

SIMSBURY



PROJECT MANUAL

BID NO. 24-02

**Town Hall Parking and Safety Improvements – Work to West of Town Hall
Simsbury, Connecticut
March 2024**

**INVITATION TO BID
TOWN OF SIMSBURY
(EQUAL OPPORTUNITY EMPLOYER)**

**BID NO. 24-02
Town Hall Parking and Safety Improvements – Work to West of Town Hall
Simsbury, Connecticut**

Sealed bids endorsed "Town Hall Parking and Safety Improvements – Work to West of Town Hall, Simsbury, Connecticut" will be received at the office of the Finance Department, 933 Hopmeadow St., Simsbury, Connecticut until Tuesday, April 9, 2024, at 2:00 p.m. (EST) at which time they will be opened in public by the Director of Finance. Bids received after the time set for the opening may be rejected.

This project includes the removal of existing stairs, installation of new retaining wall and installation of new outdoor stairs to the west of Simsbury Town Hall with associated grading, curbing, drainage structure modification, landscaping, and appurtenances.

A Pre-Bid Site Visit will be held at the site at 933 Hopmeadow Street, Simsbury, CT 06070 on Thursday, March 28, 2024 at 11:00 a.m. local time at the Town Hall Main Meeting Room.

Documents can be obtained from the Town of Simsbury website:
<https://www.simsbury-ct.gov/finance/pages/public-bids-and-rfp> .

It is the responsibility of the Contractor to obtain physical copies of these plans utilizing the PDF versions available online.

The right is reserved to reject any or all bids or to waive defects in same if it be deemed in the best interest of the Town of Simsbury.

The Town of Simsbury is an Affirmative Action - Equal Opportunity Employer.

Amy Meriwether
Director of Finance/Treasurer
Town of Simsbury

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BIDDING REQUIREMENTS

Town Hall Parking and Safety Improvements

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1. **INTRODUCTION**

The Town of Simsbury (the "Town") is soliciting bids for Town Hall Parking and Safety Improvements – Work to West of Town Hall. This Invitation is not a contract offer.

The scope of this project is described more particularly in the Invitation for Bid that is a part of this bid package.

The location, general characteristics and principal details of the work are indicated on drawings in the plan set prepared by Town of Simsbury Engineering Department titled "Town Hall Parking and Safety Improvements – Work to West of Town Hall", dated March 22, 2024.

The above drawings are the contract drawings, referred to herein as the "Drawings."

Interested parties should submit a bid response in accordance with the requirements and directions set forth in this bid package.

The Town will return unopened any bid received after the date and time of bid opening.

If there are any conflicts between the provisions of these Instructions to Bidders and any other document(s) comprising this bid package, these Instructions to Bidders shall prevail.

2. **KEY DATES**

Invitation to Bid issued:	March 22, 2024
Pre-Bid Conference:	March 28, 2024 @ 11:00 a.m. at Town Hall
Bids Due:	April 9, 2024 @ 2:00 p.m.
Notice of Conditional Award:	April 12, 2024
Contract Execution:	April 19, 2024
Commencement of Work:	April 22, 2024
Substantial Completion of Work:	June 14, 2024
Final Completion of all work:	August 2, 2024

3. **PROJECT COMPLETION**

The contractor is advised that time is of the essence for this project. The Contractor shall provide a detailed work schedule including any suggested phasing for approval by the Town prior to execution of the Contract. The work schedule shall be updated weekly for the duration of the construction.

a. **Project Completion**

Work under this contract shall be substantially completed as follows:

All elements of the project shall be substantially completed by the dates listed in Section 2, and final completion by August 2, 2024. Substantial completion includes all work included in the contract. The Contractor shall be subject to liquidated damages described in Section 8 in the event that work is not substantially complete by these dates.

4. **CONTINGENCIES**

The Town reserves the right to cancel this bid process and any resulting Contract at any time if the Town deems such action to be in its best interests, including but not only if either of the following conditions exists:

- The Town, through changes in its requirements or methods of operation, no longer has a need for the subject matter of this Invitation; or
- The Town is not satisfied with the work under the Contract, or the successful bidder fails to comply with any of the Contract's terms and conditions.

5. **OBTAINING BID PACKAGE**

The bid package – i.e., each of the documents listed on the page preceding these Instructions and collectively referred to as the "Invitation" – may be obtained from the Town of Simsbury website: <https://www.simsbury-ct.gov/finance/pages/public-bids-and-rfp> .

6. **BID SUBMISSION INSTRUCTIONS**

Bids must be in the Town office identified above prior to the date and time the first bid is scheduled to be opened publicly. Postmarks prior to the bid opening date and time do **NOT** satisfy this condition. The Town will **NOT** accept corrections and/or modifications received after the first bid is opened publicly. Bids may not be withdrawn after bid opening, and bids must remain in effect for sixty (60) calendar days after bid opening, even if the bidder discovers errors in the bid after opening.

One (1) original bid must be submitted on the accompanying Bid Form and in sealed, opaque envelopes clearly labeled with the bidder's name, the bidder's address, the words "BID DOCUMENTS," and the Bid Title and Bid Opening Date, to prevent opening prior to the bid opening date. The bidder should also complete the following forms and submit as part of the bid submission:

- Bid Security
- Non-Collusion Affidavit
- Legal Status Form
- Statement of Bidder's Qualifications
- Simsbury Hold Harmless and Indemnification Agreement

The Town will reject, and not accept, bids submitted in unmarked envelopes that the Town opens in its normal course of business. The Town may, but shall not be required to, return such bid and inform the bidder that the bid may be resubmitted in a sealed envelope properly marked as described above.

Bids must be submitted on the prescribed form and all blank spaces for bid prices must be completed and all prices shall be stated in both words and figures. Bid prices shall include all labor, materials, equipment, and transportation necessary to perform the work in accordance with the Contract. The person signing the bid must initial errors, alterations or corrections on both the original bid and all required copies. Ditto marks or words such as "SAME" shall not be used in the Bid Form.

Bids may be withdrawn personally or in writing provided that the Town receives the withdrawal prior to the time and date fixed for the bid opening. Bids are considered valid for sixty (60) calendar days after bid opening, to permit the Town to review the bids and to investigate the bidders' qualifications prior to awarding the bid. Bidders may not withdraw, cancel or modify their bid for a period of ninety (90) calendar days after the bid opening or the Bidder shall forfeit its Bid Security.

An authorized person representing the legal entity of the bidder must sign the bid.

7. LUMP SUM PRICES

Lump sum prices for each of the items in the bid shall include its prorated share of overhead, profit, and all costs associated with that item. The lump sum price represents the **entire compensation** that the Town shall pay for **all** of the work associated with the item.

8. LIQUIDATED DAMAGES

If the Contractor shall neglect, fail or refuse to complete the Work within the time herein specified, or any proper extension thereof granted by the terms of this Agreement then the Contractor does hereby agree, as part consideration for awarding of this Contract, to pay the Owner the amount specified in the Contract, not as a penalty but as liquidated damages for such breach of Contract as hereinafter set forth, for each and every calendar day that the Contractor shall be in default after the time stipulated in the Contract for completing the Work the sum of Five Hundred Dollars (\$500) per calendar day.

The said amount is fixed and agreed upon by and between the Contractor and the Owner because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages of the Owner would in such event sustain, the said amount shall be retained from time to time by the Owner from current periodical estimates. It is further agreed that time is of the essence of each and every portion of this Contract and of the specifications wherein a definite and certain length of time is fixed for the performance of any act whatsoever, and where under the Contract an additional time is allowed for the completion of any Work, the new time limit fixed by such extension shall be of the essence of this Contract, provided that the Contractor shall not be charged with liquidated damages or any excess cost when the delay in completion of the Work is due to acts of God and other similar circumstances beyond his control.

9. QUESTIONS

Questions concerning the bid are to be in writing preferably by email and directed **only to:**

Name: Daniel F. Gannon
Project Engineer
933 Hopmeadow Street
Simsbury, CT 06070
E-mail: <mailto:dgannon@simsbury-ct.gov>

If a bidder finds any omission, discrepancy or error in, has questions concerning, or seeks an exception to anything in the documents constituting this Invitation, it should notify the Town as soon as possible and in no event later than five (5) business days before the date of the bid opening. The bidder must direct that inquiry to: Daniel Gannon, email address: <mailto:dgannon@simsbury-ct.gov>. No oral statement of the Town shall be effective to modify any of the provisions of this Invitation.

However, the Town will not make any oral interpretations to any bidder as to the meaning of any bid documents or portions thereof, and no bidder shall rely on any alleged oral interpretation. A bidder shall request an interpretation in writing to Daniel Gannon, email address: <mailto:dgannon@simsbury-ct.gov>. The Town will not consider any such request made more than five (5) business days before the bid opening date.

10. ADDENDA

The Town will post an addendum or addenda, which shall be a part of this Invitation and the resulting Contract, containing all questions received as provided for above and decisions regarding same. At least three (3) calendar days prior to the receipt of bids, the Town will post a copy of the addendum at <https://www.simsbury-ct.gov/finance/pages/public-bids-and-rfp>. Each bidder is responsible for checking the website to determine if the Town has issued an addendum and, if so, to complete its bid in accordance with the Invitation as modified by the addendum.

