducted during periods of low flow, whenever possible. The Engineer shall remain aware of flow conditions during the conduct of such work, and shall cause such activity to cease should flow conditions threaten to cause excessive erosion, siltation or turbidity. The Contractor shall make every effort to secure the work site before predicted major storms. A major storm shall be defined as a storm predicted by NOAA Weather Service with warnings of flooding, severe thunderstorms, or similarly severe weather conditions or effects.

10. All temporary fill shall be stabilized during use to prevent erosion and shall be suitably contained to prevent sediment or other particulate matter from reentering a wetland or watercourse. All areas affected by temporary fills must be restored to their original contours or as directed by the Engineer, and revegetated. The areal extent of temporary fill or excavation shall be confined to that area necessary to perform the work, as approved by the Engineer.

11. Seeding is to be accomplished within 7 days of the Contractor's reaching an appropriate grading increment as determined by the Engineer. If the Engineer anticipates and notifies the Contractor, or if the Contractor intends, that a grading operation will be suspended for a period of 30 or more consecutive days, the Contractor shall, within the first 7 days of that suspension period, accomplish seeding, or take such other appropriate measures to stabilize the soil as may be required by the Engineer.

12. Dumping of oil, chemicals or other deleterious materials on the ground is forbidden. The Contractor shall provide a means of catching, retaining, and properly disposing of drained oil, removed oil filters, or other deleterious material. All spills of such materials shall be reported immediately by the Contractor to the DEP.

13. No application of herbicides or pesticides within 8 m of any wetland or watercourse will be allowed. All such applications must be done by a Connecticut licensed applicator. The Contractor shall submit to the Engineer the proposed applicator's name and license number, and must receive the Engineer's approval of the proposed applicator, before such application is carried out.
14. During spawning seasons, as defined in the Contract, discharges and construction activities in spawning areas of State Waters shall be restricted so as not to disturb or inhibit aquatic species which are indigenous to the waters.

If the Contractor wants to make changes in construction operations or scheduling which would affect the use of or necessity for any pollution controls, before beginning to implement those changes it must submit a written proposal detailing them to the Engineer, and must receive the Engineer’s approval of those changes. As part of its submission the Contractor must submit a plan showing what erosion and sedimentation controls above and beyond those called for in the plans and specifications would be necessitated by the changes it proposes to make in the sequence or nature of Project construction activities and related operations.

The Contractor shall inspect temporary and permanent erosion and sedimentation controls immediately after each rainfall and at least daily during prolonged rainfall. The Contractor shall maintain all erosion and sedimentation control devices in a functional condition in accordance with the document “Connecticut Guidelines for Soil Erosion and Sediment Control,” as revised, and the Department’s document “On Site Mitigation for Construction Activities,” as revised. In the event the Contractor fails to maintain such devices in accordance with such documents, and the Contractor does not correct those failures within 24 hours after receipt of written notice of such failures from the Engineer, the Department may proceed with its own or other forces to remedy specified failure and the cost thereof will be deducted from monies due the Contractor under the Contract or under any other State contract.

D. Air Quality Control
The Contractor shall exercise every reasonable precaution throughout the life of the Contract to safeguard the air resources of the State by controlling or abating air pollution in accordance with the DEP’s regulations. These measures shall include the control and abatement of dust, mist, smoke, vapor, gas, aerosol, other particulate matter, odorous substances or any combination thereof arising from construction operations, hauling, storage or manufacture of materials.

E. Noise Pollution
The Contractor shall take measures to control the noise intensity caused by his construction operations and equipment, including but not limited to equipment used for drilling, pile driving, blasting, excavation or hauling.

All methods and devices employed to minimize noise shall be subject to the continuing approval of the Engineer. The maximum allowable level of noise at the nearest residence or occupied building shall be 90 decibels on the “A” weighted scale (dBA). Any operation that exceeds this standard will cease until a different construction methodology is developed to allow the work to proceed within the 90 dBA limit.
F. Contaminated and/or Hazardous Material

The Town will acquire any “Hazardous Waste Generator Permit(s)” required under the Resource Conservation and Recovery Act, for the management and disposal of all contaminated and/or hazardous material known to exist or discovered during construction operations, provided that:

1. such material is within the construction limits defined in the Contract, and;
2. such material is not comprised of waste materials generated by the Contractor.

If the Town has defined an area of known or suspected contamination within the Project limits, and if contaminated material in that area has not been removed prior to the start of the Project, the disposition of such material shall be arranged for with an appropriate party.

In the event that the Contractor encounters or exposes any material, not previously known or suspected to be contaminated, but which exhibits abnormal properties which may indicate the presence of hazardous or contaminated material, the Contractor shall cease all operations in the vicinity of the abnormal condition, and the Engineer shall be notified immediately. The presence of barrels, discolored earth, metal, wood, visible fumes or smoke, abnormal odors or excessively hot earth may indicate the presence of hazardous or contaminated material, and shall be treated with extreme caution. The proper disposition of the material shall be arranged for with an appropriate party.

Unless otherwise provided for under a specific Contract item, direct Contractor involvement with hazardous or contaminated materials, other than those associated with Contract operations, is neither required nor solicited under this Contract.

When the Contractor performs support work incidental to the removal, treatment or disposal of hazardous or contaminated material, payment will be made at the unit prices for applicable pay items in the Contract. When the Contract does not include appropriate pay items, payment will be made in accordance with the section titled EXTRA WORK.

The Contractor shall faithfully observe all security precautions established pursuant to OSHA 239 CFR 1919.120, including all revisions and amendments, and shall not work in any area known to contain or suspected of containing hazardous or contaminated material without prior written approval of the Engineer.

The Contractor will assume sole responsibility for the proper storage, handling, management and disposal of all regulated materials and wastes associated with the Contractor’s operations, including but not limited to; lubricants, antifreeze, engine fluids, paints, and solvents. All costs associated with the Contractor’s failure to properly manage such materials in accordance with federal and state regulations, and all remedial and punitive costs incurred by the Town as a result of such failure will be borne by the Contractor.

Excluded from the requirements under this article are coatings removed by the Contractor for the purpose of painting structural steel or other steel elements. The debris resulting from paint removal
shall be tested by the Town to determine whether or not it is contaminated or hazardous material. Once so tested, these materials shall be removed from the site and disposed of by the Contractor in accordance with applicable special provisions.

**Sedimentation and Erosion Control**

The Town has obtained a permit from the Watertown Conservation Commission. The Contractor shall transfer the permit to his own name. No work shall be started until the erosion and sediment controls are installed.

It is the Contractor’s responsibility to install any additional sedimentation and erosion control, as ordered by the Engineer or as required by site conditions. It is the Contractor’s responsibility for the adequate installation, operation and maintenance of sedimentation and erosion controls. No direct payment will be made for the installation, operation and maintenance of any sedimentation and erosion control.

**Work Within or Near Areas Designated as Inland Wetlands**

Portions of this project are to be constructed in or near wooded areas and areas classified as inland wetlands. The Contractor shall limit disturbance of these areas, to what is absolutely necessary for construction, and restore these areas, as closely as possible, to their original state.

The Contractor shall familiarize himself with permits and maps held by the Town of Watertown indicating the wetlands. The Contractor shall be required to strictly adhere to all requirements and restrictions imposed by said permits.

The Contractor shall not introduce any substantial quantities of fill materials into any areas outside the contract limits.

**Soil and Groundwater Conditions**

The Owner assumes no responsibility whatsoever with respect to ascertaining for the Contractor such facts concerning physical characteristics at the site of the project. The Contractor agrees that he will make no claim for and has no right to additional payment or extension of time for completion of the work, or any other concession because of any interpretations or misunderstanding on his part of this Contract or because of any failure on his part to fully acquaint himself with all conditions relating to the work.

**General Sanitary Requirements**

The Contractor shall provide proper sanitary accommodations at a convenient place on or near the work site. They shall be cleaned daily and shall be adequately serviced.

*The Contractor shall maintain a safe drinking water supply readily available to all workers.*
Water Supply and Electrical Energy
The Contractor shall make his own arrangements for obtaining the electrical energy and water supply necessary for construction purposes at no additional cost to the Owner.

Resident Engineer’s Office
It will not be necessary for the Contractor to construct or maintain an office for the use of the Engineer. The Engineer shall have access to the telephone in the Contractor’s office.

Explosives and Blasting
Explosives shall be stored, handled, and used in accordance with the laws, ordinance and regulations of the State of Connecticut, all local regulations and with such additional regulations as the Engineer may require. Blasting shall be conducted so as not to endanger persons or property and, unless otherwise permitted, shall be covered or otherwise satisfactorily confined. The Contractor shall be responsible for and shall make good any damage of whatever nature caused by blasting or accidental explosions.

Sheeting, Shoring and Bracing
Where necessary the sides of trenches and excavations shall be supported by adequate sheeting, shoring and bracing. The Contractor shall be held accountable and responsible for the sufficiency of all sheeting, shoring and bracing used and for all damage to persons or property resulting from the improper quality, strength, placing, maintaining, or removing of the same. Where sheeting is removed care shall be taken not to disturb the new work or existing utilities and structures.

No sheeting is to be left in place unless expressly permitted by the Engineer. No direct payment will be made for sheeting, shoring and bracing and compensation for such work and all expenses incidental thereto shall be considered as included in the unit prices bid for the various items of this Contract.

Existing Structures
All known surface and underground structures, except electric and telephone service connections and water, gas and sewer service pipes, on or immediately adjacent to the work are shown on the Plans. Sewer, drainage, water and gas pipes, manholes and similar structures, located in or adjacent to the location of the structures included in this Contract, are shown on the Contract Drawings. This information is shown for the convenience of the Contractor in accordance with the best information available, but is not guaranteed to be correct or complete. The Contractor shall explore the route ahead of trenching and shall uncover all known obstructing pipes sufficiently to determine their location. Necessary changes in location may be made by the Engineer to avoid unanticipated obstructions.

Wherever water or gas mains, electric or telephone ducts or electric or telephone poles are encountered and may be in any way interfered with; the Contractor shall keep the utility company
involved fully informed in advance. The Contractor shall cooperate with the utility company in the protection, removal, relocation and replacement of such structures.

The Contractor shall, at his own expense, sustain in their places and protect from direct or indirect injury, all utilities, pipes, poles, conduits, walls, buildings, and other structures and property in the vicinity of his work. Such sustaining and protecting shall be done carefully by the Contractor and as required by the party owning or controlling the facility. Before proceeding with such work, the Contractor shall satisfy the Engineer that the methods and procedures to be used have been approved by the party owning said structure. There shall be no additional compensation for this work and all expenses incidental thereto shall be considered as in the unit price bid for the various items of this Contract.

The Contractor shall take all risks attending the presence or proximity of pipes, poles, conduits, walls, buildings, wires or other structures, utilities and property in the vicinity of his work, and he shall be responsible for all damage and assume all expense for direct or indirect injury caused by his work to any of them or to any person or property by reason of injury to them.

