

TOWN OF GLASTONBURY

INVITATION TO BID

<u>BID #</u>	<u>ITEM</u>	<u>DATE & TIME REQUIRED</u>
GL-2009-14	Route 17 (Main Street) Sidewalk Extension Great Pond Road to Old Maids Lane	April 2 nd 2009 at 11:00 a.m.

The Town of Glastonbury is currently seeking bids for the construction of approximately 990 linear feet of four-foot-wide concrete sidewalk along the west side of Route 17 (Main Street) and along a portion of Old Maids Lane to fill in various gaps in the sidewalk network between Great Pond Road and Old Maids Lane.

Bid Forms may be obtained at the Office of the Purchasing Agent, Town Hall, 2155 Main Street, Glastonbury, Connecticut 06033, (second level) and via the Town's website at www.glastonbury-ct.gov.

The Town reserves the right to waive informalities or reject any part of, or the entire bid, when said action is deemed to be in the best interests of the Town. All Sealed Bids must be submitted to the Office of the Purchasing Agent no later than the time and date indicated. All bids will be publicly opened and read.

Mary F. Visone
Purchasing Agent

**ROUTE 17 SIDEWALK EXTENSION
INVITATION TO BID**

BID #GL2009-14

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**ROUTE 17 SIDEWALK EXTENSION
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BID #GL2009-14

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, or any part of 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 unless otherwise specified.
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. Specifications must be submitted complete in every detail and, when requested, samples shall be provided. If a bid involves any exception from stated specifications, they must be clearly noted as exceptions, underlined, and attached to the bid.
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 at the job site which would affect their work before submitting a bid. Failure to meet this criteria shall not relieve the Bidder of the responsibility of completing the bid without extra cost 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. An Affirmative Action Statement will be required by the successful Bidder.

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. 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.org. Upon entering the website click on **General Information**, then **Bids and Quotes** which will bring you to the links for the **Code of Ethics** and the **Consultant 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. **Non-Resident Contractors:**

The Town is required to report names of non-resident (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. **Upon award, all non-resident contractors must furnish a five percent (5%) sales tax guarantee bond (State Form AU-766) or a cash bond for five percent (5%) of the total contract price (State Form AU-72) to DRS even though this project is exempt from most sales and use taxes.**

See State Notice to Non-Resident Contractors SN 2005 (12). If the above bond is not provided, the Town is required to withhold five percent (5%) from the contractor's payments and forward it to the State DRS.

The contractor must promptly furnish to the Town a copy of the **Certificate of Compliance** issued by the State DRS.
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.

**ROUTE 17 SIDEWALK EXTENSION
INVITATION TO BID**

BID #GL2009-14

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

NOTE: For technical questions regarding this Bid, please contact Stephen M. Braun, Assistant Town Engineer, at (860) 652-7743.

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 Town Engineer/Manager of Physical Services of the Town of Glastonbury acting personally or 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.

04.02 A State Department of Transportation Encroachment Permit will be required for the project and shall be obtained by the Contractor at no additional cost to the Town.

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.

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 CLEANING UP

15.01 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.

15.02 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.

16.00 ROYALTIES AND PATENTS

16.01 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 Intent of Contract: 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 and Incidental Construction, Form 816 (Form 816") and supplements thereto are to be considered part of the Contract Documents. The Form 816 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 816, 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.

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 Town Engineer/Manager of Physical Services, 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 PARTIAL USE OF IMPROVEMENTS

03.01 The Town may, at its election, give notice to the Contractor and place in use those sections of the work that have been completed, inspected and can be accepted as complying with the Contractor Documents and if, in its opinion, each such section is reasonably safe and fit for the use and accommodation for which it was intended, provided:

- a. The use of such sections of the work shall not materially impede the completion of the remainder of the work by the Contractor.
- b. The Contractor shall not be responsible for any damages or maintenance costs due directly to the use of such sections.
- c. The use of such sections shall in no way relieve the Contractor of his liability due to having used defective materials or to poor workmanship.
- d. The period of guarantee shall not begin until the date of the final acceptance of all work required under this Contract.

04.00 INSURANCE

04.01 The Contractor 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 Contractor and all of its agents, employees and sub-contractors and other providers of services and shall name the **Town 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. **These requirements shall be clearly stated in the remarks section on the Contractors Certificate of Insurance.** Insurance shall be written with Carriers approved in the State of Connecticut and with a minimum Best's Rating of A-. In addition, all Carriers are subject to approval by the Town. Minimum Limits and requirements are stated below:

- a. Worker's Compensation Insurance:
 - Statutory Coverage
 - Employer's Liability
 - \$100,000 each accident/\$500,000 disease-policy limit/\$100,000 disease each employee
- b. Commercial General Liability:
 - 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.

c. Automobile Insurance:

- Including all owned, hired, borrowed, and non-owned vehicles
- Limit of Liability for Bodily Injury and Property Damage
Per Accident: \$1,000,000

04.02 The Contractor shall direct its Insurer to provide a Certificate of Insurance to the Town before any work is performed. The Certificate shall specify that the Town shall receive 30 days advance written notice of cancellation or non-renewal. The Certificate shall evidence all required coverage including the Additional Insured and Waiver of Subrogation. The Contractor shall provide the Town copies of any such policies upon request.

04.03 INDEMNIFICATION: To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Town 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) 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, regardless of whether or not it is caused in part by a party indemnified hereunder.

05.00 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.

06.00 CONTRACTOR'S WORK AND STORAGE AREA

06.01 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.

07.00 DISPOSAL AREA

07.01 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. The Town's waste disposal guidelines for this facility may be found on the Town's website under the **Departments** menu by selecting **Sanitation - Refuse Disposal - Bulky Waste Facility** or by using the following link: <http://www.glastonbury-ct.gov/index.aspx?page=900>. The Contractor is required to obtain a disposal area for all other unsuitable or surplus materials at no cost to the Town.

08.00 DUST CONTROL

08.01 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.

09.00 MAINTENANCE / GUARANTEE PERIOD

09.01 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.

10.00 PROTECTION OF EXISTING UTILITIES

10.01 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.

10.02 There will be no extra payment for submitting plans or details for supporting and protecting all existing utilities during construction.

11.00 TIME FOR COMPLETION/NOTICE TO PROCEED

11.01 Within ten (10) calendar 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 Purchase Order for the Project prior to initiating any work.

11.02 The work under this Contract shall commence within twenty-one (21) calendar days of the Notice to Proceed / Purchase Order. After the work has begun, it shall continue in an orderly fashion such that all contract work is completed within sixty (60) calendar days from the date of commencement.

12.00 LIQUIDATED DAMAGES

12.01 As actual damages for any delay in completion of the work that the Contractor is required to perform under this Contract are impossible to determine, the Contractor and the Sureties shall be liable for and shall pay to the Town the sum of \$100.00 as fixed, agreed and liquidated damages for each calendar day of delay from the above-stipulated completion, or completion as modified in writing by both parties, until such work is satisfactorily completed and accepted.

13.00 SCHEDULE OF DRAWINGS

13.01 The Contractor is hereby alerted that the plan set entitled "Route 17 Sidewalk Expansion, Located from Great Pond Road to Old Maids Lane", including three (3) sheets prepared by the Town of Glastonbury Engineering Division is to be considered part of these specifications.

14.00 CHANGES IN THE WORK

14.01 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.

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 REMOVAL AND STORAGE OF MATERIALS AND STRUCTURES FOUND ON THE WORK

16.01 All salvable materials, including topsoil, gravel, fill materials, etc. and structures, including drainage pipes, catch basins and manhole frames and covers, guide railing, etc. that are not to remain in place or that are not designated for use in the work, shall be carefully removed by the Contractor and stored at such places as directed by the Engineer. All salvable materials removed and stored shall remain the property of the Town. The Engineer shall determine the materials or structures to be salvaged.

17.00 PROSECUTION AND PROGRESS

17.01 The Contractor shall give the Engineer a seven-day advance written notice of construction activities that will alter traffic patterns that result in lane shifts, detours,

temporary closures of lane(s), permanent closure of lane(s), or lane reductions. This advance notification will allow the Town to publish news releases and/or provide public radio announcements to inform the public of revised traffic patterns or possible traffic delays. Failure of the Contractor to provide such timely notice shall be considered a breach of Contract and will subject the Contractor to stop work orders until such time as the seven-day notice has been satisfied.

18.00 EXTRA AND COST PLUS WORK

18.01 Extra and cost plus work shall be governed by Article 1.04.05 and Article 1.09.04 of the Form 816.

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002.0 PREPARATION OF SITE

002.1 General: The Contractor shall furnish all labor, materials, tools, and equipment necessary and shall do all work to prepare the site as indicated on the drawings and as herein specified.

002.2 Tree Removal: Removal of trees as indicated on the plans shall be performed by workman skilled in the area of tree removal under the supervision of a Connecticut Licensed Arborist. The Contractor shall mark all trees, shrubs, and plants to be removed in accordance with the plans and these specifications. The Engineer shall have 7 days to field review the markings and make any adjustments prior to the start of the clearing operation.

Trees and shrubs within the right-of-way or within any property owned by the Town of Glastonbury that are designated for removal must be posted as such by the Glastonbury Tree Warden (Mr. Greg Foran of the Parks and Recreation Department, 652-7686) for a period of 10 days prior to removal. **No trees or shrubs within the Town of Glastonbury right-of-way shall be cut or removed until such posting has been completed and subsequent approval given by the Tree Warden.**

In general, no trees, etc. in public streets and highways are to be cut or damaged in any way except as noted on the plans. Trees, bushes, and growing crops on other lands may be cut, removed, or trimmed only to the extent provided in the terms of the rights-of-way or access rights possessed by the Town, and also only within the limits and in the manner, if any, indicated by the Engineer or by the drawings or Special Conditions.

002.3 Tree Trimming: Trimming of trees by a Connecticut Licensed Arborist is included under this item as required for clearance of construction equipment and pedestrians below the tree canopy. When the canopy of a tree must be elevated for clearance above the proposed sidewalk, trimming shall be done around the entire circumference of the tree.

002.4 Tree Protection and Care of Property: The Contractor shall install high visibility construction fence at the drip line of the tree canopy as shown on the plans and as directed by the Engineer to protect existing trees that are not to be cut from damage during construction. The Engineer, at his sole discretion, may also direct the Contractor to enclose the trunks of trees adjacent to his work that are not to be cut with substantial wooden boxes of such height as may be necessary to protect them from injury from piled material, from equipment, from his operations, or otherwise due to his work. Excavating machinery and cranes shall be of suitable type and be operated with care to prevent injury to trees not to be cut, and particularly to overhanging branches and limbs.

Branches, limbs, and roots shall not be cut except by permission of the Engineer. All cutting shall be smoothly and neatly done without splitting or crushing. In case of cutting or unavoidable injury to branches, limbs, and trunks of trees, the cut or injured portions shall be neatly trimmed and covered with an application of grafting wax or tree-healing paint, as directed.

Cultivated hedges, shrubs, and plant that might be injured by the Contractor's operations shall be protected by suitable means or shall be dug up and temporarily replanted and maintained. After the construction operations have been substantially completed, they shall be replanted in their original positions and cared for until growth is re-established. If cultivated hedges, shrubs, and plants are injured to such a degree as to affect their growth or diminish their beauty or usefulness, they shall be replaced by items of kind and quality at least equal to the kind and quality existing at the start of the work.

On paved surfaces, the Contractor shall not use or operate tractors, bulldozers, or other power-operated equipment, the treads of wheels that are so shaped as to cut or otherwise injure such surfaces.

- 002.5 Clearing: From areas to be cleared, the Contractor shall cut or otherwise remove all trees, saplings, brush, vines, and other vegetable matter such as snags, sawdust, bark, etc., and refuse. The area to be cleared shall be confined to the width shown on the plans or as stipulated in the Proposal. Vines, brush, and similar undergrowth shall be cut as close to the ground as practicable. Trees may be cut leaving a longer stump to facilitate their removal by power-operated equipment. No trees shall be cut or trimmed unless they are so indicated on the drawings.

Clearing shall also include removal and disposal of all items shown on the plans to be removed, or directed by the Engineer to be removed as part of the project, including, but not limited to, removal and disposal of existing sidewalk, steps, drainage structures, fences, and any and all other structures or materials not specifically listed in the Bid Proposal but required to be removed to accomplish the work.

All road signs, mail boxes, etc., shall be removed and reset as directed.

- 002.6 Grubbing: Grubbing shall consist of the complete removal of all tree stumps and roots larger than two inches in diameter to a minimum depth of 12-inches below the finish grade surface. All excavations made below the finished surface by the removal of trees, stumps, etc. shall be filled with suitable material and thoroughly compacted in such a manner that its surface will conform to the surrounding surface.

Stump grinding shall be used for stump removal where the potential for damage to adjacent improvements or underground utilities exists due to the excavation of stumps, or as directed by the Engineer. The requirements for grubbing noted above shall also apply to stump grinding operations.

- 002.7 Disposal: All materials removed during trimming, tree removal, and clearing and grubbing operations shall be disposed of by the Contractor in a manner satisfactory to the Engineer.

- 002.8 Payment: Except as provided otherwise in the Bid Proposal or Special Conditions, this work shall be paid for at the Contract Unit Price for "Preparation of Site", which price shall include protection of existing trees and vegetation, tree removal and tree trimming under the supervision of a Connecticut Licensed Arborist, clearing and grubbing within the limits of the work, stump grinding, removal and disposal of trees, roots, stumps, brush and other objects, leveling of areas to accommodate the work, and all labor, materials, tools, and equipment necessary thereto.

102.0 GRAVEL BORROW

102.1 Description: This work shall include the trucking of granular material from the Town of Glastonbury Bulky Waste Facility on Tryon Street, or other approved borrow pit, for use as borrow in the formation of embankment to match the proposed grades for sidewalk construction.

102.2 Material: Materials shall conform to all requirements of Article 2.02.03 of the Form 816 for performance when incorporated into embankments.

102.3 Construction Methods: Gravel borrow will be required in certain areas of sidewalk construction to form embankment as shown on the plans. In these areas, the Contractor shall be responsible for pick up and delivery of sufficient gravel borrow to form the embankment. The Town shall provide equipment at the Tryon Street Facility to load the Contractor's trucks in a timely manner, however the Contractor shall provide a minimum of 48 hours notice to ensure that the Town has sufficient personnel available at this facility.

Formation of embankment shall also be completed by the Contractor under this pay item as described in Article 2.02.03 of the Form 816, and meet the proposed subgrade elevations described on the plans or directed by the Engineer.

102.4 Payment: Gravel Borrow shall be paid for at the Contract Lump Sum price for "Gravel Borrow", complete and in place. This price shall include furnishing and delivery of material, formation of embankment, and all labor, tools, equipment, and materials incidental thereto. The Town shall provide borrow material from the Tryon Street Facility at no cost to the Contractor.

103.0 ROCK EXCAVATION AND DISPOSAL

103.1 General: The Contractor shall excavate rock (as defined below), if encountered, to the lines and grades indicated on the drawings or as directed, shall dispose of the excavated material, and shall furnish acceptable material for backfill in place of the excavated rock.

In general, rock within the limits of the sidewalk base course shall be excavated to the proper depth of the sidewalk base course.

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

103.2 Excess Rock Excavation: If rock is excavated beyond the limits of payment indicated on the drawings, specified, or authorized in writing by the Engineer, the excess excavation, whether resulting from overbreakage or other causes, shall be backfilled by and at the expense of the Contractor as specified before in this Section.

Excess excavation below the elevation of the sidewalk base course shall be filled with material of the same type, placed and compacted in the same manner as specified for the sidewalk.

In excavations for structures, excess excavation in the rock beneath foundations shall be filled with concrete which shall be Class A or Class B, at the option of the Contractor. Other excess excavation shall be filled with earth as specified in the Section entitled "Backfilling Around Structures" under BACKFILLING AND CONSOLIDATION.

103.3 Blasting: If explosives are used, all requirements for transportation, use and storage of Local, State, and Federal laws and regulations must be complied with and all necessary permits and licenses obtained by the Contractor at his expense. Permits and licenses may be obtain from the Town of Glastonbury Fire Marshalls Office, and must be shown to the Engineer upon request. Pre and Post Blast survey, may be required at the direction of the Fire Marshall, and cost of such survey shall be included under this pay item.

Explosives must be carefully transported, stored, handled, and used. The Contractor will keep on the job only such quantities of explosives as may be needed for the work underway and only during such time as they are being used. Explosives shall be stored in a secure manner in locked containers and separate from all tools. Caps and detonators shall be stored separately from other explosives. When the need for explosives is ended, all such material remaining on the job shall be promptly removed from the premises. Care must be taken that no explosives, caps, or detonators are stolen or get into the hands of unauthorized persons, or left unguarded where they may cause accidents.

Explosives shall be of such power and placed and used in such quantities as will not make the excavation unduly large or shatter unnecessarily the rock upon or against which the main or structure is to be built, or injure adjacent persons or property, those portions of the new work or structure as may already be in place, or other adjacent pipes,

ducts, or other structures. The quantity of explosives fired at one blast must be small enough and the tie for blasting selected to avoid undue annoyance to persons owning or occupying the premises near the work.

The rock must be completely matted when blasts are fired to prevent damage or injury to persons or property or the scattering of broken fragments on the adjacent ground. Adequate warning shall be given to all persons in the vicinity before any blast is discharged.

When blasting is required, the operation shall be conducted with such care as not to cause damage to any of the existing underground utilities or adjacent structures. Should such occur, the cost of repairs shall be the sole responsibility of the Contractor.

The Contractor shall notify each public utility or others having structures in proximity to the site, and others who may be affected, of his intention to use explosives. Said notice shall be given in accordance with the applicable regulations therefore, and sufficiently in advance to enable the involved agencies/companies/persons and the Contractor to take such steps as may be necessary to protect life and property. Such notice shall not, in any way, relieve the Contractor of responsibility for any damage resulting from his blasting operations.

When in sufficiently close proximity to existing gas, water, sanitary, storm, or other utilities and structures, and all services connected thereto, the Contractor shall remove the rock by methods other than blasting, if necessary, in order to protect said utilities and their services from damage. Approved methods other than blasting are barring and wedging, jackhammer, drilling, rock jacks, or other such hand or machinery methods that will not damage the adjacent utility.

No explosives shall be brought into, stored, or used on the site of any job by the Contractor unless and until he shall have furnished the Engineer with a satisfactory Certificate of Insurance showing that the risks arising from the presence of and use of explosives, and from blasting, are included within the insurance provided by the Contractor to secure his obligations to the Town. Insurance should also cover damage to underground utilities or other underground facilities.

When blasting for trench excavation, each shot sequence shall begin sufficiently ahead of completed work to prevent damage to the completed work, which must be properly protected prior to each shot.

The provisions herein shall apply where soil formation resembles rock, whether in trench, structure, or general excavation, even if it is of such nature that it is not classified and paid for as rock excavation and, if so ordered by the Engineer, will apply to openings cut through masonry, nested boulders, or other materials not herein classified as rock.

103.4 Blasting Records: An accurate blasting log must be maintained continuously for the duration of the Contract. The log shall record, for each shot, the location, amount of holes, depth, spacing, exact date and time of the blast, amount of explosives per hole, and the number of caps used. In addition, a sketch showing displacement of direct and delay caps for each shot shall be recorded.

103.5 Test Blasting and Monitoring Program: The Contractor shall employ an acceptable, independent vibration/blasting consultant to conduct test blasting prior to production blasting to devise suitable blasting procedures for production blasting, and to monitor production blasting. The vibration/blasting consultant shall be a Registered Professional Engineer in the State of Connecticut and shall have a minimum of ten years experience

as a vibration/blasting consultant. The Contractor shall submit the name of the vibration/blasting consultant to the Engineer prior to starting the work.

The purpose of the test blasting is to develop control procedures for production blasting so that no disturbance or damage shall be done to utilities, equipment, buildings, structures, groundwater wells, or the aquifer.

Based on the results of the test blasting, the vibration/blasting consultant shall develop a suitable blasting program and distance-quantity of explosive tables of the production blasting. The blasting program and the distance-quantity tables shall be submitted to the Engineer 21 days prior to the commencement of production blasting. All production blasting operations shall be in accordance with the blasting program.

The vibration/blasting consultant shall also perform continuous monitoring of all initial blasting operations and intermittent monitoring of subsequent blasting, as deemed necessary by the vibration/blasting consultant. Blasts shall be monitored with a minimum of two 3-component seismometers that record the entire particle velocity wave train and not just peak velocities. Accurate, legible seismometer records of all monitored blasts shall be obtained, and one copy of all blast records shall be submitted to the Engineer within seven days after blasting.

103.6 Wells: The Contractor's attention is directed to the existence of active groundwater supply wells near the area of construction. The Contractor shall locate all wells within or near the project area that could be affected by his operations.

The Contractor shall conduct his operations so that no disturbance or damage shall be done to the groundwater supply wells or to the aquifer from which they draw water. The aquifer is herein defined as underlying soil and rock formations within a distance of 1,500 feet from the wells and the groundwater within those formations.

The Contractor shall be fully responsible for determining the methods and controls necessary so that his construction operations do not disturb groundwater wells or the aquifer, and do not change the quality or quantity of water reaching the well.

If evidence of a change in well water quality or well yield, or disturbance or damage to any utility, equipment, building, or structure is observed or reported to the Contractor, he shall immediately notify the Engineer and all blasting operations shall be discontinued and the Contractor's vibration/blasting consultant shall recommend revised blasting procedures. The Contractor shall initiate the revised procedures, once approved by the Engineer, before blasting is continued.

The Contractor shall furnish potable water to any home where the well is disrupted or the water is declared unfit for human consumption. The water shall be supplied in such quantity as necessary to allow the homeowner to function on a normal day-to-day basis without any significant inconvenience or expense. The water shall be delivered as frequently as necessary to assure its freshness. The Contractor shall continue to furnish water until the problem is resolved.

The Contractor shall be fully responsible for the restoration or replacement of all water supply wells, utilities, equipment, buildings, or structures damaged by his operations at no cost to the Town.

103.7 Shattered Rock: If the rock below normal depth is shattered due to drilling or blasting operations of the Contractor and the Engineer considers such shattered rock to be unfit for foundations, the shattered rock shall be removed and the excavation shall be

backfilled with concrete as required, except that in pipe trenches, screened gravel may be used for backfill, if approved. All such removal and backfilling shall be done by and at the expense of the Contractor.