11. COSTS FOR PREPARING BID

This Invitation does not commit the Town to pay any costs incurred by bidders in preparing their responsive bids. Each bidder agrees that all costs it incurs in developing its bid are its sole responsibility.

12. OWNERSHIP OF BIDS

All bids submitted become property of the Town.

13. FREEDOM OF INFORMATION ACT

All information submitted in a bid or in response to a request for additional information is subject to disclosure under the Connecticut Freedom of Information Act as amended. A bidder's responses may contain financial or other data that it claims constitute proprietary or confidential information

or a trade secret. To protect such data from disclosure, a bidder should identify specifically the pages that contain claimed confidential information by visibly marking all such pages of the bid.

14. REQUIRED DISCLOSURES

In its bid each bidder must:

- State its inability to meet any specified requirement of the Invitation;
- Make a complete disclosure of all resolved and pending mediation, arbitration and litigation matters in which the bidder or its principals (regardless of their place of employment) have been involved for the most recent five (5) years;
- Make a complete disclosure of each instance of its or its principals' (regardless of their place of employment) conviction, guilty plea, nolo contendere plea, finding of civil liability or criminal responsibility in any civil action or for any criminal offense, except motor vehicle infractions; and
- Make a complete disclosure of each instance of its or its principals' (regardless of their place of employment) finding of a violation of any state or local ethics standards or other offense arising out of the submission of bids or proposals, or performance of work on public works projects or contracts.

A bidder's acceptability based on these disclosures and any investigation the Town deems necessary to determine a bidder's ability to perform the work described in this Invitation shall lie solely with the Town.

15. BIDDERS QUALIFICATIONS

In order to be considered for the project, the successful bidder shall demonstrate that they or their Subcontractor meets the following requirements:

- Completed a minimum of five similar installations of comparable size or greater to the project in the previous five calendar years.

The Owner may make such investigations as it deems necessary to determine the ability of the bidder to perform the work, and the bidder shall furnish to the Owner all such information and data for this purpose as the Owner may request. The Owner reserves the right to reject any bid if the evidence submitted by, or investigation of, such bidder fails to satisfy the Owner that such bidder is properly qualified to carry out the obligations of the Contract and to complete the work contemplated therein.

16. CONFLICT OF INTEREST

The Town shall review all bids under this provision and may reject any bid where, in the Town's opinion, the bidder could be in a conflict of interest or could be perceived to be in a possible conflict of interest position if the bidder were to become a party to the Contract.

17. DEBARRED CONTRACTORS

The Town will reject any bid from a bidder that is on a debarred Contractor list of the United States and/or the State of Connecticut.

18. LEGAL STATUS

Each bidder must complete the Bidder's Legal Status Disclosure form and must, if required, have a current license or registration to do business in the State of Connecticut that is on file with the Connecticut Secretary of the State's Office. The Town may, in its sole discretion, request acceptable evidence of any bidder's legal status.

19. BID SECURITY

Each bid must be accompanied by bid security in the amount equal to at least **TEN PERCENT (10%)** of the bid amount for the first year. The bid security shall be in the form either of the bidder's certified check or of a bid bond. The bid bond shall be prepared in the form of the Bid Bond made a part of this Invitation, duly executed by the bidder and the surety and shall be subject to the review and approval of the Town's legal counsel. The bidder's surety shall be licensed by the State of Connecticut and listed by the US Department of the Treasury in Circular No. 570. equal to at least **TEN PERCENT (10%)** of the bid amount.

In lieu of a surety bond, subject to review and approval of the Town's legal counsel, a certified check will be accepted. The bidder's bank shall be licensed and insured by the State of Connecticut and the Federal Deposit Insurance Corporation. The failure of the Town's legal counsel to approve the form of bid security shall be grounds for the Town to reject the bid.

The successful bidder, upon its refusal or failure to execute and deliver the Contract, certificates of insurance, bonds or other documents required by this Invitation within **TEN (10) business days** of written notification of award, unless the Town otherwise agrees in writing, shall forfeit to the Town the bid security.

If the successful bidder has previously failed to execute and deliver a contract on a prior bid awarded by the Town, such bidder shall have TEN (10) business days to post a cash bond in an amount deemed by the Town to adequately cover the difference between the successful bid and the next lowest, complete and responsive bid. Such cash bond shall be forfeited in its entirety in the event the successful bidder fails to execute and deliver the Contract, certificates of insurance, bonds or other documents required by this Invitation within **TEN (10) business days** of written notification of award, unless the Town otherwise agrees in writing.

The Town shall consider a bidder's failure to provide the required bid security as an incomplete and unresponsive bid.

Upon the successful bidder's execution of the Contract in the form enclosed with this Invitation and the provision of all other required documents, the Town shall release the bid security to all other bidders.

20. PRESUMPTION OF BIDDER'S FULL KNOWLEDGE

At the time the first bid is opened, the Town will presume that each bidder has read and understood each document comprising this Invitation and any addenda posted on the Town's website. A bidder's failure and/or omission to receive or examine any information concerning this Invitation shall in no way relieve it from any aspect of its bid or the obligations related to it.

At the time the first bid is opened, the Town will also presume that each bidder is familiar with and will comply with all federal, state and local laws, ordinances and regulations that in any manner relate to this Invitation and the performance of the work described in it.

By submitting a bid, each bidder represents that it has thoroughly examined and become familiar with the scope of work outlined in this Invitation and it is capable of performing the work to achieve the Town's objectives.

Each bidder shall visit and examine the location of and the routes to be used during the work described in this Invitation and thoroughly familiarize itself with all actual conditions of the property before preparing its bid. The submission of a bid shall be construed as an assurance that such examination has been made, and the Town will not recognize or award claims for compensation for additional labor, equipment or materials for difficulties encountered.

21. TAX EXEMPTIONS

The Town is exempt from the payment of federal excise taxes and Connecticut sales and use taxes. Exemption from State sales tax per Conn. Gen. Stat. Chapter 219, § 12-412(1). Bidders shall avail themselves of these exemptions.

22. INSURANCE

The successful bidder shall, at its own expense and cost, obtain and keep in force during the entire duration of the work and during the completed operations period that is the subject of this Invitation the insurance coverages set forth in the Agreement.

23. AWARD CRITERIA, SELECTION, CONTRACT EXECUTION

The Town reserves the right to accept the bid that, all things considered, is in the best interests of the Town. Although price will be an important factor, it will not be the only basis for award. Due consideration will also be given to a bidder's experience, references, service, ability to respond promptly to requests, past performance satisfactory to the Town, and other criteria relevant to the interests of the Town, including the bid documents' compliance with the procedural requirements stated in this Invitation.

The Town will not award the bid to any bidder who is in arrears or in default to the Town on any debt, contract, security or any other obligation.

The Town reserves the rights, in its sole discretion: to accept any, all, or any part of bids; to reject any, all, or any part of bids; to waive any non-material deficiencies or clerical errors in the bidding process or bid; and to award the bid that in its judgment will be in the Town's best interests. The

Town also reserves the right to award the purchase of individual items under this Invitation to any combination of separate bids or bidders.

All bids will be publicly opened and read aloud as received on the date, at the time, and at the place identified in this Invitation. Bidders may be present at the opening.

The Town may correct, after bidder verification, any mistake in a bid that is obviously a clerical error, such as a price extension or decimal point error. If an error exists in an extension of prices, the unit price shall prevail. In the event of a discrepancy between the price quoted in words and in figures, the words shall control.

The Town will select the bid that it deems to be in the Town's best interest and issue a Notice of Conditional Award of Bid to the successful bidder. The conditional award shall be subject to further discussions with the bidder that are deemed necessary by the Town and to the successful bidder's provision of the documents required by this Invitation and the execution of a Contract in the form contained in this Invitation. The successful bidder's failure to provide each required form or execute the Contract within ten (10) business days of the date of the Notice of Conditional Award of Bid shall be grounds for the Town to declare the bid withdrawn, to call the bid security, and to enter into discussions with another bidder.

The Town will post the bid results and award recommendation on the Town's website, www.townofSimsburyct.org, under "Request for Proposals."

The Notice of Conditional Award and Contract Execution dates in Section 2 are anticipated, not certain, dates.

24. COLLUSION

Each bidder shall complete the Non Collusion Affidavit that is a part of this Invitation.

Any act(s) of misrepresentation or collusion in connection with a bid shall be a basis to disqualify a bid submitted by the bidder responsible for said misrepresentation or collusion. In the event that such conduct is discovered after the execution of the Contract, the Town may terminate the Contract without incurring any liability, penalty, damages or other loss.

25. ADVERTISING

The successful bidder may not name the Town in its advertising, news releases, and promotional efforts without the Town's prior written approval.

If it chooses, the successful bidder may list the Town in a statement of references or similar document required as part of a public bid. The Town's permission to the successful bidder to do so is **not** a statement about the quality of the successful bidder's work or the Town's endorsement of the successful bidder or its work.

26. W-9 FORM

The successful bidder must provide the Town with a completed W-9 form before commencing work.

27. PAYMENTS

Payments will be made within thirty (30) calendar days after the appropriate Town officer receives and approves the invoice, unless otherwise specified in the Technical Specifications.