Guard rails, posts, guard cables, signs, poles, markers, mailboxes, fences, walls and stone walls, and other private improvements, which are temporarily removed, damaged or destroyed to facilitate installation of the sewer, shall be replaced and restored to a condition as good as or better than existed and to the satisfaction of the Owner or Engineer.

The Contractor shall, at his own expense, retain the services of a licensed surveyor to replace property markers, on or adjacent to privately owned property, which may have been disturbed during the course of construction.

**Marking New Underground Plant**

All new underground plant shall be marked with warning tape in accordance with State of Connecticut Public Act 16-345 and DPUC Regulations.

**Testing Laboratories**

The Contractor shall provide, at no additional cost to the Owner, the services of approved testing laboratories to take samples of materials and perform tests as required under this Contract or as ordered by the Engineer. Payment for these services shall be included under the applicable items of the Contract, unless otherwise specified. Contractor will notify on-call testing service company at least 24 hours in advance for compaction testing. Compaction tests are required on base materials prior to placing asphalt and on bituminous concrete pavement during rolling operations. Sieve tests will be performed on all granular materials except riprap and Proctor Tests shall be required on all materials to be compacted.
TOWN OF WATERTOWN
WATERTOWN, CONNECTICUT

TECHNICAL SPECIFICATIONS

Bowers Street Culvert Replacement
Watertown Public Works Department

Bidders shall:

- provide a list of equipment available for the project
- provide a list of references for work performed over the last five years in the State of Connecticut with special emphasis on precast retaining walls
- Provide a copy of OSHA 10 certification for each person working on project, including proposed subcontractors, if any.
- List of approved subcontractors

Project Description

This project consists of the removal and replacement of the existing 5’8” elliptical CMP pipe culvert with an 8’6” by 5’9” 3-sided precast culvert, end walls and footings, replacement of sanitary sewer and water main, removing and replacing cement rubble masonry retaining walls, bituminous concrete curbing and paving and incidental related work on Bowers Street, Watertown, Connecticut.

TECHNICAL SPECIFICATIONS

All work is to be performed in accordance with the State of Connecticut Department of Transportation “Standard Specifications for Roads, Bridges and Incidental Construction, Form 816”, as supplemented and as amended below. However, it should be noted that reference to the Form of 816 is for convenience only and is not meant to imply or to infer that this project is an 816 project or that all of the terms and conditions of the Form 816 apply. Mobilization, demobilization and construction staking will not be bid separately, but the price of such work as may be required shall be included in the unit price bid for the work.

Trafficmen:
Uniformed Police Officers will be required for all work performed in the roadway and shall be provided in accordance with the State of Connecticut Department of Transportation “Standard Specifications for Roads, Bridges and Incidental Construction”, Form 816, as amended. Upon approval by the Engineer, the contractor is to arrange for the Police Officers. The Town will be responsible for payment of the Officers. Contractor shall be responsible for all fees associated with not notifying Extra Duty Office in time to cancel extra duty officers.
TECHNICAL SPECIFICATIONS
CLEARING AND GRUBBING

Description

The work under the item for “Clearing and Grubbing” consist of clearing the ground of trees, stumps, brush, rubbish and all objectionable material in accordance with the specifications or as directed by the Town. This work shall also include the preservation from injury or defacement of vegetation and objects designated to remain. All wood greater than three inches (3”) in diameter will be cut to four foot (4”) lengths and left stacked on owner’s property. At least ten (10) days prior to any tree removal there shall be a tree removal meeting on-site and all trees that are six inches (6”) or greater in diameter to be removed shall be flagged by the Watertown Tree Warden or representative. All other vegetative material shall be chipped and removed off-site.

Construction Methods

The construction methods shall be in accordance with 2.01.03 of the Form 816, as amended. Trees, stumps, brush and other vegetative waste may be disposed of at the town of Watertown Transfer Station, located on Old Baird Road, at no charge to the Contractor, during normal Transfer Station business hours.

Method of Measurement

This work will not be measured for payment.

Basis of Payment

Payment for this work will be at the contract lump sum price for “Clearing and Grubbing,” which price shall include all equipment, tools, and labor incidental to the completion of this item. All costs incidental to the disposal of trees, stumps, etc., will be included in the price of “Clearing and Grubbing.”
TECHNICAL SPECIFICATIONS
CURBING

Description:

Bituminous Concrete Lip Curb:
The item for “Bituminous Concrete Lip Curb (BCLC)” shall include all labor, equipment and materials required to provide the bituminous concrete lip, including tack coat in accordance with Form 816 and as shown on the plans. All curbing shall be backed up by topsoil at least to the top of the curb after settlement, which shall be seeded and mulched in accordance with the appropriate line item.

Materials

Bituminous Concrete Lip Curb:

Materials, including tack coat, shall conform to the requirements of Article 8.15 of the Form 816.

Construction Methods

Bituminous concrete lip curb – in accordance with Article 8.15 of the Form 816, as amended.
Tack coat material – in accordance with the Form 816, as amended.

Method of Measurement

This work will be measured for payment by the following:

   Number of linear feet of Bituminous Concrete Lip Curb as measured along the top of the curb, as shown on the plans or as directed by the Engineer.
   Bedding and backfill for concrete curb shall not be measured for payment but shall be included in the cost per unit of concrete bid.
   Excavation, compaction, backfilling, and tack coat material will not be measured or paid for separately but shall be included in the price bid per unit foot of curbing.

Basis of Payment

This work will be paid for as follows:

   Contract unit price per each linear foot of bituminous concrete lip curb, complete and accepted in place, which price shall include all equipment, material, labor and work incidental to as specified herein.
TECHNICAL SPECIFICATIONS
STORM SEWER SYSTEM

Description:

Pipe – (Size and Type):
The item for “Pipe (Size and Type)” shall include all labor, equipment and material to furnish and install the pipe of the size and type specified and as shown on the plans. All pipe shall be ADS (as shown on plans). There shall be no separate payment for removal of existing pipe or structures, pipe backfill, compaction and alignment, but these items shall be included in the unit prices bid. Each pipe length shall be laid straight and true to line and grade by means of laser system or other system approved in advance by the Town. All surplus materials shall be properly disposed of off-site at a location approved in advance by the Town.

Construction Methods

1. Pervious structure backfill – in accordance with the Requirements of Article 2.16 of the Form 816, except that payment will be included in the item for “Catch Basin Type “.”
2. Geotextile material – in accordance with the Requirements of Article 7.55 of the Form 816 except that payment shall be included in the item for which it is required.
3. Trench excavation shall be handled in accordance with Section 20.05 of the Form 816 as amended.
4. Pipe of the size and type specified – in accordance with Article 6.51 of the Form 816 as amended by manufacturer’s recommendations.
5. Catch basins of the size and type specified – in accordance with Article 5.07 of the Form 816 as amended.
6. Pipe bedding – No. 6 stone in accordance with Article M.08.01.21 of the Form 816, as amended. Install in accordance with details on plans.
7. Rock in Trench shall be handled in accordance with Section 20.05 of the Form 816 as amended.
8. Town will furnish baseline and benchmark for installation of improvements. Contractor to provide all other field survey required. Owner to perform as-built survey upon completion of fieldwork.
Method of Measurement

This work will be measured for payment by the following:

Number of linear feet of the size and type specified to the inside wall of the structure or pipe being connected to.
Number of cubic yards of trench excavation required and actual quantities of material removed except that maximum pay limits for pipe shall be six inches below the bottom of the pipe and one foot on each side of the pipe even though the actual excavation may be wider. Pay limits for catch basins shall be six inches below bottom of basin and two feet vertically outside the neat lines of the foundations in each direction vertically.
Backfill and compaction will not be measured for payment but shall be included in the price bid for other item.
Number of cubic yard of rock within pay limits shown on plans or specified.
Number of cubic yards of pipe stone bedding, complete and accepted in place, to the pay limits shown or specified.
Number of structures of size and type shown on plans and as specified.

Basis of Payment

This work will be paid for as follows:

Contract unit price per each linear foot of pipe of the size and type specified, complete and accepted in place, which price shall include all labor, equipment, materials and work incidental to as specified herein.
Contract unit price per each structure of the size and type specified, complete and accepted in place, which price shall include all labor, equipment, materials and work incidental thereto.
Contract unit price per each cubic yard of stone bedding, complete and accepted in place, which price shall include all labor, equipment, materials and work incidental thereto.
Contract unit price per each cubic yard of rock removed, regardless of whether for pipe or structure, which price shall include all labor, equipment, materials and work incidental thereto.
TECHNICAL SPECIFICATIONS
HEADWALL AND EXISTING CULVERT REMOVAL

Excavation, Backfill and Compaction:

Backfill and compaction for roadways, trenches or structures will not be measured or paid for separately, but shall be included in the unit prices bid. Contractor is responsible for dewatering and dust control, which cost shall be paid for in the price bid for other items. Test borings were performed.
Removal of existing curbing, culvert and headwall will not be measured or paid for separately but shall be included in the item “Headwall Removal.” or other items bid.

Construction Methods

1. The excavation of existing roadway and headwall material, in accordance with the Requirements of Article 2.02 of the Form 816, as amended. Surplus material is the responsibility of the Contractor.

2. The removal of existing bituminous concrete pavement and curbing is included in the other unit prices bid. Surplus material is the responsibility of the Contractor.

3. The removal of existing headwall, in accordance with the Requirements of Article 9.74 of the Form 816, as amended. Surplus material is the responsibility of the Contractor.

4. The excavation of trench material, in accordance with the Requirements of Article 2.05 of the Form 816, as amended. Surplus material is the responsibility of the Contractor.

5. Processed gravel base – in accordance with the Requirements of Article 3.04 of the Form 816, as amended.

6. Pervious structure backfill – in accordance with the Requirements of Article 2.16 of the Form 816, as amended, except that payment will be included in the item for which it is required

7. Geotextile material – in accordance with the Requirements of Article 7.55 of the Form 816, as amended, except that payment shall be included in that of other item for which work is required, as shown on plans or as directed by Town.

8. Pipe bedding – in accordance with Article M.08.03 of the Form 816, as amended.

9. Town will furnish baseline and benchmark for installation of improvements. Contractor to provide all other field survey required. Owner to perform as-built survey upon completion of fieldwork.

10. The cost for clearing and grubbing shall be included in the clearing and grubbing item and no other separate payment shall be made, except as noted in the plans. Otherwise, the terms and conditions of Section 2.01 of the Form 816 apply.

11. Edges of all trenches in paved areas shall be neatly saw cut as part of the excavation item and contractor to ensure that edge of saw cut pavement is ready for placing asphalt pavement upon completion of the backfill and compaction operation.
Method of Measurement

This work will not be measured for payment but shall be included in the unit prices bid for other items.

