# **TOWN OF GLASTONBURY**

# **INVITATION TO BID**

<u>BID #</u>

#### ITEM

# DATE & TIME REQUIRED

GL-2017-40 Town Hall/Academy Complex Sidewalk, Curbing, Stone Sitting Wall June 6, 2017 at 11:00 A.M.

The Town of Glastonbury will receive Sealed Bids, in duplicate, for construction of concrete sidewalk, granite curb, brick pavers, and a dry-laid stone sitting wall at the Town Hall/Academy Complex located at 2155 Main Street, Glastonbury, CT. Bids will be received only at the Office of the Purchasing Agent, Town Hall (second level), 2155 Main Street, Glastonbury, CT 06033, Attention: Mary F. Visone, Purchasing Agent, until June 6, 2017 at 11:00 A.M. (local time), at which time they will be publicly opened and read aloud. No late bids will be accepted.

The Town reserves the right to waive informalities or reject any or all bids when said action is deemed to be in the best interests of the Town.

Bid Forms, Plans, and Specifications may be obtained at no cost from the Town's website at <u>www.glastonbury-ct.gov</u> or they may be purchased at The Print House LLC, 22 Krieger Lane, Unit 6, Glastonbury, CT 06033, tel. (860) 652-0803.

Prevailing Wages: The contractor must comply with Section 31-53 of the Connecticut General Statutes as amended, including annual adjustments in prevailing wages.

The Town of Glastonbury is an Affirmative Action/Equal Opportunity Employer. Minority / Women / Disadvantaged Business Enterprises are encouraged to bid.

Mary F. Visone Purchasing Agent

# TOWN HALL/ACADEMY COMPLEX SIDEWALK, CURBING, STONE SITTING WALL

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- 1. Sealed bids (**one original and one copy**) on the attached Bid Forms will be received at the Office of the Purchasing Agent, Town Hall, 2155 Main Street, Glastonbury, Connecticut 06033 (second level). At the designated time of opening, they will be publicly opened, read, recorded and placed on file.
- 2. Whenever it is deemed to be in the best interest of the Town, the Town Manager, Purchasing Agent or designated representative shall waive informalities in any and all bids. The right is reserved to reject any bid when such action is deemed to be in the best interest of the Town of Glastonbury.
- 3. The award will be on the basis of bid total cost, including any alternates selected by the Town, unless otherwise specified. The bid total cost shall be arrived at by the mathematical calculation of the unit price multiplied times the number of units specified for each line item, and the total sum of all line items in the bid. In the event that the Town finds computational errors in a respondent's bid proposal, the bid total cost shall be recalculated by the Town based on the unit prices contained in the bid proposal.
- 4. Bids will be carefully evaluated as to conformance with stated specifications.
- 5. The envelope enclosing your bid should be clearly marked by bid number, time of bid opening, and date.
- 6. <u>If a bid involves any exception from stated specifications, they must be clearly noted as exceptions, underlined, and attached to the bid.</u>
- 7. The Bid Documents contain the provisions required for the requested item. Information obtained from an officer, agent, or employee of the Town or any other person shall not affect the risks or obligations assumed by the Bidder or relieve him/her from fulfilling any of the conditions of the bid.
- 8. Each Bidder is held responsible for the examination and/or to have acquainted themselves with any conditions <u>at the job site</u> which would affect their work <u>before submitting a bid</u>. Failure to meet this criteria shall not relieve the Bidder of the responsibility of completing the bid <u>without</u> <u>extra cost</u> to the Town of Glastonbury.
- 9. Any bid may be withdrawn prior to the above-scheduled time for the opening of bids or authorized postponement thereof. Any bid received after the time and date specified shall not be considered. No Bidder may withdraw a bid within sixty (60) days after the actual date of the opening thereof. Should there be reasons why a bid cannot be awarded within the specified period, the time may be extended by mutual agreement between the Town and the Bidder.
- 10. Each bid must be accompanied by a bid bond payable to the Town for ten percent (10%) of the total amount of the bid. The bid bond of the successful Bidder will be retained until the payment bond and performance bond have been executed and approved, after which it will be returned. A certified check may be used in lieu of a bid bond. The Town of Glastonbury will not be liable for the accrual of any interest on any certified check submitted. Cashier's checks will not be accepted.

- 11. A 100% Performance and Payment bond are required of the successful bidder. This bond shall cover all aspects of the specification and shall be delivered to the Purchasing Agent prior to the issuance of a purchase order. The Performance and Payment Bond will be returned upon the delivery and acceptance of the bid items.
- 12. The Bidder agrees and warrants that in the submission of this sealed Bid, they will not discriminate or permit discrimination against any person or group of persons on the grounds of race, color, religion, national origin, sex, or physical disability including, but not limited to blindness, unless it is shown by such Bidder that such disability prevents performance of that which must be done to successfully fulfill the terms of this sealed Bid or in any manner which is prohibited by the laws of the United States or the State of Connecticut: and further agrees to provide the Human Relations Commission with such information requested by the Commission concerning the employment practices and procedures of the Bidder. <u>An Affirmative Action Statement will be required by the successful Bidder</u>.
- 13. Bidder agrees to comply with all of the latest Federal and State Safety Standards and Regulations and certifies that all work required in this bid will conform to and comply with said standards and regulations. Bidder further agrees to indemnify and hold harmless the Town for all damages assessed against the Town as a result of Bidder's failure to comply with said standards and/or regulations.
- 14. All correspondence regarding any purchase made by the Town of Glastonbury shall reference the Town's purchase order number. Each shipping container shall clearly indicate both Town purchase order number and item number.
- 15. Bidder is required to review the Town of Glastonbury Code of Ethics adopted July 8, 2003 and effective August 1, 2003 and revised October 29, 2013 and effective November 28, 2013. Bidder shall acknowledge that they have reviewed the document in the area provided on the bid/proposal response page (BP). The selected Bidder will also be required to complete and sign an Acknowledgement Form prior to award. The Code of Ethics and the Consultant Acknowledgement Form can be accessed at the Town of Glastonbury website at www.glastonbury-ct.gov. Upon entering the website scroll down to click on Bids & Proposals Icon which will bring you to the links for the Code of Ethics and the Acknowledgement Form. If the Bidder does not have access to the internet, a copy of these documents can be obtained through the Purchasing Department at the address listed within this bid/proposal.
- 16. **<u>Non-Resident Contractors</u>:** (if applicable)

Upon award the Town is required to report names of nonresident (out of state) Contractors to the State of Connecticut, Department of Revenue Services (DRS) to ensure that Employment Taxes and other applicable taxes are being paid by Contractors. A single surety bond for 5% of the entire contract price is required to be filed with DRS by any unverified nonresident prime or general contractor (if awarded) where the contract price for the project is \$250,000 or more. The contractor will be required to promptly furnish to the Town a copy of the Form AU-968 - Certificate of Compliance issued by the State of Connecticut, DRS. See State of Connecticut Notice SN 2012 (2).

17. Bidder shall include on a sheet(s) attached to its proposal a complete disclosure of all past and pending mediation, arbitration and litigation cases that the bidder or its principals (regardless of their place of employment) have been involved in for the most recent five years. Please include a

statement of the issues in dispute and their resolution. Acceptability of Bidder based upon this disclosure shall lie solely with the Town.

- 18. Bidder or its principals, regardless of their place of employment, shall not have been convicted of, nor entered any plea of guilty, or nolo contendere, or otherwise have been found civilly liable or criminally responsible for any criminal offense or civil action. Bidder shall not be in violation of any State or local ethics standards or other offenses arising out of the submission of bids or proposals, or performance of work on public works projects or contracts.
- 19. It is the responsibility of the bidder to check the Town's website before submitting bid for addendums posted prior to bid opening.

# 20. State Prevailing Wage Rates:

Respondents shall comply with State Statutes concerning Employment and Labor Practices, if applicable, and Section 31-53 of the Connecticut General Statutes, as amended (Prevailing Wages). Wage Rate Determination for this project from the State of Connecticut is included in the Bid Documents. Certified payrolls for site labor shall be submitted weekly to the Town's Representative or his designee on the correct State of Connecticut form. The Town reserves the right to, without prior notice, audit payroll checks given to workers on site in order to ascertain that wages and fringe benefits are being paid as required by the State of Connecticut. Please make special note of the State requirement to adjust wage and fringe benefit rates on each July 1st following the original published rates.

NOTE that respondent is to include in its proposal all costs required by such annual increases in the PREVAILING RATES. NO escalation clauses are to be included in the respondent's proposal and NO escalation clauses will be in the Contract Agreement. Respondent is to anticipate any future increases and include these costs in the proposal response.

Contractor's invoices will not be paid if certified payrolls are incomplete, incorrect or not received in a timely manner.

All Apprentices must be registered with the State of Connecticut and their number shall not exceed the number allowed by law. Otherwise, all workers must be paid at least the Journeyman rate listed including benefits.

# OSHA SAFETY AND HEALTH CERTIFICATION

<u>Effective July 1, 2009</u>: Any Mechanic, Laborer, or Worker, who performs work in a classification listed on the prevailing wage rate schedule on any public works project covered under C.G.S. Section 31-53, both on site and on or in the public building, must have completed a federal OSHA Safety and Health course within the last 5 years.

21. <u>Each bid shall also include a description of three (3) projects completed by the bidder with references to demonstrate successful experience with similar projects.</u>

# **IMPORTANT:** Failure to comply with general rules may result in disqualification of the Bidder.

**NOTE:** Any technical questions regarding this bid shall be made in writing (email acceptable) and directed to Stephen M. Braun, P.E., Assistant Town Engineer, 2155 Main Street, PO Box 6523, Glastonbury, CT 06033; <u>Stephen.braun@glastonbury-ct.gov</u>. Telephone (860) 652-7743 between the hours of 8:00 a.m. – 4:30 p.m. For administrative questions concerning this bid/proposal, please contact Mary F. Visone, Purchasing Agent, at (860) 652-7588 or email the Purchasing Department at <u>purchasing@glastonbury-ct.gov</u>. All questions, answers, and/or addenda, as applicable, will be posted on the Town's website at <u>www.glastonbury-ct.gov</u> (Upon entering the website scroll down to click on Bids & Proposals Icon, then scroll down page to see the active bid table. You must click the <u>Bid Title</u> to view all bid details and document links). The request must be received at least three (3) business days prior to the advertised response deadline. It is the respondent's responsibility to check the website for addenda prior to submission of any bid/proposal.

# 01.00 WORKMANSHIP, MATERIALS AND EMPLOYEES

- 01.01 Wherever in this contract the word "Engineer" is used, it shall be understood as referring to the Assistant Town Engineer acting through any assistants duly authorized.
- 01.02 The entire work described herein shall be completed in accordance with the plans and specifications to the full intent and meaning of the same. Unless otherwise specified, all materials incorporated in the permanent work shall be new, and both workmanship and material shall be of good quality. The Contractor shall, if required, furnish satisfactory evidence as to the kind and quality of materials.
- 01.03 The wording "furnish", "install", "construct", "furnish and install", or any similar terms, unless specifically noted to the contrary, shall include all labor, materials, water, tools, equipment, light, power, transportation, and any other services required for the completion of the work.
- 01.04 The Contractor shall at all times enforce strict discipline and good order among his employees, and shall seek to avoid employing on the work any unfit person or anyone not skilled in the work assigned to him.

# 02.00 SUPERINTENDENT

02.01 The Contractor shall keep on the work during its progress, in the absence of the Contractor, a competent Superintendent. The Superintendent shall be acceptable to the Engineer and shall fully represent the Contractor. All directions given to the Superintendent shall be binding as if given to the Contractor.

# 03.00 PRECONSTRUCTION MEETING

03.01 A Preconstruction Meeting will be held with the Engineer, Contractor, and any private utility company prior to commencing any work. The Engineer shall arrange the meeting based on a mutually convenient time.

# 04.00 PERMITS

04.01 Other than local permits, all permits, licenses, and fees required for the performance of the Contract work shall be secured and paid for by the Contractor.

# 05.00 PROPERTY ACCESS

05.01 The Contractor shall take all proper precautions to protect from injury or unnecessary interference, and provide proper means of access to abutting property where the existing access is cut off by the Contractor.

# TOWN HALL/ACADEMY COMPLEX SIDEWALK, CURBING, STONE SITTING WALL GENERAL CONSTRUCTION SPECIFICATIONS

- 05.02 The Contractor shall take all proper precautions to protect persons from injury or unnecessary inconvenience and leave an unobstructed way along the public and private places for travelers, vehicles, and access to hydrants.
- 05.03 The Contractor shall make arrangements with the adjacent property owners for such trespass as he may reasonably anticipate in the performance of the work. All such arrangements shall be reported, in writing, to the Engineer.

# 06.00 PROTECTION OF THE PUBLIC AND OF WORK AND PROPERTY

- 06.01 The Contractor shall continuously maintain adequate protection of all work from damage, and shall take all reasonable precautions to protect the Town from injury or loss arising in connection with the Contract.
- 06.02 The Contractor shall adequately protect adjacent private and public property as provided by law and the Contract Documents.
- 06.03 The Contractor shall make good any damage, injury, or loss of his work and to the property of the Town resulting from lack of reasonable protective precautions.

# 07.00 EXISTING IMPROVEMENTS

- 07.01 The Contractor shall conduct his work so as to minimize damage to existing improvements. Except where specifically stated otherwise in the specifications, drawings, or as directed by the Engineer, it will be the responsibility of the Contractor to restore to their original condition, as near as practical, all improvements on public or private property. This shall include:
  - a. Property within and adjacent to the side of installation such as shrubs, walks, driveways, fences, etc.
  - b. Utility mains, ducts, poles, and services. The Contractor is hereby notified that utilities, if/where shown on the plans, are at approximate locations. These locations are subject to possible errors in the source of information and errors in transcription. The Contractor shall make certain of the exact location of all mains, ducts, poles, and services prior to excavation.

# 08.00 SEPARATE CONTRACTS

08.01 The Engineer reserves the right to let other contracts in connection with this work. The Contractor shall afford other contractors reasonable opportunity for the introduction and storage of their materials and the execution of their work, and shall properly connect and coordinate his work with theirs. Wherever work being done by the Town of Glastonbury forces or by other contractors is contiguous to work covered by this Contract, the respective rights of the various interests involved shall be established by the Engineer to secure the completion of the various portions of the work.