28. TOWN INSPECTION OF WORK

The Town may inspect the successful bidder's work at all reasonable times. This right of inspection is solely for the Town's benefit and does not transfer to the Town the responsibility for discovering patent or latent defects. The successful bidder has the sole and exclusive responsibility for performing in accordance with the Contract.

29. REJECTED WORK OR MATERIALS

The successful bidder, at its sole cost and expense, shall remove from the Town's premises rejected items, commodities and/or work within 48 hours of the Town's notice of rejection. Immediate removal may be required when safety or health issues are present.

30. MAINTENANCE AND AVAILABILITY OF RECORDS

The successful bidder shall maintain all records related to the work described in the Invitation for a period of three (3) years after final payment under the Contract or until all pending Town, state and federal audits are completed, whichever is later. Such records shall be available for examination and audit by Town, state and federal representatives during that time.

31. REPRESENTATION OF TOWN

In performing the work described in the Invitation, the successful bidder, its agents and employees shall act in an independent capacity and shall not act as, and are not, officers, employees or agents of the Town.

32. SUBCONTRACTING

The successful bidder agrees not to enter into any subcontracting agreement for any or all of the work described in the Invitation without obtaining the Town's prior written consent. All subcontracting shall be subject to the same terms and conditions as are applicable to the successful bidder. The successful bidder shall be fully and solely responsible for the performance of and payments to any Subcontractors.

33. COMPLIANCE WITH LAW

The successful bidder shall comply with all applicable laws, regulations, ordinances, codes and orders of the United States, the State of Connecticut and the Town related to its bid and the

performance of the work described in the Invitation. The successful bidder shall commit no trespass on private property in performing any of the work described in the Invitation.

By submitting a bid, the successful bidder covenants that it has complied, and during the term of the Contract will comply, with the obligations under the Immigration Reform and Control Act ("IRCA") and that all employees it assigns to the Contract are authorized for employment in the United States of America. The successful bidder further covenants that it has properly completed, and during the term of the Contract will properly complete, I-9s for all employees assigned to the Contract. The successful bidder agrees to defend, indemnify and hold the Town harmless in the event that any of the successful bidder's employees provided under the Contract is found not to be authorized to work under the law or in the event that there is a determination that the successful bidder has failed to comply with IRCA's obligations, including but not limited to the failure to prepare correctly and maintain I-9s. The successful bidder further agrees to defend, indemnify and hold harmless the Town from and against any and all claims brought against the Town as a result of these obligations, including but not limited to settlement fees, judgments, attorneys fees and costs. These defense, hold harmless and indemnity obligations shall survive the Contract's termination or expiration.

34. LICENSES AND PERMITS

The successful bidder shall, for the term of the Contract, have and provide proof of all permits and licenses required by the Town and/or any other state or federal authority. The successful bidder shall immediately and in writing notify the Town of the loss or suspension of any such license or permit.

35. SECURITY, PERFORMANCE, AND PAYMENT

At the time of Contract execution, the successful bidder shall file with the Town security in an amount not less than one hundred percent (100%) of the total bid for, which security shall be for both the satisfactory performance of the work and for all labor and materials. Such security shall be in the form of either surety bond(s) or the successful bidder's certified check.

The surety bond(s) shall be prepared in the form of the Performance Bond, and the Labor and Material Payment Bond, made a part of this Invitation, duly executed by the bidder and the surety and shall be subject to the review and approval of the Town's legal counsel. The bidder's surety shall be licensed by the State of Connecticut and listed by the US Department of the Treasury in Circular No. 570. The Town may accept a certified check in lieu of a surety bond, subject to review and approval of the Town's legal counsel. The bidder's bank shall be licensed and insured by the State of Connecticut and the Federal Deposit Insurance Corporation. The failure of the Town's legal counsel to approve the form of such security shall be grounds for the Town to reject the bid.

The successful bidder shall provide the Town with such security prior to the start of each Contract year in an amount the Town estimates for the work anticipated for that Contract year. Failure to provide such security shall be grounds to terminate the Contract.

36. NON-DISCRIMINATION AND EQUAL EMPLOYMENT OPPORTUNITY

During the term of the Contract, the successful bidder agrees to be an equal employment opportunity employer and will not discriminate as to race, color, creed, sex, national origin, marital status, physical or mental disability or any other protected classification under state and federal law.

37. LOCAL VENDOR BENEFIT

If any Simsbury based vendor responds to a bid notice and comes with 5% of the lowest bidder, all qualification being equal, the local based vendor will be allowed the opportunity to adjust their bid to match that of the lowest bidder.

38. WAGE RATES

The project is subject to State of Connecticut Prevailing Wage Rates.

END OF INSTRUCTIONS TO BIDDERS

BID PROPOSAL

To: Office of the Finance Director
Town of Simsbury
933 Hopmeadow Street
Simsbury, CT 06070

Proposal of:

Contractor Name: _____

Street Address: _____

City, State, Zip Code _____

The undersigned further declares that he has carefully examined the site of the work, the information for bidders, specifications, drawings and form of contract and will contract to provide all necessary tools, apparatus and implements, freight, cartage and expense, and to do all work and furnish all the materials necessary to construct the proposed work named on the title page in the manner and upon the conditions specified, and upon the terms which follow herein.

But it is understood and agreed that the prices bid for unit quantities of work in the following items shall control in any contract awarded hereon; that the quantities used are approximate only, being estimated solely for use in comparing bids; and that the following products obtained by multiplying the unit prices bid by the estimated quantities, and the total of those prices are inserted only for the purpose of checking this proposal and for the convenience of the bidder. In the case of error or discrepancies, unit prices govern and written words take precedence over figures.

No bids may be withdrawn for a period of 90 days after the opening of bids without the approval and written consent of the Finance Director. If no award has been made within 90 days after the opening of bids, the bid may be withdrawn upon demand of the bidder at any time thereafter, so long as he has not been notified of the acceptance of his bond.

And the undersigned agrees to furnish satisfactory performance and payment bonds with surety, and to execute and deliver, within five days after the notice of the award, a formal contract with the Town of Simsbury for the fulfillment of this proposal; and it is agreed, in case of failure or neglect on the part of the undersigned to do so, the Town may determine that the bidder has abandoned the contract and thereupon the proposal and acceptance shall be null and void, and at the Town's option the amount of the bond or check accompanying the proposal shall be forfeited to the Town of Simsbury, or shall be returned to the bidder in whole or in part.

The undersigned further declares that the bidder is:

- a. A CORPORATION organized under the laws of the State of having its principal office at

The principal officers of said corporation with their respective titles and address are as follows:

- b. A LLC organized under the laws of the State of having its principal office at

The principal officers of said corporation with their respective titles and address are as follows:

- c. A PARTNERSHIP consisting of the following individuals (with their addresses).

- d. An INDIVIDUAL, by the name of _____ and doing business as

The bidder is required to state below what work of a similar character to that included in the proposed contract he has done and give reference that will enable the Town to judge his experience, skill and business standing.

The bidder is required to give a brief description of the plan and general methods proposed for carrying on the work indicating there in whether the plan and equipment are owned or to be hired by the bidder.

BID PRICES

INSTRUCTIONS: Bidder is to write his bid price in words in the blank spaces provided at the end of the description.

The Bidder is advised that the description is only a summary. The lump sum bid shall include all of the items as specified in detail in the contract document.

In case of discrepancies between amounts shown in words and amount shown in figures, BIDDER agrees that amounts shown in words will govern.

BID SCHEDULE

BIDDER'S NAME:

PROPOSAL NUMBER:

BID NO. 24-02

Town Hall Parking and Safety Improvements – Work to West of Town Hall

LUMP SUM BASE BID PRICE – BASE BID 1 of plan including expansion of existing parking lot, mill and pave of parking lot near sally port, placing bituminous concrete curb, placing concrete dumpster pad, removal of existing stairs and bituminous concrete path, installation of retaining wall, riprap basin, replace drainage grate with catch basin top, tree removal, and associated grading.

Pursuant to and in full compliance with the solicitation, the undersigned bidder, having visited the site or property if applicable, and having thoroughly examined each and every document comprising the solicitation, including any addenda, hereby offers and agrees as follows:

To provide the products and/or services specified in, and upon the terms and conditions of, the solicitation for the total sum of _____

_____/100 Dollars (write out in words)

(\$_____).

LUMP SUM BASE BID PRICE – BASE BID 2 of plan including tree removal, (3) pre-cast stairs with associated concrete landings and sidewalks, remove and replace bituminous concrete path, and associated grading.

Pursuant to and in full compliance with the solicitation, the undersigned bidder, having visited the site or property if applicable, and having thoroughly examined each and every document comprising the solicitation, including any addenda, hereby offers and agrees as follows:

To provide the products and/or services specified in, and upon the terms and conditions of, the solicitation for the total sum of _____
_____/100 Dollars (write out in words)

(\$_____).

MANDATORY UNIT PRICES

Should the amount of improvements required be increased or decreased due to special considerations found at the site or because of a request of the Town of Simsbury, the undersigned agrees that the following supplemental UNIT PRICES will be the basic price in place for computing the EXTRA or CREDIT.