Basis of Payment

This work will be paid for as follows:

Contract lump sum price for other items, complete in place and accepted, which price shall include all equipment, material, labor and work incidental thereto as specified herein.
TECHNICAL SPECIFICATIONS
BITUMINOUS CONCRETE

Description
Work under this section includes the furnishing and placing of a smooth and dense bituminous concrete mixture with a uniform texture. Work under this section shall also include sawing and sealing of joints and cracks, formation of subgrade, provision of tack coat material and raising existing utility structures to grade. Materials for utility raising (rings, valve boxes, etc...) shall be provided by Town. Driveways are a separate item and not included in this section. All work performed under this item shall be in conformance with the State of Connecticut Department of Transportation “Standard Specifications for Roads, Bridges and Incidental Construction”, Form 816 as amended. It is expressly stated that the specific references to the Form 816 is for the technical requirements stated therein and that this project is not an 816 project, nor are all of the other terms of the Form 816 applicable.

Materials
Materials under this section shall conform to the requirements of Article M.04 of the Form 816.

Compacted Granular Fill
Compacted granular fill shall conform to the requirements of Article M.05.01 of the Form 816; except the coarse aggregate shall be broken stone and fine aggregate shall be stone sand, screenings or a combination thereof.

Construction Methods
1. Bituminous concrete – in accordance with Article 4.06 of the Form 816, as amended.
2. Town will furnish baseline and benchmark for installation of improvements. Contractor to provide all other field survey required. Owner to perform as-built survey upon completion of fieldwork.
3. All vendors must provide a detailed delivery ticket for every load of material supplied. Town reserves the right to withhold payment for material for which no ticket is provided.
4. Processed aggregate base (compacted granular fill) shall be installed in compliance with Section 3.05 of the Form 816.
5. Formation of Subgrade shall be performed in compliance with Section 2.09 of the Form 816.
Method of Measurement

This work will be measured for payment by the following:

Number of tons of Bituminous Concrete – of Class shown on plans, as specified or as directed by Town, spread and accepted in place, as documented by the net weight in tons subject to the theoretical yield computations as described in the Form 816,

Tack coat, dewatering and dust control will not be measured or paid for separately, but shall be included in prices bid per unit price.

Number of cubic yards of compacted granular fill, as shown on the plans or as ordered by the Town, complete and accepted in place, which shall include any excavation, backfill, compaction and work incidental thereto.

Formation of Subgrade as described in Section 2.09.04 of the Form 816.

Basis of Payment

This work will be paid for as follows:

Contract unit price per ton for bituminous concrete installed and accepted complete in place, which price shall include all equipment, material, labor and work incidental to as specified herein.

Contract unit price per cubic yard for compacted granular fill, complete and accepted in place, which work shall include all equipment, material, labor and work incidental thereto.

Contract unit price per square yard, complete and accepted in place which price shall include all materials, equipment, labor and tools necessary thereto.
TECHNICAL SPECIFICATIONS
MAINTENANCE AND PROTECTION OF TRAFFIC

Description:
The item for “Maintenance and Protection of Traffic” shall include all labor, equipment and materials required in accordance with the Form 816, except that this item shall also include the cost of signs, barricades, drums, lights, delineators, traffic cones and furnishing and placing of materials such as borrow, gravel, crushed stone, bituminous concrete for patching and pipe. Contractor is solely responsible for work zone safety and shall provide, at a minimum, the work zone signage attached. Roadway shall be kept open to at least one-way traffic to access residences within the project area at all times, and shall be opened to two way traffic at the completion of the work day. A detour may be arranged with prior approval of the Town. Contractor to work with adjacent property owners to provide access to individual homes to the greatest extent practicable but access shall always be provided at the end of the work day. Work zone cone, barricade and signage patterns shall be based upon the posted speed limit of 25 miles per hour and the attached plates.

Method of Measurement
This work will not be measured for payment.

Basis of Payment
This work will be paid for at the contract lump sum price for “Maintenance and Protection of Traffic” in accordance with Article 9.71 of the Form 816, except that this item will also include all costs for signs, barricades, drums, traffic cones, lights, delineators and the cost of furnishing, placing or relocating of materials such as temporary precast concrete barriers, borrow, gravel, crushed stone, bituminous concrete for patching, pipes and temporary repairs or to maintain safe and efficient vehicular and pedestrian traffic.
TECHNICAL SPECIFICATIONS
TOPSOIL AND TURF ESTABLISHMENT

Description:

The item for “Topsoil and Turf Establishment” shall include all labor, equipment and material necessary to strip and stockpile existing topsoil, respread stockpiled topsoil to line, depth and grade at the locations as shown on the plans or as directed by the Engineer, rake out all stones 1” and greater in size as well as roots and other objectionable material, seed and mulch in accordance with Articles 9.44 and 9.50 of the Form 816, as amended, at the unit price per square yard.

Materials

Topsoil, fertilizer, seed, and mulch shall conform to the requirements of Section M.13 of the Form 816, as amended.

Construction Methods

1. Topsoil and Turf Establishment - in accordance with Articles 9.44 and 9.50 of the Form 816, as amended,
2. Town will furnish baseline and benchmark for installation of improvements. Contractor to provide all other field survey required. Owner to perform as-built survey upon completion of fieldwork.

All work must be complete, and accepted in place by September 15, 2016.

Method of Measurement

This work will be measured for payment by the following:

Number of square yards of Topsoil and Turf Establishment as shown on the plans or as directed by the Engineer. Limits of payment for this item are two feet beyond the vertical edge of any curbing and four feet beyond the vertical edge of any pipe or catch basin.

Basis of Payment

This work will be paid for as follows:

Contract unit price per each square yard of “Topsoil and Turf Establishment”, complete and accepted in place, which price shall include all equipment, mowing, watering, maintenance, material, labor and work incidental to as specified herein. Partial payment of up to 60% may be made for work completed, but not accepted, at the option of the Town.
TECHNICAL SPECIFICATIONS
CONSTRUCTION STAKING

Description

The work under the item for “Construction Staking” shall consist of all construction layout and reference staking necessary for the proper control and satisfactory completion of all work on the project, except base line to be provided by Town, property lines, highway lines and non-access lines.

Construction Methods

The construction staking methods shall be in accordance with Article 9.80 of the Form 816, as amended. All references to “Department” shall mean Town of Watertown.

Method of Measurement

This work will not be measured for payment but shall be paid at the contract lump sum price.

Basis of Payment

Payment for this work will be at the contract lump sum which price shall include all equipment, tools, and labor incidental to the completion of this item.
TECHNICAL SPECIFICATIONS
SEDIMENTATION CONTROL SYSTEM

Description

The item for “Sedimentation Control Systems” shall include all labor, equipment and materials required to furnish, place, maintain and remove sedimentation control systems, as shown on the plans or as directed by the Town, in place according to Form 816, as amended. There shall be no separate payment for the cleaning out accumulated sediment or replacing failed system.

Materials

Materials shall conform to the requirements of Section 2.19 of the Form 816, as amended.

Construction Methods

System shall be placed and maintained in accordance with the requirements of Section 2.19 of the Form 816, as amended.

Method of Measurement

This work will not be measured for payment.

Basis of Payment

This work will be paid for as follows:

Contract lump sum price for sedimentation control systems installed and accepted complete in place, which price shall include all equipment, material, labor, tools and work incidental to the placement, maintenance, replacement, removal and disposal of the system and surplus material. No additional payment shall be made for cleaning out accumulated sediment or replacement materials.
TECHNICAL SPECIFICATIONS
GRAVEL STREAMBED MATERIAL

Description

Gravel Streambed Material shall consist of a well-graded, heterogeneous mixture of material placed disposal off-site of all unused material within watercourse channel and culvert walls and wing-walls to simulate natural streambed material. Work under this item shall consist of excavating existing channel bottom material in areas where the channel bottom is to be re-graded or disturbed to create a work area for a culvert placement and cofferdam installation. This item shall also include stockpiling and protecting the excavated material on the project site, subsequent placement of the stockpiled material in the channel, removal and proper

Material

The material for this item shall consist of the existing naturally formed cobbles, gravel, soils and clean natural sediment from within the channel.

If an insufficient quantity of material is available from the existing channel bottom at this site, the Contractor shall furnish supplemental material meeting the approval of the Engineer from other sources within the project limits, or from another approved source. A minimum notice of 2 weeks must be given to the Engineer for inspection and approval.

The gradations shall consist of a well-graded, heterogeneous mixture containing a wide range of sizes falling within the gradation ranges of natural streambed material in the immediate vicinity of the crossing. The stone shall consist of sound and tough material, be non-angular (rounded) and uncut, similar in mineral composition and color to the on-site materials.

Bank run gravel, if approved for use as supplemental material, shall be uncrushed, conforming to the requirements of Section M.02.02-1.

Rock excavated from ledge (bedrock) formations, or broken from larger boulders, will not be accepted. Broken concrete will not be accepted.

Construction Methods

Prior to placing Gravel Streambed Material, the area shall be accurately shaped. The material shall be placed to its full course thickness in one operation in such a manner to produce a reasonably well-graded mixture. The material shall then be compacted. The compacted course shall be of the specified thickness and/or to the lines and grades as shown on the plans or as ordered by the Engineer.
Method of Measurement

Gravel Streambed Material will be measured in place after compaction within the payment lines shown or as specified by the Engineer.

Basis of Payment

This work will be paid for at the contract unit price per cubic yard for "Gravel Streambed Material," complete in place, including all materials, equipment, tools, and labor incidental thereto.
TECHNICAL SPECIFICATIONS
HANDLING WATER

Description

This work shall consist of the construction of such cofferdams, flow diversion dams, barriers or other such protective facilities and methods as are necessary for the conduction of water beyond the limits of construction; the dewatering of the site on which work is to be constructed; and the removal of all such temporary structures and facilities upon the completion of the permanent work or as required. The handling of water shall be in accordance with the requirements of Section 1.10 and the Inland Wetlands and Watercourses Permit. For the purposes of this specification, such work shall be understood to mean any temporary type of protective facility which the Contractor elects to build or use to satisfy, and which does satisfy, the condition that the work be built in the dry. The handling of flood flows, the protection of any or all of the finished construction during high water, and maintaining the operation of the existing structure until it is abandoned are included in the scope of the work under this item.

Construction Methods

The Contractor shall investigate and verify existing stream conditions, and evaluate the need for, and the type of protection and facilities required. The suggested method of controlling water during construction consist of a temporary by-pass pipe and temporary flow diversion dams as shown on the plans. The Contractor shall submit his plans and methods for handling water for review and approval in accordance with the requirements of Section 1.10 of the Standard Specifications. The furnishing of such plans and methods shall not serve to relieve the Contractor of any part of his responsibilities for the safety or the successful completion of this work.

The minimum height of any cofferdams, flow diversion dams and barriers shall be in accordance with the information shown on the plans and sizes of pumps shall be as designed by the Contractor to provide reasonable protection from flooding. All such temporary structures or facilities shall be safely designed, extended to sufficient depth and be of such dimensions and water-tightness to assure construction of the permanent work in the dry. They shall not interfere with proper performance of the work. Their construction shall be such as to permit excavation for the permanent work to the limits shown on the plans. Interior dimensions shall give sufficient clearance for construction. Movements or failures of the temporary protection facilities, or any portions thereof, which prevent proper completion of the permanent work, shall be corrected at the sole expense of the Contractor.