- 103.8 Preparation of Rock Surfaces: Whenever so directed during the progress of the work, the Contractor shall remove all dirt and loose rock from designated areas and shall clean the surface of the rock thoroughly using steam to melt snow and ice, if necessary. Water in depressions shall then be removed, as required, so that the whole surface of the designated area can be inspected to determine whether seams or other defects exist.

The surfaces of rock foundations shall be left sufficiently rough to bond well with the masonry and embankments to be built thereon and, if required, shall be cut to rough benches or steps.

Before any masonry or embankment is built on or against the rock, the rock shall be scrupulously freed from all vegetation, fragments, ice, snow, and other objectionable substances. Picking, barring, wedging, streams of water under sufficient pressure, stiff brushes, hammers, steam jets, and other effective means shall be used to accomplish this cleaning. All free water left on the surface of the rock shall be removed.

- 103.9 Removal of Boulders: Piles of boulders or loose rock encountered within the limits of earth embankments shall be removed to a suitable place of disposal.

- 103.10 Disposal of Excavated Rock: Excavated rock may be used in backfilling trenches subject to the following limitations:

- a. Pieces of rock larger than permitted under the section entitled "Backfilling Pipe Trenches" shall not be used for this purpose.
- b. The quantity of rock used as backfill in any location shall not be so great as to result in the formation of voids.
- c. Rock backfill shall not be placed within 18 inches of the surface of the finished grade.
- d. Surplus excavated rock shall be disposed of as specified for surplus excavated earth.

- 103.11 Backfilling Rock Excavations: Where the rock has been excavated and the excavation is to be backfilled, the backfilling above normal depth shall be done as specified under EARTH EXCAVATION BACKFILL. If material suitable for backfilling is not available in sufficient quantity from other excavations, the Contractor shall, at his own expense, furnish suitable material from outside sources.

- 103.12 Compaction of Backfill Material: Consolidation of backfill material in a trench where rock has been blasted shall be obtained through the use of a water-jetting method, or as approved by the Engineer.

- 103.13 Measurement and Payment: Where rock (as defined in this Section) is encountered, it shall be stripped of the overlaying material and the Engineer will measure the same. All rock excavated before the Engineer shall have examined it shall be estimated by the Engineer based on obvious evidence of rock.

The quantity of rock excavation to be paid for shall be the number of cubic yards of rock in place, as if measured before excavation, that would have been removed if the excavation had been made everywhere exactly to the lines of payment shown in the typical cross section for sidewalk construction. The volume of excavation will be determined by average end area method.

Payment for rock excavation shall include all materials, labor, and equipment required for excavation and removal of rock as described in this Section and as required for compliance with all applicable codes and regulations. If blasting is required, pre/post blast survey and all other work necessary for compliance with applicable codes and regulations is included in the contract unit price for this item.

113.0 BITUMINOUS CONCRETE LIP CURBING

113.1 General: This item shall conform to Section 8.15 BITUMINOUS CONCRETE LIP CURBING, of the Form 816.

201.0 CONCRETE SIDEWALKS

201.1 General: The Contractor is to construct sidewalks to lines and grades as shown on the drawings or at locations as directed by the Engineer. The sidewalks shall be of monolithic construction and 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. Sidewalk construction shall include the removal of existing and construction of new house lateral walks where new sidewalk grades make it necessary. At street corners where the intersection is rounded with a radius of less than 25 feet to the curb, the sidewalk slabs will be a minimum of five feet in length and constructed of five-inch thick concrete. The sidewalk shall pitch to the street at a slope of 1/4-inch per foot or as directed by the Engineer.

Pedestrian 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.

201.2 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. 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.

201.3 Concrete: The concrete furnished shall conform with respect to composition, transportation, mixing and placing, to Class F Cement Concrete 4,000 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.

201.4 Detectable Warning Strips: The Detectable Warning Strip shall be a prefabricated detectable warning surface tile as manufactured from Engineered Plastics Inc. 300 International Drive, Suite 100 Williamsville, NY 14221, telephone number (800) 682-2525 or the approved equal from ADA Fabricators, INC. P.O Box 179 North Billerica, MA 01862 telephone number (978) 262-9900. The tile shall conform to the dimensions shown on the plans and have a brick red homogeneous color throughout in compliance with Federal Standard 595A Color #22144 or approved equal.

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.

201.5 Dowels: Smooth dowels, 5/8-inch in diameter, measuring 24 inches in length shall be installed within all expansion and contraction joints, concrete driveway aprons and the last end section of each sidewalk slab poured at the end of each working day.

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 3/4-inches in diameter and 12 inches in depth into the existing concrete slab. The dowels, dipped in a liquid asphalt or grease and wrapped in aluminum foil, 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.

Smooth metal dowels shall be 5/8-inch in diameter and 24 inches in length. All metal dowels shall conform to the requirements of ASTM A615 Grade 60.

201.6 Expansion Joints: At maximum intervals of 15 feet, an expansion joint shall be placed. The material for expansion joints shall be either 1/4-inch thick cork asphalt or 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.

201.7 Surface Finish: 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 1/4-inch radius tool. All edging lines shall be removed.

201.8 Curing: The Contractor shall use a liquid membrane-forming curing compound. The curing compound shall be similar or equal to Demicon "Cure Hard" with fugitive dye and shall meet the latest ASTM Specification C-156. Waterproof paper or plastic membrane are acceptable alternatives.

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.

201.9 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.

201.10 Basis of Payment: Concrete Sidewalk shall be measured and paid for at the Contract unit price per square foot as contained in the Bid Proposal, which price shall include the Base Course Underneath Sidewalks, excavation, and all other materials and all labor, tools, and equipment necessary for completion of the work.

Pedestrian Ramps shall be measured and paid for as a unit at the Contract unit price for each Pedestrian Ramp as contained in the Bid Proposal, which price shall include the Base Course Underneath Sidewalks, Excavation, Detectable Warning Strip, and all other materials and all labor, tools, and equipment necessary for completion of the work.

204.0 GRADING AND TOPSOILING

204.1 Description: This work shall consist of furnishing, placing, and shaping topsoil in areas shown on the plans where directed by the Engineer. The topsoil shall be placed to the depth stated in the Contract or specifications.

204.2 Material: The material shall conform to the requirements of Article M.13.01.1 of the Form 816.

204.3 Construction Methods: The areas on which topsoil is to be placed shall be graded to a reasonably true surface and cleaned of all stones, brickbats, and other unsuitable materials. After areas have been brought to proper subgrade and approved by the Engineer or his agent, loam shall be spread to a depth as indicated in the Contract, or to a depth of no less than four inches, with due allowance made for settlement. All stones, roots, debris, sod, weeds, and other undesirable material shall be removed from the topsoil. After shaping and grading, all trucks and other equipment shall be excluded from the topsoiled area to prevent excessive compaction. The Contractor shall perform such work as required to provide a friable surface for seed germination and plant growth prior to seeding.

During hauling and spreading operations, the Contractor shall immediately remove any material dumped or spilled on the shoulders or pavement.

It shall be the Contractor's responsibility to restore to line, grade, and surface all eroded areas with approved material and to keep topsoiled areas in acceptable condition until the completion of the construction work.

Wherever subgrade material is sand, gravel, or other previous material, and elsewhere as required by the Engineer, the Contractor shall place a four-inch layer of clay or other impervious material on the subgrade material before placing loam.

204.4 Payment: This work will be measured for payment by the number of square yards of area on which the placing of the topsoil has been completed and the work accepted.

The limits of payment shall be to the slope limits as shown on the plans. In the absence of slope limits, the maximum area of measurement shall be the area extending two feet behind the sidewalk and the area between the sidewalk and edge of pavement. No payment shall be made outside of these limits unless the disturbance was directed or approved by the Engineer. No payment shall be made for areas disturbed for staging, storage of materials, or other area disturbed for the convenience of the Contractor.

This work will be paid for at the Contract unit price per square yard for "Grading and Topsoil", which price shall include all materials, equipment, tools, labor, and work incidental thereto.

205.0 TURF ESTABLISHMENT

205.1 Description: The work included under this item shall consist of furnishing and placing pre-emergent fertilizer, seed, and mulch on all areas to be seeded as shown on the plans, or where directed by the Engineer.

205.2 Materials:
The seeding materials for this work shall conform to the requirements of Section M.13 of the Form 816, and Table 205.1.

Pre-emergent fertilizer shall be comparable to Tupersan Seed Starter 11-23-10, plus Crabgrass Control.

205.3 Construction Methods: Construction methods shall be those established as agronomically acceptable and feasible, and that are approved by the Engineer.

205.4 Preparation: Areas shall be made friable and receptive to seeding by methods approved by the Engineer. In all cases, the final prepared area shall meet the lines and grades for such surface as shown on the plans, or as directed by the Engineer. In no event will seeding be allowed on a hard or crusted soil surface.

All areas shall be reasonably free from weeds taller than three inches. Removal of weed growth from the slope areas shall be by approved methods, including hand mowing, which does not rut or scar the slope surface or cause disruption of the slope line and grade. Seeding on level areas shall not be permitted until substantially all weed growth is removed. Seeding on slope areas shall not be permitted without removal or cutting of weed growth except by written permission of the Engineer.

205.5 Seeding Season: The normal seasonal dates for seeding shall be as follows:

Spring: March 15th to June 15th
Fall: August 15th to October 15th

If the Contactor seeds outside the seasonal periods, any additional materials furnished and placed to establish growth shall be done at the Contractor's expense. The Contractor must also reseed, mulch, and repair any areas seeded, whether out-of-season or not, that are damaged by fire, erosion, or any other cause, as directed by the Engineer at no expense to the Town.

Areas of disturbed soil that will contribute to air and stream pollution shall be established to the designated vegetation cover as soon as feasible or when directed by the Engineer.

205.6 Seeding Methods: Seed shall be uniformly applied by any agronomically acceptable and feasible method approved by the Engineer.

Seed for lawn areas shall be fresh and clean and free from weed seed, seed of grasses other than those specified, and free from chaff and other extraneous material. Seed shall be raked in with a fine tooth rake. After seed is sown, the surface of the ground shall be thoroughly rolled with a light roller suitable for sown seed. All seeded areas shall be watered and maintained to the satisfaction of the Engineer. Within two weeks after grass seed has come up, any areas where grass seed has not germinated properly, or where the surface has been washed or damaged in any way, shall be reseeded as before.

Normal seed mixtures shall be applied at the rate of 200 pounds per acre. Fertilizer shall be uniformly placed at the rate of 600 pounds per acre.

205.7 Mulching: Areas seeded shall be mulched unless otherwise ordered by the Engineer. Wood chip mulch shall not be used on seeded areas. Unless otherwise shown on the plans or called for in the Special Provisions, mulch will be applied according to Table 205-2. The mulch will be anchored according to Table 205-3.

205.8 Compaction: The Contractor shall keep all equipment and vehicular and pedestrian traffic off areas that have been seeded to prevent excessive compaction and damage to young plants. Where such compaction has occurred, the Contractor shall rework the soil to make a suitable seed bed, then reseed and mulch such areas with the full amount of the specified materials at no extra charge to the Town.

205.9 Cleanup: This work will not be considered complete until all clean-up operations are complete. This shall include the removal of all debris resulting from the seeding operations on shoulders, pavement, or adjacent property, public and private. The Contractor shall be required to shape, grade, and establish vegetative cover in accordance with the specifications on all areas disturbed outside the normal limits of construction.

Any area in the project where ground cover is destroyed due to the construction operations must have a new ground cover established by means of seeding, fertilizing, and mulching, if necessary, as directed by the Engineer.

205.10 Warranties and Certificates: The Contractor shall supply the Engineer with all warranties or certificates furnished with the seed mixture or fertilizer prior to use of the material.

205.11 Payment: This work will be measured for payment by the number of square yards of surface area actually covered by seeding, fertilizer, and mulch when 90% of seeded area has achieved four-inch growth as specified.

The limits of payment shall be to the slope limits as shown on the plans. In the absence of slope limits, the maximum area of measurement shall be the area extending two feet behind the sidewalk and the area between the sidewalk and edge of pavement. No payment shall be made outside of these limits unless the disturbance was directed or approved by the Engineer. No payment shall be made for areas disturbed for staging, storage of materials, or other area disturbed for the convenience of the Contractor.

This work will be paid for at the Contract unit price per square yard for "Turf Establishment", which price shall include all materials, maintenance, equipment, tools, labor, and work incidental thereto.

TABLE 205-1

SEED MIXTURES, RATES AND DATES

<u>SEED MIXTURE 4/</u>	<u>PERCENT BY WT.</u>	<u>SEEDING RATES</u>		<u>SEEDING DATES</u>	<u>SPECIAL ADAPTATION</u>
		<u>LBS. PER 1,000 SQ. FT.</u>	<u>LBS. PER PER ACRE</u>		
Red Fescue <u>3/</u> Perennial Ryegrass	60 40	1	40	April 1 – June 15 Aug. 1 – Sept. 30	No Mow Areas Droughty Areas
Reed Canary Grass Redtop	80 20	1	50	April 1 – June 15 Aug. 15 – Sept. 15	Wildlife or Wet Area
Red Fescue <u>2/</u> Kentucky Bluegrass Perennial Bluegrass	70 20 10	2	80	April 1 – June 15 Aug. 15 – Oct 15	High Maintenance Lawn Areas
Ky 31 Tall Fescue Birdsfoot Trefoil	70 30	1	40	April 1 – June 1	No Mow Areas Wet Areas

1/ These are minimum seeding rates and should be increased if adverse conditions exist.
2/ 10 lbs. of Birdsfoot Trefoil may be added to this mixture.
3/ Ky 31 Tall Fescue may be used in place of Red Fescue.
4/ May add 5 lbs. of Perennial Ryegrass for quick fall cover.

TABLE 205-2
 GUIDE TO MULCH MATERIAL

<u>MULCH MATERIAL</u>	<u>QUALITY</u>	<u>APPLICATION RATES</u>		<u>REMARKS</u>
		<u>Per 1,000 sq. ft.</u>	<u>Per Acre</u>	
Hay or Straw	Air dried, free from undesirable seeds	75-100 lbs. or 2-3 bales	1.5-2 tons 90-110 bales	Use straw where mulch effect is to be maintained for more than three months. Subject to wind blowing unless kept moist or tied down. Good for critical area erosion control. Spread uniformly, leave 10-20% of ground exposed. Excellent for seedbed protection until vegetation is established. Salt marsh hay where available is usually free of weed seeds.

TABLE 205-3

MULCH ANCHORING GUIDE

<u>ANCHORING METHOD OR MATERIAL</u>	<u>REMARKS AND HOW TO APPLY</u>
Jute Netting, Twisted	Good for watering or critical erosion area seedbed stabilization. Use pegs or special stables to anchor netting and prevent blowing. Generally available in 4-foot wide rolls and up to 300-foot long.
Peg and Twine	Used to anchor hay, straw, or other mulch which may be subject to blowing. Drive 8 to 10 inch long wooden pegs into soil on 3 or 4 foot centers. Secure mulch to soil surface by stretching twine between the pegs in a criss-cross and square pattern on each. Make two or more turns with twine around each stake. Drive pegs flush with soil if mowing and maintenance is planned.

206.0 SEDIMENTATION CONTROL SYSTEM

206.1 General: This item shall conform to Section 2.19 of the Form 816.

213.0 EARTHWORK AND GRADING FOR SIDEWALK CONSTRUCTION

213.1 General: 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.

213.2 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. Excavation shall include the saw cutting, removal, and disposal of bituminous concrete and concrete sidewalks, driveways, and pavements, including curbing and tree roots, where necessary, due to the new sidewalk grade and as shown on the plans or as directed by the Engineer. 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.

213.3 Grading Existing Topsoil: Upon completion of sidewalk construction, the Contractor is to 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.

213.4 Lawn Restoration: This work will consist of restoring grass areas disturbed in the Contract work. All work will be in conformance with Section 205.0 TURF ESTABLISHMENT.

213.5 Basis of Payment:
Except as provided otherwise below and in the Bid Proposal for "Removal of Pavement", all of the above-described work under the heading of EARTHWORK AND GRADING FOR SIDEWALK CONSTRUCTION shall be included in the Contract unit price for sidewalks or other items associated with the work.

Sawcutting, removal, and disposal of existing bituminous pavement and concrete sidewalk shall be paid for at the contract unit price per square yard for "Removal of Pavement", which price shall include all labor, material, tools, and equipment incidental thereto.

214.0 BASE COURSE UNDERNEATH SIDEWALKS

214.1 Description: The Contractor shall make the necessary excavation and furnish material for base construction under sidewalks.

214.2 Material: The material used for base course construction shall conform to the requirements of Section M.02.01 of the Form 816 for broken or crushed stone. It shall consist of sound, tough, and durable stone and shall be free of thin or elongated pieces, lumps of clay, soil, loam, or vegetative matter. All material shall be approved by the Engineer prior to its use.

214.3 Construction Method: The material for the base course shall be spread upon the prepared subgrade to such depth as to give a compacted thickness of eight 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.

214.4 Basis of Payment: There will be no separate payment for this item. All of the above-described work under the heading "Base Course Underneath Sidewalks" shall be included in the Contract Unit Prices for sidewalks or the item associated thereto.

215.0 PERMANENT DRIVEWAY REPAIRS

215.1 Description: The Contractor shall furnish all labor, tools, material, and equipment to replace all driveway pavement damaged due to the associated construction, as shown on the plans and as directed by the Engineer. This item shall also include the removal and disposal of existing bituminous pavement necessary for driveway replacement work.

215.2 Materials:

The base course shall be processed stone of a quality satisfactory to the Engineer.

Hot laid bituminous concrete for driveway repairs shall be Bituminous Class 2 per Section M.04 of the Form 816.

215.3 Construction Methods: Portions of the driveway or driveway aprons to be replaced shall be saw cut, and the existing pavement removed and disposed of by the Contractor. The eight inches of trench immediately below the bottom of the proposed pavement shall be backfilled with processed stone and compacted in four-inch layers. The upper three inches shall be topped by the Contractor with hot bituminous concrete or as required to match the existing pavement, and maintained at grade. The edges shall be painted with an asphalt emulsion prior to the placement of permanent pavement. Hot laid bituminous concrete shall be placed so as to give a three-inch compacted surface, or a surface that has a depth equal to the existing driveway surface, whichever is greater. Compaction shall be made with a power-driven roller. The finished surface shall be free from waves or depressions.

215.4 Basis of Payment: Measurement and payment will be based on the Contract Unit Price per square yard of "Permanent Driveway Repairs" complete in place, which price shall include saw cutting, removal and disposal of existing bituminous pavement, all materials (including base materials), labor, tools, and equipment incidental thereto.

228.0 TREE PROTECTION TRENCH

228.1 Description: This work includes excavation of a tree protection trench adjacent to an existing or proposed sidewalk by means of a chain-driven trenching machine with additional pruning of roots using hand methods as required. This is performed adjacent to the proposed sidewalk excavation and within the drip line of an existing tree to cleanly sever roots prior to sidewalk excavation.

The services of a licensed arborist will be required to supervise the above referenced work and shall be included in the contract unit price for tree protection trench.

228.2 Construction Methods: Tree protection trench shall be installed in advance of the intended sidewalk construction during time periods where damage to trees will be minimized, as directed by the Engineer. The work area shall generally include the length of sidewalk within the drip line of the canopy of the tree of concern. Extreme care shall be taken by the Contractor to identify and protect underground utilities within the work area, and any conflicts shall be immediately brought to the attention of the Engineer.

Where tree protection trench is called for on the plans, the Contractor shall use a chain-driven trenching apparatus to cleanly sever tree roots adjacent to the sidewalk to the full depth of the sidewalk excavation as directed by the Engineer. Additional pruning of roots using hand methods may also be required, as directed by the Engineer or licensed arborist supervising the work.

The disturbed area shall be restored to existing grades and shall be seeded per Section 205.00 of the specifications.

228.3 Payment: Tree protection trench shall be measured for payment by the number of linear feet of tree protection trench installed and accepted. This work shall be paid for at the Contract unit price for "Tree Protection Trench", which price shall include all materials, equipment, tools, labor, and work incidental thereto.

The services of a certified arborist to supervise work under this item shall not be measured separately for payment, but rather shall be included in the contract unit price for "Tree Protection Trench".

Restoration of disturbed areas shall be measured and paid for under Section 205.00 Turf Establishment.

301.0 MAINTENANCE AND PROTECTION OF TRAFFIC

301.1 Description: Unless other provisions are made on the plans or in the Special Conditions, the Contractor shall keep the roadway open to traffic for the full length of the project and shall provide a sufficient number of travel lanes and pedestrian pathways to move that traffic ordinarily using the roadway. The travel lanes and pedestrian pathways shall be drained and kept reasonably smooth and in suitable condition at all times in order to provide minimum interference with traffic and consistent with proper execution of the work.

Suitable ingress and egress shall be provided at all times where required for all intersecting roads and for all abutting properties have legal access.

301.2 Construction Methods: When a scheme for maintenance of traffic that may include detours is shown on the plans or approved by the Legal Traffic Authority, this shall govern unless an alternate scheme acceptable to the Engineer is offered by the Contractor at no additional cost. If no scheme is shown on the plans or described in the Special Conditions of the Contract and the Contractor wishes to deviate from the provisions of maintaining traffic as described in this Section, the Contractor must submit, and the Engineer may approve, a schedule showing a proposed sequence of operations and a compatible method of maintaining traffic.

301.3 Traffic Signs and Barricades: The Contractor will furnish signs, barricades, traffic cones, and traffic delineators to forewarn traffic of the construction. The Contractor will also provide such safety measures, pavement markings, warning devices, and signs as deemed necessary to safeguard and guide the traveling public through detours ordered by the Engineer or included in the approved scheme for maintenance of traffic. Signs and barricades will be delivered adjacent to the project and traffic cones and delineators will be provided when required, at no cost to the Town. The Contractor shall erect, maintain, move, adjust, relocate and store these signs, barricades, traffic cones, and delineators when, where, and in accordance with the "Manual on Uniform Traffic Control Devices", or as directed by the Engineer.

The use of unauthorized or unapproved signs, barricades, traffic cones, or traffic delineators will not be permitted.

The Contractor shall keep all signs in proper position and clean and legible at all times. Care shall be taken so that weeds, shrubbery, construction materials or equipment, and soil are not allowed to obscure any sign, light, or barricade. Signs that do not apply to existing conditions shall be removed or adjusted so that the legend is not visible to approaching traffic.

301.4 Snow Removal: The Contractor, when order by the Engineer, shall remove snow and take care of icy conditions on temporary, new, and existing sidewalks on any part of the right-of-way within the limits of the project.