Each UNIT PRICE shall include all equipment, tools, labor, permits, fees, etc., incidental to the installation and completion of the work involved.

The amounts shown are net changes to the Contract for additional work and include the Contractor's and any Subcontractor's amounts for overhead and profit. For deleted work, the net credit to the Contract shall be 10% less.

All work is to be accomplished in accordance with applicable Sections of the Specifications and Site Details.

C.Y. = cubic yard
S.Y. = square yard
L.F. = linear foot

S.F. = square foot
V.F. = vertical foot
EA = Each

- | | | |
|-----|---|--------------|
| 1. | Furnish and Install New Bituminous Concrete Curb | \$_____/L.F. |
| 2. | Furnish and Install Concrete Dumpster Pad | \$_____/C.Y. |
| 3. | Furnish and Install New Retaining Wall | \$_____/S.F. |
| 4. | Furnish and Install Bituminous Concrete Parking Lot | \$_____/S.F. |
| 5. | Remove Existing Bituminous Concrete Path & Stairs | \$_____/EA. |
| 6. | Furnish and Place 8-Rise Concrete Stairs | \$_____/EA. |
| 7. | Furnish and Place 10-Rise Concrete Stairs | \$_____/EA. |
| 8. | Furnish and Install Concrete Sidewalk and Landing | \$_____/S.F. |
| 9. | Furnish and Install Bituminous Concrete Path | \$_____/S.F. |
| 10. | Mill and Pave Existing Parking Lot | \$_____/S.F. |
| 11. | Furnish and Install Earthen Fill | \$_____/C.Y. |
| 12. | Final Restoration including Topsoil and Seed | \$_____/S.F. |
| 13. | Tree Removal | \$_____/EA. |
| 14. | Modified Rip Rap | \$_____/C.Y. |

TOWN OF SIMSBURY, CONNECTICUT

BIDDER'S LEGAL STATUS DISCLOSURE

Please fully complete the applicable section below, attaching a separate sheet if you need additional space.

For purposes of this disclosure, "permanent place of business" means an office continuously maintained, occupied and used by the bidder's regular employees regularly in attendance to carry on the bidder's business in the bidder's own name. An office maintained, occupied and used by a bidder only for the duration of a contract will not be considered a permanent place of business. An office maintained, occupied and used by a person affiliated with a bidder will not be considered a bidder's permanent place of business.

IF A SOLELY OWNED BUSINESS:

Bidder's Full Legal Name _____

Mailing Address _____

Owner's Full Legal Name _____

Does the bidder have a "permanent place of business" in Connecticut, as defined above?

_____ Yes _____ No

If yes, please state the full street address (not a post office box) of that "permanent place of business."

IF A CORPORATION:

Bidder's Full Legal Name _____

Mailing Address _____

State in which Legally Organized _____

State Business ID # _____

Current Officers

President

Secretary

Chief Financial Officer

Vice President

Treasurer

Does the bidder have a "permanent place of business" in Connecticut, as defined above?

_____ Yes _____ No

If yes, please state the full street address (not a post office box) of that "permanent place of business."

IF A LIMITED LIABILITY COMPANY:

Bidder's Full Legal Name _____

Mailing Address _____

State in which Legally Organized _____

State Business ID # _____

Current Manager(s) and Members

Name & Title (if any) _____
Address

Name & Title (if any) _____
Address

Name & Title (if any) _____
Address

Name & Title (if any) _____
Address

Name & Title (if any) _____
Address

Does the bidder have a "permanent place of business" in Connecticut, as defined above?

_____ Yes _____ No

If yes, please state the full street address (not a post office box) of that "permanent place of business."

IF A PARTNERSHIP:

Bidder's Full Legal Name _____

Mailing Address _____

State in which Legally Organized _____

State Business ID # (if applicable) _____

Current Partners

_____	_____
Name & Title (if any)	Address

_____	_____
Name & Title (if any)	Address

_____	_____
Name & Title (if any)	Address

_____	_____
Name & Title (if any)	Address

Does the bidder have a "permanent place of business" in Connecticut, as defined above?

_____ Yes _____ No

If yes, please state the full street address (not a post office box) of that "permanent place of business."

Bidder's Full Legal Name

(print)

Name and Title of Bidder's Authorized Representative

(signature)

Bidder's Representative, Duly Authorized

Date

END OF LEGAL STATUS DISCLOSURE FORM

TOWN OF SIMSBURY

BIDDER'S NON-COLLUSION AFFIDAVIT

BID NO. 24-02

Town Hall Parking and Safety Improvements – Work to West of Town Hall

The undersigned bidder, having fully informed himself/itself regarding the accuracy of the statements made herein, certifies that:

- (1) the bid is genuine; it is not a collusive or sham bid;
- (2) the bidder developed the bid independently and submitted it without collusion with, and without any agreement, understanding, communication or planned common course of action with, any other person or entity designed to limit independent bidding or competition;
- (3) the bidder, its employees and agents have not communicated the contents of the bid to any person not an employee or agent of the bidder and will not communicate the bid to any such person prior to the official opening of the bid; and
- (4) no elected or appointed official or other officer or employee of the Town of Simsbury is directly or indirectly interested in the bidder's bid, or in the supplies, materials, equipment, work or labor to which it relates, or in any of the profits thereof.

The undersigned bidder further certifies that this statement is executed for the purpose of inducing the Town of Simsbury to consider its bid and make an award in accordance therewith.

Legal Name of Bidder

(signature)

Bidder's Representative, Duly Authorized

Name of Bidder's Authorized Representative

Title of Bidder's Authorized Representative

Date

Subscribed and sworn to before me this _____ day of _____, 20____.

Notary Public
My Commission Expires:

(Acknowledgement if a Corporation)

State of Connecticut)
)
County of _____) ss:

On this the _____ day of _____, 20__ before me personally came and appeared _____ to me known, who, being by me duly sworn, did depose and say that he/she is the _____ of _____, the corporation described in and which executed the foregoing instrument; that he/she knows the seal of the corporation; that one of the impressions affixed to said instrument is an impression of such seal; that it was so affixed by order of the directors of said corporation, and that s/he signed her/his name thereto by like order.

(Notary Seal)

Commissioner of the Superior Court
Notary Public
My commission expires:

(Acknowledgement of a Partnership)

State of Connecticut)
)
County of Hartford) ss:

On this the _____ day of _____, 20__ before me personally came and appeared _____ to me known, and known to me to be a partner of the partnership described in and which executed the foregoing instrument and he/she acknowledged to me that he/she executed the same as and for a free act of said partnership.

(Notary Seal)

Commissioner of the Superior Court
Notary Public
My commission expires:

(Acknowledgement of a Proprietorship)

State of Connecticut)
) ss:
County of Hartford)

On this the _____ day of _____, 20____ before me personally came and appeared
_____ to me known, and known to me to be the person described in and who
executed the foregoing instrument and acknowledged that he/she executed the same as his/her free act
and deed.

(Notary Seal)

Commissioner of the Superior Court
Notary Public
My commission expires:

STATEMENT OF BIDDER'S QUALIFICATIONS

All questions shall be answered and information given shall be clear and comprehensive. This statement shall be notarized. If additional room is required to answer questions, please attach additional sheet(s) with the supplemental information. The bidder's name shall appear on the top of the supplemental sheets to avoid confusion. The bidder may submit additional information as it deems necessary to enable the Town to judge the bidder's ability to perform the proposed Contract.

A complete statement of Bidders Qualifications shall be submitted for any Subcontractor that will be utilized to satisfy Item 13 of this Statement of Bidders Qualifications.

1. Bidder's full legal name:
2. Permanent main office address:
3. Contact person for this Invitation:
4. Phone and fax numbers and e-mail address of the contact person during normal business hours:
5. Date of organization:
6. Date of incorporation, if applicable:
7. Number of years bidder has been engaged in business under present firm or trade name:
8. Contracts on hand (dollar value, anticipated completion date):
9. General character or type of work performed by the bidder:
10. Has the bidder ever failed to complete any work awarded to it? If so, please explain in detail the circumstances:
11. Has the bidder ever defaulted on a contract? If so, please explain in detail the circumstances:

12. List contracts of a similar nature (size, type, and complexity) completed successfully by the bidder within the last five (5) years. List the other contracting party, the value of the contract, and the year completed.
13. List the equipment that will be available for the work described in this Invitation.
14. How many years of experience does the bidder have in work of similar size, type, and complexity to the Work of this Invitation?
15. Describe the background and experience of each individual person listed in the Bidder's Legal Status Disclosure:
16. Provide the name of the bidder's bank or other financial institution, contact person, phone number, address, and state the bidder's available credit:
17. If necessary for the Town to determine an award of contract, will the bidder provide a detailed financial statement?
18. List all legal disputes (mediation, arbitration or litigation) that the bidder or any predecessor in interest has been involved with in the last five (5) years, the nature of the dispute, the adverse party and the result.