# 09.00 INSPECTION OF WORK

- 09.01 The Town shall provide sufficient personnel for the inspection of the work.
- 09.02 The Engineer shall at all times have access to the work whenever it is in preparation or progress, and the Contractor shall provide proper facilities for such access and for inspection.
- 09.03 If the specifications or the Engineer's instructions require any work to be specially tested or approved, the Contractor shall give the Engineer timely notice of its readiness for inspection and, if the inspection is by another authority other than the Engineer, of the date fixed for such inspection. Inspections by the Engineer shall be made promptly. If any work should be covered up without approval or consent of the Engineer, it must, if required by the Engineer, be uncovered for examination and properly restored at the Contractor's expense.
- 09.04 Reinspection of any work may be ordered by the Engineer. If such work is found to be in accordance with the Contract Documents, the Town shall pay the cost of reinspection and replacement. If such work is not in accordance with the Contract Documents, the Contractor shall pay such cost.

# 10.00 RIGHT TO INCREASE OR DECREASE WORK

10.01 The Town shall have the right to increase or decrease the amount of work herein specified as may be required.

# 11.00 RIGHT OF ENGINEER TO STOP WORK FOR WEATHER CONDITIONS

11.01 Should the work, in the opinion of the Engineer, be in danger by reason of inclemency of weather, or could not be finished in time to prevent such danger, the Contractor shall cease operations upon order of the Engineer, and shall not resume them until ordered to do so by the Engineer when the weather conditions are favorable. The Contractor shall, upon such orders, discontinue work, remove all materials or appliances for or in use upon the work, and place the streets in proper condition for use by the public during the time the work is suspended as herein provided, without cost to the Town.

# 12.00 CONTRACTOR TO BE RESPONSIBLE FOR IMPERFECT WORK OR MATERIALS

12.01 Any faithful work or imperfect material that may be discovered before the acceptance and the payment of the work shall be corrected upon the order of the Engineer. The acceptance and payment of the work does not in any manner relieve the Contractor of his obligation to construct work in the proper manner and the use of materials herein specified.

# 13.00 TOWN MAY NOTIFY CONTRACTOR IF WORK IS NOT CARRIED ON SATISFACTORILY

- 13.01 If, in the opinion of the Engineer, the Contractor is not proceeding with the work at a sufficient rate of progress so as to finish in the time specified, or has abandoned said work, or is not complying with the terms and stipulations or the Contract and specifications, the Engineer may serve notice on the Contractor to adopt such methods as will ensure the completion of the work in the time specified.
- 13.02 If, within five days after the Engineer has notified the Contractor that his work is not being carried on satisfactorily as before mentioned, the Engineer shall have the right to annul the Contract and manage the work under the direction of the Engineer, or re-let, for the very best interest of the Town as a new contract, the work under said new Contract shall be considered the responsibility of the defaulting Contractor.
- 13.03 Additional costs incurred over and above the original Contract shall be borne by the Performance Bond.

# 14.00 DEDUCTIONS FOR UNCORRECTED WORK

- 14.01 If the Engineer deems it inexpedient to correct work that has been damaged or that was not done in accordance with the Contract, an equitable deduction from the Contract price shall be made therefor.
- 14.02 The Contractor shall promptly remove from the premises all materials condemned by the Engineer as failing to meet Contract requirements, whether incorporated in the work or not, and the Contractor shall promptly replace and re-execute his own work in accordance with the Contract and without expense to the Town, and shall bear the expense of making good all work by other contractors destroyed or damaged by such removal or replacement.
- 14.03 If the Contractor does not remove such condemned work and materials as promptly as possible after written notice, the Engineer may remove them and store the materials at the expense of the Contractor.

# 15.00 LAYOUT OF WORK

15.01 The Town shall provide stake-out of the work in accordance with the plans or as directed by the Engineer. The Contractor shall protect all stakes from damage or destruction and shall be responsible to assure that the grade stakes have not been altered prior to actual construction. The Town shall replace grade stakes that have been removed, at no cost to the Contractor, if their removal was caused by reasons beyond reasonable care and protection by the Contractor. If it is determined by the Engineer that the Contractor did not provide reasonable protection, the cost of restaking will be deducted from any amounts due the Contractor in the performance of the work.

# 16.00 CLEANING UP

- 16.01 The Contractor must remove all debris of every description as the work progresses and leave the surroundings in a neat and orderly condition to the satisfaction of the Engineer.
- 16.02 Upon completion, and before acceptance and final payment, the Contractor shall remove from the site all equipment, forms, surplus material, rubbish and miscellaneous debris and leave the site in a neat and presentable condition.

# 17.00 ROYALTIES AND PATENTS

17.01 The Contractor shall pay all royalties and license fees. He shall defend all suits or claims for infringement of any patent rights and shall save the Town of Glastonbury harmless from loss on account thereof, except that the Town of Glastonbury shall be responsible for all such loss when a particular manufacturer, product, or process is specified by the Town of Glastonbury.

# 01.00 NOTICE TO CONTRACTOR

- 01.01 <u>Intent of Contract</u>: The intent of the Contract is to prescribe a complete work or improvement that the Contractor undertakes to do, in full compliance with the specifications, plans, special provisions, proposal, and Contract. The Contractor shall perform all work in close conformity with the lines, grades, typical cross-sections, dimensions, and other data shown on the plans or as modified by written orders, including the furnishing of all materials, implements, machinery, equipment, tools, supplies, transportation, labor, and all other things necessary to the satisfactory prosecution and completion of the project.
- 01.02 The Contractor is hereby alerted to the fact that the State of Connecticut Department of Transportation Standard Specifications for Roads, Bridges, Facilities and Incidental Construction, Form 817 (Form 817) are the governing specifications and are to be considered part of the Contract Documents. The Form 817 shall not be provided by the Town and any cost associated therewith shall be the responsibility of the Contractor. In case of any discrepancy between the Contract Drawings or Specifications and the Form 817, the matter shall immediately be submitted to the Engineer. The Engineer shall have sole authority in resolving any discrepancies.
- 01.03 Much time and effort has gone into this project in an effort to minimize impact on trees and adjacent properties. Extreme care shall be taken by the Contractor to honor commitments made by the Town. Prior to doing any work, the Contractor should meet with the Engineer to become familiar with the conditions encountered and commitments made.
- 01.04 Traffic Cones and Drums: Traffic Drums and 42-inch Traffic Cones shall have four sixinch wide stripes (two - white and two - orange) of flexible bright fluorescent sheeting. The material for the stripes shall be one of the following, or approved equal:
  - 3M Scotchlite Diamond Grade Flexible Work Zone Sheeting, Model 3910 for the white stripes and Model 3914 for the orange stripes,
  - Avery Dennison WR-7100 Series Reboundable Prismatic Sheeting, Model WR-7100 for the white stripes and Model WR-7114 for the orange stripes.
- 01.05 NCHRP 350 Requirements For Work Zone Traffic Control Devices: CATEGORY 1 DEVICES (traffic cones, traffic drums, tubular markers, flexible delineator posts): Prior to using the Category 1 Devices on the project, the Contractor shall submit to the Engineer a copy of the manufacturer's self-certification that the devices conform to NCHRP Report 350.

CATEGORY 2 DEVICES (construction barricades, construction signs and portable sign supports): Prior to using Category 2 Devices on the project, the Contractor shall submit to the Engineer a copy of the Letter of Acceptance issued by the FHWA to the manufacturer documenting that the devices (both sign and portable support tested together) conform to NCHRP Report 350 (TL-3).

NOTE: The portable wooden sign supports that have been traditionally used by most contractors in the State of Connecticut do NOT meet NCHRP Report 350 criteria and shall not be utilized on any project advertised after October 01, 2000.

Information regarding NCHRP Report 350 devices may be found at the following web sites:

FHWA: <a href="http://safety.fhwa.dot.gov/roadway\_dept/road\_hardware/index.htm">http://safety.fhwa.dot.gov/roadway\_dept/road\_hardware/index.htm</a>

ATSSA: http://www.atssa.com/resources/NCHRP350Crashtesting.asp

01.06 <u>Demolition:</u> The Town of Glastonbury Physical Services Department is responsible for the removal and disposal of all existing pavement, curbing, drainage structures, concrete sidewalk, retaining walls, signs, etc. that are within the proposed work area under this contract. The Contractor is responsible for coordination with the Town of Glastonbury forces to ensure this work is performed prior to scheduling the work under this contract.

# 02.00 COMMUNICATIONS

- 02.01 All notices, demands, requests, instructions, approvals, proposals, and claims must be in writing.
- 02.02 Any notice to, or demand upon, the Contractor shall be sufficiently given if delivered at the office of the Contractor stated on the signature page of the Agreement (or at such other office as the Contractor may, from time to time, designate) in a sealed, postage-prepaid envelope or delivered with charges prepaid to any telegraph company for transmission, in each case addressed to such office.
- 02.03 All papers required to be delivered to the Town shall, unless otherwise specified in writing to the Contractor, be delivered to the Assistant Town Engineer, 2155 Main Street, Glastonbury, CT 06033, and any notice to, or demand upon, the Town shall be delivered at the above address in a sealed, postage-prepaid envelope or delivered with charges prepaid to any telegraph company for transmission, in each case addressed to such office or to such other representatives of the Town, or to such other address as the Town may subsequently specify in writing to the Contractor for such purpose.
- 02.04 Any such notice shall be deemed to have been given as of the time of actual delivery or, in case of mailing, when the same should have been received in due course of post or, in the case of telegrams, at the time of actual receipt, as the case may be.

# 03.00 INSURANCE

03.01 The Bidder shall, at its own expense and cost, obtain and keep in force during the entire duration of the Project or Work the following insurance coverage covering the Bidder and all of its agents, employees and sub-contractors and other providers of services and shall name the **Town of Glastonbury and its employees and agents as an Additional Insured** on a primary and non-contributory basis to the Bidders Commercial General

Liability and Automobile Liability policies. <u>These requirements shall be clearly stated</u> <u>in the remarks section on the Bidders Certificate of Insurance</u>. Insurance shall be written with insurance carriers approved in the State of Connecticut and with a minimum Best's Rating of A-VIII. In addition, all carriers are subject to approval by the Town. Minimum Limits and requirements are stated below:

- a. <u>Worker's Compensation Insurance</u>:
  - Statutory Coverage
  - Employer's Liability
  - \$500,000 each accident/\$500,000 disease-policy limit/\$500,000 disease each employee
  - A Waiver of Subrogation shall be provided in favor of the Town of Glastonbury and its employees and agents.
- b. <u>Commercial General Liability</u>:
  - Including Premises and Operations, Products and Completed Operations, Personal and Advertising Injury, Contractual Liability and Independent Contractors
  - Limits of Liability for Bodily Injury and Property Damage Each Occurrence: \$1,000,000 Aggregate: \$2,000,000 (The Aggregate Limit shall apply separately to each job.)
  - A Waiver of Subrogation shall be provided in favor of the Town of Glastonbury and its employees and agents.
- c. <u>Automobile Insurance</u>:
  - Including all owned, hired, borrowed, and non-owned vehicle
  - Limit of Liability for Bodily Injury and Property Damage Per Accident: \$1,000,000
  - A Waiver of Subrogation shall be provided in favor of the Town of Glastonbury and its employees and agents.
- d. <u>Umbrella of Excess Liability</u>:
  - State in the Remarks Section that coverage is follow form.
  - Limit of Liability Each Occurrence \$1,000,000 Aggregate \$1,000,000
- e. <u>Owner's and Contractor's Protective Liability Insurance:</u>

With respect to the Contractor's Project operations and also those of its subcontractors, the Contractor shall carry, for and on behalf of the State and the Town of Glastonbury, insurance which shall provide coverage of at least \$1,000,000 for each accident or occurrence resulting in damages from (1) bodily injury to or death of persons and/or (2) injury to or destruction of property. Subject to that limit per accident or occurrence, the policy shall provide an

aggregate coverage of at least \$2,000,000 for all pertinent damages arising during the policy period

- 03.02 The Bidder shall direct its Insurer to provide a Certificate of Insurance to the Town before any work is performed. The Contractor shall be responsible to notify the Town **60 days** in advance with written notice of cancellation or non-renewal. The Certificate shall evidence all required coverage. The Bidder shall provide the Town copies of any such insurance policies upon request.
- 03.03 INDEMNIFICATION: To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Town and the State of Connecticut and its consultants, agents, and employees from and against all claims, damages, losses and expenses, direct, indirect or consequential (including but not limited to fees and charges of engineers, attorneys and other professionals and court and arbitration costs) to the extent arising out of or resulting from the performance of the Contractor's work, provided that such claim, damage, loss or expense is caused in whole or in part by any negligent act or omission by the Contractor, or breach of its obligations herein or by any person or organization directly or indirectly employed or engaged by the Contractor to perform or furnish either of the services, or anyone for whose acts the Contractor may be liable.

# 04.00 WORK BY OTHERS

05.01 Private utilities, contractors, developers or other parties may be expected to be working within the Contract area during this Contract. It shall be the responsibility of the Contractor to coordinate his work with the work being done by others in order that the construction shall proceed in an efficient and logical manner. The Contractor shall have no claim or claims whatever against the Town, the Engineer, or other parties due to delays or other reasons caused by the work by others or his failure to coordinate such work.

# 05.00 CONTRACTOR'S WORK AND STORAGE AREA

05.01 The Contractor shall contact the Town to determine if any specific locations will be designated, or gain its approval prior to using any area for storage of equipment, materials and trailers during the period of this Contract. The Contractor shall confine his work/storage area to the limits as designated or approved and shall be responsible for the security of the work/storage area. Upon completion of the Contract, the Contractor shall remove all equipment and materials, except as otherwise specified, and restore the site to its original condition as approved by the Engineer and at no cost to the Town.

# 06.00 DISPOSAL AREA

06.01 The Tryon Street Bulky Waste Facility will be available to the Contractor, at no charge, for disposal of materials that are accepted at that facility. Waste disposal guidelines for the Bulky Waste facility are published on the Town web site at the address shown below.

Each bidder shall have reviewed and understand these guidelines prior to submitting a bid for the project.

http://www.glastonbury-ct.gov/Modules/ShowDocument.aspx?documentid=699

Acceptable materials generally include such materials as brush, stumps, demolition materials, and excess excavated earth materials. Unacceptable materials generally include such items as carpet, appliances, upholstered furniture; hazardous wastes such as pesticides, oil based paints and thinners; or other wastes as designated by the State Department of Environmental Protection. Demolition material cannot contain asbestos or other hazardous materials.

The Contractor shall obtain a disposal area for all other unsuitable or surplus materials at no cost to the Town.

# 07.00 DUST CONTROL

07.01 During the progress of the work, the Contractor shall conduct his operations and maintain the area of his activities so as to minimize the creation and dispersion of dust. If the Engineer decides that it is necessary to use water or calcium chloride for more effective dust control, the Contractor shall furnish and spread the material, as directed, without additional compensation.

# 08.00 MAINTENANCE / GUARANTEE PERIOD

08.01 The Contractor shall be held responsible to the Town for maintenance for a minimum of one-year following completion of all work under this Contract with respect to defects, settlements, etc., unless specified otherwise in the Technical Specifications.