Any pumped water must be discharged in accordance with the requirements of Section 1.10 of the Standard Specifications.

Unless otherwise provided, or directed, all such temporary protective work shall be removed and disposed of in an approved manner when no longer required.
The Contractor will be responsible for the scheduling of work so as not to interfere with any sequence of operations developed for this project. Delays as a result of work required under this item will not constitute a claim for an extension of contract time.

In addition to the requirements set forth in these specifications, this work shall conform to the applicable requirements described in the Inland Wetlands and Watercourses Permit. A copy of the approved permit is included elsewhere in this contract.

**Method of Measurement**

This item, being paid for on a lump sum basis, will not be measured for payment.

**Basis of Payment**

This work will be paid for at the contract lump sum price for “Handling Water” completed and accepted, which price shall include all materials, tools, equipment, labor and work incidental to the construction; reconstruction if required; dewatering, including pumping; handling the stream flow during construction; the removal and disposal of all protective works or facilities; disposal of water removed from the construction area; damages incurred by the Contractor; and any damages to existing facilities and to the work in progress, materials or equipment from flows or high stages of the stream.
TECHNICAL SPECIFICATIONS
REMOVAL OF EXISTING MASONRY

Description

This item shall include the removal and satisfactory disposal of all retaining walls constructed of dry masonry, cement rubble masonry or concrete and bridge substructures, the removal of which is necessary for the final completion of the work in accordance with Form 816, Article 9.74, as amended.

Construction Methods

Existing masonry shall be removed to the lines shown on the plans or as ordered by the Town, due precaution being taken to avoid injury to new construction or work to remain in place, public utility installations or abutting property. The material excavated shall be used in the embankment fill or it shall be properly disposed of at an off-site location approved in advance by the Town, constructed in the location and to the dimensions shown on the plans or as ordered by the Town.

Method of Measurement

Masonry removed under this item shall be measured for payment by the volume in cubic yards in place before the removal. Only individual masonry units of one cubic yard or more will be measured for payment.

The frequency of intermediate measurements to develop the approximate cross-section shall be at the direction of the Town.

Basis of Payment

This work will be paid for as follows:

Contract unit price per each cubic yard for “Removal of Existing Masonry”, complete and accepted in place, which price shall include all equipment, material, labor and work incidental to the removal and disposal as specified herein.
TECHNICAL SPECIFICATIONS
CEMENT RUBBLE MASONRY

Description

All labor, equipment and materials for providing cement rubble masonry structures, in accordance with Form 816, Article 6.06, as amended, of the size and type as specified or as shown on the plans.

Materials

Materials for this work – in accordance with Article 6.06 of the Form 816, as amended. Saw cutting, dewatering, dust control and tack coating included.

Construction Methods

The masonry shall be constructed in the location and to the dimensions shown on the plans or as ordered by the Town.

Method of Measurement

This work will be measured for payment by the following:

    Actual number of cubic yards, completed and accepted, within the neat liens shown or as directed by the Town. No deduction shall be made for the volume occupied by culvert or drainage pipes having an exposed surface area of less than 9 square feet for each opening. The computation of the surface area shall be based upon the nominal diameter of the pipe, disregarding the thickness of the shell.

Basis of Payment

This work will be paid for as follows:

    Contract unit price per each cubic yard of “Cement Rubble Masonry”, complete and accepted in place, which price shall include all equipment, material, labor and work incidental to as specified herein.
TECHNICAL SPECIFICATIONS
8'-6" X 5'-9" PRECAST CONCRETE 3-SIDED CULVERT, FOOTINGS, HEAD-WALLS & WING-WALLS

Description

Work under this item shall consist of designing, furnishing and installing a precast concrete 3-sided culvert constructed of three-sided, reinforced, monolithically cast sections with open ends and precast head-walls, wing-walls on precast footings of the type, size and length a shown on the plans. Reinforcing, threaded rods, lifting and seating inserts, fixtures or devices, non-shrink grout, and all other necessary materials and equipment to complete the work shall also be included in the work.

Materials

Materials shall conform to the following requirements:

1. Concrete for the precast concrete 3-sided culvert with precast headwalls, precast wing-walls and precast footings: Concrete shall conform to the requirements of Sub article M.14.01-1 of the Standard Specifications, as applicable. Concrete shall be air-entrained composed of Portland cement, fine and coarse aggregates, admixtures and water. The air-entraining feature may be obtained by the use of either air-entraining Portland cement or an approved air-entrained admixture. The entrained-air content shall be not less than 4 percent or more than 6 percent.

   The Contractor shall design and submit to the Engineer a concrete mix which shall attain a minimum 28-day strength (f′c) of 4000 psi. The Contractor shall further provide a certificate stating that the mix submitted shall meet this strength.

2. Coarse Aggregates shall consist of broken stone, having a maximum size of ¾ inch.

3. Type III or Type IIIA Portland cement may be used at no additional cost to the Town.

4. Water-Reducing Admixture: The Contractor may submit, for approval of the Engineer, water-reducing admixture for the purpose of increasing workability and reducing the water requirement for the concrete.

5. Calcium Chloride: The addition to the mix of calcium chloride or admixtures containing calcium chloride will not be permitted.

6. Concrete Form Liners: The concrete form liners shall conform to pattern #1203 "New England Dry Stack" with 1½" relief from Custom Rock International, Inc., St. Paul, Minnesota, as distributed by Connecticut Bomanite Systems, Inc., Newtown, Connecticut or approved equal. The concrete form liners and color stain used for the precast concrete headwalls on the precast concrete 3-sided culvert shall be coordinated to match the
concrete form liners and color stain used for precast concrete wing-walls and the texture and appearance of the cast in place or masonry walls for the project.

A. Form Liners – The form liners shall be reusable, made of high strength urethane and not compress more than ¼” when concrete is placed at a rate of 10 vertical feet per hour. Form liners shall be removable without causing deterioration of surface or underlying concrete.

B. Release Agent - The release agent shall be compatible with the form liners, simulated stone masonry and with the color stain system, as recommended by the manufacturer.

C. Form Ties - The form ties shall be designed to separate at least one inch back from the finished surface, leaving only a neat hole that can be plugged with patching material.

D. Color Stain - Special penetrating stain mix as provided by the manufacturer, shall achieve color variations present in the natural stone being simulated by the pattern selected for the project. Town shall select a color pattern from photos of completed projects. The stain shall create a surface finish that is breathable (allowing water vapor transmission), and that resists deterioration from water, alkali, fungi, sunlight or weathering. The stain shall be a water borne, low V.O.C. material less than 11.25 lb/cf and shall meet requirements for; weathering resistance - 2000 hours accelerated exposure in accordance with the 3-bulb test of ASTM G23, scrub test - 100 revolutions, abrasion resistance (Tabor CF-10) - 500 cycles, adhesion – 0.04” cross cuts on glass pass 3 or higher on a scale of 1 to 5 in accordance with ASTM D3359, chemical resistance - ASTM D1308.

7. Reinforcing Steel, Welded Wire Fabric and Tie Wire: All deformed bars, stirrups, welded steel wire fabric, dowels, threaded dowels and tie wires shall conform to the requirements of Article M.06.01.

8. Lifting Hooks and Seating Fixtures: Each culvert section shall contain a suitable number of reinforced lifting and/or seating fixtures to insure safe and level handling and to prevent structural damage during installation. Devices and attachments shall be of a design satisfactory for the purpose intended. All fixtures cast into the concrete for the purpose of lifting or seating the 3-sided sections shall have a corrosive resistant coating.

9. Nuts, Washers and All Other Miscellaneous Hardware: Nuts, washers and all other miscellaneous hardware: shall be galvanized in accordance with ASTM Designation A153. Any hardware on the inside surface of the culvert shall be recessed into the wall and grouted over after assembly in order to maintain a smooth, unbroken inside wall surface.

10. Gaskets: Gaskets shall be flexible, expanded rubber conforming to the requirements of ASTM D 1056, and shall form and maintain a water tight and flexible joint.

11. Non-Shrink Grout: Non-shrink grout shall conform to Sub article M.03.01-12.
12. Geotextile: Shall be “Separation (High Survivability)”, as listed in the Connecticut Department of Transportation’s Approved List for Geotextiles. Torn or punctured geotextiles shall not be used.

13. Damp proofing: Materials shall conform to the requirements of Section 7.08 - Damp proofing.

14. Corrosive Resistant Coating: This coating shall be either an epoxy material or zinc coating deposited mechanically or by hot-dipping or electroplating.

15. Threaded Inserts: Threaded inserts shall have a corrosive resistant coating and shall provide adequate resistance to pull-out for location and purpose for which they are to be used. The following threaded inserts have been approved for use in concrete 3-sided culverts.

   Dayton Superior, Type f-57
   Richmond Screw Anchor Company, Type LF
   Star Expansion Industries Corporation, Type P-25-T

**Construction Methods**

**Preformed or Cored Utility Holes in Culvert Walls**: Prior to initiation of 3-sided culvert fabrication, the Contractor shall perform sufficient number of utility test pits to establish and record precise horizontal and vertical locations of the underground utilities to be accommodated through the walls or precast footings of the proposed culvert. In particular, the precise location of the existing gravity flow sanitary sewer and the existing water main are critical since they cannot be offset without adversely affecting the integrity of the systems.

The locations of the preformed or cored holes in the walls and footings of the proposed culvert for the relocated utilities shall be coordinated with the locations of the joints in the culvert sections in accordance with the plans.

**Calculations, Working Drawings & Shop Drawings**: Before fabrication, the fabricator shall prepare and the Contractor shall submit full size shop drawings and working drawings, as well as complete design calculations, to the Engineer for approval in accordance with Article 1.05.02 (b). The length of each 3-sided culvert section is dependent upon the size and skew angle and shall be determined by the manufacturer, as long as the final length including joints is that length as shown on the contract drawings or as otherwise approved in advance. These drawings shall include complete details of the methods, materials, and equipment that are proposed to be used. All culvert sections shall be designed for HL93 vehicle loading using the AASHTO LRFD design method. Drawings and calculations shall be stamped by a Professional Engineer registered in the State of Connecticut. No fabrication is to commence on the precast units until the shop drawings and design calculations are approved by the Engineer.

Furthermore, working drawings shall include the following unless otherwise approved in advance:

   Layout plan of 3-sided culverts.
Typical cross-sections showing length, width, height and thickness of walls and slabs.

Type, size, location and spacing of steel reinforcing and inserts for anchoring threaded deformed steel bars. Bending diagrams, material lists and catalog cuts for inserts shall be provided.

Type, size and location of lifting holes and seating fixtures. All fixtures (inserts, etc.) cast permanently into the sections shall be recessed a minimum of ¾ inches. No more than four lifting holes or fixtures shall be located in each 3-sided section.

Location, spacing, type, and size of all inserts cast into the 3-sided culvert.

Complete details of the lap joints at the end of the 3-sided sections, which shall include the type, size and location of gaskets and additional steel reinforcement. Except where shown otherwise, the ends of the 3-sided sections shall have lap joints with not less than 1½ inches of concrete overlap. Each joint shall be provided with a pre-placed gasket.