SECTION 3

WAGE AND PAYROLL

REQUIREMENTS

**THIS SHEET TO BE REPLACED
FOLLOWING RECEIPT OF PREVAILING WAGE RATES**

SECTION 4

CONTRACT FORMS

TOWN OF SIMSBURY
CONTRACT

BID NO. 24-02

Town Hall Parking and Safety Improvements – Work to West of Town Hall

THIS AGREEMENT, made this ____ day of _____ by and between THE TOWN OF SIMSBURY, 933 Hopmeadow Street, Simsbury, Connecticut hereinafter referred to as the OWNER and _____ with an address at _____ hereinafter referred to as the CONTRACTOR

WITNESSETH:

That for and in consideration of the mutual covenants and promises between the parties hereto, it is hereby agreed that:

1. The CONTRACTOR will furnish all of the materials and supplies, equipment, and labor and other services necessary in conformance with these contract documents for the construction and completion of the project described in general as follows: BID NO. 24-02, Town Hall Parking and Safety Improvements – Work to West of Town Hall, Simsbury, Connecticut, as defined in the Standard Instruction for Bidders.
2. COMPLETION OF WORK. The Contractor shall commence the work covered by this contract within ten (10) calendar days after the date of receipt of the Notice to Begin Work and shall complete the same within the aforementioned dates unless the period for completion is extended as provided for in the General Conditions.
3. CONTRACT SUM. The Owner shall pay the Contractor for the performance of said work the sum of \$ _____, subject to additions or deductions provided herein in conformity with the bid schedule of prices.
4. The Contract Documents include the following:
 - (a) Instructions to Bidders
 - (b) Bidder's Proposal
 - (c) Notice of Award
 - (d) Contract
 - (e) General Conditions

(f) Supplemental General Conditions

(g) Plans

(h) Special Provisions

(i) All Addenda

5. The OWNER will pay to the CONTRACTOR in the manner and at such times as set forth in the General Conditions and in such amounts as required by the Contract Documents.
6. This Contract shall be binding upon all parties hereto and their respective heirs, executors, administrators, successors, and assigns.

IN WITNESS WHEREOF, the parties hereto have executed, or caused to be executed by their duly authorized officials, this Contract in duplicate, on the date first above written.

OWNER:

Signed, Sealed and Delivered
in the presence of:

Town of Simsbury
BY: Marc Nelson
Town Manager

CONTRACTOR:

COMPANY NAME: _____

BY: _____

CONTRACTOR'S EXEMPT PURCHASE CERTIFICATE

I hereby certify, under penalties of perjury, that I am engaged in the performance of a construction contract on a project for the following named exempt agency or organization:

Town of Simsbury

Full Name of Agency of Organization

**933 Hopmeadow Street
Simsbury, CT. 06070**

Address of Same

That such agency is, to the best of my knowledge and belief, exempt from the Sales and Use Tax because it is a

Town

(Town, School, Fire or Police Department, Library etc.,
or other branch of State or Federal Government)

in accordance with Regulation No. 16 of Sales and Use Tax.

That this certificate is issued to cover all purchases of materials and supplies, designated by me, for use of the project referred to above.

Permit No. (if any)

Contractor

Date:

Place:

Company Name

Address:

PERFORMANCE BOND

Bond Number _____

KNOW ALL MEN BY THESE PRESENTS:

That _____, as Principal, hereafter called Principal, and _____, as Surety, hereinafter called Surety are held and firmly bound unto the Town of Simsbury as Obligee, hereinafter called Owner, in the amount of _____ and /100 Dollars (\$ _____), for the payment whereof Principal and Surety bind themselves, their heirs, executors, administrators, successors, and assigns, jointly and severally, by these presents.

WHEREAS, Principal has by written Agreement dated _____ entered into a Contract with the Owner for:

BID NO. 24-02
Town Hall Parking and Safety Improvements – Work to West of Town Hall
Simsbury, Connecticut

which Contract is by reference made a part hereof, and is hereinafter referred to as the Contract.

The Surety hereby waives notice of any alterations or extensions of time made by the Owner.

WHEREAS, Principal shall be, and declared by the Owner to be in default under the Contract, the Owner having performed the Owner's obligations thereunder, the Surety shall promptly remedy the default, or shall promptly:

1. Complete the Contract in accordance with its terms and conditions; or,
2. Obtain a Bid or Bids for submission to the Owner for completing the Contract in accordance with its terms and conditions, and upon determination by the Owner of the lowest qualified responsible Bidder, arrange for a Contract between the Bidder and the Owner, and make available as Work progresses sufficient funds to pay the cost of completion of the Contract.

Any suit brought under this Bond must be instituted before the expiration of three (3) years from the date on which final payment under this Contract is rendered.

This Bond is issued simultaneously with another Bond in favor of the Town of Simsbury conditioned for full payment of Labor and Materials.

No right of action shall accrue on this Bond to or for the use of any person or corporation other than the Owner named herein or the executors, administrators, or successors of the Owner.

Signed and sealed this _____ day of _____, 20____.

(Seal of Principal)

(Principal)

In the Presence of:

(witness)

By: _____

(witness)

(Seal of Surety)

(Surety)

(witness)

By: _____

(witness)

(Power of Attorney for person signing for surety company must be attached to the Bond)

**LABOR AND MATERIAL
PAYMENT BOND**

Bond Number _____

KNOW ALL MEN BY THESE PRESENTS:

That _____, as Principal, hereafter called Principal, and _____, as Surety, hereinafter called Surety are held and firmly bound unto the Town of Simsbury as Obligee, hereinafter called Owner, in the amount of _____ and /100 Dollars (\$ _____), for the payment whereof Principal and Surety bind themselves, their heirs, executors, administrators, successors, and assigns, jointly and severally, by these presents.

WHEREAS, Principal has by written Agreement dated _____ entered into a Contract with the Owner for:

BID NO. 24-02
Town Hall Parking and Safety Improvements – Work to West of Town Hall
Simsbury, Connecticut

which Contract is by reference made a part hereof, and is hereinafter referred to as the Contract.

This Bond is issued simultaneously with another Bond in favor of the Town of Simsbury conditioned for the full and faithful performance of the Contract.

The Surety hereby waives notice of any alterations or extensions of time made by the Owner.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the said Principal shall pay for all labor and materials furnished by himself or his subcontractors for use in the prosecution of the Work, and used therein, then, this obligation to be void; otherwise to remain in full force and effect;

PROVIDED, HOWEVER, that this Bond is executed pursuant to the provisions of Sections 49-41, 49-42, and 49-43 of the Connecticut General Statutes, and the rights and liabilities hereunder shall be determined and limited by said Sections to the same extent as if they were copied at length herein.

No right of action shall accrue on this Bond to or for the use of any person or corporation other than the Owner named herein or the executors, administrators, or successors of the Owner.

Signed and sealed this _____ day of _____, 20____.

(Seal of Principal)

(Principal)

In the Presence of:

(witness)

By: _____

(witness)

(Seal of Surety)

(Surety)

(witness)

By: _____

(witness)

(Power of Attorney for person signing for surety company must be attached to the Bond)

SECTION 5

GENERAL CONDITIONS

GENERAL CONDITIONS

1. DEFINITIONS

- 1.1 Wherever used in the CONTRACT DOCUMENTS, The following terms shall have the meanings indicated which shall be applicable to both the singular and plural thereof.
- 1.2 ADDENDA - Written or Graphic Instruments issued prior to the execution of the Agreement which modify or interpret the Contract Documents, Drawings and Specifications, by additions, deletions, clarifications or corrections.
- 1.3 BID - The offer or proposal of the BIDDER submitted on the prescribed form setting forth the prices for the WORK to be performed.
- 1.4 BIDDER -Any person, firm, or corporation submitting a BID for the WORK.
- 1.5 BONDS – Bid, Performance, and Payment Bonds and other instrument of security, furnished by the CONTRACTOR in accordance with the CONTRACT DOCUMENTS.
- 1.6 CHANGE ORDER - A written order to the CONTRACTOR authorizing an addition, deletion, or revision in the WORK within the general scope of the CONTRACT TIME.
- 1.7 CONTRACT DOCUMENTS - The contract including Advertisement for Bids, information for Bidders, BID, Bid Bond, Agreement, Payment Bond, Performance Bond, NOTICE OF AWARD, NOTICE TO PROCEED, CHANGE ORDER, DRAWINGS, SPECIFICATIONS, AND ADDENDA.
- 1.8 CONTRACT PRICE - The total monies payable to the CONTRACTOR under the terms and conditions of the CONTRACT DOCUMENTS.
- 1.9 CONTRACT TIME - The number of calendar days stated in the CONTRACT DOCUMENTS for the completion of the WORK.
- 1.10 CONTRACTOR - The person, firm, or corporation with whom the OWNER has executed the Agreement.
- 1.11 DRAWINGS - The part of the CONTRACT DOCUMENTS which show the characteristics and scope of the WORK to be performed and which have been prepared or approved by the ENGINEER.
- 1.12 ENGINEER - The Town Engineer for the Town of Simsbury, Connecticut.