# 09.00 **PROTECTION OF EXISTING UTILITIES**

- 09.01 Prior to opening an excavation, effort shall be made to determine whether underground installations, (i.e., sewer, water, fuel, electric lines, etc.) will be encountered and, if so, where such underground installations are located. Before starting any excavation, the Contractor shall submit to the Engineer plans or details showing the proposed method the Contractor will use to support and protect all existing utilities during construction. The furnishing of such plans and details shall not serve to relieve the Contractor of any responsibility for the proper conduct of the work.
- 09.02 When the excavation approaches the estimated location of such an installation, the exact location shall be determined by careful probing or hand digging, and when it is uncovered, proper supports shall be provided for the existing installation. Utility companies shall be contacted and advised of proposed work prior to the start of actual excavation.
- 09.03 There will be no extra payment for submitting plans or details for supporting and protecting all existing utilities during construction.

# **10.00 TIME FOR COMPLETION/NOTICE TO PROCEED**

# 10.01 It the Town's intent that substantial completion of the work included in this contract be achieved on or before November 30, 2017. Phase 1 concrete work must be completed by June 30, 2017.

Please refer to the Phase Map on Sheet 7 Erosion and Sedimentation Control and Phasing Plan. Phasing will likely require multiple mobilizations and demobilizations. No additional costs will be paid by the Owner as a result of phasing or multiple mobilizations.

The Town will schedule a pre-construction meeting immediately upon award of this contract and will issue a Notice to Proceed at this meeting. Contractors who submit a bid for this project shall be prepared to respond to this schedule, and include all costs related to this schedule in their bid.

Within ten (10) business days after the date of the Notice of Award, the Contractor must provide the appropriate bond and insurance certificates to the Town Purchasing Agent and must be issued a Notice to Proceed / Purchase Order for the Project prior to initiating any work.

10.02 Scheduling the work required under this contract requires close coordination with other trades, contractors, and the Owner. The Contractor needs to be prepared to fit work required under this contract within the logical and orderly progression of the work on the entire project. Progression of the project may also require the Contractor to complete work required under this contract in multiple phases, as a phased approach to construction is envisioned.

# 11.00 SCHEDULE OF DRAWINGS

11.01 The Contractor is hereby alerted that the plan set entitled "Town of Glastonbury Engineering Department, Town Hall Academy Complex PW-0908, located at 2155 Main Street, Glastonbury, Connecticut, including 15 sheets, dated May 15, 2017" is to be considered part of these specifications.

# 12.00 CHANGES IN THE WORK

12.01 The Town reserves the right to perform portions of the work in connection with these plans and specifications. The reduction in the work to be performed by the Contractor shall be made without invalidating the Contract. Whenever work is done by the Town contiguous to other work covered by this Contract, the Contractor shall provide reasonable opportunity for the execution of the work and shall properly coordinate his work with that of the Town.



<b>BID / PROPOSAL NO:</b>	GL-2017-40	DATE DUE:	June 6, 2017
DATE ADVERTISED:	May 18, 2017	TIME DUE:	11:00 AM

NAME OF PROJECT: Town Hall/Academy Complex Sidewalk, Curbing, Stone Sitting Wall

In compliance with this Invitation to Bid, the Bidder hereby proposes to provide goods and/or services as per this solicitation in strict accordance with the Bid Documents, within the time set forth therein, and at the prices submitted with their bid response.

It is the responsibility of the Bidder to clearly mark the outside of the bid envelope with the Bid Number, Date and Time of Bid Opening, and it also **THE RESPONSIBILITY OF THE BIDDER TO CHECK THE TOWN'S WEBSITE BEFORE SUBMITTING BID FOR ADDENDA POSTED PRIOR TO BID OPENING.** 

# THE BIDDER ACKNOWLEDGES RECEIPT OF THE FOLLOWING ADDENDA AS REQUIRED:

Addendum #1 \_\_\_\_\_(Initial/Date) Addendum #2 \_\_\_\_\_(Initial/Date) Addendum #3 \_\_\_\_\_(Initial/Date)

# **OTHER ITEMS REQUIRED WITH SUBMISSION OF BID PROPOSAL:**

The following bid checklist describes items required for inclusion with the above-referenced bid proposal package. It is provided for the convenience of the bidders and, therefore, should not be assumed to be a complete list.

- 1. Included Bid Bond as per Section 10 of the Information for Bidders.
- 2. Included Disclosure of Past and Pending Mediation, Arbitration, and Litigation cases against the Bidder or its Principals as per Section 17 of the Information for Bidders.
- \_\_\_\_\_\_ 3. Included Qualifications Statement as per Section 21 of the Information for Bidders.
- 4. Checked Town web site for Addenda and acknowledged Addenda on page BP-1.
- \_\_\_\_\_ 5. Acknowledged Non-Collusion Affidavit on page BP-4.
- \_\_\_\_\_ 6. Acknowledged Code of Ethics on page BP-4.
- \_\_\_\_\_7. Clearly marked envelope with Bid Number, Date, Time of opening, Bidder's Company Name and address.

# TOWN HALL/ACADEMY COMPLEX SIDEWALK, CURBING, STONE SITTING WALL BID PROPOSAL

BIDDER NAME:

LINE <u>NO</u> .	ITEM <u>NO.</u>	ITEM DESCRIPTION	<u>UNIT</u>	<u>QTY</u>	UNIT <u>PRICE</u>	EXT
1	0303050A	BRICK PAVERS ON 8" REINFORCED CONCRETE BASE SLAB	S.F.	1,780		
2	0303060A	8" REINFORCED CONCRETE BASE SLAB FOR PAVERS	S.F.	1,780		
3	0404100A	BITUMINOUS CONCRETE PATCHING-FULL DEPTH	S.Y.	50		
4	0601650A	DRY LAID STONE SITTING WALL	L.S.	1		
5	0813001A	5" X 17" GRANITE STONE CURBING	L.F.	320		
6	0813002A	4" X 12" GRANITE STONE CURBING	L.F.	110		
7	0813011A	5" X 17" GRANITE CURVED STONE CURBING	L.F.	212		
8	0813015A	4" X 12" GRANITE CURVED STONE CURBING	L.F.	130		
9	0814002A	RESET GRANITE STONE CURBING	L.F.	70		
10	0814005A	RESET GRANITE CURVED STONE CURBING	L.F.	65		
11	0901006A	REMOVABLE STEEL BOLLARD	EA.	11		
12	0921001A	CONCRETE SIDEWALK	S.F.	12,300		
13	0921002A	CONCRETE SIDEWALK-8" THICK	S.F.	180		
14	0921003A	CONCRETE SIDEWALK WITH INTEGRAL CURB	S.F.	110		
15	0921005A	CONCRETE SIDEWALK RAMP	EA.	9		
16	0975002	MOBILIZATION	L.S.	1		

TOTAL BASE BID AMOUNT:

\$\_\_\_\_\_(Numeric)

WRITTEN TOTAL BASE BID AMOUNT:

# TOWN HALL/ACADEMY COMPLEX SIDEWALK, CURBING, STONE SITTING WALL BID PROPOSAL

BIDDER NAME:

# **BID ALTERNATE #1**

LINE <u>NO</u> .	ITEM <u>NO.</u>	ITEM DESCRIPTION	<u>UNIT</u>	<u>QTY</u>	UNIT <u>PRICE</u>	<u>EXT</u>	
17	0921040A	BRICK PAVERS ON 8" PROCESSED STONE BASE	S.F.	450			

BID ALTERNATE #1 AMOUNT:

\$\_\_\_\_\_(Numeric)

WRITTEN BID ALTERNATE #1 AMOUNT:\_\_\_\_\_

# **BID ALTERNATE #2**

LINE <u>NO</u> .	ITEM <u>NO.</u>	ITEM DESCRIPTION	<u>UNIT</u>	<u>QTY</u>	UNIT <u>PRICE</u>	EXT	
18	0921041A	STAMPED CONCRETE SIDEWALK	S.F.	450			

BID ALTERNATE #2 AMOUNT:

\$\_\_\_\_\_(Numeric)

WRITTEN BID ALTERNATE #2 AMOUNT:\_\_\_\_\_

BIDDER NAME:

# **NON-COLLUSION AFFIDAVIT:**

By submission of this bid, the Bidder certifies, and in the case of a joint bid each party thereto certifies as to their own organization that this bid has been arrived at independently without consultation, communication, or agreement as to any matter relating to this bid with any other Bidder or with any competitor.

#### **CODE OF ETHICS**:

I/We have reviewed a copy of the Town of Glastonbury's Code of Ethics and agree to submit a Consultant Acknowledgement Form if I/We are selected. Yes\_\_\_\_\_ No\_\_\_\_\*

\*Bidder is advised that effective August 1, 2003, the Town of Glastonbury cannot consider any bid or proposal where the Bidder has not agreed to the above statement.

**Respectfully submitted:** 

Type or Print Name of Individual

Signature of Individual

Title

Date

E-Mail Address

City, State, Zip Code

**Telephone Number/Fax Number** 

**Doing Business as (Trade Name)** 

Street Address

SS# or TIN#

(Seal – If bid is by a Corporation)

Attest

# TOWN HALL/ACADEMY COMPLEX SIDEWALK, CURBING, STONE SITTING WALL

# SPECIAL PROVISIONS

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# SECTION 1.05 CONTROL OF THE WORK

# Article 1.05.02 - Plans, Working Drawings and Shop Drawings is supplemented as follows:

# <u>Subarticle 1.05.02</u> - (2) is supplemented by the following:

The Contractor shall prepare and submit two (2) sets of catalog cuts and/or shop drawings for all items listed in Section 1.06 to the Town of Glastonbury Engineering Division for approval before ordering or fabricating any materials required for this project.

Please forward to:

Stephen Braun, P.E. Assistant Town Engineer 2155 Main Street, P.O. Box 6523 Glastonbury, CT 06033-6523 Stephen.braun@glastonbury-ct.gov

Following approval of the shop drawings, the Engineer will provide two hard copies or one PDF document to the contractor. Engineer will retain one hard copy of the approved shop drawings

# SECTION 1.06 CONTROL OF MATERIALS

# Article 1.06.01 - Source of Supply and Quality:

# Add the following:

For the following items the contractor shall submit a complete description of the item, working drawings, catalog cuts and other descriptive literature which completely illustrates such items presented for formal approval. Such approval shall not change the requirements for a certified test report and materials certificate as may be called for. All shop drawings shall be submitted at one time, unless otherwise approved by the engineer.

- 1. Concrete
- 2. Wire Mesh Reinforcing
- 3. Processed Stone
- 4. Expansion Joint Material
- 5. Joint Sealant
- 6. Galvanized Steel Dowel
- 7. Speed Dowel Sleeves
- 8. Bituminous Concrete for setting bed
- 9. Neoprene Adhesive for setting bed
- 10. Asphalt Cement for Dowels
- 11. Granite Stone Curbing
- 12. Clay Brick Pavers
- 13. Detectable Warning Tile
- 14. Removable Steel Bollard
- 15. Stone for sitting wall
- 16. Mortar for sitting wall stones
- 17. Bluestone Wall cap
- 18. Six-inch PVC for sign post sleeves

# ITEM # 0303050A BRICK PAVERS ON 8" REINFORCED CONCRETE BASE SLAB

#### Description:

The work of this item includes furnishing all materials, equipment, supplies, accessories, incidentals, labor and supervision, and performing all operations required to furnish and install brick pavers on a 8" Reinforced Concrete Base Slab as shown on the drawings, as specified herein, and as is additionally required to properly complete the work, including furnishing and installing the bituminous setting bed, neoprene-modified asphalt setting adhesive, colored sand/cement joint filler mixture, and expansion joints.

Required Submittals:

- A. Samples: Furnish not less than ten individual clay brick pavers of each size, type and color as samples, showing extreme variations in color and texture. Do not order brick for project until Engineer's approval of field sample panel.
- B. Manufacturer's Product Data: Manufacturer's product data shall be submitted for the following items:
  - 1) Brick Pavers
  - 2) Sand joint filler
  - 3) Neoprene-modified asphalt setting adhesive
  - 4) Bituminous setting bed
  - 5) Expansion joints and joint sealant
- C. Test Report:
  - 1. Test report of brick pavers shall be submitted. Testing shall be done by an independent testing laboratory. Test procedures shall conform to ASTM C-67-03 methods, as applicable. Test report shall indicate, as a minimum, the following:
    - Compressive strength, psi
    - Absorption, 5 hr. submersion in cold water.
    - Absorption, 24 hr. submersion in cold water.
    - Maximum saturation coefficient.
    - Initial rate of absorption (suction).
    - Abrasion index.
    - Freeze-thaw.
    - Tolerance to saline conditions.
    - Efflorescence.
  - 2. Job Mix Formula (JMF) for bituminous setting bed shall be submitted.
- D. Statements of Qualifications: Submit to identify and exhibit qualifications as specified in Article 3.03.02, herein.

Quality Assurance:

- A. Installer Qualifications: Installations of paving system shall be by firm that can exhibit proof of a minimum five (5) years of prior successful experience with paving installations of equivalent type and similar scope of this Project.
  - 1. Paving Installation Foreman: Installation firm for paving and surfacing of this Project shall have on staff a supervising Foreman assigned full time to this Project, beginning with the provision of mock-up installations, who shall be a competent, English-speaking supervisor, and who shall have at least 10 years' stone installation experience.

- 2. Use numbers of skilled workmen equal to work requirement or occasion. The skilled workmen shall be thoroughly trained and experienced in the necessary crafts, and shall be
- 3. completely familiar with **the** specific requirements and methods needed for performance of the work in this Section.

# Materials:

## Brick Paving Units:

The paving units shall be as manufactured by The Belden Brick Company P.O. Box 20910 Canton, Ohio 44701-0910 Phone (330) 456-0031, or approved equal. The bricks shall be 4" x 8" x 2 ¼" thick and have chamfered edges with lugs. The compressive strength shall average greater than 8,000 psi minimum. The average cold water absorption shall not be greater than 8% with no individual unit testing greater than 11%. Absorption test results may not be achieved through the use of sealers or other products applied to the clay paver. Resistance of 50 freeze-thaw cycles, when tested in accordance with ASTM C67. In addition, the clay paver must pass CSA-A231.2 freeze thaw test in saline solution without the use of sealers or other products applied to the paver. A test report must be submitted by the manufacturer. Dimensional tolerances should meet the PX standard. The dimensional tolerances around the mean values for length, width, and depth shall be 1/16". The pavers should be solid units without core holes or other perforations. The pavers shall meet or exceed ASTM C902 Light Traffic Paving Brick

# Brick Paver Descriptions:

The Belden Brick Company P.O. Box 20910 Canton, Ohio 44701-0910 Phone: 330-451-2031 Website: <u>www.beldenbrick.com</u>

NOTE: Paver colors and names are based on Belden Brick product descriptions.