Snow removal and correction of icy conditions other than those resulting from the Contractor's operations, and snow removal on uncompleted contracts under traffic, will remain the obligation of the Town.

301.5 Failure to Provide: Should the Contractor fail to perform any of the work required under this Section, the Town may perform, or arrange for others to perform, such work. In such cases, the Town will deduct from monies due or to become due the Contractor, all expenses connected therewith.

301.7 Basis of Payment: Maintenance and Protection of Traffic will be paid for at the Contract Lump Sum price for "Maintenance and Protection of Traffic". This price shall include all costs

**ROUTE 17 SIDEWALK EXTENSION
DETAILED CONSTRUCTION SPECIFICATIONS**

BID #GL-2009-14

for labor, equipment, and services involved in the erection, maintenance, moving, adjusting, relocating and storing of signs, barricades, traffic cones, and traffic delineators furnished by the Contractor, as well as all cost of labor and equipment involved in the maintenance of traffic lanes and detours ordered or included in the approved scheme for maintenance of traffic.

NOTE:

The Town of Glastonbury **CHIEF OF POLICE**, acting in the capacity of the **LEGAL TRAFFIC AUTHORITY**, shall be the sole and final authority for the Maintenance and Protection of Traffic.

302.0 TRAFFICPERSON

302.1 General: This item shall conform to Section 9.70 TRAFFICPERSON, of the Form 816.

302.3 Description: Add the following to the first paragraph of Section 9.70.01

“Trafficpersons may consist of extra duty officers of the Glastonbury Police Department or uniformed flaggers meeting acceptable criteria. The Police Chief, as the Legal Traffic Authority, shall determine which is acceptable based on location, traffic volumes, and traffic conditions.”

“All work under this item shall be paid only for the duration of the Contract as contained in the Special Conditions under ‘Time for Completion/Notice to Proceed’ and for any time extensions granted in writing by the Town. Payment for police officers required after the duration of the Contract and approved time extensions shall be made directly by the Town and such costs deducted from future payments due the Contractor.”

303.3 Basis of Payment: Replace Section 9.70.05 with the following:

There will be no direct payment for safety garments or STOP/SLOW paddles. All costs associated with furnishing safety garments and STOP/SLOW paddles shall be considered included in the general cost of the item.

1. Police Officers: The sum of money shown on the bid proposal as "Estimated Cost" for this work will be considered the bid price even though payment will be made as described below. The estimated cost figure is not to be altered in any manner by the bidder. Should the bidder alter the amount shown, the altered figures will be disregarded and the original price will be used to determine the total amount for the contract.

When the trafficperson consists of Town of Glastonbury Police Officers, the Contractor shall provide the invoices from such work to the Engineer and the Town will pay these invoices directly to the Police Department. Under these circumstances, the Contractor will be reimbursed only for the 5% markup on the actual cost of police services under this line item.”

2. Uniformed Flagger: Uniformed flaggers will be paid for at the contract unit price per hour for “Trafficperson (Uniformed Flagger)” as listed in the bid proposal, which price shall include all compensation, insurance benefits, and any other cost or liability incidental to the furnishing of the trafficpersons ordered.

<u>Pay Item</u>	<u>Pay Unit</u>
Trafficperson (Police Officer)	Est.
Trafficperson (Uniformed Flagger)	Hr.

403.0 EARTH TRENCH EXCAVATION

403.01 General: The Contractor shall make excavations of normal depth in earth for trenches and structures; shall backfill such excavations to the extent necessary; shall furnish the necessary material and construct embankments and fills; and shall make miscellaneous earth excavations and do miscellaneous grading. All such work shall be done as indicated on the drawings and as herein specified.

The program of excavation, dewatering, sheeting and bracing shall be carried out in such manner as to eliminate all possibility of undermining or disturbing the foundations of existing structures or of work previously completed under this contract.

Excavation in general shall be in open trenches. Tunneling shall be done only to pass under obstructions such as pipes or duct or only as indicated on contract drawings, or in Special Provisions, or on written permission of the Engineer, and then only in accordance with those sections hereof which describe tunnel excavation, and subject to such further conditions as may have been described by drawings, Special Provisions, or as the Engineer may specify.

The Contractor shall make excavations in such manner and to such widths as will give suitable room for building the structures or laying and jointing the piping; shall furnish and place all sheeting, bracing, and supports; shall do all coffer damming, pumping and draining; and shall render the bottom of the excavations firm and dry and acceptable in all respects.

403.02 Trench Excavation: Where pipe is to be laid in gravel bedding or concrete cradle, the trench may be excavated by machinery to or to just below, the designated subgrade, provided that the material remaining at the bottom of the trench is no more than slightly disturbed.

Where pipe is to be laid directly on the trench bottom, the lower part of trenches in earth shall not be excavated to subgrade by machinery, but, just before the pipe is to be placed, the last of the material to be excavated shall be removed by means of hand tools to form a flat or shaped bottom, true to grade, so that the pipe will have a uniform and continuous bearing and support on firm and undisturbed material between joints except for limited areas where the use of pipe slings may have disturbed the bottom.

403.03 Depth of Trench: Trenches shall be excavated to such depths as will permit the pipe to be laid at the elevations, slopes or depths of cover indicated on the drawings, and at uniform slopes between indicated elevations.

403.04 Width of Trench: The methods and equipment used for excavation must be adapted to the conditions at the site and the dimensions of the required trench. The width of ground or street surfaces cut or disturbed shall, in general, be kept as small as practicable to accommodate the work and shall not be widened by scraping or loosening materials from the sides. Every effort shall be made to keep the sides of the trenches firm and undisturbed until backfilling has been completed and consolidated.

Width of pipe trenches shall be wide enough to provide sufficient space for shoring, for foundations, for drainage, for laying, jointing, inspecting, and backfilling of sides of pipe, or for building the required structures, and as near as feasible to the above described minimums, in order to reduce the load of backfill upon the top of the sewer; to provide lateral support for the fill and haunching on the sides of the pipe, and to insure that the pipe will not be pushed out of line while placing backfill.

The maximum permissible trench width to be paid by the Town varies with the diameter of the pipe (see table 403-1). Where the Contractor chooses not to use trench supports, the

Contractor will still be paid as per maximum trench widths or actual trench width, whichever is the least.

- 403.05 Excavation for Special Foundations: Where concrete, stone or underdrain is required or ordered, excavation shall be carried down to the depth and lines required for such foundation or underdrain. If required by contract drawings or Special Provisions as part of the structure and included in the price, no additional payment for this additional excavation, as excavation, will be made. If the foundation is paid by the cubic yard or other specific item of proposal, such price for foundation shall include excavation therefore. Excavation for underdrain is included in price for underdrain.

Where the plans, Proposal or Special Provisions indicate certain foundations, they will be constructed and paid for as indicated.

Where the soil in subgrade is found to be soft, loose or freshly-filled earth, or unstable or unsuitable as a base for the proposed sewer or structure, the Engineer may, in his discretion, order it excavated to such depth and width as he may deem proper and replaced with gravel, crushed stone, concrete, plank or similar materials as he may direct.

If the excavation for foundation is made wider or deeper than required or ordered, or if excavation for concrete on sides of pipe is made wider than required or ordered, then no additional payment for the additional quantities of excavation or for additional foundation or side filling materials will be made, if being assumed that the added space was excavated for the convenience of, or by error of, the contractor.

- 403.06 Length of Trench and Space Occupied: Trenches must be constructed with a minimum of inconvenience and danger to the public and all other parties. To that end, the length of trench opened at any time, from point where ground is being broken to completed backfill and temporary surfacing, and also the amount of space in streets or public and private lands occupied by trench soil banks, equipment and supplies, shall to exceed the space or spaces considered reasonably necessary and expedient by the Engineer. In determining the length of open trench, the space for equipment, materials, supplies, etc. needed, the Engineer will consider the nature of the street or land where work is being done, depth and width of trench, types and methods of construction and equipment being used, inconvenience to the public or to private parties, possible dangers, limits or rights-of-way and other proper matters.

The Contractor must keep streets and premises near the work free from unnecessary obstructions, debris, etc. The Engineer may, at any time order all equipment, materials, surplus from excavations, debris, etc., lying outside reasonable limits of space, promptly removed; and should the Contractor fail to remove such materials within three days after notice to remove same, the Engineer may cause any part or all of such materials to be removed by such persons as he may employ, at the Contractor's expense, and may deduct the costs thereof from payment which may be or may become due to the contractor under this Contract. In any cases when public safety urgently demands it, the Engineer may cause such materials to be removed without prior notice.

Trenches shall be excavated with approximately vertical sides between the elevation of the center of the pipe and an elevation one foot above the top of the pipe.

- 403.07 Dimensions of Trenches: Trenches shall be excavated to the lines indicated on contract drawings or as described for any particular structure by any contract document. In general, room shall be allowed for installing the pipe or other structure, for making and inspecting joints in pipe, for placing and compacting fill around and on both sides of pipe, for draining and pumping as needed, for removal of unsuitable materials, and for any other purpose incidental to the fulfillment of the Contract and these specifications.

Care must be taken to excavate to correct line, grade and width at all points.

In general, sides of trenches must be not less than four inches from outside of barrel of all pipe eight inches or less in size, six inches from outside of barrel of pipe ten inches or larger in size, or as shown by contract drawings. Except as otherwise provided, excavation shall conform closely to the form and grade of the bottom of the pipe or foundation required. To accomplish this, the Engineer may require that no earth shall be excavated by machinery nearer than six inches to the finished subgrade, and the last six inches of excavation in earth shall be carefully removed by hand labor to the exact lines and grade required, immediately prior to laying pipe or underdrain or building bottom of structure.

- 403.08 Extent of Open Excavation: The extent of excavation open at any one time will be controlled by the conditions, but shall always be confined to the limits prescribed by the Engineer. At no time shall the extend of the open excavation go beyond two structures.
- 403.09 Trench Excavation in Fill: If pipe is to be laid in embankments or other recently filled material, the material shall first be placed to the top of the fill or to a height of at least one foot above the top of the pipe, whichever is the lesser. Particular care shall be taken to ensure maximum consolidation of material under the pipe location. The pipe trench shall be excavated as though in undisturbed material.
- 403.10 Unauthorized Excavation: If the bottom of any excavation is taken out beyond the limits indicated or prescribed, the resulting void shall be backfilled at the Contractor's expense with ¾" crushed stone if the excavation was for a pipeline not having a concrete cradle or encasement, or with Class B concrete if the excavation was for a masonry structure.
- 403.11 Cutting of Pavement: When the trench lies within a paved area, the trench shall be cut with an approved tool. All cuts shall be made to straight lines and shall be parallel and/or perpendicular to the center line of the trench.
- 403.12 Bridging Trenches: The Contractor shall, at no cost, provide suitable and safe bridges and other crossings where required for the accommodation of travel, and to provide access to private property during construction, and shall remove said structures thereafter.
- 403.13 Obstacles: Some obstructions, obstacles, or difficulties in the path of the work anticipated, or in the performance of the work, may have been indicated by drawings, Special Provisions, or in other contract documents. The omission of any indication or mention of any obstruction, obstacle or difficulty which a reasonable and careful contractor, bidder, or estimator might have anticipated, or any question as to adequacy of such indication as given, shall not entitle the Contractor to any extra or additional compensation for any loss or expense occasioned directly or indirectly by such obstruction, etc., not to any extension of time or waiver of any requirement of the Contract and Specifications. The Contractor shall be understood to have entered into the Contract with full knowledge that in any work involving excavation, operation in public highways or adjacent to other developments, some unforeseen obstacle, difficulties, unforeseen soil or ground water conditions, etc., may be encountered, and that the Contractor has included in the bid and contract obligations the assumptions of the risks and cost to which such obstacles, etc. may subject the bid.

The Town will make arrangements for clearance or avoidance of permanent obstruction by pipes and structures of public utilities and of public bodies, except as otherwise indicated on drawings or contract documents, where such obstruction is found in the space to be occupied by the pipe or structure to be built under the Contract. The Town will not assume the cost of temporary removal, support, protection, etc. of pipes, poles, and other structures which do

not occupy the space to be occupied by the pipe or structure to be built for the Town, where removal, support, protection, etc. of such pipes, poles or structures is desired for the convenience of, or to save expense to, or to accommodate the equipment of the Contractor.

- 403.14 Ends of Certain Pipes to be Sealed: If any pipe, drain, culvert, connection or similar conduit is encountered and cut off or cut through incidental to the construction of the work, and if the said drain, etc. is not to continue to function or be used, the open end or ends of such pipes shall be securely and tightly closed by an adequate cover or bulkhead as directed by the Engineer. Except as a specific price for such closings was fixed in the Proposal, the cost of such covers, bulkheads, and the setting of them shall have been included in the price of prices bid for various other portions of the work in the Proposal and no additional payment will be made therefore.

In removing existing pipes or other structures, the Contractor shall use care to avoid damage to materials, and the Engineer shall include for payment only those new materials which are necessary to replace those unavoidably damaged.

The structures to which the provisions of the preceding three paragraphs shall apply include pipes, wires, and other structures which (a) are not indicated on the drawings or otherwise provided for, (b) encroach upon or are encountered near the substantially parallel to the edge of the excavation, and (c) in the opinion of the Engineer will impede progress to such an extent that satisfactory construction cannot proceed until they have been changed in location, removed (to be later restored), or replaced.

When fences interfere with the Contractor's operations, the Contractor shall remove and (unless otherwise specified) later restore them to at least as good condition as that in which they were found immediately before the work was begun, all without additional compensation. The restoration of fences shall be done as promptly as possible and not left until the end of the construction period.

- 403.15 Excavation Near Existing Structures: Attention is directed to the fact that there are pipes, drains, and other utilities in certain locations. Some of these have been indicated on the drawings, but no attempt has been made to show all of the services, and the completeness or accuracy of the information given is not guaranteed.

As the excavation approaches pipes, conduits, or other underground structures, digging by machinery shall be discontinued and the excavation shall be done by means of hand tools, as directed. Such manual excavation, when incidental to normal excavation, shall be included in the work to be done under items involving normal excavation.

Where determination of the exact location of a pipe or other underground structure is necessary for doing the work properly, the Contractor may be required to excavate test pits to determine such locations. When such test pits may be properly considered as incidental to other excavation, the Contractor shall receive no additional compensation, the work being understood to be included as a part of the excavation. When the Engineer orders test pits beyond the limits of excavation considered as part of the work, such test pits shall be paid for as specified under MEASUREMENT AND PAYMENT.

- 403.16 Protection of Existing Structures: All existing pipes, poles, wires, fences, curbing, property-line markers, and other structures which the Engineer decides must be preserved in place without being temporarily or permanently relocated shall be carefully supported and protected from injury by the Contractor. Should such items be injured, they shall be restored by the Contractor, without compensation therefore, to at least as good condition as that in which they were found immediately before the work was begun.

- 403.17 Relocation and Replacement of Existing Structures: Whenever the Contractor encounters certain existing structures as described below and is so ordered in writing, the Contractor shall do the whole or such portions of the work as he may be directed, to change the location of, remove and later restore, replace such structures, or to assist the owner thereof in so doing. For all such work, the Contractor shall be paid under such items of work as may be applicable, otherwise as Extra Work.
- 403.18 Payment: Unless specified otherwise, payment for earth excavation and the disposal of surplus excavated material shall be included in the unit price or lump sum price of the item associated therewith.

TABLE 403-1
TRENCH WIDTHS

Maximum pay limits for trench widths are as follows:

Where the Contractor chooses not to use trench supports the Contractor will still be paid as per maximum trench widths.

Size Pipe Nominal Inside Diameter	Maximum Width of Trench
6"	2.5 Feet
8"	4.0 Feet
10"	4.0 Feet
12"	4.0 Feet
15"	4.0 Feet
18"	4.0 Feet
21"	4.3 Feet
24"	4.5 Feet
27"	4.8 Feet
30"	5.1 Feet
33"	5.4 Feet
36"	5.7 Feet
39"	5.9 Feet
42"	6.3 Feet

404.0 TRENCH DEWATERING

404.01 General: To ensure proper conditions at all time during construction, the Contractor shall provide and maintain ample means and devices (including spare units kept ready for immediate use in case of breakdown) with which to intercept and/or remove promptly and dispose properly of all water entering trenches and other excavations. Such excavations shall be kept dry until the structures, pipes, and appurtenances to be built therein have been completed to such extent that they will not be floated or otherwise damaged.

All water pumped or drained from the work shall be disposed of in a suitable manner without undue interference with other work, damage to pavements, other surfaces, or property. Suitable temporary pipes, flumes, or channels shall be provided for water that may flow along or across the site of the work.

404.02 Temporary Underdrains: Temporary Underdrains, if used, shall be laid in trenches beneath the grade of the structure. Trenches shall be of suitable dimensions to provide room for the chosen size of underdrain and its surrounding gravel. Underdrain pipe shall be acceptable PVC or ADS pipe of standard thickness. Sewer pipe of the quality known as "seconds" will be acceptable.

Underdrains, if used, shall be laid at an approved distance below the bottom of the normal excavation wrapped in Mirafi 140 or equal as outlined in Section 409.05 of these specifications, and entirely surrounded by graded gravel or crushed stone to prevent the admission of sand or other soil into the underdrains. The distance between the top of the bell of the underdrain pipe shall be at least three (3) inches unless otherwise permitted. The space between the underdrain and the pipe or structure shall be filled and crushed stone which shall be rammed, if necessary, and left with a surface suitable for laying the pipe or building the structure.

404.03 Drainage Wellpoint System: If required, the Contractor shall dewater the excavations by means of an efficient drainage system which will drain the soil and prevent saturated soil from flowing into the excavation. The wellpoints shall be designed especially for this type of service. The pumping unit shall be designed for use with the wellpoints and shall be capable of maintaining a high vacuum and of handling large volumes of air and water at the same time.

If required, the installation of the wellpoints and pump shall be done under the supervision of a competent representative of the manufacturer. The Contractor shall do all special work such as surrounding the wellpoints with sand or gravel or other work which is necessary for the wellpoint system to operate for the successful dewatering of the excavations.

404.04 Payment: Unless otherwise specified, payment for trench dewatering shall be included in the unit price of the item associated therewith.

405.0 BACKFILLING AND CONSOLIDATION

405.1 General: In general, and unless other material is indicated on the drawings or specified, material used for backfilling trenches and excavations around structures shall be suitable material which was removed in the course of making the construction excavations.

Frozen materials shall not be placed in the backfill nor shall backfill be placed upon frozen material. Previously frozen material shall be removed, or shall be otherwise treated as required before new backfill is placed.

405.2 Backfilling around Structures: The Contractor shall not place backfill against or on structures until they have attained sufficient strength to support the loads (including construction loads) to which they will be subjected without distortion, cracking, or other damage. As soon as practical after the structures are structurally adequate and other necessary work has been done, special leakage tests, if required, shall be made. Promptly after the completion of such tests, the backfilling shall be started and then shall proceed until its completion. The best of the excavated materials shall be used in backfilling within two feet of the structure. Unequal soil pressures shall be avoided by depositing the material evenly around the structure.

405.3 Backfilling Pipe Trenches: As soon as practicable after the pipes have been laid and the joints have acquired a suitable degree of hardness, if applicable, or the structures have been built and are structurally adequate to support the loads, including construction loads to which they will be subjected, the backfilling shall be started, and thereafter it shall proceed until its completion in accordance with pipe manufacturer recommendations.

With the exception mentioned below in this paragraph, trenches shall not be backfilled at pipe joints until after that section of the pipeline has successfully passed any specified tests required. Should the contractor wish to minimize the maintenance of lights and barricades and the obstruction of traffic, the contractor may, at his own risk, backfill the entire trench, omitting or including backfill at joints as soon as practicable after the joints have acquired a suitable degree of hardness, if applicable, and the related structures have acquired a suitable degree of strength. The contractor shall, however, be responsible for removing and later replacing such backfill at no cost should the contractor be ordered to do so in order to locate and repair or replace leaking or defective joints or pipe.

a. Materials: The nature of the materials will govern both their acceptability for backfill and the methods best suited for their placement and compaction in the backfill. The materials and methods shall both be subject to the approval and direction of the Engineer. No stone or rock fragment larger than 12 inches in greatest dimension shall be placed in the backfill nor shall large masses of backfill material be dropped into the trench in such a manner as to endanger the pipeline. If necessary, a timber grillage shall be used to break the fall of material dropped from a height of more than five feet. Pieces of bituminous pavement shall be excluded from the backfill unless their use is expressly permitted, in which case they shall be broken up as directed.

b. Ho Pac Trench Consolidation: Where the trench backfill is consolidated by the "Ho Pac" method and the depth of the trench from the road or ground surface to the top of the pipe exceeds ten feet, the trench backfill shall be placed and consolidated in two lifts of equal depth.

The approved backfill material shall be placed and compacted at a moisture content between four and eight percent (based on dry density, by weight), or with two percent of the optimum

moisture content as determined by the moisture density relationship test specified in ASTM D 1557, at the option of the Engineer. Compaction shall be by a "Ho Pac" vibratory compactor or approved equal, operating at a frequency between ten and 40 Hertz, placed directly on the backfill surface, and applied with the maximum practical force applicable by the backhoe to which it is attached. Compaction effort shall be continued until no further visible settlement occurs.

c. Miscellaneous Requirements: Whatever method of compacting backfill is used, care shall be taken that stones and lumps shall not become nested and that all voids between stones shall be completely filled with fine material. Only approved quantities of stone and rock fragments shall be used in the backfill. The Contractor shall, as part of the work done under the items involving earth excavation and rock excavation as appropriate, furnish and place all other necessary backfill material.

All voids left by the removal of sheeting shall be completely backfilled with suitable materials, thoroughly compacted.

Where required, excavated material which is acceptable to the Engineer for surfacing or pavement sub base shall be placed at the top of the backfill to such depths as may be specified elsewhere or as directed. The surface shall be brought to the required grade and stones raked out and removed.

405.4

Embankments Over Pipe: Where the top of the pipe is less than three feet below the surface of the ground, additional fill shall be placed to form an embankment to cover and protect the pipe. The top of such embankment shall not be less than three feet above the top of the pipe and not less than one foot wider than the outside diameter of the pipe, with side slopes no steeper than one and one half horizontal to vertical, or of such section as may have been indicated by drawings. Such embankments shall be made of suitable dry earth, well compacted. Embankments must be maintained to the full required dimensions during the maintenance period of the Contract, and any settlement, washout, or deficiency occurring or found during that time shall be rectified and embankments brought up to the required height, width and slopes.