- 1.13 FIELD ORDER - A written order affecting a change in the WORK not involving an adjustment in the CONTRACT PRICE or an extension of the CONTRACT TIME, issued by the ENGINEER to the CONTRACTOR during construction.
- 1.14 INSPECTOR - The person appointed by the Town of Simsbury, Conn. to supervise the WORK and shall extend to and include any assistant whom he/she may designate to act in the premises.
- 1.15 NOTICE OF AWARD - The written notice of the acceptance of the Bid from the OWNER to the successful BIDDER.
- 1.16 NOTICE TO PROCEED - Written communication issued by the OWNER to the CONTRACTOR authorizing him/her to proceed with the WORK and establishing the date of commencement of the work.
- 1.17 OWNER - The Town of Simsbury, Connecticut (A Public Body) for whom the WORK is to be performed.
- 1.18 PROJECT - The undertaking to be performed as provided in the CONTRACT DOCUMENTS.
- 1.19 SHOP DRAWINGS - All Drawings, Diagrams, Illustrations, Brochures, Schedules, and other data which are prepared by the CONTRACTOR, SUBCONTRACTOR, manufacturer SUPPLIER or Distributor which illustrate how specific portions of the WORK shall be fabricated or installed.
- 1.20 SPECIFICATIONS - A part of the CONTRACT DOCUMENTS consisting of written descriptions of a technical nature of materials, equipment, construction systems, standards and workmanship.
- 1.21 SUBCONTRACTOR - An individual firm or corporation having a direct contract with the CONTRACTOR or with any other SUBCONTRACTOR for the performance of a part of the work at the site.
- 1.22 SUBSTANTIAL COMPLETION- That date as certified by the PUBLIC WORKS DIRECTOR when the construction of the PROJECT or a specified part thereof is sufficiently completed, in accordance with the CONTRACT DOCUMENTS, so that the PROJECT or specified part can be utilized for the purposes for which it is intended.
- 1.23 SUPPLEMENTAL GENERAL CONDITIONS - Special provisions required by the

funding program or Agency (Federal, State, or Local) for participation in the PROJECT and included in the CONTRACT DOCUMENTS. Also such requirements that may be imposed by Applicable State Laws and special characteristics of the PROJECT.

- 1.24 SUPPLIER - Any person or organization who supplies materials or equipment for the WORK, including that fabricated to a special design, but who does not perform labor at the site.
- 1.25 WORK - All labor necessary to produce the construction required by the CONTRACT DOCUMENTS, all construction tools, machinery, and equipment, and all materials and equipment incorporated or to be incorporated in the PROJECT.
- 1.26 WRITTEN NOTICE - Any notice to any party of the Agreement relative to any part of this Agreement in writing and considered delivered and the service thereof completed, when posted by Mail to the said party at his/her last given address or delivered in person to said party or his/her authorized representative on the WORK.

2. PAYMENT

- 2.1 On the first of each month, the Contractor may submit an itemized estimate of work completed up to that time, including an estimate of the portion of lump sum items completed or quantities for unit priced items in the contract.
- 2.2 He/she must, if requested by the Engineer, submit satisfactory evidence that he/she has paid in full for all labor, materials and equipment included in the monthly estimate. The estimates shall be made on forms furnished by the Town and the Contractor shall certify that the estimate is correct and the work performed is in conformity with the plans and specifications. No later than 60 days after submission by the Contractor, and acceptance by the Town, of the estimate, the Town will pay the estimated cost, less five percent (5%) retained held by the Town.
- 2.3 After completion of the project and acceptance by the Town, the Contractor shall submit an itemized final estimate. No later than 60 days after acceptance of the final estimate by the Town, the Town shall pay ninety-five (95%) percent of the Contract price. No later than six months after acceptance of the final estimate the Town will pay the five (5%) retained, unless in that time the materials or workmanship in the project shall have been found to be defective.

3. PERMITS DURATION

- 3.1 The Contractor must obtain all necessary permits and pay the fee for them. (Town portion of permit fees are waived.)
- 3.2 Should the Town be prevented or enjoined from proceeding with work either before or after the start of construction by reason of any litigation or other reason beyond the control of the Town, the Contractor shall not be entitled to or assert claim for damage by reason of said delay; but time for completion of the work will be extended to such reasonable time as the Owner may determine will compensate for time lost by such delay with such determination to be set forth in writing.

4. SUPERVISION

- 4.1 The Town will be represented at all times by the TOWN ENGINEER or an employee authorized by the TOWN ENGINEER to represent him/her; and the TOWN ENGINEER or his/her authorized representative shall have sole authority in the interpretation and execution of the contract.
- 4.2 The Contractor must have a competent Field Supervisor on the job during all working hours and notify the Town of his/her name and address in writing, and where he/she may be reached normally after working hours. In the event of the absence of the Field Supervisor, the Contractor must appoint a second in command to take responsible charge of the job. The actual performance of work and superintendence shall be performed by the Contractor but the owner shall, at all times, have access to the premises for the purpose of observing or inspecting the work performed by the Contractor.

5. LAYOUT

- 5.1 The Contractor will provide line and grade by means of offset points. Any additional field work or layout required to reestablish these offset points to facilitate construction will be paid for by the Contractor.

6. SITE WORK

- 6.1 The Contractor will be responsible for maintenance of adequate barricades, signs, and warning systems to protect the job and the public.
- 6.2 The Contractor shall properly protect all underground and above ground utilities from damage. No interruption shall be caused to any utility without the knowledge of the TOWN ENGINEER.

7. STANDARDS

- 7.1 Whenever a material, article, or piece of equipment is identified on the plans or in the specifications by reference to manufacturers' or vendors' names, trade names, catalogue numbers, etc., it is intended merely to establish a standard and, any material, article, or equipment of other manufacturers and vendors which will perform adequately the duties imposed by the general design will be considered equally acceptable provided the material, article, or equipment so proposed, is, in the opinion of the Town Engineer, of equal substance and function. It shall not be purchased or installed by the Contractor without written approval.

8. CHANGES IN WORK

- 8.1 The Owner, without invalidating the Contract, may order extra work or make changes by altering, adding to or deducting from the work, the Contract Sum being adjusted accordingly.

9. CORRECTION OF WORK AFTER FINAL PAYMENT

- 9.1 Neither the final Certificate nor payment nor any provision in the Contract Documents shall relieve the contractor of responsibility for faulty materials or workmanship and, unless otherwise specified, he shall remedy any defects due thereto and pay for any damage to other work resulting therefrom, which shall appear within a period of one year from the date of substantial completion.
- 9.2 The Owner shall give notice of observed defects with reasonable promptness. All questions arising under this article shall be decided by the TOWN ENGINEER subject to mediation.

10. INSURANCE REQUIREMENTS

The Contractor must carry insurance under which the Town is named as an assured, as follows:

Such insurance must be by insurance companies licensed to write such insurance in Connecticut against the following risks with the following minimum amounts and minimum durations.

- A. Workman's Compensation, as required by State Statute.

- B. Public Liability, Bodily Injury Liability and Property Damage Liability as follows:
- | | |
|--|-------------|
| Injury or death of one person: | \$2,000,000 |
| Injury to more than one person in a single accident: | \$1,000,000 |
| Property damage in one accident: | \$1,000,000 |
| Property damage in all accidents: | \$2,000,000 |
| Excess/Umbrella Liability: | \$1,000,000 |
- C. Automobile and Truck (Vehicular) Public Liability, Bodily Injury Liability, and Property Damage Liability as follows:
- | | |
|--|-------------|
| Injury or death of one person: | \$1,000,000 |
| Injury to more than one person in a single accident: | \$1,000,000 |
| Property damage in one accident: | \$1,000,000 |
| Property damage in all accidents: | \$1,000,000 |
- D. Builders Risk including Fire and Extended coverage:
In an amount equal to the value of construction completed plus materials delivered to the site.
- E.
- | | | |
|--------------------|-----------------|-------------|
| Umbrella | Each Occurrence | \$5,000,000 |
| (Excess Liability) | Aggregate | \$5,000,000 |
- F. Professional Liability for Each Claim or Occurance \$1,000,000

Insurance under B, C, and D above must provide for a 30 day notice to the Town of cancellation/or restrictive amendment.

Insurance under B and C above must be for the whole duration of the contract and for twelve (12) months after acceptance of the project by the Town.

Insurance under D above must be carried for the whole duration of the project and until acceptance by the Town.

Subcontractors must carry A, B and C in the same amounts as above for the duration of the project and until acceptance by the Town.

Certificates of insurance must be submitted to the Town Engineer prior to the signing of the contract and within ten days of notification of award of contract. Should any insurance expire or be terminated during the period in which the same is required by this contract,

the Town Engineer shall be notified and such expired or terminated insurance must be replaced with new insurance and a new certificate furnished to the Town Engineer.

Failure to provide the required insurance and certificates may, at the option of the Town, be held to be a willful and substantial breach of this contract.

NOTE: Coverage under "B" shall include XCU coverage as necessary, Collapse and Underground shall be provided for ALL Contracts. Explosion will be provided if specified, or prior to any blasting being performed under the Contract.

11. OWNER'S RIGHT TO DO WORK

If the Contractor fails to prosecute the work properly or fails to perform any provisions of this contract, the Owner, after three days written notice to the Contractor may, without prejudice to any other remedy it may have, make good such deficiencies and may deduct the cost thereof from the payment then or thereafter due the Contractor. Provided, however, that the Town Engineer shall approve both such action and the amount charged to the Contractor.