Brick Pavers:	Series:	City Line
	Color:	Regimental Full Range Paver
	Pattern:	Herringbone

Soldier Course: Color: Regimental Red Pattern: Double Stretcher

# Bituminous Setting Bed:

Asphalt cement to be used in the bituminous setting bed shall conform to AASHTO D3381. Viscosity grade shall be AC 10 or AC 20.

Fine aggregate to be used in the bituminous setting bed shall be clean, hard sand with durable particles and free from adherent coatings, lumps of clay, alkali salts, and organic matter. Aggregate shall be uniformly graded from "Coarse" to "fine" with 85 to 100% by weight passing the No. 4 sieve, 2-10% by weight passing the No. 200 Sieve, and shall meet the gradation requirements when tested in accordance with ASTM C-136-01.

Fine aggregate shall be dried and shall be combined with hot asphalt cement, and the mix shall be heated to approximately 300 degrees F at the asphalt plant. The approximate proportion of materials shall be 7% asphalt

cement and 93% fine aggregate. Each ton of material shall be apportioned by weight in the approximate ratio of 150 lbs asphalt cement to 1850 lb sand. The Contractor shall determine the exact proportions to produce the best possible mixture for construction of the bituminous setting bed to meet specified requirements and the Engineer's approval.

# Neoprene-Modified Asphalt Setting Adhesive:

Neoprene modified asphalt setting adhesive shall meet the following requirements:

Mastic (asphalt adhesive):

a) Solids (base) content by volume = 75 + 5%.

b) Weight = 8 to 8.5 lb./gal

c) Solvent vehicle - Varsol (over 75 degrees F flash).

Base (2% neoprene, 10% fibers, 82% asphalt): a) Melting point (ASTM D-36-95) = 200 degrees F, minimum,

b) Penetration at 77 degrees F 3.5 oz. load 5 second = 23 to 27.
c) Ductility (ASTM D-113-99 at 77 degrees F 3/16"/minute) = 50 in. minimum.

**Sand Joint Filler:** Sand shall be a clean, washed, uniformly well graded masonry sand conforming to ASTM C 144-03, except that the fineness modulus shall be 2.25 +/- 0.10 Sand shall be from a single approved source. Source of supply shall not be changed during course of the work without written permission of the Engineer. Color to be approved by Engineer

Water: Water shall be potable, free of injurious contaminants.

**Expansion Joints:** Provide pre-molded rubber expansion joints as recommended by the paver manufacturer and approved by the Engineer.

**Expansion Joint Sealant:** Provide elastomeric caulk sealant as recommended by paver manufacturer and approved by Engineer.

# Construction Methods:

**Sample Panels:** Display Panel: Construct a display panel, 3' x 3' (minimum size), for each paver type, size, color, and finish specimen in this Item for use by the Engineer in selecting pavers for project. Display panel shall exhibit color range, texture, bond, jointing, patterns, and workmanship. A maximum of six display panels will be required. Display panels shall be portable with suitable lifting handles.

**Delivery, Storage, and Handling:** Pavers shall be carefully packed by the supplier for shipment. Pavers shall be stored off the ground and protected against staining and other damage. Pavers damaged in any manner shall be receded and replaced with new materials at no additional cost.

**Protection of Finished Surfaces:** Finished surfaces adjacent to the paving work shall be adequately protected from soiling, staining, and other damage during construction.

Acceptability of Concrete Base: Contractor shall examine the concrete base slab to determine its adequacy to receive the asphalt setting bed and brick paving. Concrete shall have fully cured. Evidence of inadequate concrete base shall be immediately brought to the attention of the Engineer. Concrete base shall be paid for

under Item No. 0303060A – 8" Reinforced Concrete Base for Pavers. Start of work of this item shall constitute acceptance of concrete base slab.

**Bituminous Setting Bed:** Bituminous setting bed shall be installed over the fully cured concrete base. Control bars <sup>3</sup>/<sub>4</sub>" deep shall be placed directly over the concrete base. If grades must be adjusted, place wood chocks under depth control bars already set to bring the bars to proper grades. Set two bars parallel to each other to serve as guides for the striking board. The depth control bars must be set carefully so that the pavers, when laid on the setting be will be at the proper line and grade.

While still hot (not less than 270 degrees F) some of the bituminous bed material shall be placed between the parallel depth control bars. This bed shall be pulled with the striking board over the control bars several times. After each pass, low porous spots shall be showered with fresh bituminous material to produce a smooth, firm, and even setting bed. As soon as this initial panel is completed, advance the first bar to the next position in readiness for striking the next panel. After the depth control bars and wood chocks have been removed, carefully fill all depressions that remain.

The setting bed shall be rolled with a power roller to a nominal depth of <sup>3</sup>/<sub>4</sub>" while still hot. The thickness of the setting bed shall be adjusted so that when the pavers are placed and rolled, the top surface of the pavers will be at the required finished grade.

A coating of neoprene-modified asphalt setting adhesive shall be applied by mopping, squeegeeing, or troweling over the top surface of the bituminous setting bed so as to provide a bond under the pavers. If adhesive is trowel-applied, trowel shall be serrated type with serration not to exceed 1/16".

After the neoprene-modified asphalt setting adhesive is applied, carefully place the pavers by hand in straight courses with hand tight joints and with a uniform, smooth top surface. All setting shall be done by skilled masons under adequate supervision.

Pavers shall be set true to the required lines and grades in the pattern detailed on the Drawings. Brick pavers shall be neatly cut and fitted at all perimeters and closures with joints uniform in width to that of adjacent paving. Pavers shall be cut with a water-cooled, cut-off wheel masonry saw using a diamond blade. Pavers with chips, cracks, stains or other defects which might be visible in the finished work, or which might cause such defects in the future, shall not be used.

**Joint Treatments:** Joints between pavers shall be hand tight and shall be uniform in width. Joint filler mixture shall be swept dry into the joints between pavers until the joints are completely filled. Surface shall be swept clean.

**Expansion Joints:** Install expansion joints at interruptions in brickwork, in long spans, at curbs, at dissimilar materials, and as additionally directed by the Engineer.

**Cleaning and Protection of Brick Surfaces:** After completion of paver paving, surfaces shall be carefully cleaned, removing all dirt, excess joint filler mixture, and all stains.

# Method of Measurement:

Brick Pavers on 8" Reinforced Concrete Base Slab: This work will be measured by the actual number of square feet of completed and accepted Brick Pavers on 8" Reinforced Concrete Base Slab.

Bituminous Setting Bed will not be measured for payment, but the cost shall be included in the bid price for Brick Pavers on 8" Reinforced Concrete Base Slab.

<u>Unit</u> SF

#### TOWN HALL/ACADEMY COMPLEX SIDEWALK, CURBING, STONE SITTING WALL SPECIAL PROVISIONS

Neoprene modified asphalt setting adhesive will not be measured for payment, but the cost shall be included in the bid price for Brick Pavers on 8" Reinforced Concrete Base Slab.

Sand Joint Filler will not be measured for payment, but the cost shall be included in the bid price for Brick Pavers on 8" Reinforced Concrete Base Slab.

Expansion Joint Material will not be measured for payment, but the cost shall be included in the bid price for Brick Pavers on 8" Reinforced Concrete Base Slab.

Expansion Joint Sealant will not be measured for payment, but the cost shall be included in the bid price for Brick Pavers on 8" Reinforced Concrete Base Slab.

# Basis of Payment:

Brick Pavers on 8" Concrete Base Slab will be paid for at the contract unit price per square foot for "Brick Pavers on 8" Reinforced Concrete Base Slab" which will be full compensation for furnishing and installing brick pavers, complete, in- place, including furnishing and installing the bituminous setting bed, neoprene-modified asphalt setting adhesive, sand joint filler, expansion joint material, expansion joint sealant, equipment, tools, materials and labor incidental thereto..

Item No.	Description
0303050A	BRICK PAVERS ON 8" REINFORCED CONCRETE BASE SLAB

#### ITEM # 0303060A

#### **8" REINFORCED CONCRETE BASE SLAB FOR PAVERS**

#### Description:

This item shall include the construction of an 8" Reinforced Concrete Base Slab for Pavers on a compacted processed stone base in the locations and to the dimensions and details shown on the plans or as ordered by the Engineer all in accordance with these specifications. The 8" Reinforced Base Slab shall be installed in two (2) 4" thick pours, to allow for the installation of heated concrete system piping by Town of Glastonbury forces.

# Materials:

**Processed Stone Base:** The material for this item shall be crushed trap rock conforming to the requirements of Article M.05.01 Processed Aggregate Base and Pavement of the Form 817, except that coarse aggregate shall be broken stone, and fine aggregate shall be stone sand, screenings, or a combination thereof. Gravel or reclaimed miscellaneous aggregate shall <u>not</u> be used.

**Concrete:** All materials for this work shall conform to the requirements of Section M.03 of the State of Connecticut, Department of Transportation, Standard Specifications for Roads, Bridges, Facilities and Incidental Construction, Form 817, for Class "F" concrete.

Test for air content of fresh concrete shall be made during construction. Because of effects of mixing and vibration, samples for air content preferably should be taken from concentrate after it has been placed by qualified technicians per ASTM C-231- 03 or C-238-51.

The concrete producer will be required to show that his plant and equipment meet all requirements as established by ASTM designation C-94-04, and shall also be currently approved by the State of Connecticut, Department of Transportation.

All concrete mix used must be accompanied by a certification issued by the concrete producer showing the time of day on the batch slip and the composition of the concrete mix; that is the amount and type of cement; water; kind of air-entering admixture and the retarder admixture if any; and also a certification that the mix will attain the minimum compressive strength of 4,000 psi in 28 days.

Any concrete mix without the time of day stamped on the accompanying batch slip will be rejected immediately. Also the concrete mix shall must be placed within 1 1/2 hours of the time of day stamped on the batch slip, otherwise it will be rejected.

**Galvanized Steel Dowels:** Shall be 5/8-inch x 24-inch galvanized steel smooth dowel Grade 60 conforming to article M.06-Metals. Deformed bars shall not be used. Plastic sleeves of the size required for accepting the 5/8-inch by 24-inch smooth metal dowels shall be "Speed Dowel" sleeves as manufactured by Greenstreak, 3400 Tree Court Industrial Blvd, St. Louis, MO 63122, telephone number (800) 551-5145 or approved equal. Plastic sleeves shall be installed according to manufacturer instructions and as directed by the Engineer.

**Expansion Joint Material:** Expansion Joint Material shall be  $\frac{1}{2}$ " thick and installed recessed  $\frac{1}{2}$ " from the top of the concrete slab as well as comply with article M.03.08-Joint Materials for Preformed Bituminous Cellular Type or approved equal.

**Joint Sealant:** Joint Sealant shall be installed with a continuous ½" bead along entire expansion joint cavity and comply with article M.03.08-5 (b)-Joint Sealants.

**Reinforcing:** Wire mesh reinforcing to be famished in the concrete base under this item shall be plain finish, 6 inches X 6 inches, No. 10 gage welded steel wire mesh meeting ASTM specifications A-185-02.

# Construction Methods:

**Processed Stone Base:** The processed stone base shall be placed in two (2) equal courses the full width of the excavated area. Each course shall be compacted satisfactorily to a uniform surface with at least two passes of a motor driven vibratory compactor. Additional fine material shall be added to the top course to fill any voids that may have developed during compaction and to bring the completed foundation to true line and cross section to completed thickness of 8 inches. The top of the completed stone foundation shall be below and parallel to the finished grade of the 8" reinforced Concrete Slab for Pavers as shown on the drawings.

Should the sub-base material become churned up or mixed with the bottom course material at any time, the contractor shall, without additional compensation, remove the mixture, reshape and recompact the sub-base, and replace the material removed with clean coarse material which shall be compacted to a firm uniform surface.

**Placing Concrete:** The concrete shall be discharged and placed in a manner which will prevent separation of coarse aggregate and mortar. Concrete shall always be placed starting at the low end of the section and working upgrade.

Before placement of the concrete, the foundation shall be thoroughly moistened. This shall be done far enough in advance of placement to allow absorption of water to a depth of at least 1 inch, leaving a moist but not muddy surface.

# The 8" Reinforced Base Slab shall be installed in two (2) 4" thick pours, to allow for the installation of heated concrete system piping by Town of Glastonbury forces.

The finished thickness of the concrete base shall be at least 8 inches. The concrete shall be placed in two uniform cross sections consistent with the proposed cross slope and parallel to finished grade.

The time elapsing from the time water is added to the mix until the concrete is placed shall not exceed 90 minutes. In hot weather, the maximum allowable time may be reduced by the Engineer.

**Finishing Concrete:** The surface of the concrete shall be struck off to an elevation consistent with site details and be bull-floated to a smooth surface and broom finished.

**Galvanized Steel Dowels:** Steel dowels shall be installed 24" on center along the entire expansion joint. Dowels shall be asphalt cement coated on one side. Dowels shall be installed between the first and second pour.

**Expansion Joints:** Expansion material ( $\frac{1}{2}$  inch thickness) as specified above shall be placed 12' on center maximum set  $\frac{1}{2}$ " below the top to the second 4" reinforced concrete base slab pour to receive joint sealant.

Joint Sealant: Joint Sealant shall be installed with a continuous 1/2" bead along entire expansion joint cavity

Grade: The concrete at the expansion joints shall not be raised above the general surface of the concrete slab.

**Trim:** All expansion joint material shall be set ½" below the surface of the concrete slab to enable installation of joint sealant.

Curing: All concrete base slab shall be cured as follows:

Immediately following the final finishing and as soon as possible without marring, the concrete shall be covered with cotton matting or waterproof paper for 72 hours.

**Cotton matting**, if used, shall be in good condition, shall be saturated with water prior placement, shall be suitably fastened down to prevent movement and shall be moist for the entire period it is in place.

Waterproof paper if used, shall be lapped at least 12 inches, shall cover the entire surface shall overlap all edges of the concrete slab. The laps edges of the paper shall be securely weighted down with continuous planking, or piles of earth or other material to hold and keep all edges down tight.

Before use, all waterproof paper shall be checked for tears and holes, and all tears holes shall be repaired. Covers, which become unserviceable, will be replaced as ordered by the Engineer.

Wherever waterproof paper, if used, is found to have blown off or otherwise uncovered concrete before the end of the 72 hour period, the Contractor will be required to remove the paper and immediately cover the concrete with cotton and kept moist for an additional 24 hours.