In general, such embankments may be made with materials excavated on the job and not used for backfill elsewhere. Should there not be sufficient surplus material for embankments, or should it be unsuitable or inconveniently located, the Contractor shall secure and provide sufficient suitable material. In any case, where the Town has provided borrow pits from which the Contractor may obtain filling material, the Contractor must conform to the conditions for excavating and moving such material as established by acts of the Town in obtaining such rights, and by indications on drawings or in other contract documents.

Openings through embankments for the passage of water and other purposes will be provided as indicated on drawings or elsewhere, or as ordered.

Grass shall be seeded or turf placed on embankments if, where, and as provided in contract documents. In general, if grassing is not required, the Contractor may, at his option, grass embankments to facilitate his maintenance. The Engineer may order grassing where not otherwise required under the general provisions for additional work if he deems proper.

Care shall be taken that sewer and appurtenances are not damaged by equipment or methods used for making and maintaining embankments.

Except as specific provisions may have been made in the Proposal for a particular contract, no payment other than prices bid for pipe will be paid for building and maintaining embankments or securing material therefore.

If, however, a price per cubic yard was established by the Proposal for filling material placed in embankments and/or in fills at side of embankment to avoid the formation of depressions there, the quantity of such filling material will be estimated and paid as the actual quantity placed, up to, but not exceeding the lines or sections required, measured after the embankment or fill has been made.

- 405.5 Material for Filling and Embankments: Approved selected materials available from the excavations and not required for backfill around pipes or against structures may be used for filling and building embankments, except as otherwise specified. Material needed in addition to that available from construction operations shall be obtained from approved gravel banks or other approved deposits. The Contractor shall furnish, at no cost, all borrowed material needed on the work.

All material, whether from the excavations or from borrow, shall be of such nature that after it has been placed and properly compacted it will make a dense, stable fill. It shall not contain vegetation, masses of roots, individual roots more than 18 inches long or more than one half inch in diameter, stones over six inches in diameter, or porous matter. Organic matter shall not exceed minor quantities and shall be well distributed.

- 405.6 Preparation of Subgrade: The Contractor shall remove loam and topsoil, loose vegetable matter, stumps, large roots, etc. from areas upon which embankments will be built or material will be placed for grading. The subgrade shall be shaped as indicated on the drawings and shall be so prepared by forking, furrowing, or plowing so that the first layer of the new material placed thereon will be well bonded to it.

- 405.7 Placing and Compacting Material: After the subgrade has been prepared as hereinbefore specified, the material shall be placed thereon and built up in successive layers until it has reached the required elevation.

Layers shall not exceed 12 inches in thickness before compaction. In embankments at structures, the layers shall have a slight downward slope away from the structure. In other embankments, the layers shall be slightly dished toward the center. In general, the finer and less pervious materials shall be placed against the structures or in the center, and the coarser and more pervious materials, upon the outer parts of embankments.

Each layer of material shall be compacted by the use of approved rollers or other approved means so as to secure a dense, stable and thoroughly compacted mass. At such points as cannot be reached by mobile mechanical equipment, the materials shall be thoroughly compacted by the use of suitable power driven tampers.

Previously placed or new materials shall be moistened by sprinkling, if required, to ensure proper bond and compaction. No compacting shall be done when the material is too wet, from either rain or too great an application of water, to compact it properly. At such times, the work shall be suspended until the previously placed and new materials have dried out sufficiently to permit proper compaction.

- 405.8 Compaction Test: When, in the opinion of the Engineer, such tests are necessary, the Contractor shall have compaction density tests taken by an approved independent laboratory. Ninety five percent of the maximum density determined in accordance with AA SHOT 180 Method D shall be achieved.
- 405.9 Payment: Unless otherwise specified, payment for backfilling and consolidation shall be included in the unit price or lump sum price of the item associated therewith.

406.0 PIPES AND CULVERTS

406.1 General: These items shall conform to Section 6.51 CULVERTS of the Form 816, modified as follows.

Trench excavation, dewatering, and backfill for these items shall be according to Section 403.0 EARTH TRENCH EXCAVATION, Section 404.0 TRENCH DEWATERING, and Section 405.0 BACKFILLING AND CONSOLIDATION of these specifications.

406.2 Method of Measurement: There will be no direct measurement for trench excavation and backfill, and there will be no measurement for payment for gravel fill, bedding material, or for the cost of modifying the existing catch basin as required for connection of the proposed pipe to the existing drainage system, but the costs thereof shall be included in the contract unit price per linear foot for the size and type of pipe being installed.

406.3 Basis for Payment: The work under these items will be paid for at the contract unit price per linear foot of pipe and size specified, complete in place including trench excavation, backfill, gravel fill, bedding material and all other materials, equipment, tools, and labor incidental thereto.

407.0 CATCH BASINS AND DROP INLETS

407.1 General: These items shall conform to Section 5.07 CATCH BASINS, MANHOLES, AND DROP INLETS of the Form 816, modified as follows.

Trench excavation, dewatering, and backfill for these items shall be according to Section 403.0 EARTH TRENCH EXCAVATION, Section 404.0 TRENCH DEWATERING, and Section 405.0 BACKFILLING AND CONSOLIDATION of these specifications.

Manholes shall not be included under this item, but shall conform to Section 508.0 MANHOLES of these specifications.

407.2 Method of Measurement: There will be no direct measurement for trench excavation in the installation of the various drainage appurtenances.

407.3 Basis of Payment: The work under these items shall be paid for at the unit contract price each for type of catch basins and drop inlets complete in place and shall include all materials, tools, equipment, and labor necessary to complete the excavation and installation of units in conformity with the plans, or as specified.

408.0 RIPRAP

408.1 General: This item shall conform to Section 7.03 RIPRAP, of the Form 816, except as described below. Riprap shall meet the gradation for modified riprap and shall be placed in a 12-inch thick layer to the horizontal limits shown on the plans or as directed by the Engineer. Riprap shall be placed on a 6-inch thick layer of granular fill or other suitable bedding material.

408.2 Method of Measurement: The quantity of riprap measured for payment shall be the number of square yards whose length and width are measured in place as accepted and thickness as described above.

There will be no direct measurement for trench excavation or bedding material in the installation of the riprap.

408.3 Basis of Payment: This work will be paid for at the contract unit price per square yard for the type of riprap indicated, complete in place, including all materials, excavation, bedding material, equipment, tools, and labor incidental thereto.

411.0 CULVERT ENDS

411.1 General: These items shall conform to Section 6.52 CULVERT ENDS and Section 2.05 TRENCH EXCAVATION, of the Form 816, modified as follows:

411.2 Method of Measurement: There will be no direct measurement for trench excavation and there will be no measurement for payment for gravel fill, bedding material, or for the cost of connecting proposed drainage systems with existing systems, but the cost thereof shall be included in the contract unit price per linear foot for the size and type of pipe being installed.

411.3 Basis for Payment: The work under these items will be paid for at the contract unit price per each size specified, complete in place, including trench excavation, gravel fill, bedding material, and all other materials, equipment, tools, and labor incidental thereto.

602.0 ADJUST GATE BOX

602.1 General: Under this item shall be included the adjustment of existing utility gate boxes and covers as required to match the proposed grades and furnish and install extension rings, extension stems, or air valve extensions as required by the appropriate utility company.

602.2 Construction Methods: The Contractor shall carefully excavate around the gate boxes, remove the boxes, install extension stems or air valve extensions if necessary, and adjust the gate box to the final grade using extension rings, and refill the excavation. Care shall be taken to prevent material from filling the inside of the gate box. Extension stems shall be required if the gate box is raised two-feet or more.

602.3 Payment: The resetting of gate boxes, complete with gate box extension rings, extension stems, air valve extensions, and additional top and bottom sections as required shall be measured as a unit. This work will be paid for at the Contract Unit Price for each "Adjust Gate Box", complete in place, which price shall include the cost of furnishing materials, and all labor, tools, and equipment incidental thereto.

Proposal of _____
(hereinafter called "Bidder"), organized and existing under the laws of the State of _____
_____, doing business as _____
_____.

To the Town of Glastonbury (hereinafter called "Town").

In compliance with your Invitation to Bid, the Bidder hereby proposed to furnish materials and/or services as per Bid Number GL-2009-14 in strict accordance with the Bid Documents, within the time set forth therein, and at the prices stated below.

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.

The Bidder acknowledges receipt of the following:

Addendum #1 _____

Addendum #2 _____

Addendum #3 _____

It is the responsibility of the Bidder to check the Town's website for any Addendum before submitting the bid.

**ROUTE 17 SIDEWALK EXTENSION
 BID PROPOSAL**

BID #GL-2009-14

<u>ITEM NO.</u>	<u>DESCRIPTION</u>	<u>QTY.</u>	<u>UNIT PRICE</u>	<u>EXTENSION</u>
1.	Preparation of Site in accordance with Section 002.0 of the Detailed Construction Specifications	Lump Sum	\$ _____/L.S.	\$ _____
2.	Gravel Borrow in accordance with Section 102.0 of the Detailed Construction Specifications	Lump Sum	\$ _____/L.S.	\$ _____
3.	Rock Excavation in accordance with Section 103.0 of the Detailed Construction Specifications	65 CY	\$ _____/C.Y.	\$ _____
4.	4' Wide Concrete Sidewalk, 5" thick in accordance with Section 201.0 of the Detailed Construction Specifications	3,960 SF	\$ _____/S.F.	\$ _____
5.	Pedestrian Ramps in accordance with Section 201.0 of the Detailed Construction Specifications	2 EA	\$ _____/EA.	\$ _____
6.	Grading and Topsoil in accordance with Section 204.0 of the Detailed Construction Specifications	1,200 SY	\$ _____/S.Y.	\$ _____
7.	Turf Establishment in accordance with Section 205.0 of the Detailed Construction Specifications	1,200 SY	\$ _____/S.Y.	\$ _____
8.	Bituminous Concrete Lip Curbing in Accordance with Section 211.0 of the Detailed Construction Specifications	40 LF	\$ _____/L.F.	\$ _____
9.	Sedimentation Control Fence in Accordance with Section 212.0 of the Detailed Construction Specifications	250 LF	\$ _____/L.F.	\$ _____
10.	Removal of Pavement in accordance with Section 213.0 of the Detailed Construction Specifications	105 SY	\$ _____/S.Y.	\$ _____
11.	Permanent Driveway Repairs in accordance with Section 215.0 of the Detailed Construction Specifications	1,100 SY	\$ _____/S.Y.	\$ _____
12.	Tree Protection Trench in accordance with Section 228.0 of the Detailed Construction Specifications	120 LF	\$ _____/L.F.	\$ _____

**ROUTE 17 SIDEWALK EXTENSION
 BID PROPOSAL**

BID #GL-2009-14

ITEM NO.	DESCRIPTION	QTY.	UNIT PRICE	EXTENSION
13.	Maintenance and Protection of Traffic in accordance with Section 301.0 of the Detailed Construction Specifications	Lump Sum	\$_____/L.S.	\$_____
14.	Trafficperson (Police Officer) in accordance with Section 302.0 of the Detailed Construction Specifications	EST	\$3,000.00 /EST	\$ 3,000.00
15.	Trafficperson (Uniformed Flagger) in accordance with Section 302.0 of the Detailed Construction Specifications	24 HR	\$_____/HR	\$_____
16.	12-inch HDPE Pipe in accordance with Section 406.0 of the Detailed Construction Specifications	14 LF	\$_____/LF	\$_____
17.	12-inch HDPE Culvert End in accordance with Section 411.0 of the Detailed Construction Specifications	1 EA	\$_____/EA	\$_____
18.	Modified Riprap in accordance with Section 408.0 of the Detailed Construction Specifications	7 SY	\$_____/SY	\$_____
19.	Adjust Gate Box in accordance with Section 602.0 of the Detailed Construction Specifications	2 EA	\$_____/EA.	\$_____

TOTAL BID AMOUNT: \$_____

WRITTEN BID AMOUNT: _____

**ROUTE 17 SIDEWALK EXTENSION
BID PROPOSAL**

BID #GL-2009-14

**TOWN OF GLASTONBURY
BID / PROPOSAL
DATE ADVERTISED**

**GL # or RPGL #
DATE / TIME DUE**

**2009-14
April 2nd, 11:00 a.m.**

NAME OF PROJECT

Route 17 Sidewalk Extension

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 ADDENDUMS POSTED PRIOR TO BID OPENING.

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

Doing Business as (Trade Name)

Signature of Individual

Street Address

Title

City, State, Zip Code

Date

Telephone Number/Fax Number

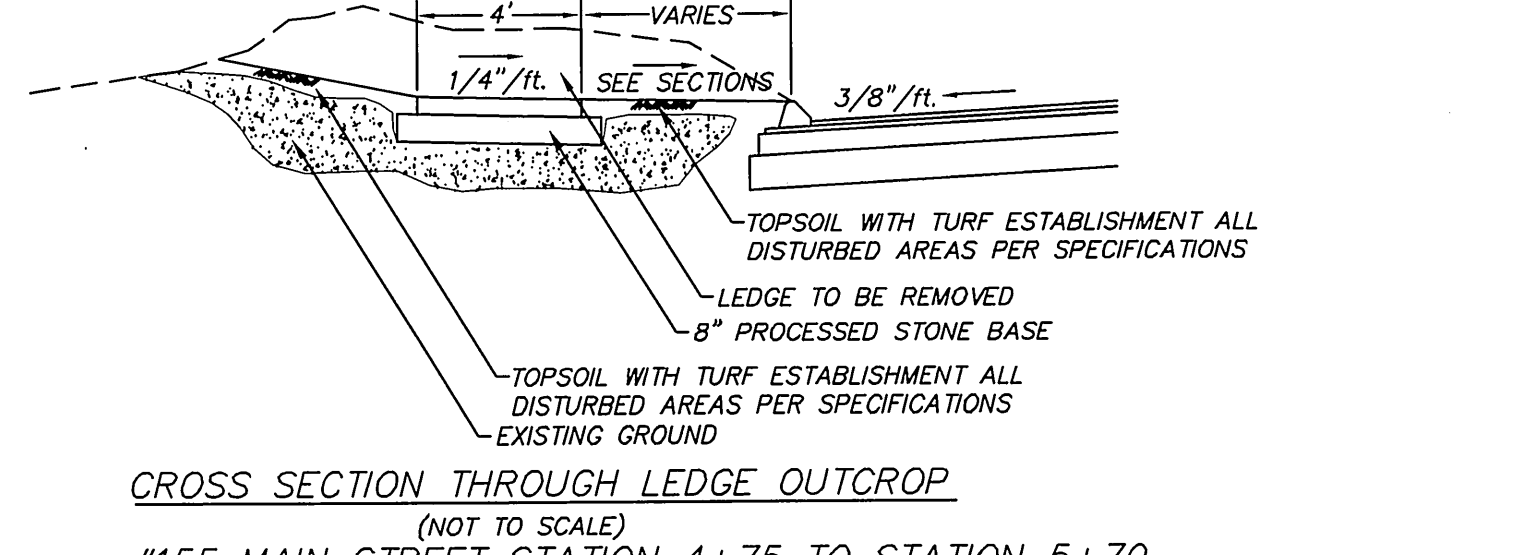
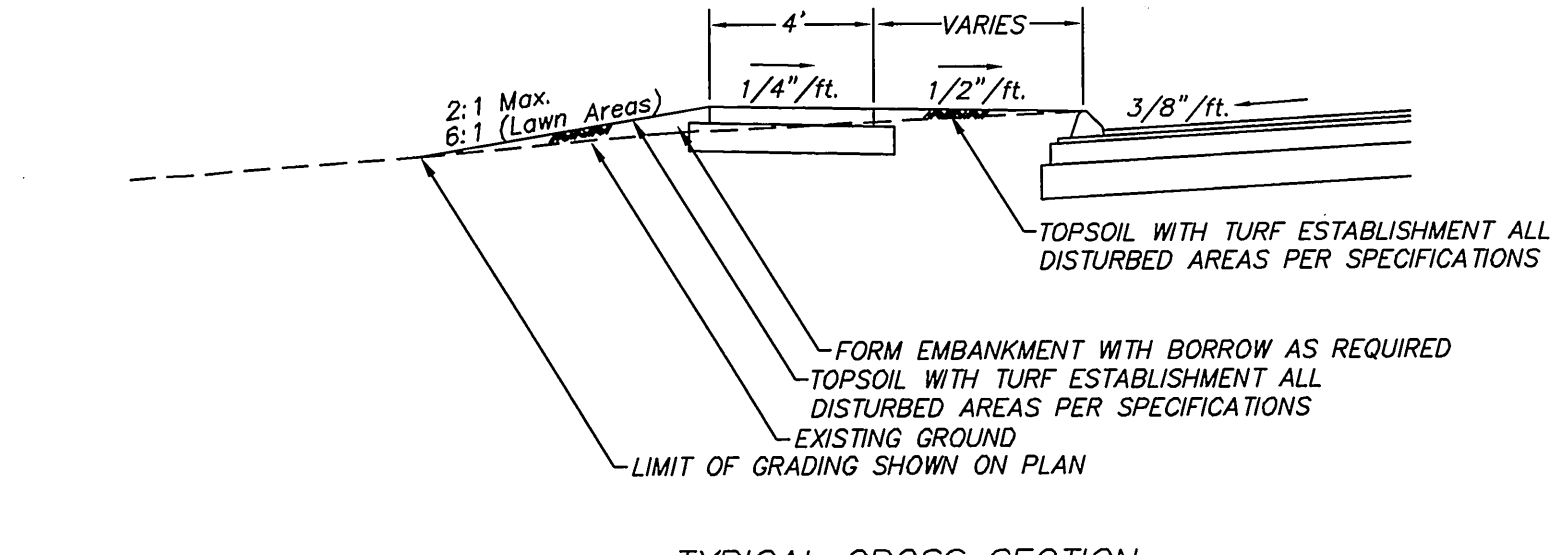
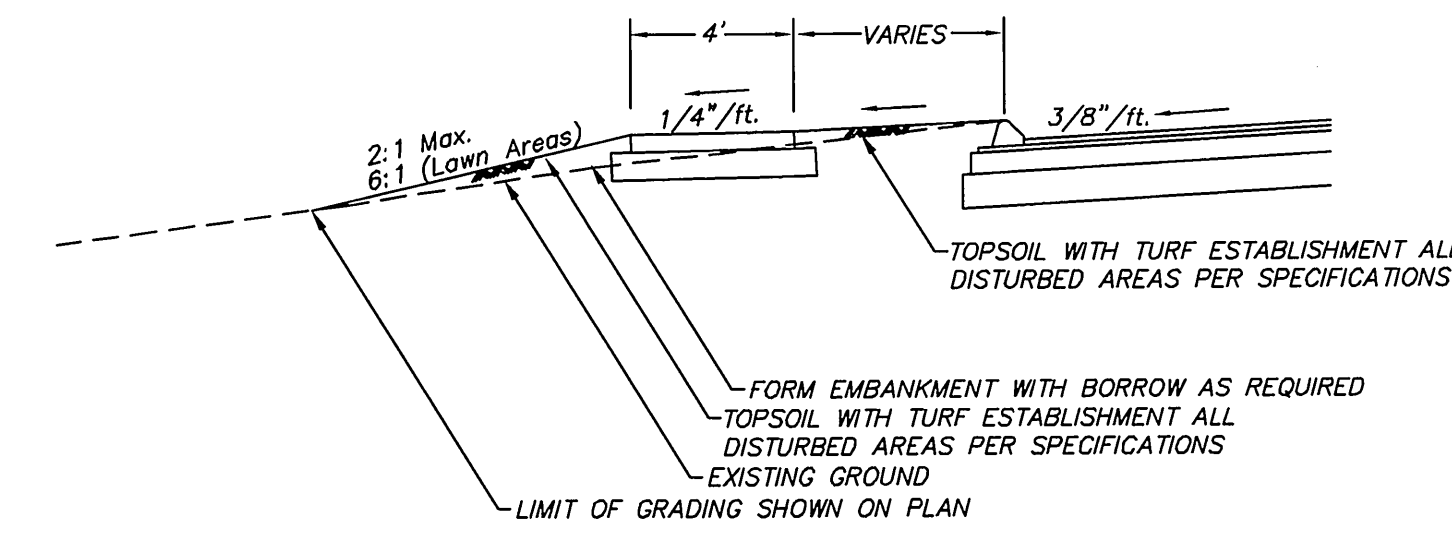
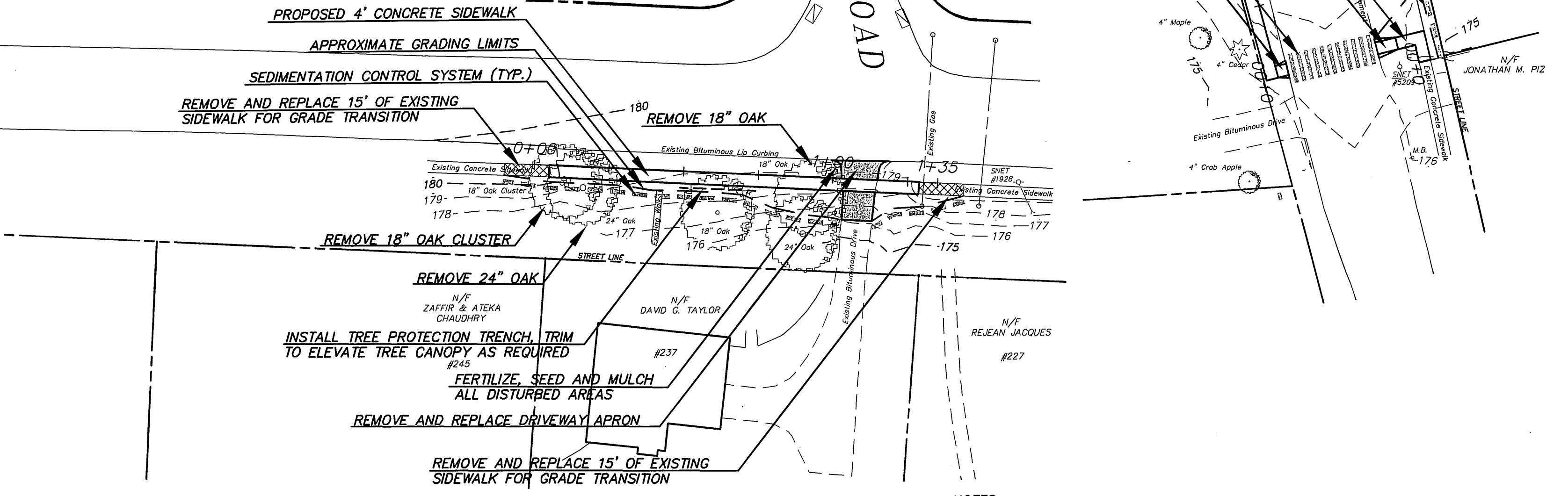
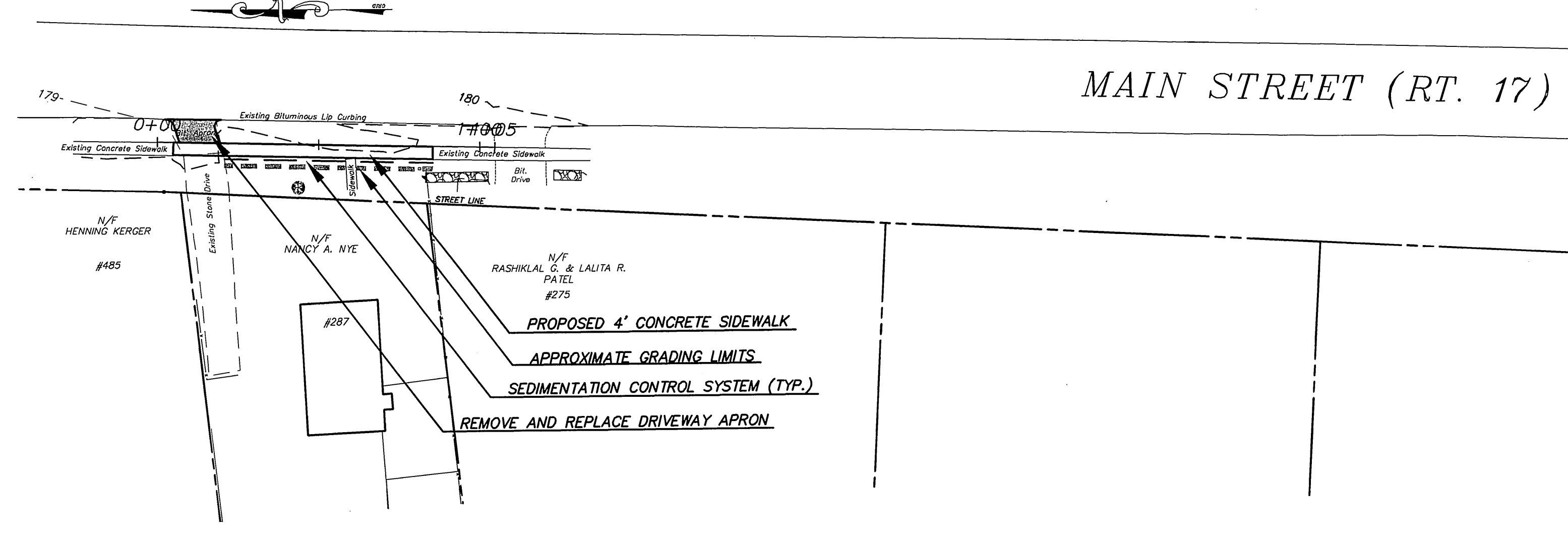
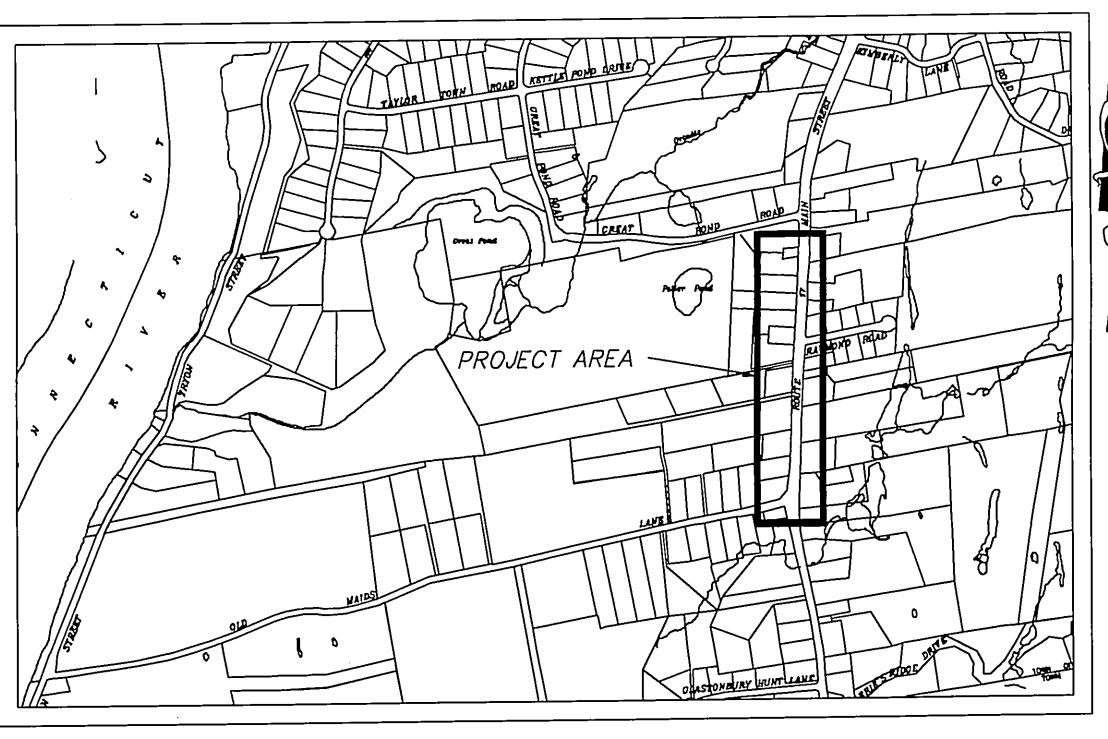
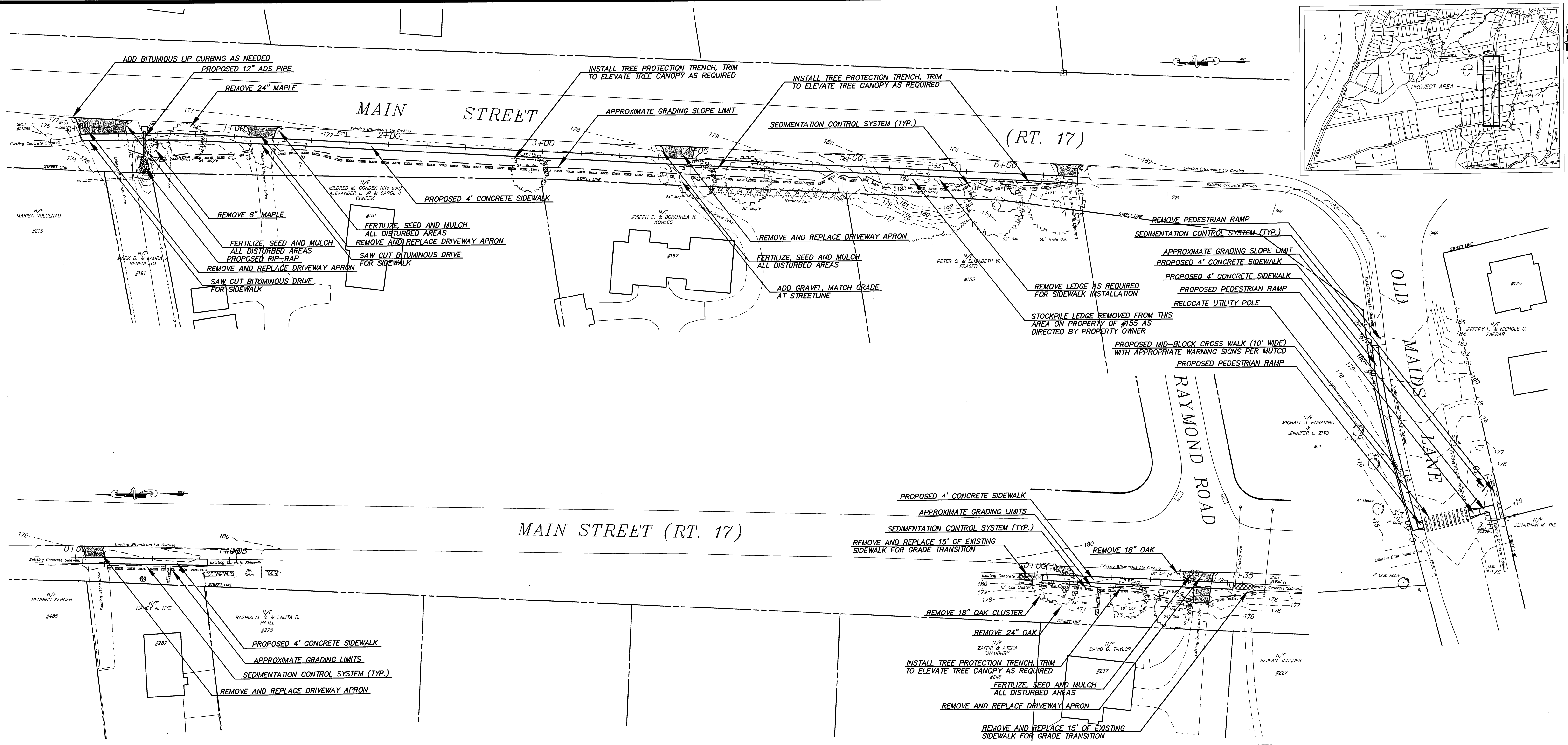
E-Mail Address