The type and application method of the corrosive resistant coating.

Limits of damp proofing.

Material designations.

**Load Rating:** The fabricator of the 3-sided culvert shall submit load rating calculations, signed by a professional engineer licensed in the State of Connecticut, to the Town. The Town will forward the load rating calculations to the Connecticut Department of Transportation’s Bridge Safety & Evaluation Unit for review. Load ratings shall be performed using the AASHTO LRFR method, and shall include a summary sheet, as well as back-up calculations, in accordance with the requirements of the Department’s Consulting Engineer’s General Memorandum 12-01 dated March 16, 2012. *All inventory and operating ratings shall be greater than or equal to 1.0.*

**Forms:** The forms in manufacture shall be sufficiently rigid and accurate to maintain the 3-sided section dimensions within the permissible variations given below under “Quality Control”. All casting surfaces shall be of smooth non-porous material. Forms shall be mortar tight and strong enough to prevent misalignment of adjacent 3-sided sections. They shall be constructed to allow their removal without damage to the concrete. A positive means of supporting reinforcing cages in place during forming shall be required.

The forms shall not be removed until the concrete is strong enough to avoid possible injury from such removal. All forming materials used for casting cylindrical openings for lifting holes or holes for grouting deformed steel bars shall be removed. All non-plastic material used as forms for casting weep holes (where called for) shall also be removed.

Void forms shall be held in place against uplift or lateral displacement during the pouring and vibrating of the concrete by substantial wire ties or other satisfactory means as approved by the Engineer.

**Mixing and Placing Concrete:** The concrete mix as designed and submitted by the Contractor shall
be proportioned and mixed in a batch mixer to produce a homogeneous concrete conforming to the requirements. The transporting, placement and compaction of concrete shall be by methods that will prevent the segregation of the concrete materials and the displacement of the enforcement steel from its proper position in the form. There shall be no interruption in the pouring of any unit. Truck-mixed or transit-mixed concrete will not be allowed.

Concrete shall not be deposited into the forms when the ambient temperature is below 40°F or above 100°F, unless adequate heating or cooling procedures have been previously approved by the Engineer. The concrete temperature shall be 60°F to 90°F at the time of placement. At no time will truck-mixed or transit-mixed concrete be allowed.

Production during the winter season, from November 15 to March 15 inclusive, will be permitted only on beds located in a completely enclosed structure of suitable size and dimension that provides a controlled atmosphere for the protection of the casting operation and the product. Outside operations will not be permitted during rainfall unless the operation is completely under cover.

Vibrating shall be done with care in such a manner as to avoid displacement of reinforcing steel, voids, forms, or other components. There shall be no interruption in the pouring of any of the sections. Concrete shall be carefully placed in the forms and vibrated sufficiently to produce a surface free from imperfections such as honeycombing, segregation, cracking, or checking. Any deficiencies noted in the sections may be cause for rejection.

Curing: Precast units shall be cured by a method or combination of methods approved by the Engineer that will give satisfactory results. Curing shall be for a sufficient length of time so that the concrete will develop the specified compressive strength at 28 days or less.

Patching: No patching of the complete units will be allowed unless permitted by the Engineer. The Contractor’s proposal for methods and materials to be used in the patching operation shall be submitted to the Engineer for his approval.

Reinforcing: Top reinforcing steel in the top slab of the Concrete 3-Sided Culvert shall be epoxy-coated.

Joints: The precast reinforced concrete 3-sided sections shall be produced with male and female ends except as shown otherwise on plans. The ends shall be of such design and so formed that when the sections are laid together, they will make a continuous line of 3-sided sections with a smooth interior face free of irregularities.

Test Cylinders: During the casting of the units, the Contractor shall make test cylinders under. A minimum of four (4) cylinders shall be taken during each production run. Cylinders shall be cured under laboratory control conforming to the requirements of ASTM C 192 and shall be used to determine the 28-day compressive strength requirements (f′c). Failure of any of the 28-day test cylinders to meet 90 percent of the minimum compressive strength requirements may be cause for
rejection. The Engineer also reserved the right to request and test core specimens from the units to determine their adequacy.

Quality Control: The dimensional tolerance of the units shall conform to the following:

(a) Internal Dimensions and Finish: The internal dimensions shall not vary more than 1 percent from the design dimensions. The haunch dimensions shall not vary more than ¼ inch from the design dimensions. The interior shall be smooth and free of irregularities.

(b) Slab and Wall Thickness: The slab and wall thickness shall not be less than that shown in the design by more than 5 percent or 3/16 inch, whichever is greater. A thickness more than that required in the design will not be a cause for rejection.

(c) Length of Opposite Surfaces: Variations in laying lengths of two opposite surfaces of the 3-sided section shall not be more than ⅛ inch/foot of span with a maximum of ⅜ inch in any 3-sided section except where beveled ends are specified.

(d) Length of Section: The under run in length of a section shall not be more than ⅛ inch/foot of length with a maximum of ⅜ inch in any 3-sided section.

(e) Position of Reinforcement: The maximum variation in the spacing of reinforcement shall be ± ⅛ inch. Cover shall be 1-½ inches minimum.

Finishing: Formed surfaces shall not be finished in any specific manner except as noted below. All fins, runs, or mortar shall be removed from surfaces which will remain exposed. Form marks on exposed surfaces shall be smoothed by grinding as needed. The following surfaces shall be finished as follows:

Top surfaces: Where 3-sided sections are to be covered with membrane waterproofing, the top surface of the roof slab shall be given a float finish in accordance with Sub-article 6.01.03-21. All exposed top surfaces of the head-walls and wing-walls shall be given a grout clean-down finish in accordance with Sub article 6.01.03-21 inch in any 3-sided section except where beveled ends are specified.

(d) Length of Section: The under run in length of a section shall not be more than ⅛ inch/foot of length with a maximum of ⅜ inch in any 3-sided section.

(e) Position of Reinforcement: The maximum variation in the spacing of reinforcement shall be ± ⅛ inch. Cover shall be 1-½ inches minimum.

Marking: The following information shall be clearly marked on each section by indentation, waterproof paint or other approved means:
A. 3-sided section and rise.
B. Date of manufacture.
C. Name or trademark of manufacturer.
D. An identification number or letter on the TOP of each section (to insure proper placement).

Handling and Storage: Handling devices shall be provided in each 3-sided section for the purpose of handling and placing. Care shall be taken during storage, transporting, hoisting and handling of all units to prevent cracking or damage. Units damaged by improper storage, transporting or handling shall be replaced by the Contractor at his expense.

Inspection and Rejection: The quality of materials, the process of manufacture, and the finished units shall be subject to rejection on account of failure to conform to any of the specification requirements. Individual units may be rejected because of any of the following:

A. Fractures or cracks passing through the wall, except for a single end crack that does not exceed the depth of the joint.
B. Defects that indicate imperfect proportioning, mixing and molding.
C. Honeycombed or open texture.
D. Damaged ends, where such damage would prevent making a satisfactory joint.

Installation: The installation of the precast concrete 3-sided culvert sections shall proceed as required by the sequence of construction.

The precast footings, 3-sided culvert sections and wing-walls shall be placed in a manner to best accommodate and facilitate the construction of the concrete headwalls, wing-walls, etc. No 3-sided sections shall be set on precast footings without the approval of the Engineer. The 3-sided culvert sections shall fully bear on the precast footing.

The 3-sided culvert sections shall be set to the line and grade indicated on the plans or as directed by the Engineer. Placement of the sections shall not start until the Engineer has approved the depth of excavation and the suitability of the foundation material.

The lap joints shall be securely seated together to achieve a silt-tight joint all around. A silt-tight joint is defined as a joint in which the gasket is compressed to a minimum of one half of its uncompressed width. The gasket shall be uniformly compressed along all vertical and horizontal surfaces. A positive means, through the use of seating devices, shall be used for pulling one section against another to assure an adequate silt-tight joint.

Details for the seating method shall be submitted to the Engineer for review. The lap joints shall be seated such that they make a continuous line of sections with a smooth interior free from irregularities in the invert line.
The top portions of the horizontal lap joints for the roof and the outside face of the vertical lap joints (full height on each side) for the 3-sided culvert shall be neatly filled with non-shrink grout after seating the sections. The exposed portions of the lap joints within the haunches or fillets shall also be neatly filled with non-shrink grout. The finished surface shall be smooth and level with the adjacent concrete.

Geotextile shall be placed over all vertical joints. Geotextile shall also be placed over the roof joints of culverts not receiving woven glass fabric. The geotextile shall extend 6” to each side of the joint and be attached to the culvert using silicone caulk.

After its installation, any 3-sided section or joint that is, as determined by the Engineer, not acceptable in vertical or horizontal alignment for any reason, including but not limited to settlement, displacement, excess camber or misfit, shall be removed by the Contractor and correctly installed, as directed by the Engineer and at no additional cost to the Town.

All fixtures or holes cast into the sections for lifting or seating shall be neatly filled with non-shrink grout. The finished surface shall be smooth and level with the adjacent concrete.

The surface preparation, mixing, placing, curing, and finishing of the non-shrink grout shall conform to the written instructions provided by the manufacturer of the grout. The Contractor shall furnish the Engineer with copies of the instructions. The grout shall be cured at least 3 days unless determined otherwise by the Engineer.

Backfilling: Methods of backfilling shall be in conformance with the requirements of the plans and Section 2.16 except that fill placed around the three sided culvert sections shall be deposited on both sides to approximately the same elevation at the same time.

**Method of Measurement**

This work will be measured for payment by the actual number of linear feet of precast concrete 3-sided culvert sections and wing-walls on precast footings, of the size indicated and layout, completed, accepted and measured in place along the top slab at the centerline of the culvert.

Work associated with furnishing and installing concrete form liners and color stain to simulate stone masonry facing for the precast concrete headwalls and wing-walls of the precast concrete 3-sided culvert will not be measured for separately, but shall be included in the item for “8'-6" x 5'-9" Precast Concrete 3-Sided Culvert”.

**Basis of Payment**

Payment for this work will be made at the contract unit price per linear foot for “8'-6" x 5'-9 Precast Concrete 3-Sided Culvert”, of the size indicate, as shown on the plans, complete and accepted, which price shall include precast wing-walls and precast footings, concrete form liners and color staining of concrete surfaces to simulate the stone facing on the precast concrete headwalls, threaded inserts,
damp proofing, threaded dowels, pipe sleeves, void forms, non-shrink grout, gaskets and all other materials, equipment, tools and labor incidental thereto.