When the concrete is poured during cold weather (night temperature below 42 degrees F) the concrete shall be protected by a layer of hay at least 6 inches thick and covered with waterproof paper or by other means acceptable to the Engineer. This protection shall be provided in addition to the curing procedure specified above and shall be maintained for at least four days after the day the concrete was poured.

Curing compounds shall not be used under any circumstances.

# Method of Measurement:

8" Reinforced Concrete Base Slab for Pavers will be measured by the actual number of square feet of completed and accepted 8" Reinforced Concrete Base Slab for Pavers.

Excavation required to the proposed subgrade will not be measured for payment, but the cost shall be included in the bid price for 8" Reinforced Concrete Base Slab for Pavers.

Processed Stone Base will not be measured for payment, but the cost shall be included in the bid price for 8" Reinforced Concrete Base Slab for Pavers.

Galvanized Steel Dowels will not be measured for payment, but the cost shall be included in the bid price for 8" Reinforced Concrete Base Slab for Pavers.

Expansion Joint Material will not be measured for payment, but the cost shall be included in the bid price for 8" Reinforced Concrete Base Slab for Pavers.

Joint Sealant will not be measured for payment, but the cost shall be included in the bid price for 8" Reinforced Concrete Base Slab for Pavers.

Asphalt Cement will not be measured for payment, but the cost shall be included in the bid price for 8" Reinforced Concrete Base Slab for Pavers.

Reinforcing will not be measured for payment, but the cost shall be included in the bid price for 8" Reinforced Concrete Base Slab for Pavers.

Unit

S.F.

# TOWN HALL/ACADEMY COMPLEX SIDEWALK, CURBING, STONE SITTING WALL SPECIAL PROVISIONS

Cotton Matting, if required, will not be measured for payment, but the cost shall be included in the bid price for 8" Reinforced Concrete Base Slab for Pavers.

Waterproof Paper, if required, will not be measured for payment, but the cost shall be included in the bid price for 8" Reinforced Concrete Base Slab for Pavers.

# Basis of Payment:

This work will be paid for at the contract unit price per square foot for 8" Reinforced Concrete Base Slab For Pavers" complete in place, which price shall include all required excavation and disposal of surplus material, processed stone base, compaction, expansion joint material, galvanized steel dowels, joint sealant, asphalt cement, reinforcing, cotton matting, waterproof paper, backfill, equipment, tools, materials and labor incidental thereto.

Item No.Description0303060A8" REINFORCED CONCRETE BASE SLAB FOR PAVERS

# ITEM # 0404100A BITUMINOUS CONCRETE PATCHING-FULL DEPTH

#### Description:

Work under this item consists of the Contractor constructing pavement repairs of unclassified excavation followed by the installation of new compacted subbase and the installation of hot mix asphalt (HMA) in accordance with these specifications, plans, and as directed by the Engineer.

The work shall be comprised of the following:

Patch Excavation-Unclassified:	Total Depth as required to excavate to the bottom of the process stone base material required for installation of Granite Stone Curbing.				
Existing Hot Mix Asphalt (HMA):	3" (Two Lifts) 6"	HMA Class1 HMA Class 4			
Existing Subbase:	10"				

#### Materials:

HMA Courses: The requirements of Section 4.06 of the Standard Specifications Form 817 apply.

**Subbase:** The requirements of Section M.02 Grading C Gravel apply.

# **Construction Methods:**

**Patch Excavation:** Full Depth Patch repair excavation shall consist of the removal and disposal of all materials, the removal of which is necessary for the proper completion of the work, to a depth below the processed stone base required for installation of the 5" X 17" Granite Stone Curbing.

- 1. Make the excavation square or rectangular with faces straight and vertical.
- 2. The Contractor shall use pavement saw cutting or equipment approved by the Engineer which will not damage adjacent pavement. A jack hammer and compressor will not be allowed for cutting the pavement surface.
- 3. Cut back and excavate the existing pavement an additional 12" in width from the limits of the proposed soil excavation as indicated on the plans and as directed by the Engineer.

**Earth Excavation and Subbase:** Where the soil in the bottom of the patch is found to be unsuitable, the Engineer shall order it removed and replaced with Grading "C" Gravel Subbase. The subbase shall be placed in lifts not to exceed 6" and shall be constructed to allow proper placement and thickness of the HMA materials. The subbase materials shall be compacted to a minimum of 95% of laboratory modified proctor, AASHTO T-180. This additional excavation and construction of the granular subbase shall be considered included if required.

**HMA:** Swab or paint the existing vertical faces of the pavement with approved emulsified asphalt such that a uniform film or asphalt will remain when cured.

Place the intermediate binder course(s) using approved methods and compact to a minimum of 92% of the maximum theoretical specific gravity using power rollers or other mechanical methods to achieve satisfactory results.

The perimeter of the patch shall be painted with tack coat or approved equal such that a 4" wide strip will be equally spaced on the new and existing pavement. The tack coat material shall be dusted with stone screenings or stone dust such that no tracking or pick-up of the seal will occur.

**Traffic Control:** The Contractor shall control and protect public traffic adjacent to and within the project site. The Contractor shall provide a traffic control plan conforming to the Manual on Uniform Traffic Control Devices (MUTCD), latest edition and Connecticut Department of Transportation (ConnDOT) Construction Traffic Control Plans as specified within the Standard Specifications Form 817.

The Contractor is required to provide and supply certified flaggers, traffic cones and signs per the approved plans. If municipal police officers are required, the Town of Glastonbury will hire and pay for the services required.

No open excavations or partially completed patches shall be left open or uncompleted overnight.

**One-Year Warranty:** The Full-Depth Patch repairs shall be warranted for one (1) year after final acceptance.

The Contractor will perform all warranty work, including but not limited to, replacement, traffic Control and incidentals, at NO cost to the Town as long as written notification is provided within the warranty period, even if the repair work extends beyond the warranty period. Failure to perform the warrantee work, when notified, will limit the Contractor from future work in the Town.

The Contractor shall perform all required repairs, including replacement, to meet the requirements of this specification. Temporary repairs will be replaced with permanent repairs as weather allows.

# Method of Measurement:

The work will be measured for payment by the accepted number of square yards of "Bituminous Concrete Patching-Full Depth", of the type specified, complete in place. Measured limits of the Bituminous Concrete Patching-Full Depth shall be made to the outside limits of the 12" cut back of the existing bound surface, as shown in the details in the construction plans.

There will be no direct measurement for payment of saw cutting, excavation, disposal of surplus materials, subbase, compaction, preparation of the patch, tack coating, and construction of the required depth of HMA Intermediate Course(s) and traffic control. This work and material will be included in the unit price for "Bituminous Concrete Patching-Full Depth".

# Basis of Payment:

The furnishing and installing of "Bituminous Concrete Patching-Full Depth" shall be paid for at the contract price per square yard. The unit price shall include saw cutting, excavation, disposal of surplus materials, subbase, compaction, preparation of the patch, tack coating, and construction of the required depth of HMA Intermediate Course(s), traffic control and warrantee in accordance with the specifications and as directed by the Engineer.

Payment shall include all labor, materials, equipment, cleaning of pavement surface, material disposal and incidentals necessary to complete the work described.

Item No.	Description	<u>Unit</u>
0404100A	BITUMINOUS CONCRETE PATCHING-FULL DEPTH	S.Y.

#### ITEM # 0601650A DRY LAID STONE SITTING WALL

#### **Description:**

This item will consist of furnishing and constructing a Dry Laid Stone Sitting Wall on a compacted processed stone base in the location, grades, and to the dimensions and details shown on the contract drawings, and in accordance with these specifications. The Contractor shall install a blue stone cap on Dry Laid Stone Sitting Wall to the dimensions and details shown on the details and contract drawings.

#### Materials:

**Processed Stone Base:** The material for this item shall be crushed trap rock conforming to the requirements of Article M.05.01 Processed Aggregate Base and Pavement of the Form 817, except that coarse aggregate shall be broken stone, and fine aggregate shall be stone sand, screenings, or a combination thereof. Gravel or reclaimed miscellaneous aggregate shall <u>not</u> be used.

**Wall Stone:** Stone shall be local stone provided by Tower Hill Quarry on New London Turnpike in Glastonbury, Connecticut or approved equal. The Contractor shall submit a sample of the stone to the Engineer for approval. Any variations shall be approved by the Engineer.

**Mortar:** Mortar for bedding and joints shall conform to section M.11.04-Motar. It shall be non-staining and be tinted to match the stone facing. Color to be approved by Owner / Engineer. Hold mortar back from face of stone.

**Bluestone:** Bluestone wall cap shall be rock face Pennsylvania bluestone, uniform in color, 2" thick, 2' wide, 3' long pieces (min.) with radius cut edges supplied by Connecticut Stone, Milford, CT or equal.

Joint Sealer: Caulk all joints of bluestone cap. Color to match bluestone and be approved by the Engineer.

**Backfill Material:** The material for backfill shall be Pervious Structure Backfill conforming to the requirements of Articles M.02.05 and M.02.06.

#### Construction Methods:

Contractor shall excavate all existing material to the depth of the proposed subgrade as indicated on the plans and details or as directed by the Engineer. All unsuitable material shall be removed and disposed of.

Subbase shall be graded and thoroughly compacted to the lines and grades indicated on the plans and details or as directed by the Engineer.

Processed stone base shall be installed and thoroughly compacted to the lines and grades indicated on the plans and details or as directed by the Engineer.

Stones shall be placed on the compacted base. Place larger stones toward the bottom of the wall and graduate to smaller size stone at the top of the wall. Stones shall fit tightly. Fill all large voids within the interior of the wall with process stone or smaller stones prior to mortaring the joints. The face of the stone wall shall have a 2" batter per foot of height of the wall.

Mortar shall be placed between stones on each course. Mortar shall be held back from the face of the wall.

Bluestone cap shall be set in a mortar bed level along the top of the stone wall. All butt joints shall be neat and flush. Joints shall be caulked with sealant as specified above.

Backfill shall be placed and compacted to the lines and grades shown on the plans and details or as directed by the Engineer. Care shall be taken not to damage the wall.

#### Method of Measurement:

Dry Laid Stone Sitting Wall will be paid for at a lump sum price and will not be measured for payment.

#### **Basis of Payment:**

This work will be paid for at the contract lump sum for "Dry Laid Stone Sitting Wall" complete in place, which price shall include all required excavation and disposal of surplus material, processed stone base, compaction, field stone, mortar, bluestone cap, joint sealant, backfill, equipment, tools, materials and labor incidental thereto.

Item No.Description0601650ADRY LAID STONE SITTING WALL

<u>Unit</u> L.S.

ITEM #0813002A	4" X 12" GRANITE STONE CURBING
ITEM # 0813012A	5" X 17" GRANITE STONE CURBING
ITEM # 0813013A	5" X 17" GRANITE CURVED STONE CURBING
ITEM # 0813015A	4" X 12" GRANITE CURVED STONE CURBING

#### Description:

 $5^{"}$  x 17" Granite Stone Curbing or  $5^{"}$  x 17" Granite Curved Stone Curbing shall include saw cutting and excavating for installation of the  $5^{"}$  x 17" granite stone curbing of the type indicated on a 6" thick compacted base of processed stone, furnishing and setting to line and grade new granite stone curb, new curved granite stone curb, installation of the concrete setting bed for curved or straight curb sections; furnishing and placing backfill and mortaring or caulking of curb joints as required or directed by the Engineer.

4" x 12" Granite Stone Curbing or 4" x 12" Granite Curved Stone Curbing shall include saw cutting and excavating for installation of the 4" x 12" granite stone curbing of the type indicated on a 6" thick compacted base of processed stone, furnishing and setting to line and grade new granite stone curb, new curved granite stone curb, installation of the concrete setting bed for curved or straight curb sections; furnishing and placing backfill and mortaring or caulking of curb joints as required or directed by the Engineer. This item shall be used as a border for the brick pavers as indicated in the locations shown on the plans or depicted within the details.

This item also includes transition lengths (curved or straight) when matching existing top of curb elevations at the beginning and ends of curbing limits or at sidewalk ramps. The transition length of curb shall be one continuous 3 foot or 6 foot length as directed by the Engineer.

This item shall include trimming damaged ends of existing curb stones and cutting existing curb stones to a shorter length, both trimming and cutting to produce a new end which is square with the planes of the top and face of the curb. This item shall also include cutting curb stones horizontally in locations where the depth of curb stones must be reduced to clear obstacles or utilities.

#### Materials:

All new granite curb supplied for use shall be 5" x 17" or 4" x 12" and shall conform to the following:

Curbstones shall be hard and durable granite of light color and uniform texture neither stratified nor laminated. Curbstones shall be free from seams, cracks and evidence of weakening or disintegration and shall be of a good smooth splitting appearance. Granite shall come from a quarry previously approved by the Engineer.

Should the Contractor request use of granite from a quarry not previously approved, he shall submit samples sufficiently in advance of need to allow the Engineer opportunity to judge the stone both as to quality and appearance. All curbstones for a given project shall come from one quarry and be all of one type. Granite when tested shall have a French coefficient of wear of not more than 32. Test sample shall conform to the requirements of ASTM C-615-03.

**Dimensions:** Straight curb shall be 5 inches by 17 inches depth or 4 inches by 12 inches depth shall be nominal depth plus or minus 1 inch, minimum curb length to be 6 feet (except for closures to be not less than 4 feet) minimum width at bottom to be nominal width minus 1 inch for two thirds the length with an absolute minimum of minus 2 inches for the remaining one third.

All curbs to be set on radius 75 feet or less shall be 5 inches by 17 inches or 4 inches by 12 inches cut to arc with radian joints, depth shall be 17 or 12 inches plus or minus 1 inch, minimum length to be 4 feet, minimum width at bottom to be 5 or 4 inches for two thirds the length with an absolute minimum of 4 inches for the remaining one third.

Straight curb to be set on radius over 75 feet to 500 feet shall be 5 inches with ends trimmed so that face and top joint fit properly, depth to be 17 or 12 inches plus or minus 1 inch, minimum length to be 4 feet, maximum length to be 6 feet, minimum length at bottom to be 5 or 4 inches for two thirds the length with absolute minimum of 4 inches for the remaining one third.

**Finish**: The curbstone shall have a top surface free from wind and drill holes, it shall be sawed to an approximately true 1/8 inch. The front and back arris lines shall be straight and true with no variation from a straight line greater than 1/8 inch. On the back surface there shall be no projection for 3 inches down which would fall outside a batter of 4 inches in 12 inches from the back arris line. The front face shall be at right angles to the plane of the top or battered not more than one inch in twelve inches, and shall be quarry split or sawn, free from drill holes in the exposed face. The front face shall have no projections greater than 3/4 of an inch or depression greater than 1/2 inch measured from the vertical plane of the face through the top arris line for a distance of 8 inches down from the top.