SS# or TIN#

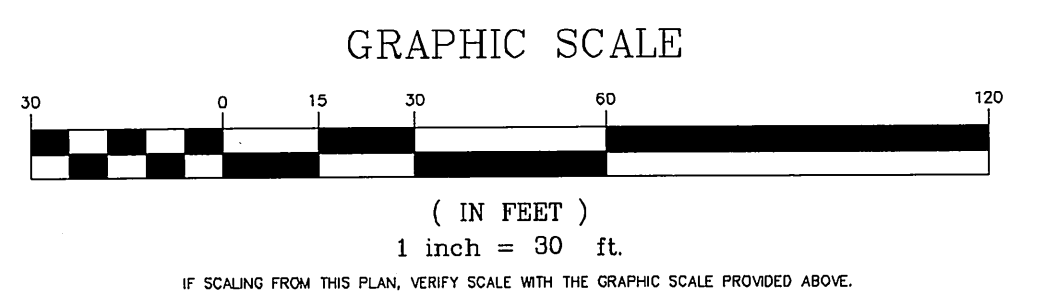
(Seal – If bid is by a Corporation)

Attest

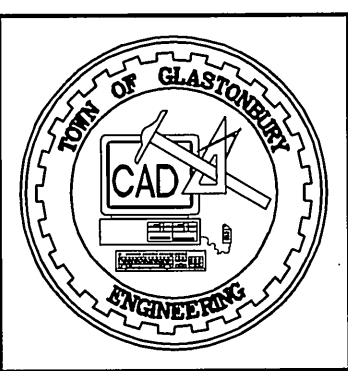
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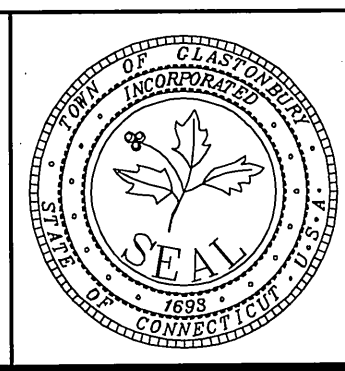
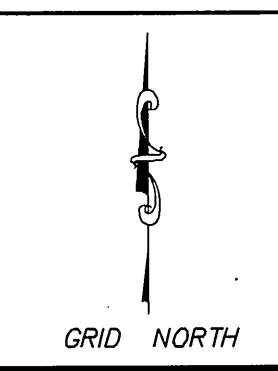
- NOTES:
1. ALL PROPERTY LINE AND RIGHT OF WAY INFORMATION DEPICTED ON THESE PLANS WERE TAKEN FROM TOWN OF GLASTONBURY ASSESSOR MAPS AND ARE TO BE CONSIDERED APPROXIMATE AND INFORMATIONAL IN NATURE; AND ARE NOT TO BE CONSTRUED AS AN ACCURATE BOUNDARY DETERMINATION.
 2. ALL UTILITY INFORMATION AND DATA SHOWN OR INDICATED IN THE CONTRACT DOCUMENTS ARE COMPILED FROM MAPS AND DATA FURNISHED BY OTHERS; ANY SUCH INFORMATION SHOULD NOT BE CONSTRUED AS ACCURATE OR COMPLETE AND THE CONTRACTOR SHALL VERIFY ALL LOCATIONS PRIOR TO CONSTRUCTION.
 3. THESE PLANS ARE NOT TO BE USED FOR THE LOCATION OF UNDERGROUND UTILITIES - Call Before You Dig CBYD (1-800-922-4445) A MINIMUM OF TWO WORKING DAYS BEFORE PERFORMING ANY EXCAVATION.
 4. INSTALLATION OF TREE PROTECTION TRENCH AND ADDITIONAL HAND PRUNING OF ROOTS DISTURBED DURING EXCAVATION SHALL BE PERFORMED BY A CT LICENSED ARBORIST.
 5. TRIMMING TO ELEVATE THE CANOPY OF EXISTING TREES TO REMAIN SHALL BE PERFORMED BY A CT LICENSED ARBORIST. TREES SHALL ALSO BE TRIMMED OF DEAD AND/OR STRUCTURALLY DEFECTIVE LIMBS OVER THE PROPOSED SIDEWALK AREAS, AND SHALL BE INCLUDED IN THE PRICE FOR SITE PREPARATION.
 6. ALL TREE REMOVALS NOTED ON THE PLAN AND OTHER CLEARING AND GRUBBING WORK ARE INCLUDED IN THIS CONTRACT UNDER THE 'SITE PREPARATION' ITEM.
 7. PAVEMENT MARKINGS AND SIGNING ON OLD MAIDS LANE ARE NOT INCLUDED IN THIS CONTRACT.



REVISIONS	
NO.	DESCRIPTION
1.	ISSUED FOR CONSTRUCTION
	3-16-2009

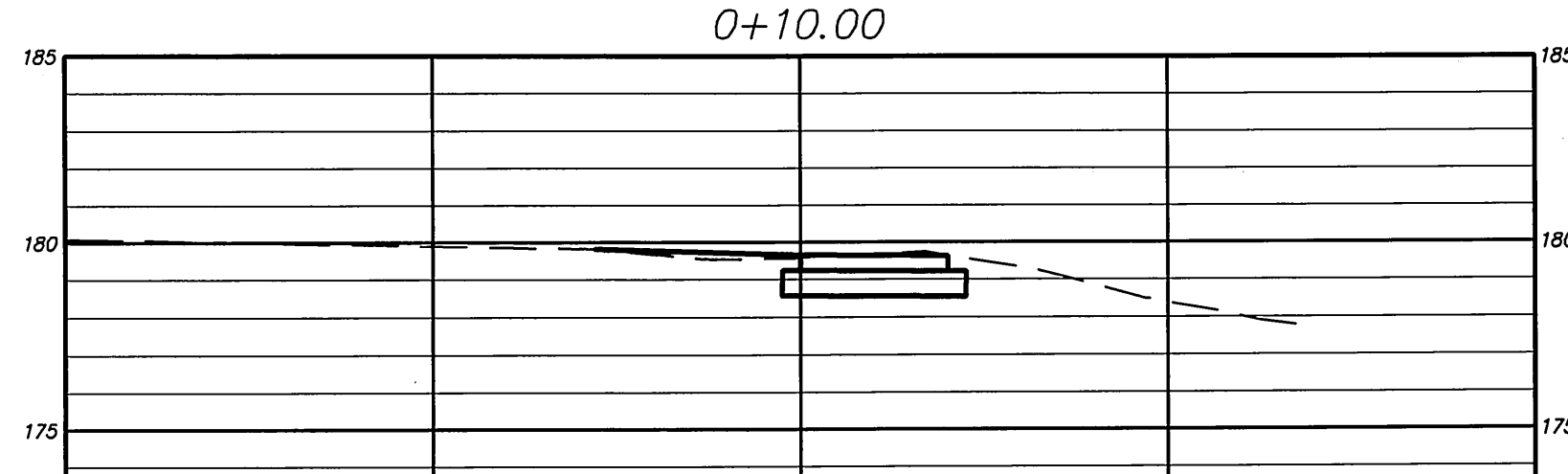
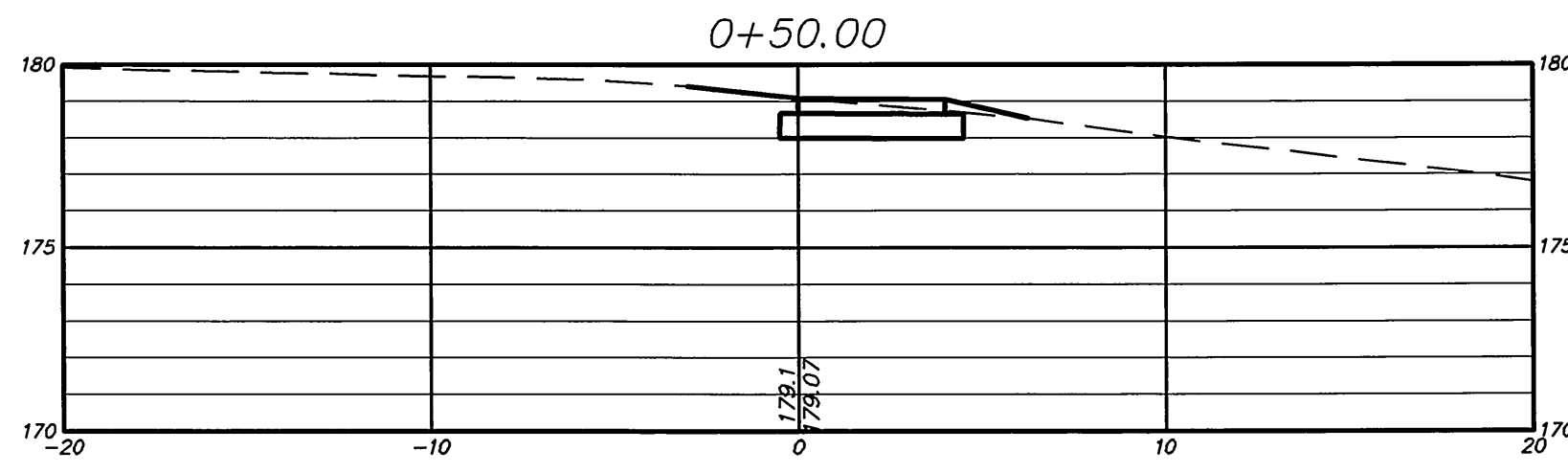
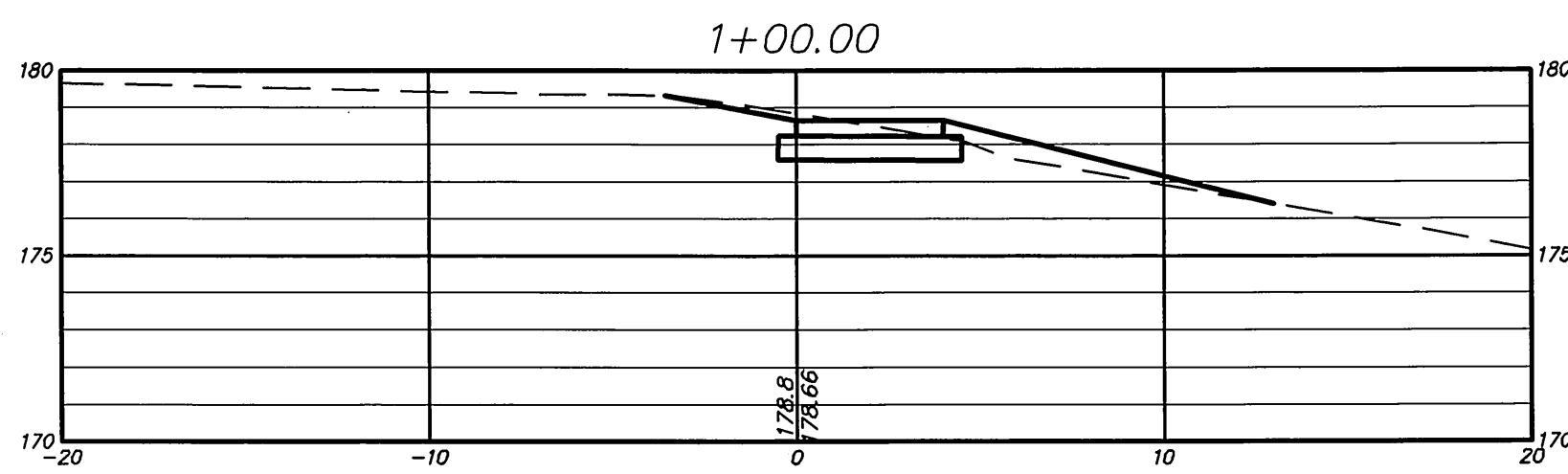
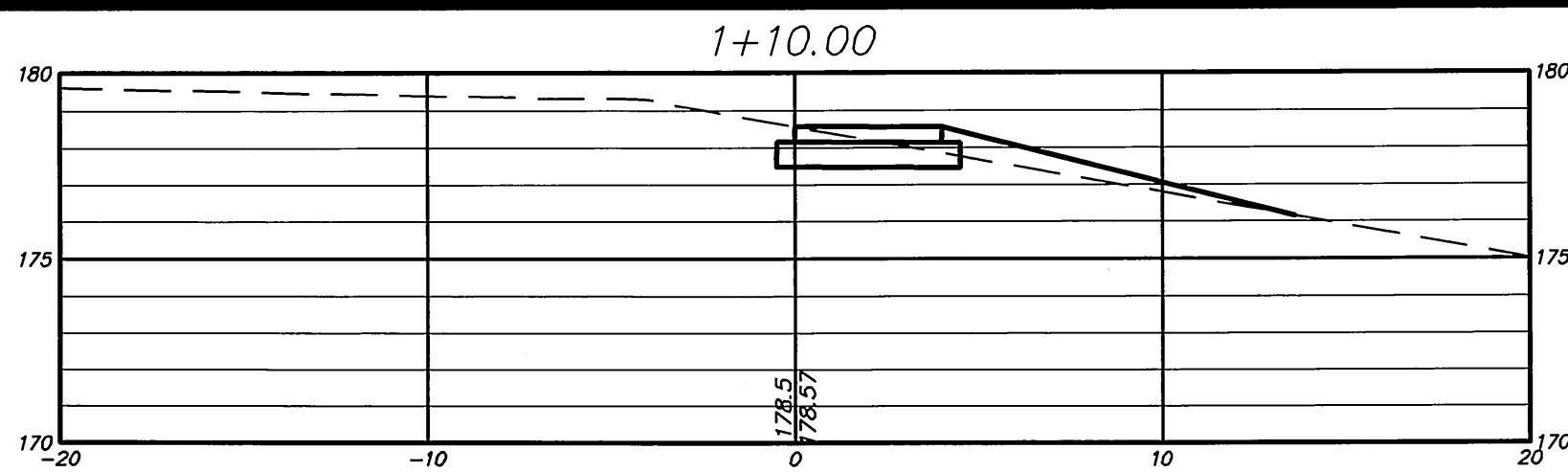


SCALE: AS SHOWN	DATE: 8-20-2008
DRAWN BY: S.Troy	CHECKED BY: S.M.B. 8-22-2008
APPROVED BY: D.A.P. 8-22-2008	
ST. FILE:	
MANUAL REVISIONS TO THIS DOCUMENT ARE PROHIBITED. ALL REVISIONS MUST BE PERFORMED ON THIS SHEET IN THE LEFT MARGIN. IF THERE ARE ANY DISCREPANCIES OR QUESTIONS CONTACT THE TOWN OF GLASTONBURY, ENGINEERING OFFICE AT (860) 652-7735.	