The contract unit price per linear foot for “8’-6”x 5’-9” Precast Concrete 3-Sided Culvert” shall also include the costs of preparing and furnishing design calculations, load ratings, working drawings, and shop drawings.
TECHNICAL SPECIFICATIONS
REPLACE SANITARY SEWER MAIN
RECONNECT SANITARY SEWER LATERAL

Description

Work under these items for sanitary sewer excavation and sanitary sewer pipe construction shall conform to the requirements of Section 2.05 and 6.51 respectively as supplemented and amended as follows:

This section includes all pipe, labor, equipment, appliances and materials required for the construction of sanitary sewer main or connection of service lateral at the locations and to the lines and grades indicated and/or as directed, including all pipe, pipe fittings and accessories, connections to the existing piping, testing of pipelines and material tests, bypass pumping, excavation, installation, bedding materials, backfilling, services of manufacturer's representatives and all other related and appurtenant work, complete in place and accepted, in accordance with the drawings and specifications, and as directed by and to the satisfaction of the Watertown Fire District (860) 274-6332. This also included notification of property owners and residents affected by the work.

This work shall consist of the installation of a ductile iron pipe sanitary sewer through the openings in the walls or footings of the three sided culvert as a replacement of the existing sanitary line in conflict with the proposed culvert at the existing location and to the existing lines and grades indicated on the plans and/or as directed.

Materials

Materials shall conform to the following requirements:


Construction Methods

Sewer flows shall be maintained throughout the work. Earthwork shall conform to Section 2.05. as amended by Section 14.00.

The Contractor shall furnish to the Watertown Fire District notarized test reports from the pipe and gasket manufacturers including methods of tests by an approved independent testing laboratory to show compliance of all materials furnished under this section of the specifications.
TECHNICAL SPECIFICATIONS
REPLACE WATER MAIN

Description

Work under this item for water main excavation and water main pipe construction shall conform to the requirements of Section 2.05 and 6.51 respectively as supplemented and amended as follows:

This Section includes all pipe, labor, equipment, appliances and materials required for the replacement of water main in a steel sleeve at the locations and to the lines and grades indicated and/or as directed, including all pipe materials, valves, pipe fittings and accessories, connections to the existing piping, testing of pipelines and material tests, excavation, installation, bedding materials, backfilling, services of manufacturer's representatives and all other related and appurtenant work, complete in place and accepted, in accordance with the drawings and specifications, and as directed by and to the satisfaction of the Watertown Fire District (860) 274-6332. This also included notification of property owners and residents affected by the work.

This work shall consist of the installation of a ductile iron pipe water main through the openings in the walls of the three sided culvert as a replacement of the existing water main in conflict with the proposed at the existing location and to the existing lines and grades indicated on the plans and/or as directed.

Materials

Materials shall conform to the following requirements:

Watertown Fire District Standard Specifications for Water Main and Service Line Materials.

Construction Methods

The Contractor shall furnish to the Watertown Fire District notarized test reports from the water pipe, water valve, and gasket manufacturers including methods of tests by an approved independent testing laboratory to show compliance of all materials furnished under this section of the specifications.

A copy of each test report is to be attached to the shipping list of each shipment itemizing by size; class and wall type, serial number and date of manufacture. All required testing of pipe materials furnished under this section of the specifications shall be provided by the Contractor at no additional expense to the Watertown Fire District.

59
THIS IS A PUBLIC WORKS PROJECT

Covered by the

PREVAILING WAGE LAW

CT General Statutes Section 31-53

If you have QUESTIONS regarding your wages
CALL (860) 263-6790

Section 31-55 of the CT State Statutes requires every contractor or subcontractor performing work for the state to post in a prominent place the prevailing wages as determined by the Labor Commissioner.
Project: Bowers Street Culvert Replacement

Minimum Rates and Classifications for Heavy/Highway Construction

Connecticut Department of Labor
Wage and Workplace Standards Division

*ID#: H 22010*

By virtue of the authority vested in the Labor Commissioner under provisions of Section 31-53 of the General Statutes of Connecticut, as amended, the following are declared to be the prevailing rates and welfare payments and will apply only where the contract is advertised for bid within 20 days of the date on which the rates are established. Any contractor or subcontractor not obligated by agreement to pay to the welfare and pension fund shall pay this amount to each employee as part of his/her hourly wages.

Project Number:  
FAP Number:  
Project: Bowers Street Culvert Replacement

<table>
<thead>
<tr>
<th>CLASSIFICATION</th>
<th>Hourly Rate</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>01) Asbestos/Toxic Waste Removal Laborers: Asbestos removal and encapsulation (except its removal from mechanical systems which are not to be scrapped), toxic waste removers, blasters. <strong>See Laborers Group 5 and 7</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1) Boilermaker</td>
<td>33.79</td>
<td>34% + 8.96</td>
</tr>
<tr>
<td>1a) Bricklayer, Cement Masons, Cement Finishers, Plasterers, Stone Masons</td>
<td>33.48</td>
<td>28.76</td>
</tr>
<tr>
<td>2) Carpenters, Piledrivermen</td>
<td>31.45</td>
<td>23.54</td>
</tr>
</tbody>
</table>

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**Project: Bowers Street Culvert Replacement**

<table>
<thead>
<tr>
<th>2a) Diver Tenders</th>
<th>31.45</th>
<th>23.54</th>
</tr>
</thead>
<tbody>
<tr>
<td>3) Divers</td>
<td>39.91</td>
<td>23.54</td>
</tr>
<tr>
<td>03a) Millwrights</td>
<td>31.84</td>
<td>23.99</td>
</tr>
<tr>
<td>4) Painters: (Bridge Construction) Brush, Roller, Blasting (Sand, Water, etc.), Spray</td>
<td>45.95</td>
<td>19.35</td>
</tr>
<tr>
<td>4a) Painters: Brush and Roller</td>
<td>31.52</td>
<td>19.35</td>
</tr>
<tr>
<td>4d) Painters: Blast and Spray</td>
<td>34.52</td>
<td>19.35</td>
</tr>
<tr>
<td>4e) Painters: Tanks, Tower and Swing</td>
<td>33.52</td>
<td>19.35</td>
</tr>
</tbody>
</table>

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5) Electrician (Trade License required: E-1,2 L-5,6 C-5,6 T-1,2 L-1,2 V-1,2,7,8,9) 37.62 23.00 + 3% of gross wage

6) Ironworkers: Ornamental, Reinforcing, Structural, and Precast Concrete Erection 34.47 31.09 + a

7) Plumbers (Trade License required: (P-1,2,6,7,8,9 J-1,2,3,4 SP-1,2) and Pipefitters (Including HVAC Work) (Trade License required: S-1,2,3,4,5,6,7,8 B-1,2,3,4 D-1,2,3,4 G-1, G-2, G-8, G-9) 40.62 28.91

---LABORERS---

8) Group 1: Laborer (Unskilled), Common or General, acetylene burner, concrete specialist 28.55 18.90 + a

9) Group 2: Chain saw operators, fence and guard rail erectors, pneumatic tool operators, powdermen 28.80 18.90 + a

10) Group 3: Pipelayers 29.05 18.90 + a

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11) Group 4: Jackhammer/Pavement breaker (handheld); mason tenders (cement/concrete), catch basin builders, asphalt rakers, air track operators, block paver, curb setter and forklift operators

| Group 5: Toxic waste removal (non-mechanical systems) | 30.55 | 18.90 + a |

13) Group 6: Blasters

| Group 6: Blasters | 30.30 | 18.90 + a |

Group 7: Asbestos/lead removal, non-mechanical systems (does not include leaded joint pipe)

| Group 7: Asbestos/lead removal, non-mechanical systems | 29.55 | 18.90 + a |

Group 8: Traffic control signalmen

| Group 8: Traffic control signalmen | 16.00 | 18.90 + a |

Group 9: Hydraulic Drills

| Group 9: Hydraulic Drills | 29.30 | 18.90 + a |

---LABORERS (TUNNEL CONSTRUCTION, FREE AIR). Shield Drive and Liner Plate Tunnels in Free Air.---

**As of:** Tuesday, April 19, 2016
<table>
<thead>
<tr>
<th>Description</th>
<th>Rate</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>13a) Miners, Motormen, Mucking Machine Operators, Nozzle Men, Grout Men,</td>
<td>32.22</td>
<td>18.90 + a</td>
</tr>
<tr>
<td>Shaft &amp; Tunnel Steel &amp; Rodmen, Shield &amp; Erector, Arm Operator, Cable Tenders</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13b) Brakemen, Trackmen</td>
<td>31.28</td>
<td>18.90 + a</td>
</tr>
</tbody>
</table>

---CLEANING, CONCRETE AND CAULKING TUNNEL---

<table>
<thead>
<tr>
<th>Description</th>
<th>Rate</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>14) Concrete Workers, Form Movers, and Strippers</td>
<td>31.28</td>
<td>18.90 + a</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Description</th>
<th>Rate</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>15) Form Erectors</td>
<td>31.60</td>
<td>18.90 + a</td>
</tr>
</tbody>
</table>

---ROCK SHAFT LINING, CONCRETE, LINING OF SAME AND TUNNEL IN FREE AIR:---

<table>
<thead>
<tr>
<th>Description</th>
<th>Rate</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>16) Brakemen, Trackmen, Tunnel Laborers, Shaft Laborers</td>
<td>31.28</td>
<td>18.90 + a</td>
</tr>
</tbody>
</table>

As of: Tuesday, April 19, 2016
<table>
<thead>
<tr>
<th>Task Description</th>
<th>Hours</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>17) Laborers Topside, Cage Tenders, Bellman</td>
<td>31.17</td>
<td>18.90 + a</td>
</tr>
<tr>
<td>18) Miners</td>
<td>32.22</td>
<td>18.90 + a</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>63.39</td>
<td></td>
</tr>
<tr>
<td><strong>---TUNNELS, CAISSON AND CYLINDER WORK IN COMPRESSED AIR:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18a) Blaster</td>
<td>38.53</td>
<td>18.90 + a</td>
</tr>
<tr>
<td>19) Brakemen, Trackmen, Groutman, Laborers, Outside Lock Tender, Gauge Tenders</td>
<td>38.34</td>
<td>18.90 + a</td>
</tr>
<tr>
<td>20) Change House Attendants, Powder Watchmen, Top on Iron Bolts</td>
<td>36.41</td>
<td>18.90 + a</td>
</tr>
<tr>
<td>21) Mucking Machine Operator</td>
<td>39.11</td>
<td>18.90 + a</td>
</tr>
</tbody>
</table>

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## Project: Bowers Street Culvert Replacement

---TRUCK DRIVERS---(*see note below)

<table>
<thead>
<tr>
<th>Type of Truck</th>
<th>Rate 1</th>
<th>Rate 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two axle trucks</td>
<td>28.83</td>
<td>21.39 + a</td>
</tr>
<tr>
<td>Three axle trucks; two axle ready mix</td>
<td>28.93</td>
<td>21.39 + a</td>
</tr>
<tr>
<td>Three axle ready mix</td>
<td>28.98</td>
<td>21.39 + a</td>
</tr>
<tr>
<td>Four axle trucks, heavy duty trailer (up to 40 tons)</td>
<td>29.03</td>
<td>21.39 + a</td>
</tr>
<tr>
<td>Four axle ready-mix</td>
<td>29.08</td>
<td>21.39 + a</td>
</tr>
<tr>
<td>Heavy duty trailer (40 tons and over)</td>
<td>29.28</td>
<td>21.39 + a</td>
</tr>
</tbody>
</table>