12. ACCEPTANCE OF FINAL PAYMENT AS RELEASE

The acceptance by the Contractor of final payment shall be and shall operate as a release to the OWNER of all claims and all liability to the CONTRACTOR other than claims in stated amounts as may be specifically excepted by the CONTRACTOR for all things done or furnished in connection with this WORK and for every act and neglect of the OWNER and others relating to or arising out of this WORK. Any payment however, final or otherwise, shall not release the CONTRACTOR or his sureties from any obligation under the CONTRACT DOCUMENTS or the Performance BOND and Payment BONDS.

13. CONTRACT SECURITY

The Contractor shall within ten (10) days after the receipt of the NOTICE OF AWARD furnish the OWNER with a performance BOND and a payment BOND in penal sums equal to the amount of the CONTRACT PRICE, conditioned upon the performance by the CONTRACTOR of all undertakings, covenants, terms, conditions, and agreements of the CONTRACT DOCUMENTS, and upon the prompt payment by the CONTRACTOR to all persons supplying labor and materials in the prosecution of the WORK provided by the CONTRACT DOCUMENTS. Such BONDS shall be executed by the CONTRACTOR and shall be in a Form acceptable to the Town Director of Finance. When Surety Company Bonds are used, the corporate bonding company shall be licensed to transact such business in the State of Connecticut and named on the current list of "Surety Companies Acceptable on Federal Bonds" as published in the Treasury Department Circular Number 570. The expense of these BONDS shall be borne by the CONTRACTOR. If at any time a surety on any such bond is declared as bankrupt or loses its right to do business in the State in which

the WORK is to be performed or is removed from the list of surety companies accepted on FEDERAL BONDS, CONTRACTOR shall within ten (10) days after notice from the OWNER to do so, substitute an acceptable BOND (or BONDS) in such form and sum as may be satisfactory to the OWNER. The premiums on such BOND shall be paid by the CONTRACTOR. No further payments shall be deemed due nor shall be made until the CONTRACTOR shall have furnished an acceptable BOND to the OWNER.

14. ASSIGNMENT

Neither the CONTRACTOR nor the OWNER shall sell, transfer, assign, or otherwise dispose of the CONTRACT or any portion thereof, or of his/her right title or interest therein, or his obligations there under, without written consent of the other party.

15. DRAWINGS AND SPECIFICATIONS

- 15.1 The intent of the DRAWINGS and SPECIFICATIONS is that the CONTRACTOR shall furnish all labor, materials, tools, equipment, and transportation necessary for the proper execution of the WORK in accordance with the CONTRACT DOCUMENTS and all incidental work necessary to complete the PROJECT in an acceptable manner ready for use, occupancy, or operation by the OWNER.
- 15.2 In case of conflict between the DRAWINGS AND SPECIFICATIONS, the SPECIFICATIONS shall govern. Figure dimensions on DRAWINGS shall govern over scale dimensions, and detailed DRAWINGS shall govern over general DRAWINGS.
- 15.3 Any discrepancies found between the DRAWINGS AND SPECIFICATIONS and site conditions or any inconsistencies or ambiguities in the DRAWINGS or SPECIFICATIONS shall be immediately reported to the ENGINEER, in writing, who shall promptly correct such inconsistencies or ambiguities in writing. WORK done by the CONTRACTOR after his/her discovery of such discrepancies, inconsistencies or ambiguities shall be done at the CONTRACTOR'S risk.
- 15.4 The OWNER will furnish free of charge to the contractor up to three (3) copies of the DRAWINGS and SPECIFICATIONS as necessary for the proper execution of the WORK.

16. MATERIALS, WORKMANSHIP, SERVICES, AND FACILITIES

- 16.1 It is understood that except as otherwise specifically stated in the CONTRACT DOCUMENTS, the CONTRACTOR shall provide and pay for all materials, tools,

equipment, sanitary conveniences, light, power, transportation, supervision, temporary construction of any nature, and all other services and facilities of any nature whatsoever necessary to execute, complete, and deliver the WORK within the specified time.

- 16.2 All materials furnished shall be new and of the best quality customarily used in or furnished for work of the character of that herein proposed. Many features of the proposed work are described in detail herein, but the failure to so describe any part of the proposed work or any details or appurtenance thereof shall not be an exception to the above rule. The absence of requirements in drawings or specifications covering details usually included in first class installations of this kind shall not excuse the contractor for their omission in this work.
- 16.3 All workmanship shall be of the best quality for WORK of the character of that herein proposed. The CONTRACTOR shall employ only competent employees to do the WORK required.
- 16.4 Materials and equipment shall be so stored as to insure the preservation of their quality and fitness for the WORK. Stored materials and equipment to be incorporated in the WORK shall be located so as to facilitate prompt inspection.
- 16.5 Materials, supplies, or equipment to be incorporated into the WORK shall not be purchased by the CONTRACTOR or the SUBCONTRACTOR subject to a chattel mortgage or under a conditional sale contract or other agreement by which an interest is retained by the seller.
- 16.6 Drinking water furnished for the employees on the job shall comply with O.S.H.A. regulations.

17. PROTECTION OF WORK AND PROPERTY

- 17.1 The CONTRACTOR will be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the WORK--he/she will take all necessary precautions for the safety of, and will provide the necessary protection to prevent damage, injury or loss to all employees on the site and other persons who may be affected thereby, all the work and all materials or equipment to be incorporated therein, whether in storage on or off the site, and other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction.
- 17.2 The CONTRACTOR will comply with all applicable laws, ordinances, rules,

regulations, and orders of any public body having jurisdiction. He/she will erect and maintain, as required by the conditions and progress of the WORK, all necessary safeguards for safety and protection. He/she will notify owners of adjacent utilities when prosecution of the work may affect them. The CONTRACTOR will remedy all damage, injury, or loss to any property caused, directly or indirectly, in whole or in part, by the CONTRACTOR, and SUBCONTRACTOR or anyone directly or indirectly employed by any of them or anyone for whose acts any of them be liable, except damage or loss attributable to the fault of the CONTRACT DOCUMENTS or the acts or omissions, of the OWNER or the TOWN ENGINEER or anyone employed by either of them or anyone for whose acts either of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of the CONTRACTOR.

- 17.3 The CONTRACTOR will notify the OWNER at least one week prior to the start of construction.
- 17.4 The CONTRACTOR shall be responsible for verifying the location of any existing utilities. The CONTRACTOR shall notify "Call Before You Dig" at 1-800-922-4455 such that any utility lines can be marked.
- 17.5 In emergencies affecting the safety of persons or the work or property at the site or adjacent thereto, the CONTRACTOR, without special instruction or authorization from the ENGINEER or OWNER, shall act to prevent threatened damage, injury or loss. He/she will give the ENGINEER prompt WRITTEN NOTICE of any significant changes in the WORK or deviations from the CONTRACT DOCUMENTS caused thereby, and a CHANGE ORDER shall thereupon be issued covering the changes and deviations involved.

18. CHANGES IN CONTRACT PRICE

The CONTRACT PRICE may be changed only by a CHANGE ORDER. The value of any WORK covered by a CHANGE ORDER or of any claim for increase or decrease in the CONTRACT PRICE shall be determined by one or more of the following methods in the order of precedence listed below:

- (a) Unit prices previously approved
- (b) An agreed lump sum
- (c) The actual cost for labor, direct overhead, materials, supplies, equipment, and other services necessary to complete the work. In addition there shall be added an amount to be agreed upon but not to exceed fifteen (15) percent of the actual cost of the WORK to cover the cost of general overhead and profit.

19. TIME FOR COMPLETION

- 19.1 The date of beginning and the time for completion of the WORK are essential conditions of the CONTRACT DOCUMENTS and the WORK embraced shall be commenced on a date specified in the NOTICE TO PROCEED.
- 19.2 The CONTRACTOR will proceed with the work at such rate of progress to insure full completion within the CONTRACT TIME. It is expressly understood and agreed, by and between the CONTRACTOR and the OWNER, that the CONTRACT TIME for the completion of the WORK described herein is a reasonable time, taking into consideration the average climatic and economic conditions and other factors prevailing in the locality of the WORK.
- 19.3 If the CONTRACTOR is delayed at any time in the progress of the WORK by changes ordered in the WORK, by labor disputes, fire, unusual delay in transportation, unavoidable casualties, causes beyond the CONTRACTOR'S control, or by any cause which the ENGINEER may determine justifies the delay, then the CONTRACT TIME shall be extended by CHANGE ORDER for such reasonable time as the ENGINEER may determine.