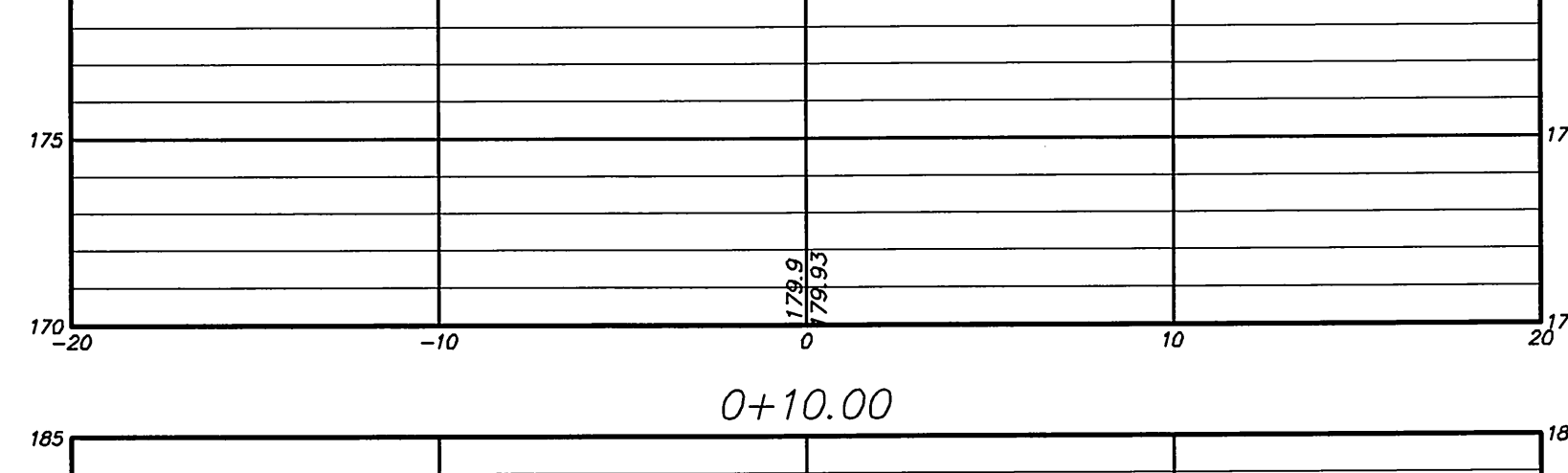
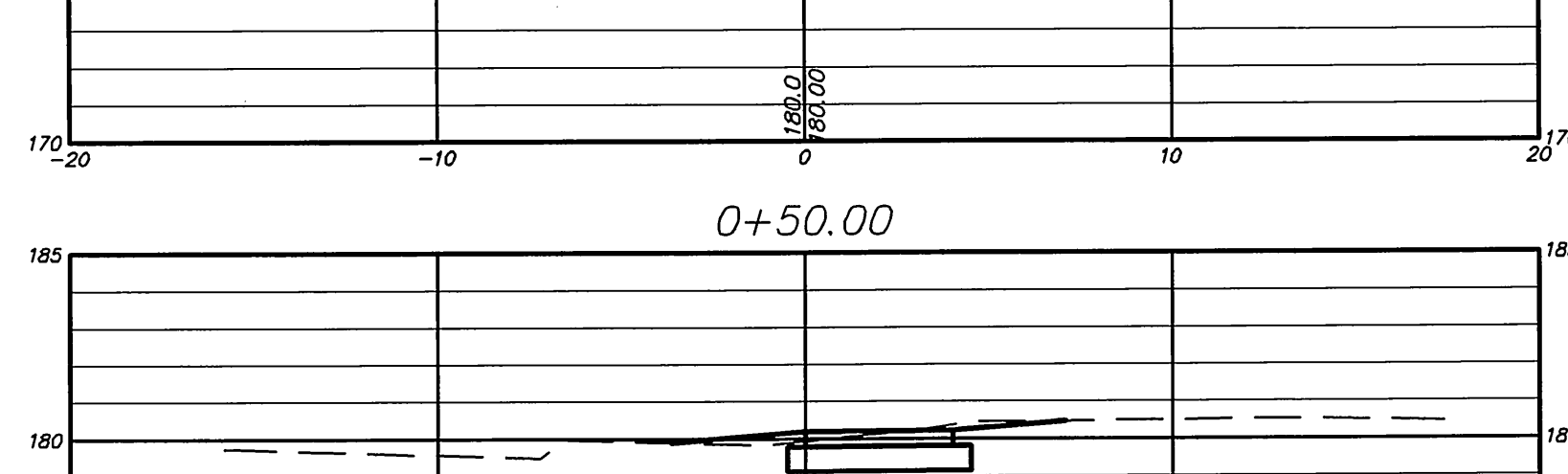
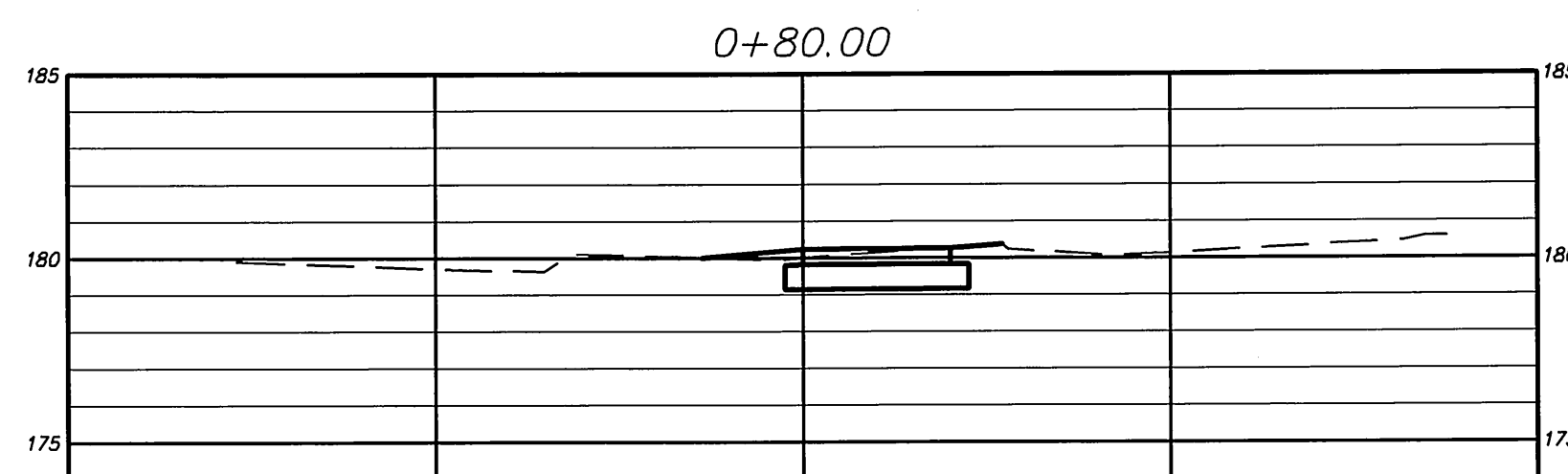


PLAN DEPICTING
EXISTING AND PROPOSED CONDITIONS
for
RT. 17 SIDEWALK EXPANSION
located from
GREAT POND ROAD to OLD MAIDS LANE
GLASTONBURY, CONNECTICUT

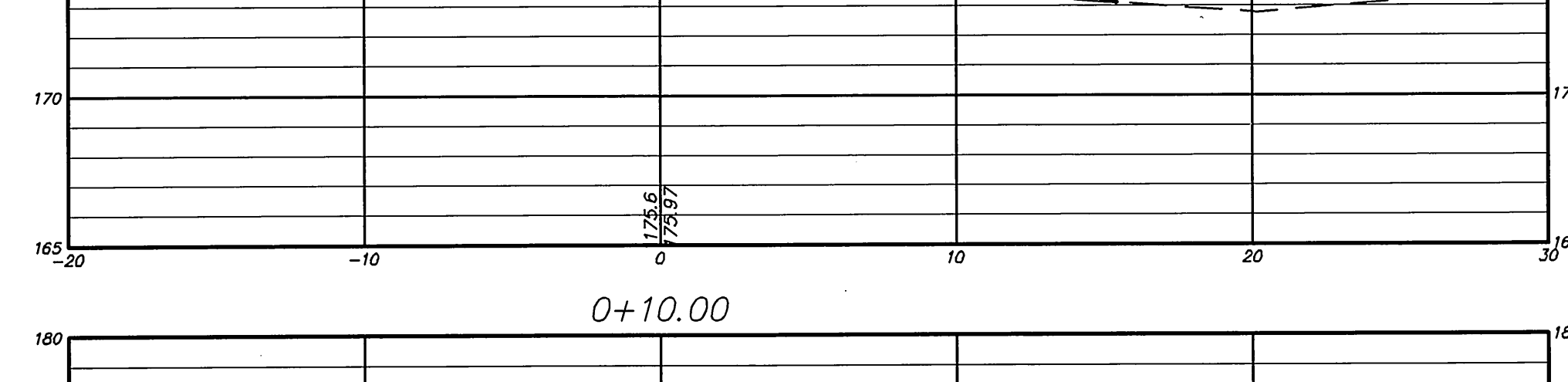
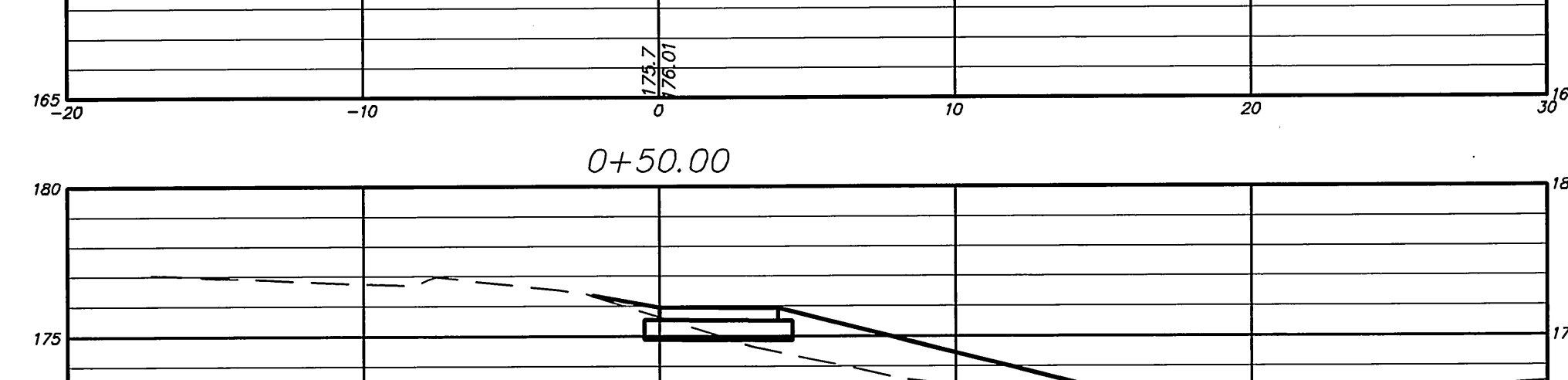
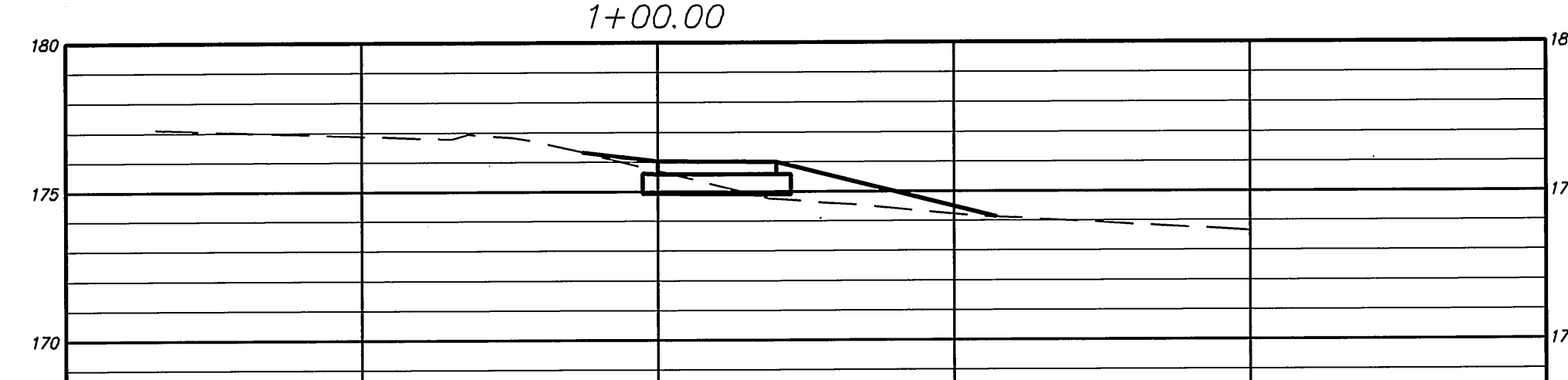
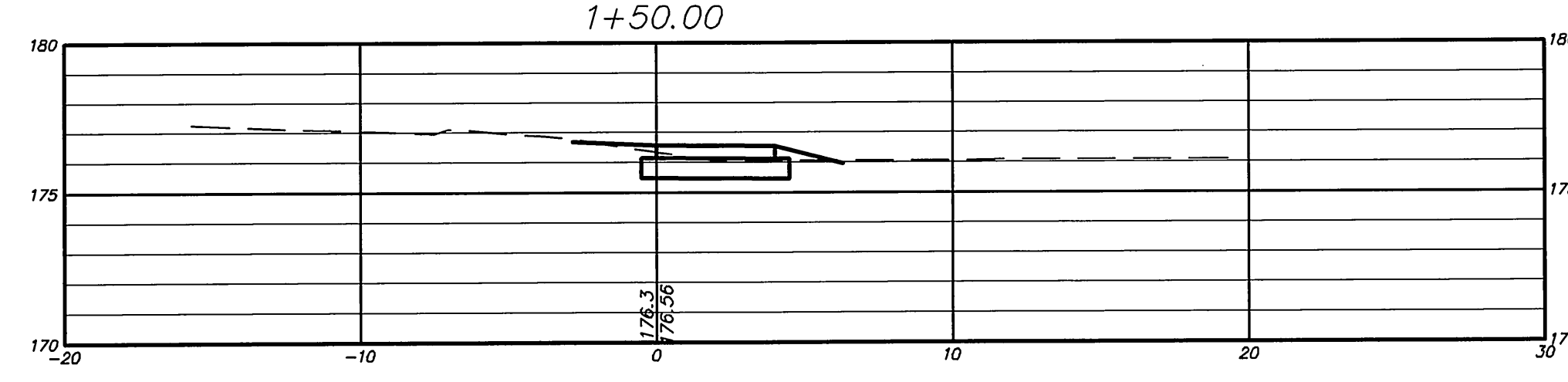
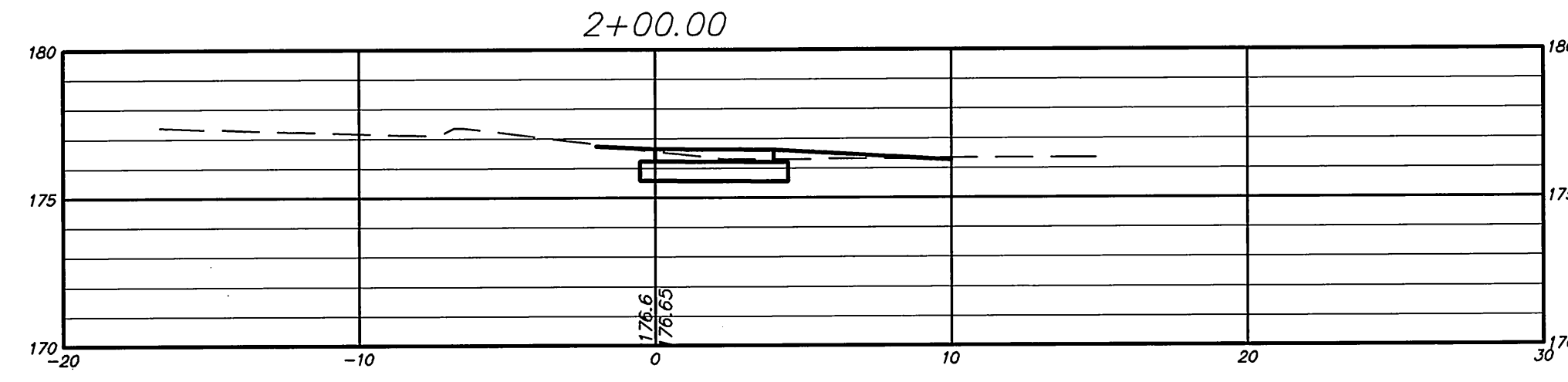
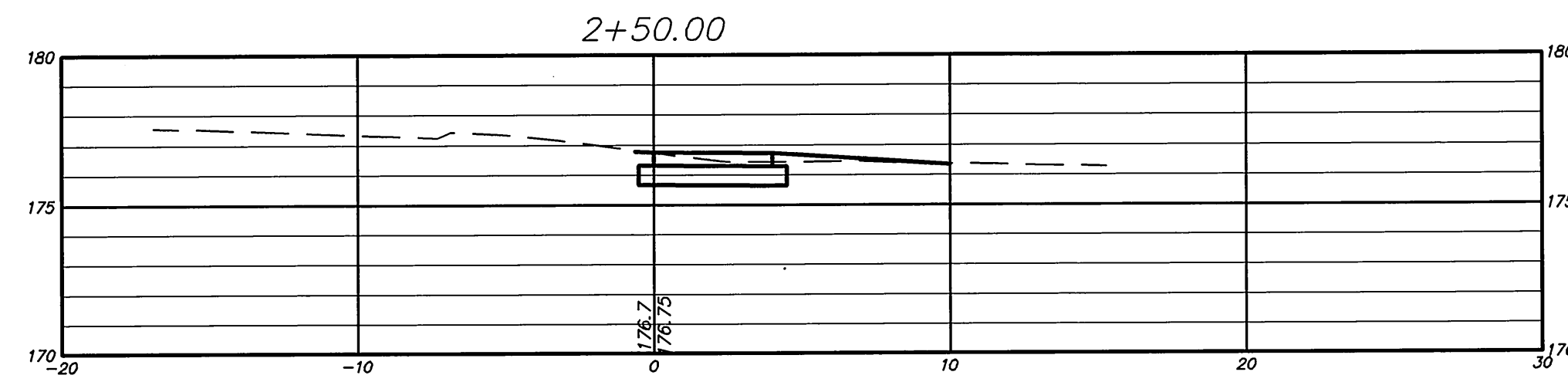
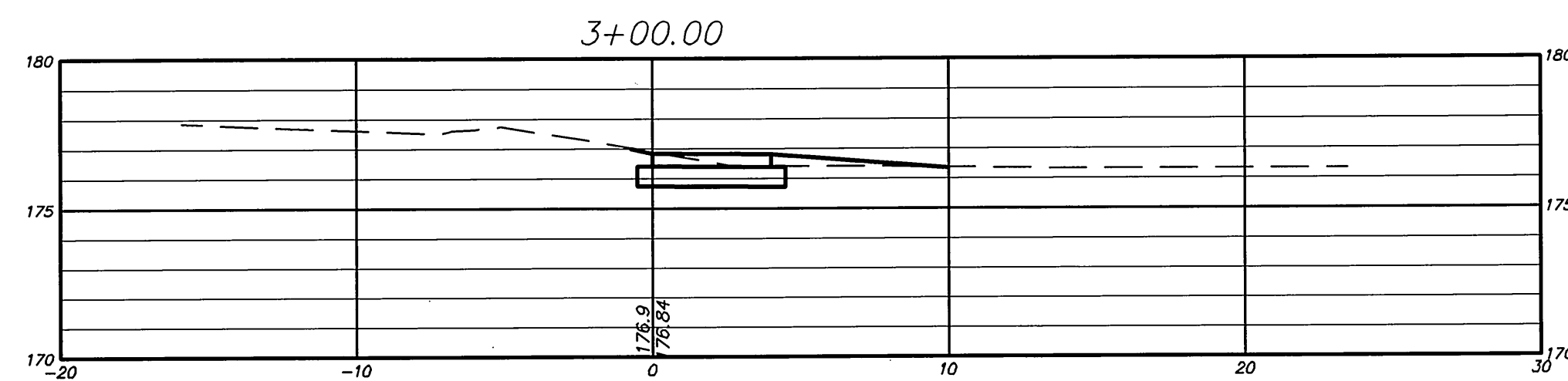
SHEET NO. 1 OF 1