For the remaining distance there shall be no projections or depressions greater than 1 inch measured in the same manner. The arris lines at the ends shall be pitched with no variation from the plane of the face greater than 1/8 inch. The ends of all stones shall be square with the planes of the top and face, and so finished that when the stones are placed end to end as closely as possible, no space more than 1/4 inch shall show in the joint for the full width of the top and down on the face for 8 inches. On curb stones having a length of 6 feet or more, the remainder of the end may break back not over 6 inches, on shorter curb stones, they shall not break back more than 4 inches. The bottom surface shall be sawn or quarry split to an approximately true plane. Half drill holes will not be permitted in the arris line of the back. Front arris line may be rounded to a radius not over 1/2 inch. If sawn, the curbstone shall be thoroughly cleaned of any iron rust or iron particles.

Granite curb returns shall be 17 or 12 inches deep and shall conform to the detail shown in the contract drawings and all material requirements in this specification.

**Processed Stone Base:** The material for this item shall be crushed trap rock conforming to the requirements of Article M.05.01 Processed Aggregate Base and Pavement of the Form 817, except that coarse aggregate shall be broken stone, and fine aggregate shall be stone sand, screenings, or a combination thereof. Gravel or reclaimed miscellaneous aggregate shall <u>not</u> be used.

**Concrete:** All materials for this work shall conform to the requirements of Section M.03 of the State of Connecticut Standard, Department of Transportation, Specifications for Roads, Bridges, Facilities and Incidental Construction, Form 817 for Class "C" concrete.

**Caulk:** Caulking compound shall be a material which complies with ASTM C-920, Type S, Grade NS, Class 25 sealing compound, polyurethane based elastomeric, single component, moisture cured sealant, capable of 25% joint movement. The color of the compound shall be cement mortar gray.

#### Construction Methods:

All curbing installations shall be laid out in the field and prior to placement of concrete footings, be approved by the Engineer. The contractor shall notify the Engineer at least two business days in advance of final curbing layout for approval prior to concrete placement.

The curbing shall be marked in the field by a licensed land surveyor in accordance with the detailed coordinates for the curb lines, radii's and recessed curbing points.

**Excavation:** The Contractor shall excavate to a depth of 24" below the top of finished curb grade. The street pavement shall be removed to a width of at least 6" in front of the curb to facilitate proper setting and

backfilling. Bituminous concrete and macadam pavement in front and back of the curb shall be cut to neat straight lines before excavation to minimize pavement damage.

Where there is good sod behind the curb, the sod shall be removed before excavation and saved for re-use.

Where there is a dummy joint 18" to 24" behind the curb, the Engineer may require the Contractor to saw the joint prior to excavating behind the curb. Saw cutting will be included in this item.

Where concrete base pavement is encountered excavation shall include removal of all existing concrete or other foundations. Saw cutting the concrete base shall also be included in this item.

Where the distance between the back of the curb and sidewalk is 12" or less, or where trees are encountered immediately behind the curb, the Engineer may order the Contractor to excavate by hand to avoid damage to the walk or trees.

**Processed Stone Base:** A 6" thick by 18" wide base of processed stone shall be installed as a foundation for the curb. This material may be installed in one lift and shall be thoroughly compacted with an approved vibratory compaction device to achieve 95% compaction.

**Setting Curb:** The curb shall be set to line and grade established by the Engineer. Maximum variation from established line and grade shall be 1/4". The finished curb shall present a neat appearance free from irregularities of line and grade.

For curved stone curb, masonry blocking used to hold the curb in place shall be allowed to remain when backfilling is completed.

**Backfill:** All foundation and backfill shall be placed in layers not over six inches thick and each layer shall be thoroughly compacted using motor driven powered vibratory compactor.

For granite stone curbing, all curb joints shall be set in concrete 6" from either edge as shown on the details.

For curved granite stone curb, the curb shall be set in concrete along its entire length. The Contractor shall use a very stiff mix and shall spade and tamp to eliminate all voids, especially under the curb.

Concrete setting bed for all granite stone curb shall not extend higher than 6" above the bottom of the curb.

**Caulking:** All curb joints shall be filled with caulking compound with either pneumatic or ratcheted hand gun or with other equipment as approved by the Engineer. At approximately 50-foot intervals, a 1/2-inch joint shall not be filled with caulking compound but left free for expansion.

**Cutting or Trimming:** The contractor shall employ appropriate cutting tools to produce a clean, square, and plumb cut for a neat appearance when reset. For vertical cuts, the ends shall be finished so that when stones are placed end to end as closely as possible, no space more than one half inch wide shall show in the joint for the full width of the top or down on the face for 9". The remainder of the joint may break back not more than 4" from the plane of the joint. The Engineer may require the cut to be made with the stone in place in the ground. Horizontal cuts shall be made in a manner that allows for a 2" vertical clearance of the object or utility interference with the bottom of the curb stone. Horizontal cuts which exceed 1/3 the depth of the stone to be cut require the engineers approval prior to cutting.

In the trimming and cutting of damaged curbstones, the portion cut off shall be kept to a minimum.

If in making a cut, the Contractor damages the curb so as to make it unusable, the Contractor shall furnish, at no cost to the Town a piece of suitable curb cut to proper length to replace the damaged curb.

#### Method of Measurement:

5" x 17" Granite Stone Curbing or 5" x 17" Granite Curved Stone Curbing will be measured by the actual number of linear feet of completed and accepted 5" x 17" Granite Stone Curbing or 5" x 17" Granite Curved Stone Curbing

4" x 12" Granite Stone Curbing or 4" x 12" Granite Curved Stone Curbing will be measured by the actual number of linear feet of completed and accepted 4" x 12" Granite Stone Curbing or 4" x 12" Granite Curved Stone Curbing

Measurement shall be made along the top arris line of face of curb. Curbing to be set on a radius of 100 feet or less will be measured for payment as curved stone curb.

Cutting or trimming existing or proposed curb will not be measured for payment, but the cost shall be considered included in the bid price for 5" x 17" Granite Stone Curbing, 5" x 17" Granite Curved Stone Curbing, 4" x 12" Granite Stone Curbing.

#### **Basis of Payment:**

This work will be paid for at the contract unit price per linear foot for "5" x 17" Granite Stone Curbing", "5" x 17" Granite Curved Stone Curbing", 4" x 12" Granite Stone Curbing, 4" x 12" Granite Curved Stone Curbing of the type and size specified, complete in place and accepted, which price shall include all excavation and disposal of unsuitable materials, processed stone base, concrete setting bed, backfilling, equipment, tools and labor incidental thereto.

There will be no direct payment for furnishing, placing and compacting processed stone base, cutting or trimming existing or proposed curb, beveling or rounding the ends of the ends of the curbing, pointing the joints with mortar or caulk, concrete setting bed, repair of disturbed areas in front and back of curb and the 12" maximum grassed area in back of curb, but the cost of this work shall be considered as included in the general cost of the work.

Item No.	Description	<u>Unit</u>
0813002A	4" X 12" GRANITE STONE CURBING	L.F.
0813012A	5" X 17" GRANITE STONE CURBING	L.F.
0813013A	5" X 17" GRANITE CURVED STONE CURBING	L.F.
0813015A	4" X 12" GRANITE CURVED STONE CURBING	L.F.

#### ITEM # 0814002A RESET GRANITE STONE CURBING

#### ITEM # 0814005A RESET GRANITE CURVED STONE CURBING

#### Description:

This work shall consist of the removing and resetting or adjusting of existing stone curbing of the type specified to the lines and grades given, in accordance with the dimensions and details of the plans or as directed by the Engineer.

#### Materials:

All existing curbing which is acceptable shall be used. The reset stone curbing shall be in lengths of at least 4 ft. long, except where necessary for closures, where pieces shall be at least 3 ft. long.

Mortar: Mortar shall be as specified in Article M.11.04.

**Processed Stone Base:** The material for this item shall be crushed trap rock conforming to the requirements of Article M.05.01 Processed Aggregate Base and Pavement of the Form 817, except that coarse aggregate shall be broken stone, and fine aggregate shall be stone sand, screenings, or a combination thereof. Gravel or reclaimed miscellaneous aggregate shall <u>not</u> be used.

**Concrete:** All materials for this work shall conform to the requirements of Section M.03 of the State of Connecticut Standard, Department of Transportation, Specifications for Roads, Bridges, Facilities and Incidental Construction, Form 817 for Class "C" concrete.

**Caulk:** Caulking compound shall be a material which complies with ASTM C-920, Type S, Grade NS, Class 25 sealing compound, polyurethane based elastomeric, single component, moisture cured sealant, capable of 25% joint movement. The color of the compound shall be cement mortar gray.

#### **Construction Methods:**

All curbing installations shall be laid out in the field and prior to placement of concrete footings, be approved by the Engineer. The contractor shall notify the Engineer at least two business days in advance of final curbing layout for approval prior to concrete placement.

The curbing shall be marked in the field by a licensed land surveyor in accordance with the detailed coordinates for the curb lines, radii's and recessed curbing points.

The curbing to be reset shall be removed with care to avoid damage and, if ordered, shall be transported to a point or points on the project which will allow all the reset curbing to be installed in continuous lines. Curbing removed and not reset shall remain the property of the Town of Glastonbury unless otherwise ordered by the Engineer and shall be transported to such points, adjacent to the work, as the Engineer may designate. Where adjustments only have to be made to curbing, such adjustments shall be carried out as specified by the Engineer.

**Excavation:** The Contractor shall excavate to a depth of 24" below the top of finished curb grade. The street pavement shall be removed to a width of at least 6" in front of the curb to facilitate proper setting and backfilling. Bituminous concrete and macadam pavement in front and back of the curb shall be cut to neat straight lines before excavation to minimize pavement damage.

Where there is good sod behind the curb, the sod shall be removed before excavation and saved for re-use. Where there is a dummy joint 18" to 24" behind the curb, the Engineer may require the Contractor to saw the joint prior to excavating behind the curb. Saw cutting will be included in this item.

Where concrete base pavement is encountered excavation shall include removal of all existing concrete or other foundations. Saw cutting the concrete base shall also be included in this item.

Where the distance between the back of the curb and sidewalk is 12" or less, or where trees are encountered immediately behind the curb, the Engineer may order the Contractor to excavate by hand to avoid damage to the walk or trees.

**Processed Stone Base:** A 6" thick by 18" wide base of processed stone shall be installed as a foundation for the curb. This material may be installed in one lift and shall be thoroughly compacted with an approved vibratory compaction device to achieve 95% compaction.

**Setting Curb:** The curb shall be set to line and grade established by the Engineer. Maximum variation from established line and grade shall be 1/4". The finished curb shall present a neat appearance free from irregularities of line and grade.

For curved stone curb, masonry blocking used to hold the curb in place shall be allowed to remain when backfilling is completed.

**Backfill:** All foundation and backfill shall be placed in layers not over six inches thick and each layer shall be thoroughly compacted using motor driven powered vibratory compactor.

For granite stone curbing, all curb joints shall be set in concrete 6" from either edge as shown on the details.

For curved granite stone curb, the curb shall be set in concrete along its entire length. The Contractor shall use a very stiff mix and shall spade and tamp to eliminate all voids, especially under the curb.

Concrete setting bed for all granite stone curb shall not extend higher than 6" above the bottom of the curb.

**Caulking:** All curb joints shall be filled with caulking compound with either pneumatic or ratcheted hand gun or with other equipment as approved by the Engineer. At approximately 50-foot intervals, a 1/2-inch joint shall not be filled with caulking compound but left free for expansion.

**Cutting or Trimming:** The contractor shall employ appropriate cutting tools to produce a clean, square, and plumb cut for a neat appearance when reset. For vertical cuts, the ends shall be finished so that when stones are placed end to end as closely as possible, no space more than one half inch wide shall show in the joint for the full width of the top or down on the face for 9". The remainder of the joint may break back not more than 4" from the plane of the joint. The Engineer may require the cut to be made with the stone in place in the ground. Horizontal cuts shall be made in a manner that allows for a 2" vertical clearance of the object or utility interference with the bottom of the curb stone. Horizontal cuts which exceed 1/3 the depth of the stone to be cut require the engineers approval prior to cutting.

In the trimming and cutting of damaged curbstones, the portion cut off shall be kept to a minimum.

If in making a cut, the Contractor damages the curb so as to make it unusable, the Contractor shall furnish, at no cost to the Town a piece of suitable curb cut to proper length to replace the damaged curb.

#### Method of Measurement:

This work will be measured for payment by the actual number of linear feet of the type of curbing, reset and accepted. Measurement shall be made along the top arris line of face of curb.

#### Basis of Payment:

This work will be paid for at the contract unit price per linear foot for "Reset Granite Stone Curbing" or "Reset Granite Curved Stone Curbing", complete in place and accepted, which price shall include all excavation, backfilling, disposal of surplus material.

There will be no direct payment for furnishing, placing and compacting granular base, beveling or rounding the ends of the curbing, concrete setting bed, sealing the joints with mortar, removing the curbing and hauling it to any location on or adjacent to the project as directed by the Engineer, but the cost of this work shall be considered as included in the general cost of the work.

Item No.	Description	<u>Unit</u>
0814002A	RESET GRANITE STONE CURBING	L.F.
0814005A	RESET GRANITE CURVED STONE CURBING	L.F.

#### ITEM # 0901006A REMOVABLE STEEL BOLLARD

#### Description:

Work under this item includes providing and installing removable steel bollards with a cast-in-place concrete footing at the locations shown on the plans. Bollard will remove completely from the base unit by applying torque to a fire hydrant type nut releasing the locking mechanism. The bollard shall be able to be returned to its original locked position without the use of any tools or other devices.

#### Materials:

**Removable Steel Bollard:** Shall be Maxiforce Removable Bollard MR-RW-RS1-R. Round Wrench, Round Style 1 Head with removable base as manufactured by: Blue Ember Technologies, LLC, Sykesville, MD 21784, Tel 410-552-9888, Fax 410-552-9939, or approved equal.

**Concrete for Footing:** Shall be Class A Concrete as per the Form 817.

**Steel Plate:** A36 ASTM A36/A36M-05 Standard Specification for Steel, Carbon, Cold-Rolled Sheet, Commercial Quality.

**Steel Tube:** ASTM A53/A53M-04a Standard Specification for Pipe, Steel, Black and Galvanize Coated and Welded and Seamless. ASTM A500 Standard Specification for Cold-Formed Welded and Seamless Carbon Tubing in Rounds and Shapes.

Fasteners: Series 300 Stainless Steel

Provide material free from surface blemishes and defects where exposed to view in the finished installation. Materials not specified shall be of good commercial quality, suitable in all respects for the purpose intended.

**Cleaning:** After fabrication of units, all tool marks and surface imperfections shall be removed and exposed faces of all welded joints dressed smooth.