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Specialized earth moving equipment other than conventional type on-the-road trucks and semi-trailer (including Euclids) | 29.08 | 21.39 + a

| ---POWER EQUIPMENT OPERATORS--- |

Group 1: Crane handling or erecting structural steel or stone, hoisting engineer (2 drums or over), front end loader (7 cubic yards or over), Work Boat 26 ft. & Over, Tunnel Boring Machines. (Trade License Required) | 38.55 | 23.55 + a

Group 2: Cranes (100 ton rate capacity and over); Excavator over 2 cubic yards; Piledriver ($3.00 premium when operator controls hammer); Bauer Drill/Caisson. (Trade License Required) | 38.23 | 23.55 + a

Group 3: Excavator/Backhoe under 2 cubic yards; Cranes (under 100 ton rated capacity), Graddall, Master Mechanic; Hoisting Engineer (all types of equipment where a drum and cable are used to hoist or drag material regardless of motive power of operation), Rubber Tire Excavator (Drott-1085 or similar); Grader Operator; Bulldozer Fine Grade (slopes, shaping, laser or GPS, etc.). (Trade License Required) | 37.49 | 23.55 + a

Group 4: Trenching Machines; Lighter Derrick; Concrete Finishing Machine; CMI Machine or Similar; Koehring Loader (Skooper) | 37.10 | 23.55 + a

Group 5: Specialty Railroad Equipment; Asphalt Paver; Asphalt Spreader; Asphalt Reclaiming Machine; Line Grinder; Concrete Pumps; Drills with Self Contained Power Units; Boring Machine; Post Hole Digger; Auger; Pounder; Well Digger; Milling Machine (over 24" Mandrell) | 36.51 | 23.55 + a

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Project: Bowers Street Culvert Replacement

Group 5 continued: Side Boom; Combination Hoe and Loader; Directional Driller.  
36.51   23.55 + a

Group 6: Front End Loader (3 up to 7 cubic yards); Bulldozer (rough grade dozer).  
36.20   23.55 + a

Group 7: Asphalt Roller; Concrete Saws and Cutters (ride on types); Vermeer Concrete Cutter; Stump Grinder; Scraper; Snooper; Skidder; Milling Machine (24" and Under Mandrel).  
35.86   23.55 + a

Group 8: Mechanic, Grease Truck Operator, Hydroblaster, Barrier Mover, Power Stone Spreader; Welder; Work Boat under 26 ft.; Transfer Machine.  
35.46   23.55 + a

Group 9: Front End Loader (under 3 cubic yards), Skid Steer Loader regardless of attachments (Bobcat or Similar); Fork Lift, Power Chipper; Landscape Equipment (including hydroseeder).  
35.03   23.55 + a

Group 10: Vibratory Hammer, Ice Machine, Diesel and Air Hammer, etc.  
32.99   23.55 + a

Group 11: Conveyor, Earth Roller; Power Pavement Breaker (whiphammer), Robot Demolition Equipment.  
32.99   23.55 + a

As of: Tuesday, April 19, 2016
<table>
<thead>
<tr>
<th>Group</th>
<th>Description</th>
<th>Hourly Rate</th>
<th>Overtime Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 12:</td>
<td>Wellpoint Operator.</td>
<td>32.93</td>
<td>23.55 + a</td>
</tr>
<tr>
<td>Group 13:</td>
<td>Compressor Battery Operator.</td>
<td>32.35</td>
<td>23.55 + a</td>
</tr>
<tr>
<td>Group 14:</td>
<td>Elevator Operator; Tow Motor Operator (Solid Tire No Rough Terrain).</td>
<td>31.21</td>
<td>23.55 + a</td>
</tr>
<tr>
<td>Group 15:</td>
<td>Generator Operator; Compressor Operator; Pump Operator; Welding Machine Operator; Heater Operator.</td>
<td>30.80</td>
<td>23.55 + a</td>
</tr>
<tr>
<td>Group 16:</td>
<td>Maintenance Engineer/Oiler</td>
<td>30.15</td>
<td>23.55 + a</td>
</tr>
<tr>
<td>Group 17:</td>
<td>Portable asphalt plant operator; portable crusher plant operator; portable concrete plant operator.</td>
<td>34.46</td>
<td>23.55 + a</td>
</tr>
<tr>
<td>Group 18:</td>
<td>Power Safety Boat; Vacuum Truck; Zim Mixer; Sweeper; (minimum for any job requiring CDL license).</td>
<td>32.04</td>
<td>23.55 + a</td>
</tr>
</tbody>
</table>

**As of:** Tuesday, April 19, 2016
**Project: Bowers Street Culvert Replacement**

**NOTE:** SEE BELOW

---LINE CONSTRUCTION---(Railroad Construction and Maintenance)---

<table>
<thead>
<tr>
<th>20) Lineman, Cable Splicer, Technician</th>
<th>45.43</th>
<th>6.25%+19.20</th>
</tr>
</thead>
<tbody>
<tr>
<td>21) Heavy Equipment Operator</td>
<td>40.89</td>
<td>6.25%+17.18</td>
</tr>
<tr>
<td>22) Equipment Operator, Tractor Trailer Driver, Material Men</td>
<td>38.62</td>
<td>6.25%+16.68</td>
</tr>
<tr>
<td>23) Driver Groundmen</td>
<td>24.99</td>
<td>6.25%+10.87</td>
</tr>
<tr>
<td>23a) Truck Driver</td>
<td>34.07</td>
<td>6.25%+15.41</td>
</tr>
</tbody>
</table>

*As of:* Tuesday, April 19, 2016
<table>
<thead>
<tr>
<th>Task Description</th>
<th>Hours</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>24) Driver Groundmen</td>
<td>30.92</td>
<td>6.5% + 9.70</td>
</tr>
<tr>
<td>25) Groundmen</td>
<td>22.67</td>
<td>6.5% + 6.20</td>
</tr>
<tr>
<td>27) Linemen, Cable Splicers, Dynamite Men</td>
<td>41.22</td>
<td>6.5% + 12.20</td>
</tr>
<tr>
<td>28) Material Men, Tractor Trailer Drivers, Equipment Operators</td>
<td>35.04</td>
<td>6.5% + 10.45</td>
</tr>
</tbody>
</table>

_As of:_ Tuesday, April 19, 2016
Project: Bowers Street Culvert Replacement

Welders: Rate for craft to which welding is incidental.

*Note: Hazardous waste removal work receives additional $1.25 per hour for truck drivers.

**Note: Hazardous waste premium $3.00 per hour over classified rate

<table>
<thead>
<tr>
<th>ALL Cranes: When crane operator is operating equipment that requires a fully licensed crane operator to operate he receives an extra $3.00 premium in addition to the hourly wage rate and benefit contributions:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Crane handling or erecting structural steel or stone; hoisting engineer (2 drums or over)</td>
</tr>
<tr>
<td>2) Cranes (100 ton rate capacity and over) Bauer Drill/Caisson</td>
</tr>
<tr>
<td>3) Cranes (under 100 ton rated capacity)</td>
</tr>
<tr>
<td>Crane with 150 ft. boom (including jib) - $1.50 extra</td>
</tr>
<tr>
<td>Crane with 200 ft. boom (including jib) - $2.50 extra</td>
</tr>
<tr>
<td>Crane with 250 ft. boom (including jib) - $5.00 extra</td>
</tr>
<tr>
<td>Crane with 300 ft. boom (including jib) - $7.00 extra</td>
</tr>
<tr>
<td>Crane with 400 ft. boom (including jib) - $10.00 extra</td>
</tr>
</tbody>
</table>

All classifications that indicate a percentage of the fringe benefits must be calculated at the percentage rate times the "base hourly rate".

Apprentices duly registered under the Commissioner of Labor's regulations on "Work Training Standards for Apprenticeship and Training Programs" Section 31-51-d-1 to 12, are allowed to be paid the appropriate percentage of the prevailing journeymen hourly base and the full fringe benefit rate, providing the work site ratio shall not be less than one full-time journeyperson instructing and supervising the work of each apprentice in a specific trade.

---Connecticut General Statute Section 31-55a: Annual Adjustments to wage rates by contractors doing state work---

The Prevailing wage rates applicable to this project are subject to annual adjustments each July 1st for the duration of the project.

Each contractor shall pay the annual adjusted prevailing wage rate that is in effect each July 1st, 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's website.

The annual adjustments will be posted on the Department of Labor's Web page: www.ct.gov/dol.

The Department of Labor will continue to issue the initial prevailing wage rate schedule to the Contracting Agency for the project.

All subsequent annual adjustments will be posted on our Web Site for contractor access.

Contracting Agencies are under no obligation pursuant to State labor law to pay any increase due to the annual adjustment provision.

As of: Tuesday, April 19, 2016
Project: Bowers Street Culvert Replacement

Effective October 1, 2005 - Public Act 05-50: any person performing the work of any mechanic, laborer, or worker shall be paid prevailing wage

All Person who perform work ON SITE must be paid prevailing wage for the appropriate mechanic, laborer, or worker classification.

All certified payrolls must list the hours worked and wages paid to All Persons who perform work ON SITE regardless of their ownership i.e.: (Owners, Corporate Officers, LLC Members, Independent Contractors, et. al)

Reporting and payment of wages is required regardless of any contractual relationship alleged to exist between the contractor and such person.

~Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clause (29 CFR 5.5 (a) (1) (ii)).

Please direct any questions which you may have pertaining to classification of work and payment of prevailing wages to the Wage and Workplace Standards Division, telephone (860)263-6790.

As of: Tuesday, April 19, 2016
PLEASE

IT IS A REQUIREMENT OF THIS BID THAT EACH PROPOSAL SUBMITTED MUST HAVE A DUPLICATE COPY ATTACHED.