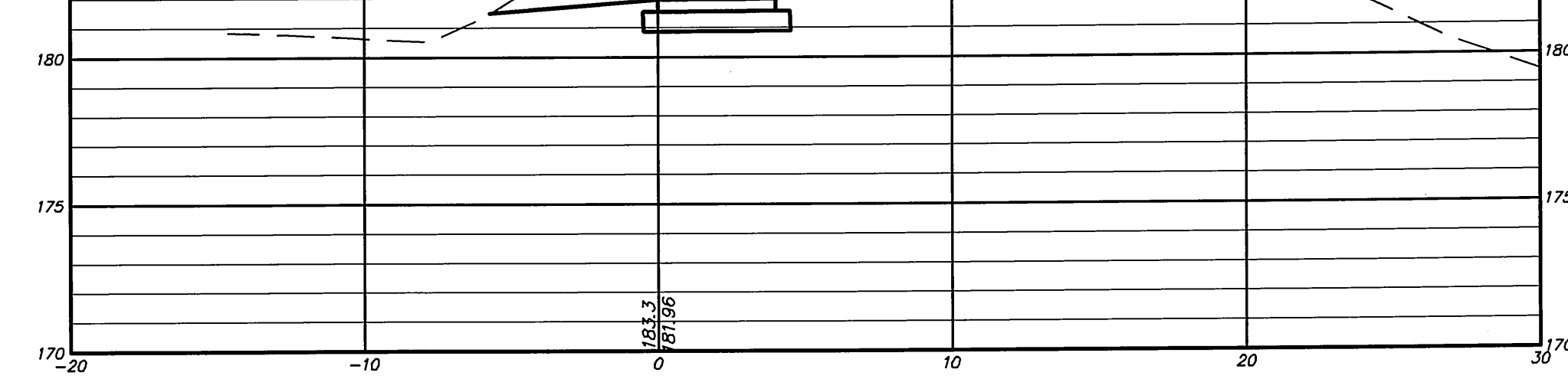
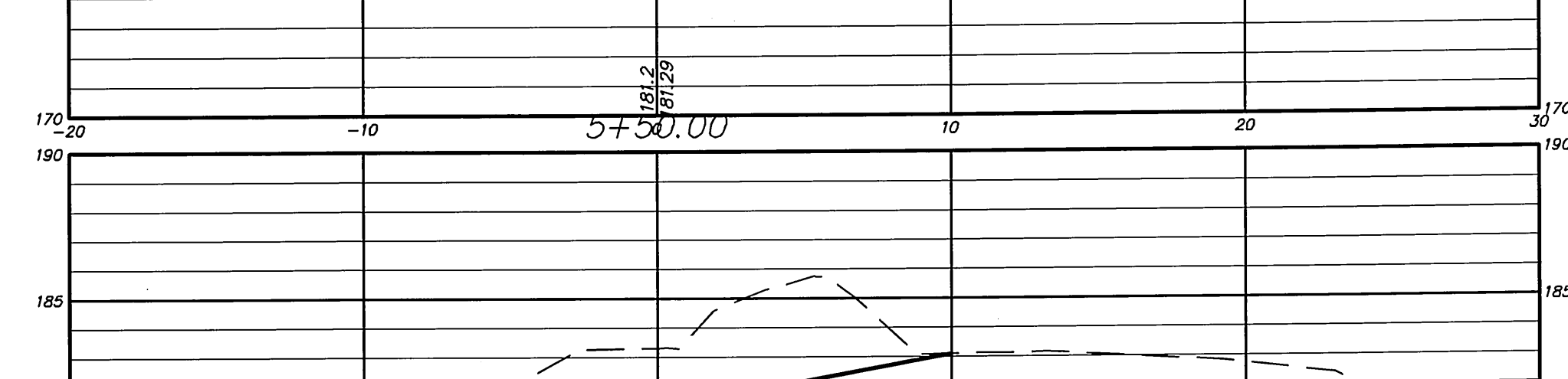
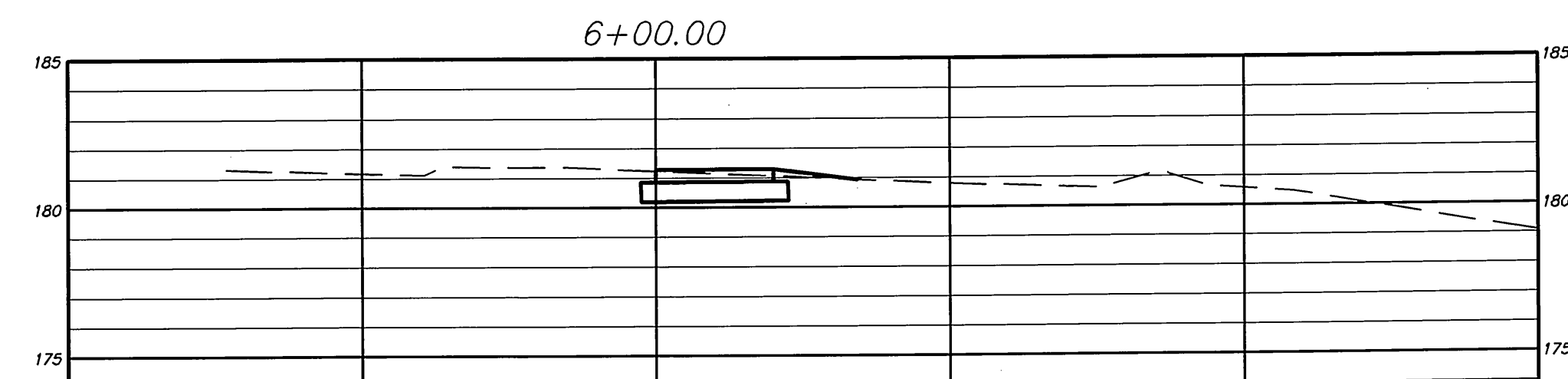
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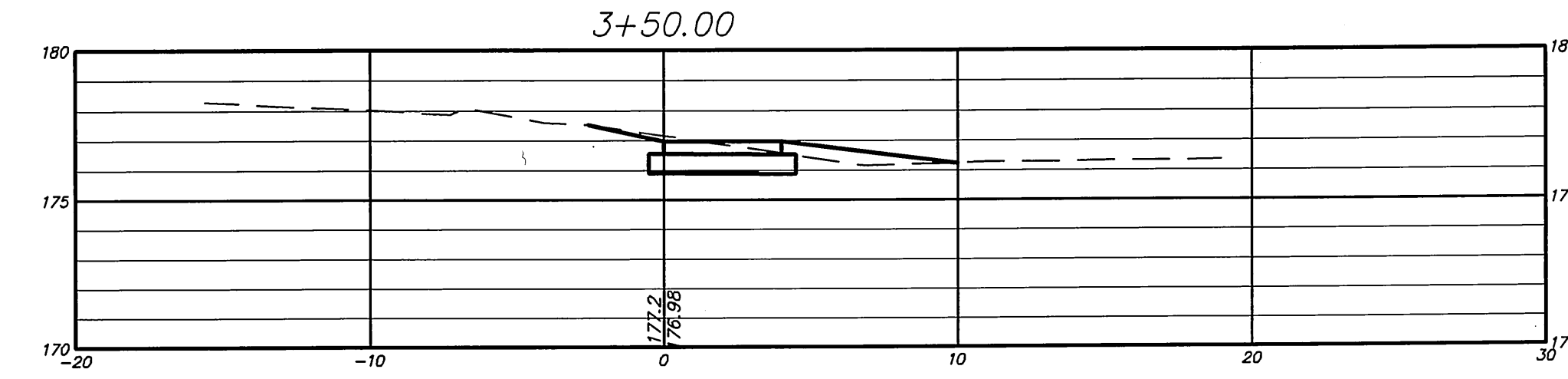
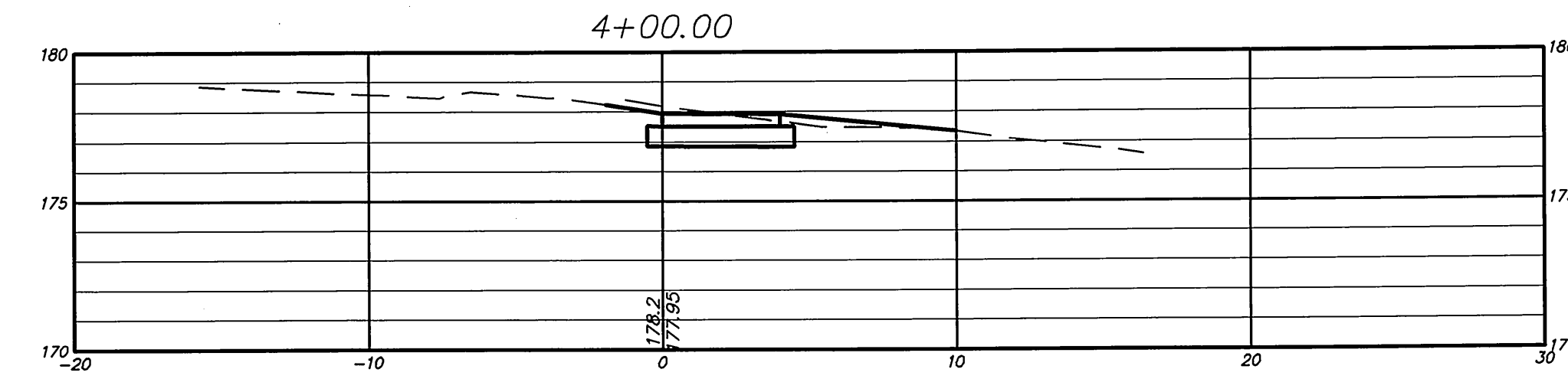
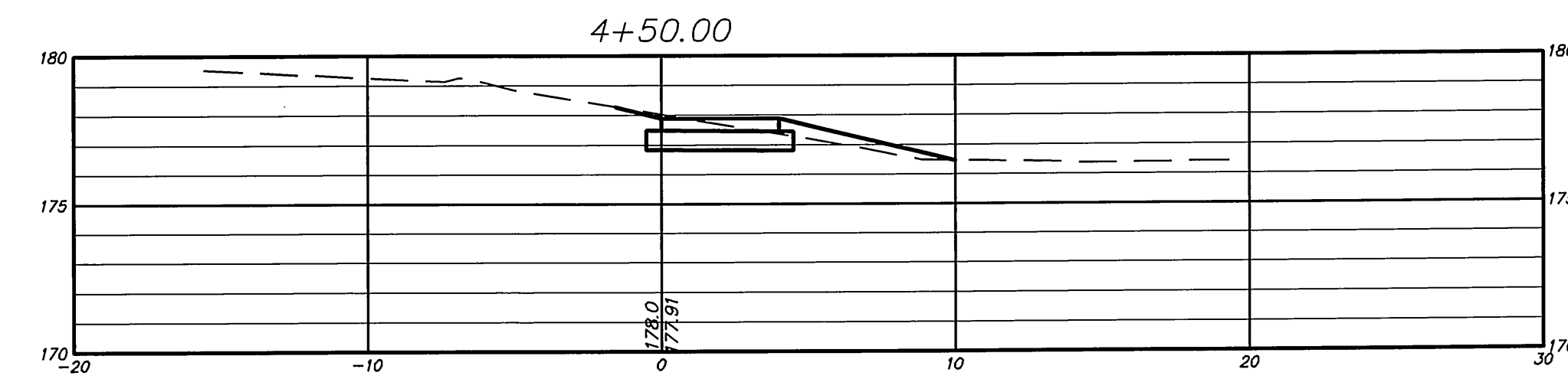
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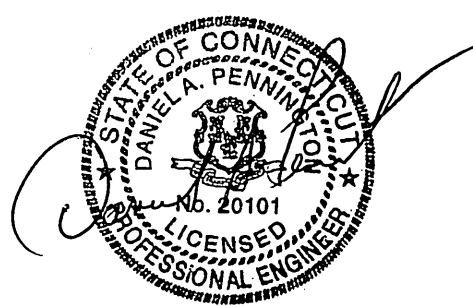
SECTION OF SIDEWALK ALONG HOUSE #181 MAIN STREET



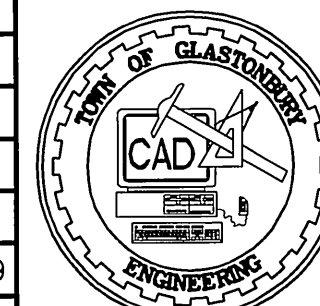
SECTION OF SIDEWALK ALONG HOUSE #155 MAIN STREET



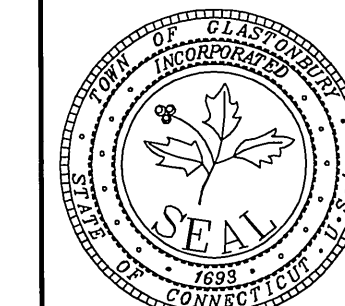
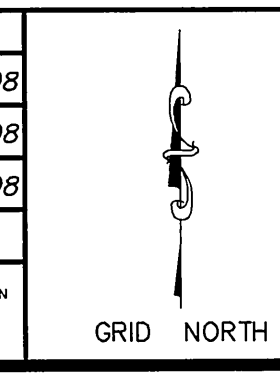
SECTION OF SIDEWALK ALONG HOUSE #167 MAIN STREET



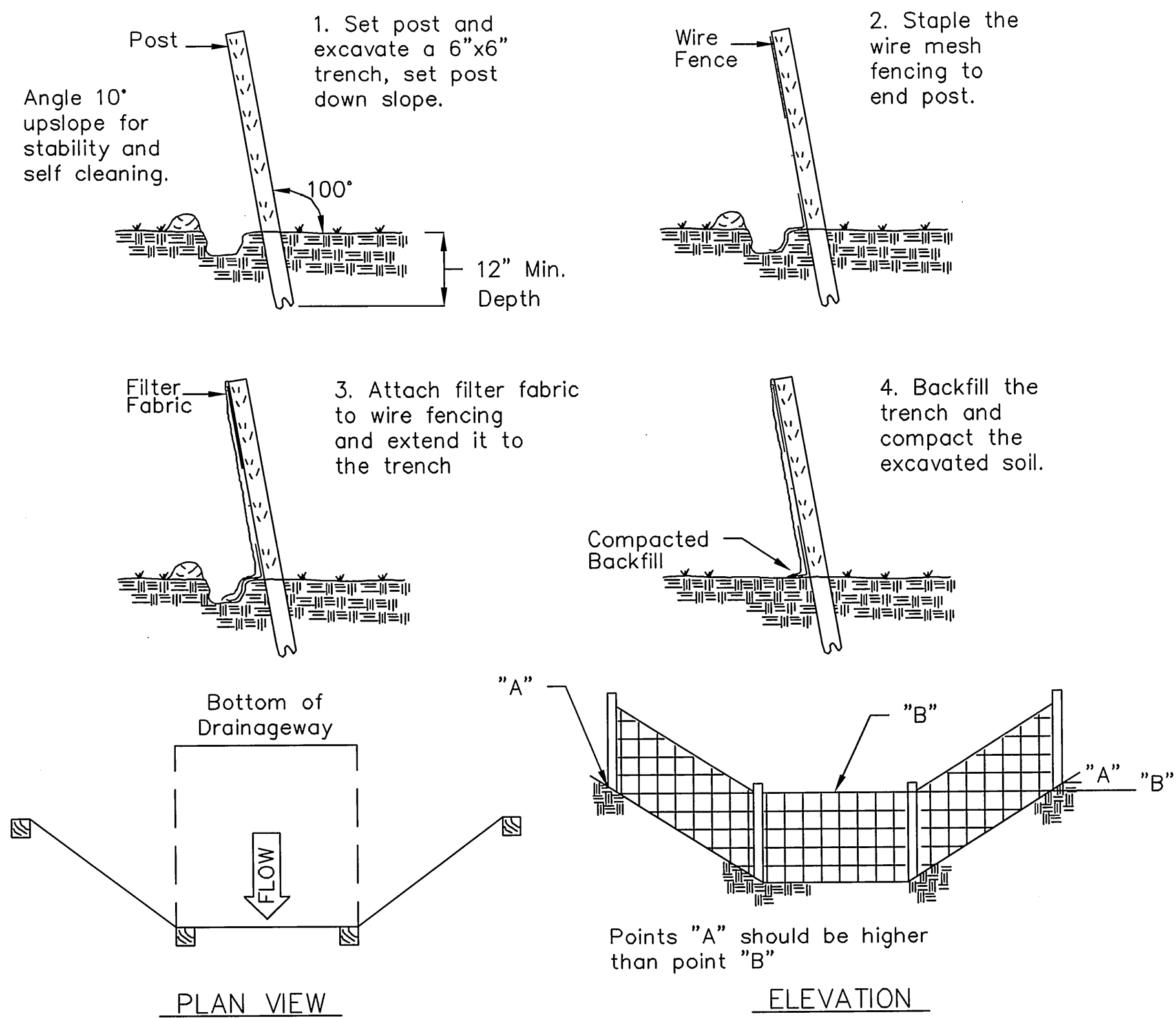
REVISIONS		
NO.	DESCRIPTION	DATE
1.	ISSUED FOR CONSTRUCTION	3-16-2009



SCALE: AS SHOWN	DATE: 8-20-2008
CHECKED BY: S.Troy	8-22-2008
APPROVED BY: D.A.P.	8-22-2008
ST. FILE:	
MANUAL REVISIONS TO THIS DOCUMENT ARE PROHIBITED. ALL REVISIONS MUST BE PERFORMED ON CAD FILE SHOWN ON THE LEFT MARGIN. IF THERE ARE ANY DISCREPANCIES IN THE DRAWING, CONTACT THE TOWN OF GLASTONBURY, CONNECTICUT. ENGINEERING OFFICE AT (860) 632-7735.	

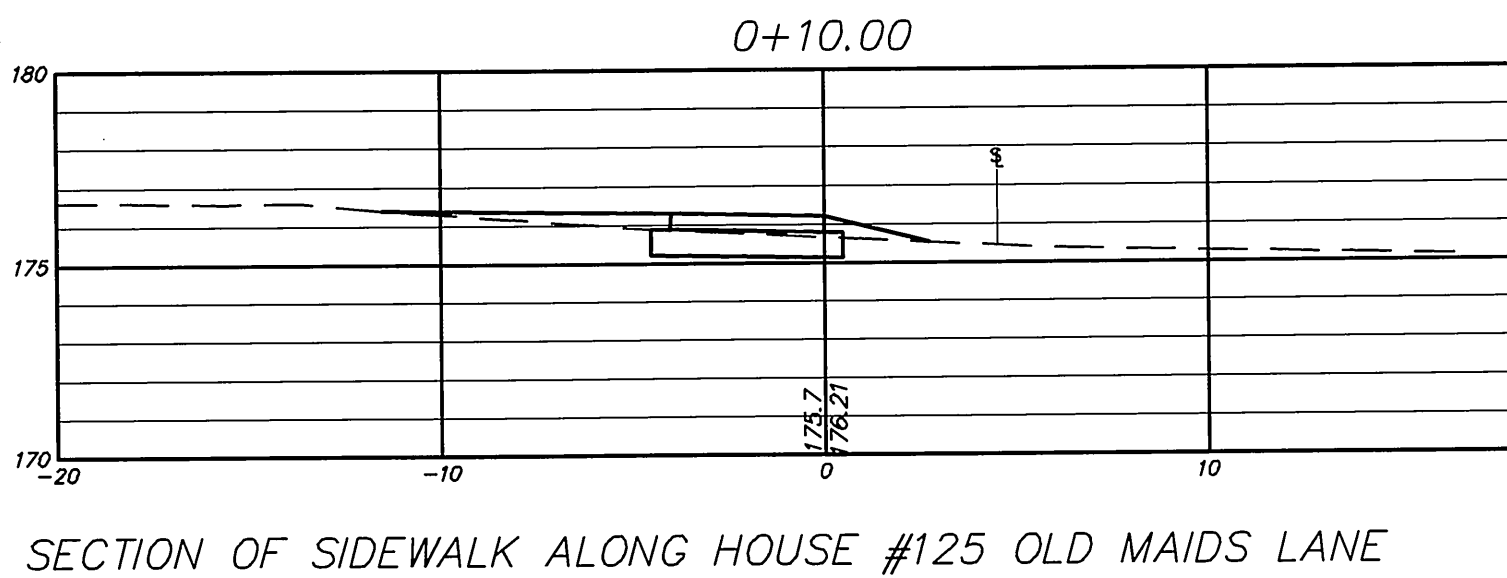
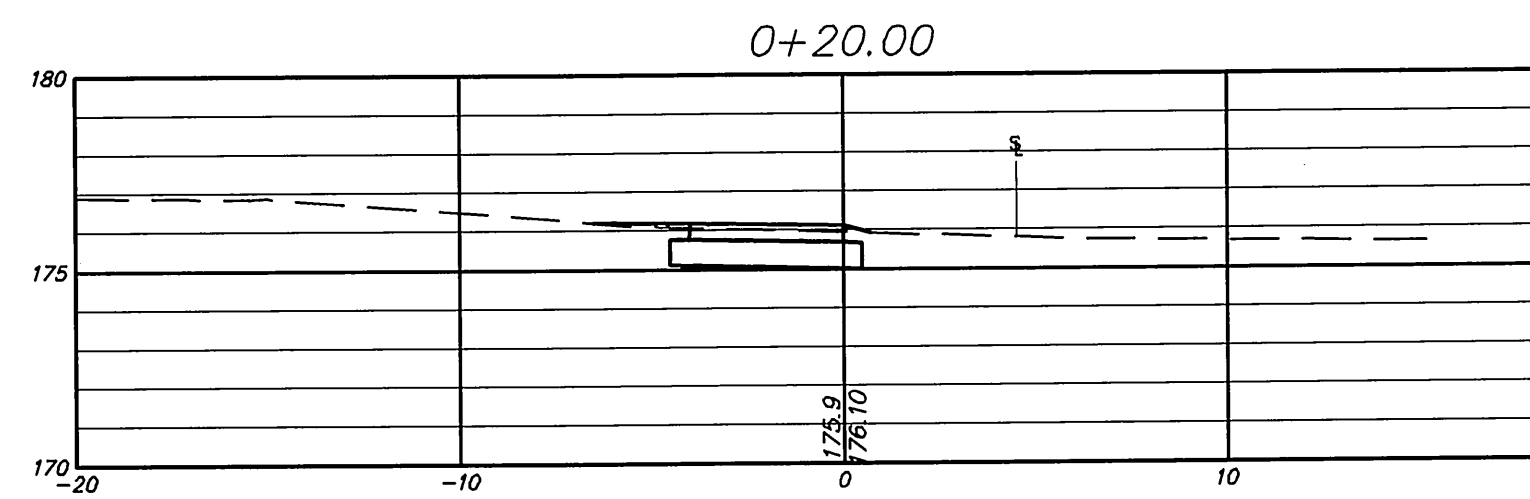