**Priming and Painting:** Coat with a standard rust-inhibitive primer per manufacturer standard application instructions. Powder Coat with factory applied TIGER Drylac or equivalent. Color to be Bengal Black 49/88888.

#### **Construction Methods:**

Comply with manufacturer provided instructions and drawings. Base units shall be installed with the top plate flush with the finished surface. Keep any holes in the base unit top clear of taking on any debris that would limit the bollard unit from seating properly per instructions. Bollard shall be secured to base unit after it is leveled and fully cured. Attach bollard per manufacturer instructions.

#### **Basis of Payment:**

The work under this item will be paid for at the contract unit price for each "Removable Steel Bollard" complete in place and accepted, which price shall include all required excavation and disposal of surplus material, concrete, furnishing and placing, equipment, tools, materials and labor incidental thereto.

Item No.	Description	<u>Unit</u>
0901006A	REMOVABLE STEEL BOLLARD	EA.

ITEM # 0921001A	CONCRETE SIDEWALK
ITEM # 0921002A	<b>CONCRETE SIDEWALK – 8" THICK</b>
ITEM # 0921003A	CONCRETE SIDEWALK WITH INTEGRAL CURB
ITEM # 0921005A	CONCRETE SIDEWALK RAMP

#### **Description:**

The Contractor is to construct sidewalks to lines and grades as shown on the drawings or at locations as directed by the Engineer. Concrete sidewalks shall be five inches thick, except at industrial and commercial driveways where it shall be eight inches thick and reinforced with 6" x 6" 10/10 steel mesh. Concrete sidewalks with integral curb shall have a monolithic integral curb section 5" thick and reinforced with 6" x 6" 10/10 steel mesh. Sidewalk construction shall include the removal of existing and construction of new house lateral walks where new sidewalk grades make it necessary. The sidewalk shall pitch to the street at a slope of ¼-inch per foot or as directed by the Engineer. Contractor shall install 6" PVC sleeves, prior to pouring the concrete, for future installation of sign posts by others in the locations and dimensions shown on the plans or as directed by the Engineer.

Concrete sidewalk ramps are to be constructed to the lines and grades shown on the plans at locations directed by the Engineer, and shall be a minimum of five inches thick. This work shall also include furnishing and installing Detectable Warning Strips in the locations and to the dimensions and details shown on the plans or as ordered by the Engineer.

#### Materials:

**Processed Stone Base:** The material for this item shall be **crushed trap rock** conforming to the requirements of Article M.05.01 Processed Aggregate Base and Pavement of the Form 817, except that coarse aggregate shall be broken stone, and fine aggregate shall be stone sand, screenings, or a combination thereof. Gravel or reclaimed miscellaneous aggregate shall <u>not</u> be used.

**Forms:** The forms used shall be five-inch steel or 2" x 6" wood firmly supported and staked to the line and grade given by the Engineer. **2"x4" wood forms shall not be used and shall be cause for immediate rejection of sidewalk.** The forms shall be free from warp and shall be of sufficient strength to resist springing out of shape. All forms shall be cleaned and oiled before use.

**Concrete:** The concrete furnished shall conform with respect to composition, transportation, mixing and placing, to Class F Cement Concrete 4,400 PSI, as specified by the State of Connecticut Department of Transportation in its latest specification and revisions. An approved air-entraining admixture shall be used to entrain 5% to 7% air in the concrete.

Concrete Curing Compound / Sealer: All concrete sidewalks shall be treated using Repel 100 by Kingdom Products curing compound / sealer or approved equal meeting ASTM C309, Type 1, Class A and B.

**Detectable Warning Strips:** The Detectable Warning Strip shall be a replaceable tactile warning surface tile as manufactured by ADA Solutions, Inc of P.O. Box 3, North Billerica MA 01862 Tel: 800.372.0519 Fax: 978.262.9125 www.adatile.com or approved equal. Tile shall be brick red in color (Federal Color # 20109) and all attachment hardware shall be stainless steel. The tile shall conform to the dimensions shown on the plans or as directed by the Engineer.

**Dowels:** Smooth metal dowels, 5/8-inch in diameter, measuring 18 inches in length shall be installed using plastic sleeves within all expansion and contraction joints, concrete driveway aprons, at concrete sidewalk ramps, and at the last end section of each sidewalk slab poured at the end of each working day.

Plastic sleeves of the size required for accepting the 5/8-inch by 18-inch smooth metal dowels shall be "Speed Dowel" sleeves as manufactured by Greenstreak, 3400 Tree Court Industrial Blvd, St. Louis, MO 63122, telephone number (800) 551-5145 or approved equal. Plastic sleeves shall be installed according to manufacturer instructions and as directed by the Engineer.

Smooth metal dowels shall be 5/8-inch in diameter and 18 inches in length. All metal dowels shall conform to the requirements of ASTM A615 Grade 60.

**Expansion Joints:** At maximum intervals of 15 feet, an expansion joint shall be placed to the full depth of the concrete slab. The material for expansion joints shall be either  $\frac{1}{4}$ -inch thick cork asphalt or  $\frac{3}{8}$ -inch thick asphalt impregnated bonded cellular fiber, or approved equal. Expansion joints of the same material shall also be placed at points abutting existing structures.

**PVC Sign Sleeve:** PVC Sign Sleeve shall be 6" diameter schedule 40 or 80 PVC. PVC sleeve shall be the full depth of the concrete and set flush with the top of the proposed sidewalk prior to pouring concrete sidewalk.

#### **Construction Methods:**

**Limits of Disturbance:** The Contractor is to exercise caution to prevent unnecessary damage to lawns, trees, bushes, or any other existing improvements. If, in the opinion of the Engineer, existing improvements are damaged due to the carelessness of the Contractor, the same shall be repaired or replaced at the Contractor's expense.

**Earthwork:** The Contractor shall remove and dispose of grass, rubbish, and other objectionable materials within the limits of the sidewalk construction. The Contractor shall perform all excavation necessary to construct sidewalks to the grades as shown on the construction plans. Existing house lateral walks and driveways adjacent to the sidewalk shall be removed and base graded and prepared for a smooth connection. The Contractor shall remove and dispose of all excess material.

Suitable excavated material shall be re-used within the project limits as directed by the Engineer to form embankment for sidewalks where required. Embankment formation shall be completed as described in Article 2.02.03 of the Form 817, and shall meet the proposed subgrade elevations described on the plans or directed by the Engineer. Excess earth materials shall become the property of the Contractor and shall be disposed of at no additional cost to the Town.

**Process Stone Base Installation:** The processed stone base course shall be spread upon the prepared subgrade to such depth as to give a compacted thickness of eight (8) inches. The material shall be uniformly spread in two layers of equal depth in the entire base course excavation and each layer shall be wetted and compacted to a firm even surface with a roller weighing not less than 500 pounds or by use of pneumatic tampers or vibratory compactors.

**PVC Sign Sleeve Installation:** The PVC Sign Sleeve shall be installed in the sign locations shown on the plans or as directed by the Engineer prior to pouring the concrete sidewalk. The top of the PVC Sign Sleeve shall be set flush with the proposed sidewalk.

**Installation of Dowel:** Dowels are also to be installed between new and existing concrete slabs. Where new or repaired walks abut up against existing concrete sidewalks, the Contractor shall drill two holes measuring <sup>3</sup>/<sub>4</sub>-inches in diameter and 12 inches in depth into the existing concrete slab. The dowels, with plastic sleeve, shall be set into the existing sidewalk slab prior to the placement of concrete. The dowels are to be level with the latitude pitch of the sidewalk and shall conform to details of these specifications.

**Concrete Work:** The surface finish shall be struck off, forcing coarse aggregate below mortar surface. After strike-off, the surface shall be worked and floated with a wooded, aluminum, or magnesium float followed by steel troweling. The slab shall then be broomed cross-wise with a fine hair broom. The outside edges of the slab shall be edged with a ¼-inch radius tool. All edging lines shall be removed.

The Detectable Warning Strip shall be set directly in poured concrete according to the plans and the manufacturer's specifications or as directed by the Engineer. The Contractor shall place two 11.34 Kg concrete blocks or sandbags on each tile to prevent the tile from floating after installation in wet concrete.

**Curing Compound / Sealer Application:** The Contractor shall apply the approved curing compound / sealer using a 3/8" nap roller or low pressure sprayer at a rate of 200 to 300 square feet per gallon and according to manufacturer installation instructions or as directed by the Engineer. Concrete surface shall be clean and free of any surface contaminants when applying sealer. When applying sealer to fresh concrete the bleed water must be off the surface as this water can inhibit proper function of the sealer. Any areas where the sealer puddles shall be immediately spread to other areas where absorption can occur to avoid undesirable appearance of finished surface. Sealer shall not be applied if rain is forecast within 24 hours, or if ambient temperature at the time of application is below 50 degrees or above 80 degrees Fahrenheit, or as directed by the Engineer.

Newly constructed sidewalk surfaces shall be protected from all foot or vehicular traffic for a period of seven days. The Contractor shall have on the job, at all times, sufficient polyethylene film or waterproof paper to provide complete coverage in the event of rain.

**Temperature:** No concrete is to be placed when air temperature is below 40°F, or at 45°F and falling, unless prior approval is given by the Engineer. In the event weather conditions may be such that concrete that is not completely cured is subject to freezing, the Contractor shall provide a minimum of a six-inch layer of hay, straw, or thermal blankets for protection. Any concrete laid during cold weather that is damaged by freezing shall be the responsibility of the Contractor and shall be replaced at his expense.

**Final Grading:** Upon completion of sidewalk construction, the Contractor is to re-grade the areas between sidewalks and curbs, if the typical section indicates a grass plot, and disturbed areas back of the sidewalk. The Contractor shall backfill and compact these areas so as to conform to the typical cross-section. The upper four inches of the backfill shall be loam or topsoil, loose and friable and free of sticks, rocks, roots, weeds, or other unsuitable material.

#### Method of Measurement:

Concrete Sidewalk will be measured by the actual number of square feet of completed and accepted Concrete Sidewalks.

Concrete Sidewalk-8" Thick will be measured by the actual number of square feet of completed and accepted Concrete Sidewalk-8" Thick.

Concrete Sidewalk with Integral Curb will be measured by the actual number of square feet of completed and accepted Concrete Sidewalk with Integral Curb.

Concrete Sidewalk Ramp will be measured by the actual number of each completed and accepted Concrete Sidewalk Ramps.

#### Basis of Payment:

"Concrete Sidewalk" will be paid for at the contract unit price per square foot ,complete in place, which price shall include all required excavation and disposal of surplus material, processed stone base, compaction, expansion joint material, dowels, dowel sleeves, PVC Sign Sleeves, finishing, curing compound/sealer, backfill, equipment, tools, materials and labor incidental thereto.

"Concrete Sidewalk–8-inch Thick" will be paid for at the contract unit price per square foot ,complete in place, which price shall include all required excavation and disposal of surplus material, processed stone base, compaction, wire mesh reinforcing, expansion joint material, dowels, dowel sleeves, finishing, curing compound/sealer, backfill, equipment, tools, materials and labor incidental thereto.

"Concrete Sidewalk with Integral Curb" will be paid for at the contract unit price per square foot ,complete in place, which price shall include all required excavation and disposal of surplus material, processed stone base, compaction, wire mesh reinforcing, expansion joint material, dowels, dowel sleeves, finishing, curing compound/sealer, backfill, equipment, tools, materials and labor incidental thereto.

"Concrete Sidewalk Ramp" will be paid for at the contract unit price per each ,complete in place, which price shall include all required excavation and disposal of surplus material, processed stone base, compaction, wire mesh reinforcing, expansion joint material, dowels, dowel sleeves, finishing, curing compound/sealer, backfill, equipment, tools, materials and labor incidental thereto.

Saw cutting, Removal, excavation to subgrade and disposal of existing concrete sidewalk sections shall be paid for at the contract unit price per square yard for "Removal of Concrete Sidewalk" as listed in the Bid Proposal, which price shall include all labor, material, tools, and equipment incidental thereto.

Item No.	Description	<u>Unit</u>
0921001A	CONCRETE SIDEWALK	S.F.
0921002A	CONCRETE SIDEWALK-8" THICK	S.F.
0921003A	CONCRETE SIDEWALK WITH INTEGRAL CURB	S.F.
0921005A	CONCRETE SIDEWALK RAMP	EA.

#### ITEM # 0921040A

#### BRICK PAVERS ON 8" PROCESSED STONE BASE

#### Description:

This item shall consist of furnishing and placing clay brick pavers on a 8" compacted process stone base including all excavation, removal and disposal of surplus material, processed stone base, furnishing and placing of brick pavers, sand base material, sand joint filler, cutting of brick pavers, labor, materials, tools, and equipment necessary to install the clay brick pavers in the locations indicated on the plans or as directed by the Engineer.

#### Materials:

#### **Brick Paving Units:**

The paving units shall be as manufactured by The Belden Brick Company P.O. Box 20910 Canton, Ohio 44701-0910 Phone (330) 456-0031, or approved equal. The bricks shall be 4" x 8" x 2 ¼" thick and have chamfered edges with lugs. The compressive strength shall average greater than 8,000 psi minimum. The average cold water absorption shall not be greater than 8% with no individual unit testing greater than 11%. Absorption test results may not be achieved through the use of sealers or other products applied to the clay paver. Resistance of 50 freeze-thaw cycles, when tested in accordance with ASTM C67. In addition, the clay paver must pass CSA-A231.2 freeze thaw test in saline solution without the use of sealers or other products applied to the paver. A test report must be submitted by the manufacturer. Dimensional tolerances should meet the PX standard. The dimensional tolerances around the mean values for length, width, and depth shall be 1/16". The pavers should be solid units without core holes or other perforations. The pavers shall meet or exceed ASTM C902 Light Traffic Paving Brick

#### Brick Paver Descriptions:

The Belden Brick Company P.O. Box 20910 Canton, Ohio 44701-0910 Phone: 330-451-2031 Website: www.beldenbrick.com

NOTE: Paver colors and names are based on Belden Brick product descriptions.

Brick Pavers: Series: City Line Color: Regimental Full Range Paver Pattern: Herringbone

Soldier Course: Color: Regimental Red Pattern: Double Stretcher

**Processed Stone Base:** The material for this item shall be crushed trap rock conforming to the requirements of Article M.05.01 Processed Aggregate Base and Pavement of the Form 817, except that coarse aggregate shall be broken stone, and fine aggregate shall be stone sand, screenings, or a combination thereof. Gravel or reclaimed miscellaneous aggregate shall <u>not</u> be used.