YOUR COOPERATION IS APPRECIATED
TOWN OF WATERTOWN
WATERTOWN, CONNECTICUT 06795

BID PROPOSAL

Bowers Street Culvert Replacement
Watertown Public Works Department

BID OPENING: 11:00 a.m., Tuesday, May 31, 2016

TO:      Jason Warner, Purchasing Agent
        Town of Watertown
        Town Hall Annex
        424 Main Street
        Watertown, CT 06795

The undersigned, as bidder, agrees to furnish material, labor and equipment for the Bowers Street Culvert Replacement as specified and declares that no person or persons, other than those named herein, are interested in this Proposal; that this Proposal is made without collusion with any person, firm, or corporation; that he has carefully examined the location of the proposed work, the proposed Form of Contract, and the Contract Drawings therein referred to: that no person or persons acting in any official capacity for the Town is directly or indirectly interested therein or in any portion of the profit thereof; and that he proposes and agrees, if this Proposal is accepted, to execute the Form of Contract with the Town; to provide all necessary equipment, tools, labor and deliver and to do all work and furnish all materials specified in the Contract, in the manner and time therein prescribed, and according to the requirements of the Town as therein set forth, and that he will take in full payment therefor, the following unit prices and lump sums, to wit:

FIRM ______________________________________________________

Name _____________________________________________________

Street _____________________________________________________

City State Zip Code _________________________________________

NAME ____________________________________________________

Please Print _______________________________________________

TELEPHONE NUMBER _________________________________________

FAX NUMBER ______________________________________________

EMAIL ADDRESS ____________________________________________

SIGNED ____________________________ DATE ___________________
## PROPOSAL

<table>
<thead>
<tr>
<th>Description/Unit Price</th>
<th>Estimated Quantities</th>
<th>Computed Totals</th>
</tr>
</thead>
</table>

### Quantities

#### 1. Clearing and Grubbing

The unit price of

Dollars

and Cents

($ _) per lump sum (LS)

| 1 LS | $ _ |

#### 2. Handling Water

The unit price of

Dollars

and Cents

($ _) per lump sum (LS)

| 1 LS | $ _ |

#### 3. Cut Bituminous Concrete Pavement

The unit price of

Dollars

and Cents

($ _) per linear foot (LF)

| 66 LF | $ _ |

#### 4. Structure Excavation Earth (Complete)

The unit price of

Dollars

---

62
and ____________________ Cents

($_______________) per cubic yard (CY) 310 CY $__________

5. Structure Excavation Rock (Complete)

The unit price of

______________________ Dollars

and ____________________ Cents

($_______________) per cubic yard (CY) 20 CY $__________

6. Bituminous Concrete Lip Curb

The unit price of

______________________ Dollars

and ____________________ Cents

($_______________) per linear foot (LF) 20 LF $__________

7. Formation of Subgrade

The unit price of

______________________ Dollars

and ____________________ Cents

($_______________) per square yard (SY) 57 SY $__________

8. Subbase

The unit price of

______________________ Dollars

and ____________________ Cents

($_______________) per cubic yard (CY) 19 CY $__________
9. **Gravel Streambed Material**

The unit price of

_________________________ Dollars

and ______________________ Cents

($_________) per cubic yard (CY) 11 CY $_______

10. **Compacted Granular Fill**

The unit price of

_________________________ Dollars

and ______________________ Cents

($_________) per cubic yard (CY) 10 CY $_______

11. **Pervious Structure Backfill**

The unit price of

_________________________ Dollars

and ______________________ Cents

($_________) per cubic yard (CY) 162 CY $_______

12. **Sedimentation Control System**

The unit price of

_________________________ Dollars

and ______________________ Cents

($_________) per Lump Sum (LS) 1 LS $_______
13. Bituminous Concrete – Class 1

The unit price of

_________________________ Dollars

and ______________________ Cents

($____________________) per ton (TON)  

23 TON $________

14. Bituminous Concrete – Class 2

The unit price of

_________________________ Dollars

and ______________________ Cents

($____________________) per ton (TON)  

9 TON $________

15. Cement Rubble Masonry

The unit price of

_________________________ Dollars

and ______________________ Cents

($____________________) per cubic yard (CY)  

14 CY $________

16. 8’-6” x 5’-9” 3-sided Precast Concrete Culvert

The unit price of

_________________________ Dollars

and ______________________ Cents

($____________________) per linear foot (LF)  

43 LF $________
17. Exploration Test Borings

The unit price of

__________________________ Dollars

and ______________________ Cents

($__________________) per linear foot (LF)  55 LF  $________

18. Modified Riprap

The unit price of

__________________________ Dollars

and ______________________ Cents

($__________________) per cubic yard (CY)  4 CY  $________

19. Membrane Waterproofing

The unit price of

__________________________ Dollars

and ______________________ Cents

($__________________) per Square Yard (SY)  50 SY  $________

20. Geotextile (Separation-Medium Survivability)

The unit price of

__________________________ Dollars

and ______________________ Cents

($__________________) per Square Yard (SY)  12 SY  $________
20. **Protective Fence (Ornamental)**

The unit price of

_________________________ Dollars

and ______________________ Cents

($____________________) per Linear Foot (LF) 51 LF  $__________

21. **Maintenance and Protection of Traffic**

The unit price of

_________________________ Dollars

and ______________________ Cents

($____________________) per lump sum (LS) 1 LS  $__________

22. **Removal of Existing Masonry**

The unit price of

_________________________ Dollars

and ______________________ Cents

($____________________) per cubic yard (CY) 15 CY  $__________

23. **Mobilization**

The unit price of

_________________________ Dollars

and ______________________ Cents

($____________________) per lump sum (LS) 1 LS  $__________

67
24. Construction Staking

The unit price of

__________________________ Dollars

and ______________________ Cents

($____________________) per lump sum (LS) 1 LS $_________

25. Replace Water Main

The unit price of

__________________________ Dollars

and ______________________ Cents

($____________________) per lump sum (LS) 1 LS $_________

26. Reconnect Sanitary Sewer Lateral

The unit price of

__________________________ Dollars

and ______________________ Cents

($____________________) per each (EA) 1 EA $_________

27. Relocation of Existing Sewer Main

The unit price of

__________________________ Dollars

and ______________________ Cents

($____________________) per lump sum (LS) 1 LS $_________
28. Topsoil and Turf Establishment

The unit price of

_________________________ Dollars

and ______________________ Cents

($____________________) per square yard (SY)

20 SY $____________

Computed
Total $__________

Computed
Total- Project $__________

NOTE: The Computed Totals are for convenience in initial comparison of bids and are not an official part of this Proposal. The Town reserves the right to eliminate any Item or portion of the work which it deems to be in its best interest.

Payment Terms ____________________________________________________________

Time to Completion ___________________________________ Working Days

Warranty ________________________________________________________________

Have you taken any exceptions or have you deviated from our printed specification and if so, are such suggested changes clearly noted on the page provided for exceptions to specifications?

___ yes  ______ no
EXCEPTIONS TAKEN TO SPECIFICATIONS:
RECEIPT OF ADDENDA

<table>
<thead>
<tr>
<th>ADDENDUM #</th>
<th>SIGNATURE</th>
<th>DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

NAME OF BIDDER: ________________________________

OFFICIAL ADDRESS: ______________________________________

PHONE NUMBER: _______________________________________

BY: ___________________________ TITLE: ___________________________
    (Please Print)

DATE: ________________________________

SIGNATURE: ___________________________
PROPOSED SUBCONTRACTORS

FIRM ____________________________

Name ____________________________

Street ____________________________

City ____________________________ State ______ Zip Code ______

CONTACT ____________________________ TELEPHONE ____________________________

Please Print

TYPE OF WORK TO BE PERFORMED ____________________________

______________________________

FIRM ____________________________

Name ____________________________

Street ____________________________

City ____________________________ State ______ Zip Code ______

CONTACT ____________________________ TELEPHONE ____________________________

Please Print

TYPE OF WORK TO BE PERFORMED ____________________________

______________________________

FIRM ____________________________

Name ____________________________

Street ____________________________

City ____________________________ State ______ Zip Code ______

CONTACT ____________________________ TELEPHONE ____________________________

Please Print

TYPE OF WORK TO BE PERFORMED ____________________________

______________________________
REFERENCES

The Bidder is required to fill out the following form to enable the Owner to make inquires and judgement as to the Bidder's experience, skill, available financial resources, credit and business standing.

1. Number of years the Bidder has been in business as a General Contractor: ________________.

2. List three (3) projects of similar in nature to the project described herein that the Bidder has completed along with the approximate construction cost. Include the name, address and telephone number of a reference for each project.

________________________________________
________________________________________
________________________________________
________________________________________
________________________________________

3. List projects presently under construction by the Bidder, dollar volume of the Contract and percent completed.

________________________________________
________________________________________
________________________________________
________________________________________
4. Has the Bidder ever failed to complete work awarded to him; and if so, state where and why.


5. Does the Bidder plan to sublet any part of this work; and if so, give details.


6. List equipment the Bidder owns that is available for this project.


7. List equipment the Bidder plans to rent or purchase for this project.


8. If the Bidder has worked under the direction of a Consulting Engineer, list recent projects with the name, address and telephone number of the Consultant.


9. List name, address and telephone number for the following:

Surety: ____________________________________________


Bank: _____________________________________________


Major Material Supplier: ________________________________


PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS: that

__________________________
(Name of Contractor)

__________________________
(Address of Contractor)

a _______________________, hereinafter called Principal and
(Corporation, Partnership, or Individual)

__________________________
(Name of Surety)

__________________________
(Address of Surety)

hereinafter called Surety, are held and firmly bound unto

__________________________
(Name of Owner)

__________________________
(Address of Owner)

hereinafter called OWNER, in the penal sum of ____________________ Dollars, $_________________ in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, successors, and assigns, jointly and severally, firmly by these presents.

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

__________________________

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

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

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

IN WITNESS WHEREOF, this instrument is executed in ___ counterparts each one of which shall be deemed an original, this ___ day of ___________, 20__.

ATTEST:

_________________________  ____________________________
(Principal) Secretary      By__________________________  (s)
(SEAL)

_________________________
(Witness as to Principal)

_________________________
(Address)

_________________________
(Address)

ATTEST:

_________________________
(Surety) Secretary         By__________________________  Attorney-in-Fact
(SEAL)

_________________________
(Witness as to Surety)

_________________________
(Address)

_________________________
(Address)

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

IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state where the PROJECT is located.
PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS: that

(Name of Contractor)

(Address of Contractor)

a (Corporation, Partnership, or Individual)

(Name of Surety)

(Address of Surety)

hereinafter called Surety, are held and firmly bound unto

(Name of Owner)

(Address of Owner)

hereinafter called OWNER, in the penal sum of $__________ Dollars, in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, successors, and assigns, jointly and severally, firmly by these presents.

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

NOW, THEREFORE, if the Principal shall well, truly and faithfully perform its duties, all the undertakings, covenants, terms, conditions, and agreements of said contract during the original term thereof, and any extensions thereof which may be granted by the OWNER, with or without notice to the Surety and during the one year guaranty period, and if he shall satisfy all claims and demands incurred under such contract, and shall fully indemnify and save harmless the OWNER from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the OWNER all outlay and expense which the OWNER may incur in making good any default, then this obligation shall be void; otherwise to remain in full force and effect.
Provided, further, that the said surety, for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to work to be performed thereunder or the specifications accompanying the same shall in any wise affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the work or to the specifications.

Provided, further, that no final settlement between the owner and the contractor shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

In witness whereof, this instrument is executed in ______ counterparts each one of which shall be deemed an original, this _____ day of __________, 20__.

Attest:

_________________________
(Principal) Secretary
(SEAL)

_________________________
(Witness as to Principal)
(Address)

_________________________
(Surety) Secretary
(SEAL)

_________________________
(Witness as to Surety)
(Address)

_________________________
Principal

By ________________________(s)
(Address)

_________________________
Surety

By ________________________
Attorney-in-Fact

(Address)

Note: Date of bond must not be prior to date of contract.
If contractor is partnership, all partners should execute bond.
Important: Surety companies executing bonds must appear on the treasury department's most current list (Circular 570 as amended) and be authorized to transact business in the state where the project is located.