PROPOSED CROSS SECTIONS
for
RT. 17 SIDEWALK EXPANSION
located from
GREAT POND ROAD to OLD MAIDS LANE
GLASTONBURY, CONNECTICUT

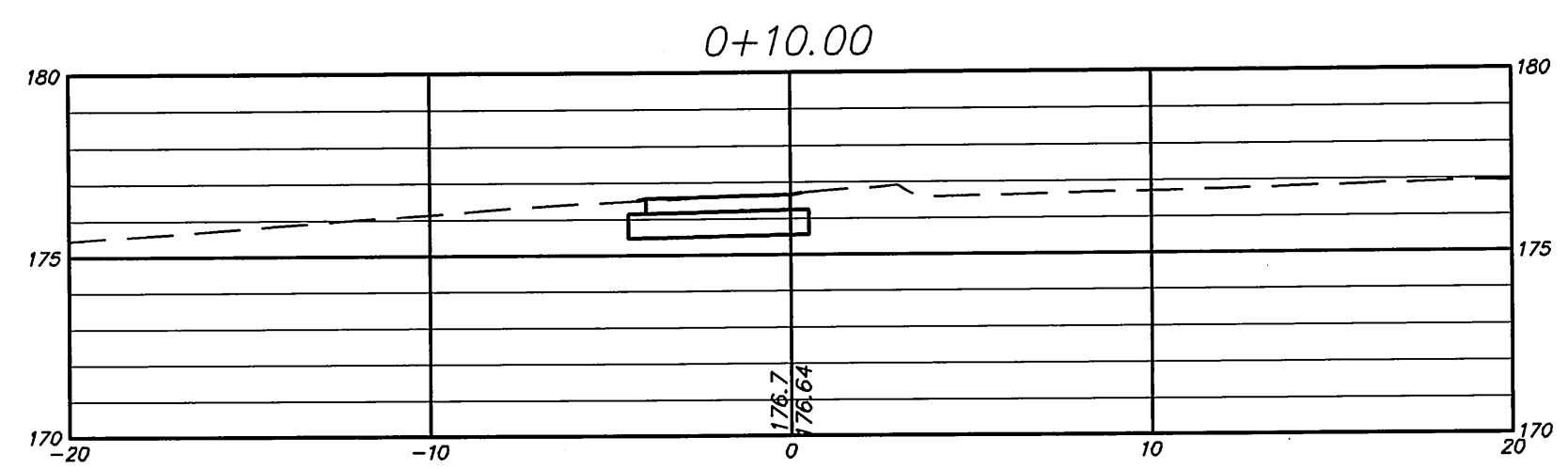
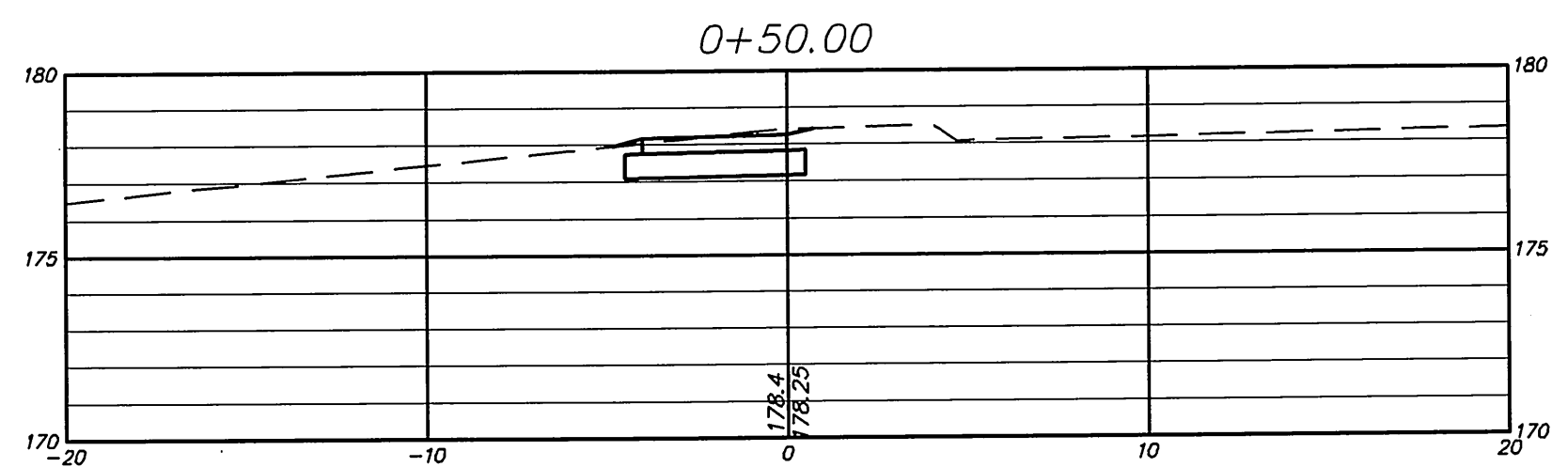


Source: U.S. Department of Agriculture, Soil Conservation Service, Storrs, Connecticut

PLACEMENT AND CONSTRUCTION OF A SYNTHETIC FILTER BARRIER
fig. 7-9



SECTION OF SIDEWALK ALONG HOUSE #125 OLD MAIDS LANE



SECTION OF SIDEWALK ALONG HOUSE #11 OLD MAIDS LANE

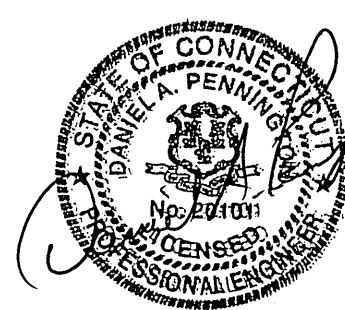
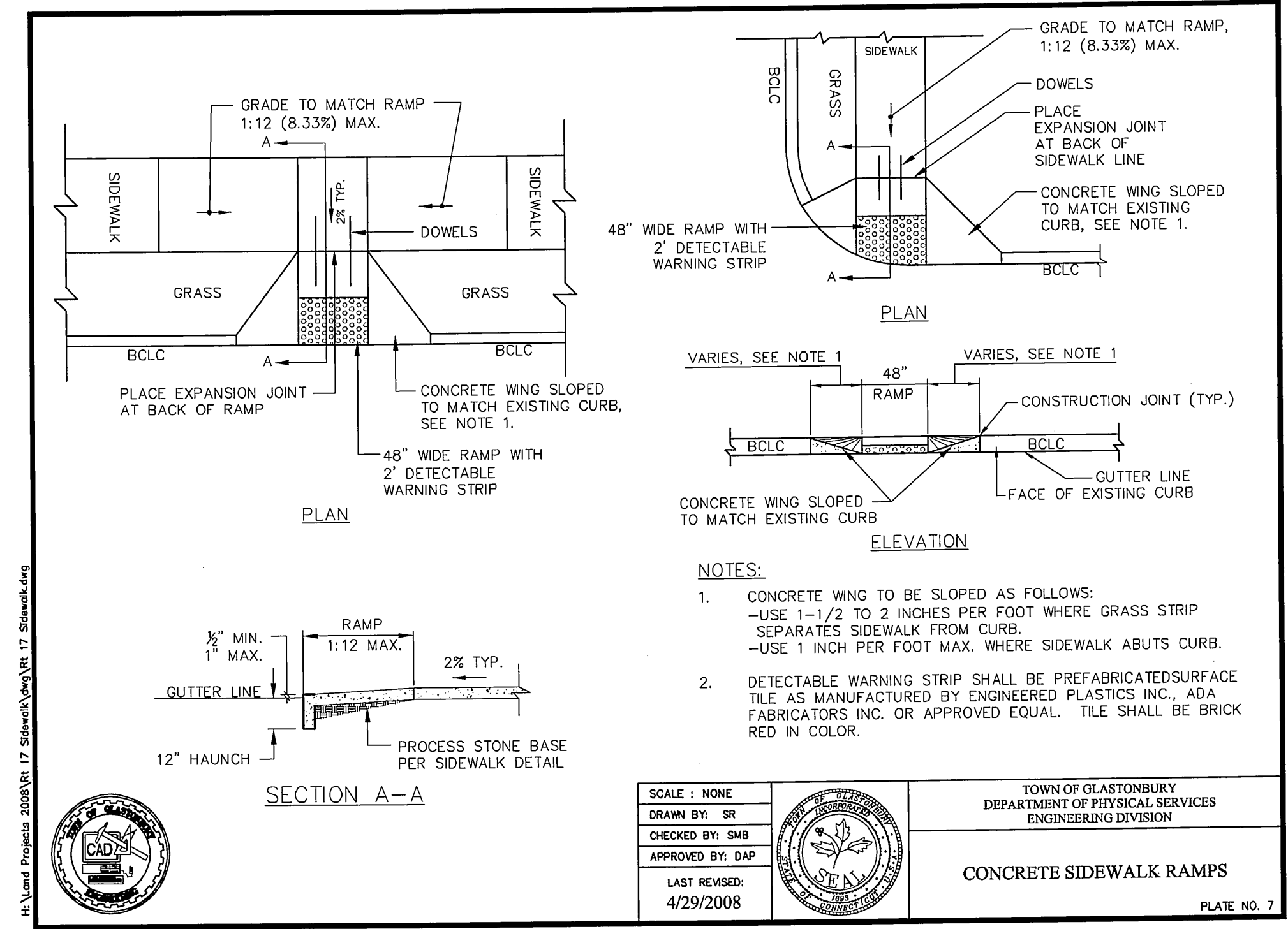
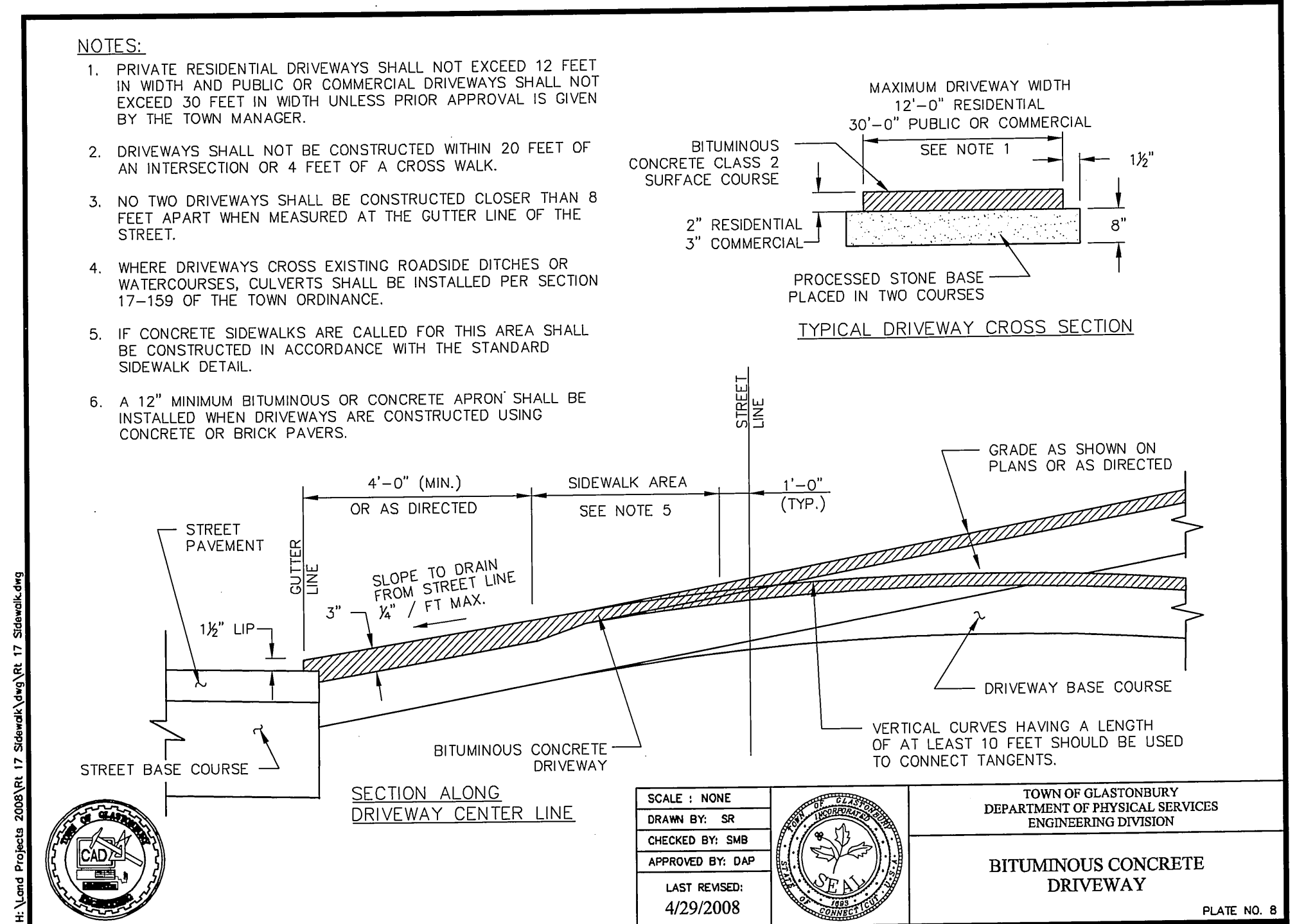
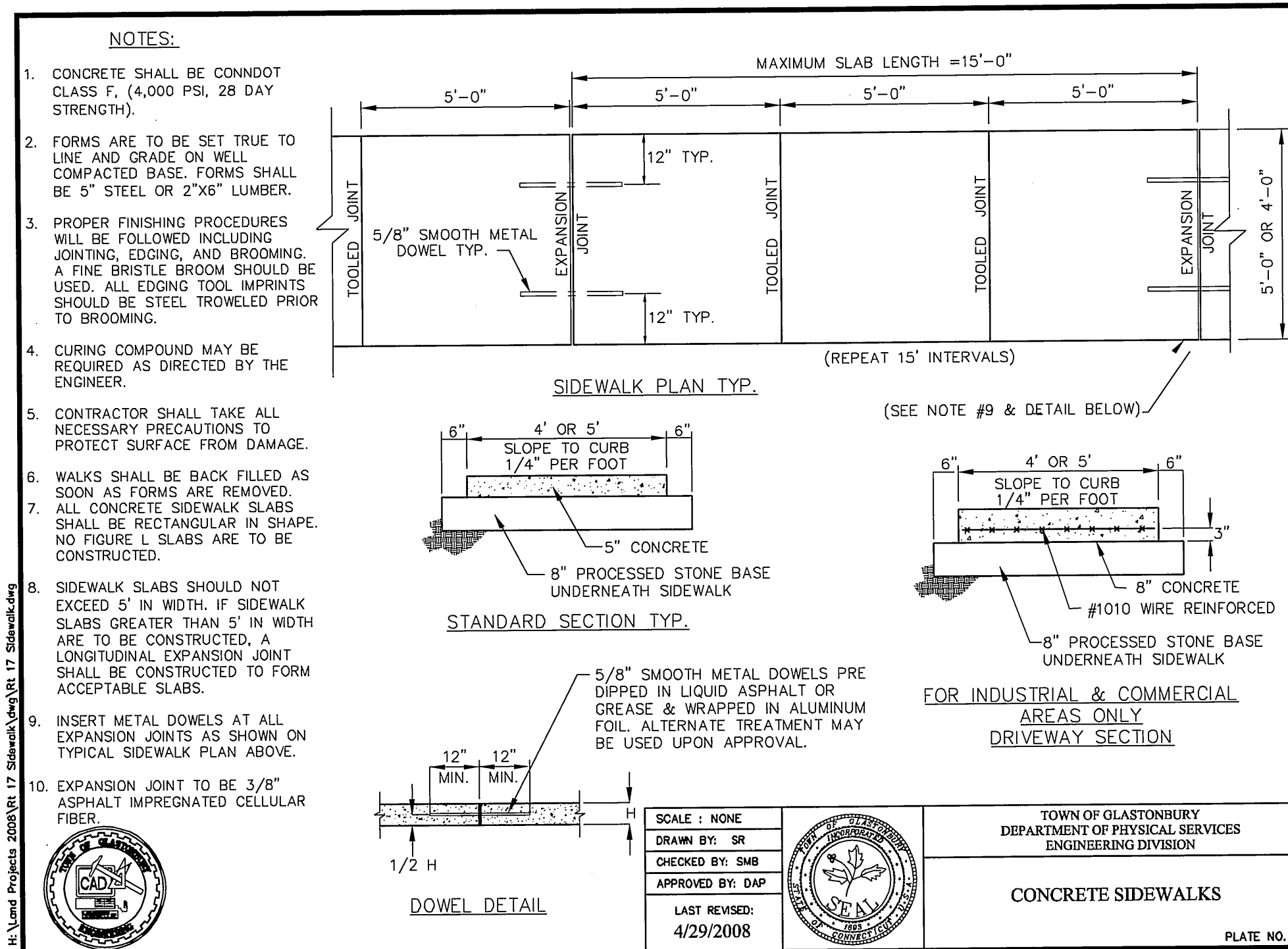
SEDIMENTATION AND EROSION CONTROL REQUIREMENTS

THESE GUIDELINES SHALL APPLY TO ALL WORK CONSISTING OF ANY AND ALL TEMPORARY AND/OR PERMANENT MEASURES TO CONTROL WATER POLLUTION AND SOIL EROSION AS MAY BE REQUIRED, DURING THE CONSTRUCTION OF THE PROJECT.

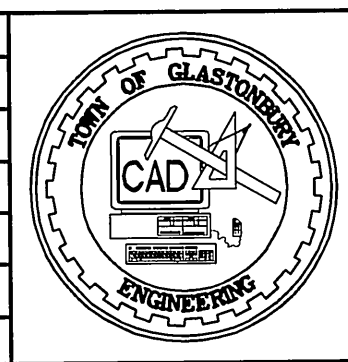
IN GENERAL, ALL ACTIVITIES SHALL PROCEED IN SUCH A MANNER SO AS NOT TO POLLUTE ANY WETLANDS, WATERCOURSE, WATERBODY, AND CONDUIT CARRYING WATER, ETC. THE DEPARTMENT OF PHYSICAL SERVICES SHALL LIMIT, INsofar AS POSSIBLE, THE SURFACE AREA OF EARTH MATERIALS EXPOSED BY CONSTRUCTION METHODS, AND IMMEDIATELY PROVIDE PERMANENT AND TEMPORARY POLLUTION CONTROL MEASURES TO PREVENT CONTAMINATION OF ADJACENT WETLANDS, WATERCOURSES AND WATERBODIES, AND TO PREVENT, INsofar AS POSSIBLE, EROSION ON THE SITE.

CONSTRUCTION METHODS, IN GENERAL, SHALL BE IN ACCORDANCE WITH THE PROVISIONS SET FORTH IN THE "GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL" (2002) BY THE STATE OF CONNECTICUT COUNCIL ON SOIL AND WATER CONSERVATION.

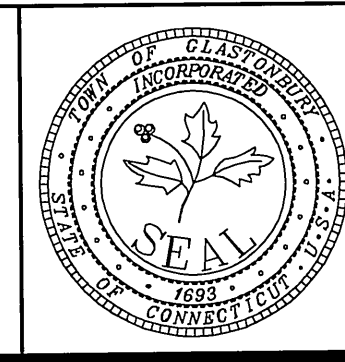
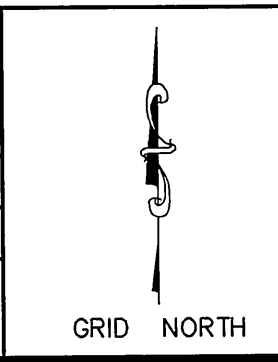
- ALL CONTROL MEASURES SHALL BE INSTALLED AS NOTED ABOVE AND AS SHOWN ON THE PLANS.
- ALL CONTROL MEASURES SHALL BE INSPECTED AND APPROVED BY THE ENGINEER PRIOR TO COMMENCEMENT OF ANY WORK, INCLUDING PRE-CONSTRUCTION CLEARING AND GRUBBING.
- ALL CONTROL MEASURES SHALL BE MAINTAINED AND UPGRADED AS REQUIRED TO ACHIEVE PROPER SEDIMENT CONTROL THROUGHOUT THE CONSTRUCTION PERIOD AND UNTIL DISTURBED AREAS HAVE BEEN THOROUGHLY STABILIZED.
- NO CONTROL MEASURES SHALL BE REMOVED WITHOUT APPROVAL FROM THE ENGINEER.
- ADDITIONAL CONTROL MEASURES SHALL BE INSTALLED DURING THE CONSTRUCTION PERIOD IF DEEMED NECESSARY BY THE ENGINEER.
- THE LIMITS OF CLEARING, GRADING AND DISTURBANCE, AS SHOWN ON THE PLAN(S), SHALL BE KEPT TO A MINIMUM WITHIN THE APPROVED AREA OF CONSTRUCTION. ALL AREAS OUTSIDE THE LIMITS OF CLEARING SHALL REMAIN TOTALLY UNDISTURBED.
- ANY CONTROL MEASURES RETAINING SEDIMENT OVER 1/2 THEIR HEIGHT SHALL HAVE THE SEDIMENT IMMEDIATELY REMOVED, AND ALL DAMAGED CONTROL MEASURES SHALL BE REMOVED AND REPLACED.
- ALL NEW AND EXISTING CATCH BASINS LOCATED WITHIN THE PROJECT LIMITS SHALL BE PROTECTED WITH A SEDIMENTATION CONTROL SYSTEM IN GRASSED AREAS OR WITH A SEDIMENTATION CONTROL SACK IN PAVED AREAS UNTIL ALL DISTURBED AREAS HAVE BEEN THOROUGHLY STABILIZED.
- SEDIMENT REMOVED FROM CONTROL MEASURES AND DRAINAGE FACILITIES SHALL BE DISPOSED OF IN A MANNER THAT IS CONSISTENT WITH STATE AND LOCAL REGULATIONS.
- THE PLANTING SEASONS FOR THE SPECIFIED SEED MIXTURE SHALL BE AS DEFINED IN THE 2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL, UNLESS DIRECTED OTHERWISE BY THE TOWN ENVIRONMENTAL PLANNER. OUTSIDE OF THESE SPECIFIED DATES, AREAS WILL BE STABILIZED WITH HAYBALE CHECK DAMS, FILTER FABRIC, OR WOODCHIP MULCH AS REQUIRED TO CONTROL EROSION.



REVISIONS		
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