Sand Base Material: Sand base material shall conform to Article M.03.01 of the Standard Specifications

**Sand Joint Filler:** Sand shall be a clean, washed, uniformly well graded masonry sand conforming to ASTM C144-03, except that the fineness modulus shall be 2.25 +/- 0.10 Sand shall be from a single

approved source. Source of supply shall not be changed during course of the work without written permission of the Engineer. **Color to be approved by Engineer.** 

#### Construction Methods:

The Contractor shall excavate all existing material to the proposed subgrade as indicated on the plans and details. The existing subgrade shall be properly compacted prior to installation of the 8" process stone base. Process stone base material required to meet the final grades shall be placed and properly compacted ensuring a minimum thickness of 8" is achieved. The Contractor shall place a layer of sand base course material 2" in thickness on the properly prepared gravel base. The sand base course shall be thoroughly compacted and present a hard smooth surface. After the sand base course has been properly prepared, Brick Pavers shall be placed at the final grades in the pattern mentioned above or as directed by the Engineer. The brick shall be placed tightly. The Contractor shall place the sand joint filler into all joints ensuring sand is completely installed to the full depth of the brick pavers.

#### Method of Measurement:

This work shall be measured by the actual number of square feet of Brick Pavers completed and accepted.

#### Basis of Payment:

This work shall be paid for at the contract unit price per square foot ,complete in place, which price shall include all required excavation and disposal of surplus material, furnishing and placing brick pavers, processed stone base, sand base, compaction, sand joint filler, cutting of brick pavers, equipment, tools, materials and labor incidental thereto.

<u>Item No.</u> 0921040A Description BRICK PAVERS ON 8" PROCESSED STONE BASE

#### ITEM # 0921041A STAMPED CONCRETE SIDEWALK

#### **Description:**

This item shall consist of installation of a Stamped Concrete Sidewalk constructed on a compacted processed stone base that incorporates integral concrete pavement color, pattern, textural surface, dry shake color hardener, concrete staining, and application of a sealant solution. Work under this item also includes furnishing and installing joints in accordance with the plans and this specification.

**Materials:** Materials for this work shall conform to the following requirements:

**Portland Cement:** Concrete shall conform to the requirements of Article M.03.01 for Class "F" Concrete with a maximum aggregate size of 1/2".

**Processed Stone Base:** The material for this item shall be crushed trap rock conforming to the requirements of Article M.05.01 Processed Aggregate Base and Pavement of the Form 817, except that coarse aggregate shall be broken stone, and fine aggregate shall be stone sand, screenings, or a combination thereof. Gravel or reclaimed miscellaneous aggregate shall <u>not</u> be used.

**Reinforcement:** Shall be #1010 wire mesh reinforcement conforming to the requirements of Article M.06.01.

**Color Admixture:** Shall contain colored, water-reducing, coloring agents that are lime proof and UV resistant, and without calcium chloride. The color admixture shall conform to the requirements of ASTM C979 and ASTM C494. Admixture shall be added to the concrete at the rates directed by the product manufacturer. **Color to be approved by the Engineer.** 

**Curing and Sealing Compound:** SCOFIELD® Cureseal-W<sup>™</sup> [Semi Gloss]. Curing and sealing compound shall conform to the requirements of ASTM C309 and matching the color admixture manufacturer, for use with integrally colored concrete. **Color to be approved by the Engineer.** 

Release Agent: pattern tool manufacturer recommended and compatible with integral color additives.

**Dry-shake Colored Hardener:** LITHOCHROME ® Color Hardener or approved equal. As recommended by the pattern tool manufacturer and of a heavy duty grade. **Color to be approved by the Engineer.** 

Preformed expansion joint filler shall conform with Article M.03.01 Part 5.(b).(1).

**Joint Sealant:** Select one of the following silicone joint sealants or an approved equal: Dow Corning 888 or 890-SL Manufactured by: The Dow Corning Corporation PO Box 994 Midland, MI 48686-0994.

Other silicone joint sealants expressly manufactured for use with concrete will be considered for use provided they are submitted in advance for approval to the Engineer. Other joint sealants will be considered for use only if a complete product description is submitted, as well as documentation describing at least five installations of the product. These documented installations must demonstrate that the product has performed successfully for at least three years under traffic conditions.

**Backer Rod:** An open-cell type rod with an impervious skin that will not outgas when ruptured. Use the backer rod together with the joint sealant. Select one of the following or an Engineer approved equal:

SOF ROD, manufactured by Nomaco Inc., CERA-ROD, manufactured by W.R.Meadows, Inc., Sandells Open-Cell Backer Rod, manufactured by Sandell Mfg. Co., Inc.

#### Construction Methods:

The Contractor shall have at least 5 years of experience performing the installation of patterned and colored concrete. The prime Contractor submits a minimum of 5 references proving the satisfactory completion of such work performed by the concrete contractor within 7 calendar days of the award of the contract for Engineer approval. The submittal shall include the names, addresses, and phone numbers of the personnel responsible for the administrating the contracts, and the location of the prior work. If the Engineer determines that the contractor proposed has insufficient experience, or has performed unsatisfactory work on other contracts, the prime Contractor will be required to resubmit documentation for an alternate contractor for the approval of the Engineer.

<u>Sample Panels:</u> Construct a display panel, 3' x 3' (minimum size), for three variations on pattern and color to be selected by the Engineer for use in selecting a pattern and color for use on the project. Display panel shall exhibit color range, texture, patterns, and workmanship. A maximum of three display panels will be required. Display panels shall be portable with suitable lifting handles.

Construction methods shall conform to the requirements of Article 9.21.03. The surface shall be finished and marked off as directed by the Engineer.

The stamped concrete shall have a uniform and consistent color and pattern as determined by the Engineer. Stamp patterns with respect to the joints to insure the stones in the pattern line up with the joint locations. Follow all manufacturers' recommendations unless otherwise directed by the Engineer.

Schedule the concrete placement to avoid exposure to excessive wind and heat before applying curing materials. In the event of forecasted rain, snow, or frost within a 24 hour period of time, protect concrete from moisture, freezing, or thawing.

**Method of Measurement:** This work will be measured for payment as follows:

Stamped Concrete Sidewalk will be measured by the actual number of square feet of completed and accepted Stamped Concrete Sidewalk.

Excavation, Backfill and Disposal of surplus material will not be measured for payment, but the cost shall be included in the bid price for Stamped Concrete Sidewalk.

Process Stone Base will not be measured for payment, but the cost shall be included in the bid price for Stamped Concrete Sidewalk.

Reinforcement will not be measured for payment, but the cost shall be included in the bid price for Stamped Concrete Sidewalk.

#### Basis of Payment:

The work under this item will be paid for at the contract unit price per square foot of "Stamped Concrete Sidewalk" complete in place and accepted, which price shall include all required excavation and disposal of surplus material, backfilling, process stone base, compaction, reinforcement, joint sealant, backer rod, equipment, tools, materials and labor incidental thereto.

Item No.	Description	<u>Unit</u>
0921041A	STAMPED CONCRETE SIDEWALK	S.F.

#### TOWN HALL/ACADEMY COMPLEX SIDEWALK, CURBING, STONE SITTING WALL

#### ATTACHMENT A: STATE WAGE RATES

General Statutes of Connection welfare payments and will ap on which the rates are established		<b>Division</b> of Section 31-53 of the prevailing rates a vithin 20 days of the ed by agreement to p	nd date pay to
Project Number:	Project Town:		
FAP Number:	State Number:	-	
Project: Town Hall Site R	Rehabilitation		
CLASSIFICATION		Hourly Rate	Benefits
encapsulation (except its remo	emoval Laborers: Asbestos removal and oval from mechanical systems which are not to be ers, blasters. **See Laborers Group 5 and 7**		
1) Boilermaker		33.79	34% + 8.96
1a) Bricklayer, Cement Masor	ns, Cement Finishers, Plasterers, Stone Masons	33.48	30.21
2) Carpenters, Piledrivermen		32.00	24.42

2a) Diver Tenders	32.00	24.42
3) Divers	40.46	24.42
03a) Millwrights	32.47	24.84
4) Painters: (Bridge Construction) Brush, Roller, Blasting (Sand, Water, etc.), Spray	46.95	20.15
4a) Painters: Brush and Roller	32.02	20.15
4b) Painters: Spray Only	35.02	20.15
4c) Painters: Steel Only	34.02	20.15

35.02	20.15
34.02	20.15
38.65	24.42+3% of gross wage
35.22	31.99 + a
40.62	29.71
29.25	19.50
	34.02 38.65 35.22 40.62

9) Group 2: Chain saw operators, fence and guard rail erectors, pneumatic tool operators, powdermen	29.50	19.50
10) Group 3: Pipelayers	29.75	19.50
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	29.75	19.50
12) Group 5: Toxic waste removal (non-mechanical systems)	31.25	19.50
13) Group 6: Blasters	31.00	19.50
Group 7: Asbestos/lead removal, non-mechanical systems (does not include leaded joint pipe)	30.25	19.50
Group 8: Traffic control signalmen	16.00	19.50

Group 9: Hydraulic Drills	29.30	18.90
LABORERS (TUNNEL CONSTRUCTION, FREE AIR). Shield Drive and Liner Plate Tunnels in Free Air		
13a) Miners, Motormen, Mucking Machine Operators, Nozzle Men, Grout Men, Shaft & Tunnel Steel & Rodmen, Shield & Erector, Arm Operator, Cable Tenders	32.22	19.50 + a
13b) Brakemen, Trackmen	31.28	19.50 + a
CLEANING, CONCRETE AND CAULKING TUNNEL		
14) Concrete Workers, Form Movers, and Strippers	31.28	19.50 + a
	31.60	

### Project: Town Hall Site Rehabilitation

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

31.28	19.50 + a
31.17	19.50 + a
32.22	19.50 + a
38.53	19.50 + a
38.34	19.50 + a
	31.17 32.22 38.53

Project: Town Hall Site Rehabilitation		
20) Change House Attendants, Powder Watchmen, Top on Iron Bolts	36.41	19.50 + a
21) Mucking Machine Operator	39.11	19.50 + a
TRUCK DRIVERS(*see note below)		
Two axle trucks	29.13	22.32 + a
Three axle trucks; two axle ready mix	29.23	22.32 + a
Three axle ready mix	29.28	22.32 + a
Four axle trucks, heavy duty trailer (up to 40 tons)	29.33	22.32 + a

## Project: Town Hall Site Rehabilitation Four axle ready-mix 29.38 22.32 + aHeavy duty trailer (40 tons and over) 29.58 22.32 + aSpecialized earth moving equipment other than conventional type on-the road 29.38 22.32 + atrucks and semi-trailer (including Euclids) ----POWER EQUIPMENT OPERATORS----Group 1: Crane handling or erecting structural steel or stone, hoisting engineer 39.30 24.05 + a(2 drums or over), front end loader (7 cubic yards or over), Work Boat 26 ft. & Over, Tunnel Boring Machines. (Trade License Required) Group 2: Cranes (100 ton rate capacity and over); Excavator over 2 cubic 38.98 24.05 + ayards; Piledriver (\$3.00 premium when operator controls hammer); Bauer Drill/Caisson. (Trade License Required) Group 3: Excavator/Backhoe under 2 cubic yards; Cranes (under 100 ton rated 38.24 24.05 + acapacity), Gradall; 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)

Group 4: Trenching Machines; Lighter Derrick; Concrete Finishing Machine; CMI Machine or Similar; Koehring Loader (Skooper)	37.85	24.05 + 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)	37.26	24.05 + a
Group 5 continued: Side Boom; Combination Hoe and Loader; Directional Driller.	37.26	24.05 + a
Group 6: Front End Loader (3 up to 7 cubic yards); Bulldozer (rough grade dozer).	36.95	24.05 + 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).	36.61	24.05 + a
Group 8: Mechanic, Grease Truck Operator, Hydroblaster, Barrier Mover, Power Stone Spreader; Welder; Work Boat under 26 ft.; Transfer Machine.	36.21	24.05 + 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).	35.78	24.05 + a

Project: Town Hall Site Rehabilitation		
Group 10: Vibratory Hammer, Ice Machine, Diesel and Air Hammer, etc.	33.74	24.05 + a
Group 11: Conveyor, Earth Roller; Power Pavement Breaker (whiphammer), Robot Demolition Equipment.	33.74	24.05 + a
Group 12: Wellpoint Operator.	33.68	24.05 + a
Group 13: Compressor Battery Operator.	33.10	24.05 + a
Group 14: Elevator Operator; Tow Motor Operator (Solid Tire No Rough Terrain).	31.96	24.05 + a
Group 15: Generator Operator; Compressor Operator; Pump Operator; Welding Machine Operator; Heater Operator.	31.55	24.05 + a
Group 16: Maintenance Engineer/Oiler	30.90	24.05 + a

## Project: Town Hall Site Rehabilitation

Group 17: Portable asphalt plant operator; portable crusher plant operator; portable concrete plant operator.	35.21	24.05 + a
Group 18: Power Safety Boat; Vacuum Truck; Zim Mixer; Sweeper; (minimum for any job requiring CDL license).	32.79	24.05 + a
**NOTE: SEE BELOW		
LINE CONSTRUCTION(Railroad Construction and Maintenance)		
20) Lineman, Cable Splicer, Technician	47.14	6.5% + 20.98
21) Heavy Equipment Operator	42.43	6.5% + 18.84
22) Equipment Operator, Tractor Trailer Driver, Material Men	40.07	6.5% + 18.27

As of:

Project: Town Hall Site Rehabilitation		
23) Driver Groundmen	25.93	6.5% + 8.53
23a) Truck Driver	35.36	6.5% + 16.88
LINE CONSTRUCTION		
24) Driver Groundmen	30.92	6.5% + 9.70
	50.72	0.570 + 9.70
25) Groundmen	22.67	6.5% + 6.20
26) Heavy Equipment Operators	37.10	6.5% + 10.70
27) Linemen, Cable Splicers, Dynamite Men	41.22	6.5% + 12.20

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28) Material Men, Tractor Trailer Drivers, Equipment Operators

35.04 6.5% + 10.45

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

ALL Cranes: When crane operator is operating equipment that requires a fully licensed crane operator to operate he receives an extra \$4.00 premium in addition to the hourly wage rate and benefit contributions:

1) Crane handling or erecting structural steel or stone; hoisting engineer (2 drums or over)

2) Cranes (100 ton rate capacity and over) Bauer Drill/Caisson

3) Cranes (under 100 ton rated capacity)

Crane with 150 ft. boom (including jib) - \$1.50 extra Crane with 200 ft. boom (including jib) - \$2.50 extra Crane with 250 ft. boom (including jib) - \$5.00 extra Crane with 300 ft. boom (including jib) - \$7.00 extra Crane with 400 ft. boom (including jib) - \$10.00 extra

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.

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*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.

#### ATTACHMENT B: CONSTRUCTION PLANS