20. SUSPENSION OF WORK, TERMINATION AND DELAY

- 20.1 The OWNER may suspend the WORK or any portion thereof for a period of not more than ninety days, or such further time as agreed upon by the CONTRACTOR, by WRITTEN NOTICE to the CONTRACTOR and the ENGINEER which notice shall fix the date on which work shall be resumed. The CONTRACTOR will resume that WORK on the date so fixed. The CONTRACTOR will be allowed an increase in the CONTRACT PRICE or an extension of the CONTRACT TIME, or both, directly attributable to any suspension.
- 20.2 If the CONTRACTOR is adjudged as bankrupt or insolvent, or if he/she makes a general assignment for the benefit of his creditors, or if a trustee or receiver is appointed for the CONTRACTOR or for any of his property, or if he/she files a petition to take advantage of any debtor's act, or to reorganize under the bankruptcy or applicable laws, or if he/she repeatedly fails to supply sufficient skilled workmen or suitable materials or equipment, or if he/she repeatedly fails to make prompt payments to SUBCONTRACTORS or for labor, materials, or equipment or if he/she disregards laws, ordinances, rules, regulations or orders of any public body having jurisdiction of the WORK or if he/she disregards the authority of the TOWN ENGINEER, or if he/she otherwise violates any provision of the CONTRACT DOCUMENTS, then the OWNER may, without prejudice to any other right or remedy and after giving the CONTRACTOR and his/her surety a minimum of ten (10) days from delivery of a WRITTEN NOTICE, terminate the services of the CONTRACTOR and take possession of the PROJECT and of all

materials, equipment, tools, construction equipment, and machinery thereon owned by the CONTRACTOR and finish the WORK by whatever method he/she may deem expedient. In such case the CONTRACTOR shall not be entitled to receive any further payment until the WORK is finished. If the unpaid balance of the CONTRACT PRICE exceeds the direct and indirect costs of completing the PROJECT, including compensation for additional professional services, such excess SHALL BE PAID TO THE CONTRACTOR. If such costs exceed such unpaid balance, the CONTRACTOR will pay the difference to the OWNER. Such costs incurred by the OWNER will be determined by the TOWN ENGINEER and incorporated in a CHANGE ORDER.

- 20.3 Where the CONTRACTOR'S services have been so terminated by the OWNER, said termination shall not affect any right of the OWNER against the CONTRACTOR then existing or which may thereafter accrue. Any retention or payment of monies by the OWNER due the CONTRACTOR will not release the CONTRACTOR from compliance with the CONTRACT DOCUMENTS.
- 20.4 After ten (10) days from delivery of a WRITTEN NOTICE to the CONTRACTOR and the ENGINEER, the OWNER may, without cause and without prejudice to any other right or remedy, elect to abandon the PROJECT and terminate the contract. In such case, the CONTRACTOR shall be paid for all WORK executed and any expense sustained plus reasonable profit.
- 20.5 If, through no act or fault of the CONTRACTOR, the WORK is suspended for a period of more than ninety (90) days by the OWNER or under an order of court or other public authority, or the ENGINEER fails to act on any request for payment within thirty (30) days after it is submitted, or the OWNER fails to pay the CONTRACTOR substantially the sum approved by the ENGINEER or awarded by arbitrators within (30) days of its approval and presentation, then the Contractor may, after ten (10) days from delivery of a WRITTEN NOTICE to the OWNER and the ENGINEER, terminate the CONTRACT and recover from the OWNER payment for all WORK executed and all expenses sustained. In addition and in lieu of terminating the CONTRACT, if the ENGINEER has failed to act on a request for payment or if the OWNER has failed to make any payment as aforesaid, the CONTRACTOR may upon Ten (10) Days written notice to the OWNER and the ENGINEER stop the WORK until he has been paid all amounts then due, in which event and upon resumption of the WORK until he has been paid all amounts then due, in which event and upon resumption of the WORK, CHANGE ORDERS shall be issued for adjusting the CONTRACT PRICE or extending the CONTRACT TIME or both to compensate for the costs and delays attributable to the stoppage of the WORK.
- 20.6 If the performance of all or any portion of the WORK is suspended, delayed, or interrupted as a result of a failure of the OWNER or TOWN ENGINEER to act within the time specified in the CONTRACT DOCUMENTS, or if no time is specified, within

a reasonable time, an adjustment in the CONTRACT PRICE or an extension of the CONTRACT TIME, or both shall be made by CHANGE ORDER to compensate the CONTRACTOR for the costs and delays necessarily caused by the failure of the OWNER or ENGINEER.

21. INDEMNIFICATION

- 21.1 The CONTRACTOR will indemnify and hold harmless the OWNER and their agents and employees from and against all Claims, Damage, Loss, or Expense including Attorney's fees arising out of or resulting from the performance of the WORK, provided that any such Claims, Damage, Loss or Expense is attributed to Bodily Injury, Sickness, Disease or Death, or to injury to or destruction of tangible property including the loss of use resulting therefrom; and is caused in whole or in part by any negligent or willful act or omission of the CONTRACTOR, and SUBCONTRACTOR, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable.
- 21.2 In any and all claims against the OWNER or any of their agents or employees, by any employee of the CONTRACTOR or SUBCONTRACTOR, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, the INDEMNIFICATION OBLIGATION shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the CONTRACTOR or any SUBCONTRACTOR under Workmen's Compensation Acts, Disability Benefit Acts or other Employee Benefits Acts.
- 21.3 The obligation of the CONTRACTOR under this paragraph shall not extend to the liability of the OWNER or any of its agents or employees arising out of the preparation or approval of MAPS, DRAWINGS, Opinions, Reports, Surveys, CHANGE ORDERS, Designs, or SPECIFICATIONS.

22. SEPARATE CONTRACTS

- 22.1 The OWNER reserves the right to let other contracts in connection with this PROJECT. 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. If the proper execution or results of any part of the CONTRACTOR's WORK depends upon the WORK of any other CONTRACTOR, the CONTRACTOR shall inspect and promptly report to the ENGINEER any defects in such WORK that render it unsuitable for such proper execution and results.
- 22.2 The OWNER may perform additional WORK related to the PROJECT by himself, or he may let other Contracts containing provisions similar to these. The CONTRACTOR will afford the other CONTRACTORS who are Parties to such

CONTRACTS (or the OWNER, if he is performing the additional WORK himself), reasonable opportunity for the introduction and storage of materials and equipment and the execution of WORK, and shall properly connect and coordinate his WORK with theirs.

- 22.3 If the performance of Additional WORK by other CONTRACTORS or the OWNER is not noted in the CONTRACT DOCUMENTS prior to the execution of the CONTRACT, written notice thereof shall be given to the CONTRACTOR prior to starting any such additional WORK. If the CONTRACTOR believes that the performance of such additional WORK by the OWNER or others involves him in additional expense or entitles him to an extension of the CONTRACT TIME, he may make a Claim therefore as provided in Sections 22 and 23.

23. SUBCONTRACTING

- 23.1 The CONTRACTOR may utilize the services of Specialty SUBCONTRACTORS on those parts of the WORK which, under normal contracting practices, are performed by Specialty CONTRACTORS.
- 23.2 The CONTRACTOR shall not award WORK to SUBCONTRACTOR(s) in excess of Fifty (50) Percent of the CONTRACT PRICE, without prior written approval of the OWNER.
- 23.3 The CONTRACTOR shall be fully responsible to the OWNER for the Acts and omissions of his SUBCONTRACTORS, and of persons either directly or indirectly employed by him.
- 23.4 The CONTRACTOR shall cause appropriate provisions to be inserted in all subcontracts relative to the WORK to bind SUBCONTRACTORS, as applicable to the WORK OF SUBCONTRACTORS and to give the CONTRACTOR the same power as regards terminating any subcontract that the OWNER may exercise of the CONTRACTOR under any provision of the CONTRACT DOCUMENTS.
- 23.5 Nothing contained in this CONTRACT shall create any contractual relation between any SUBCONTRACTOR and the OWNER.

24. GUARANTY

The CONTRACTOR shall guarantee all materials and equipment furnished and WORK performed for a period of one (1) year from the date of SUBSTANTIAL COMPLETION. The CONTRACTOR warrants and guarantees for a period of one (1) year from the date of SUBSTANTIAL COMPLETION of the PROJECT that the completed PROJECT is free from all defects due to faulty materials or WORKMANSHIP and the CONTRACTOR shall promptly

make such corrections as may be necessary by reason of such defects including the repairs of any damage to other parts of the PROJECT resulting from such defects. The

OWNER will give notice of observed defects with reasonable promptness. In the event that the CONTRACTOR should fail to make such repairs, adjustments, or other WORK that may be made necessary by such defects, the OWNER may do so and charge the CONTRACTOR the cost thereby incurred. The PERFORMANCE BOND or a MAINTENANCE BOND shall remain in force at a value of 25% of the completed WORK through the GUARANTEE PERIOD.

25. DISPUTE RESOLUTION

- 25.1 All claims, disputes and other matters in questions arising out of, or relating to, the CONTRACT DOCUMENTS or the breach thereof, except for claims which have been waived by the making and acceptance of Final Payment as provided by Section 16, shall be decided by Arbitration in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association. This agreement to arbitrate shall be specifically enforceable under the prevailing Connecticut Arbitration law.
- 25.2 Notice of the Demand for Arbitration shall be filed in writing with the Other Party to the CONTRACT DOCUMENTS and with the American Arbitration Association, and a copy shall be filed with the Town Engineer. The Demand for Arbitration shall in no event be made on any claim, dispute, or other matter in question which would be barred by the applicable Statute of Limitations.
- 25.3 The CONTRACTOR will carry on the WORK and maintain the Progress Schedule during any Mediation proceedings, unless otherwise mutually agreed in writing.

26. TAXES

The CONTRACTOR will pay all consumer, use, and other similar taxes required by the Law of the Place where the WORK is performed. This WORK is being performed for a Municipal Government and is exempt from Sales Tax.

SUPPLEMENTAL GENERAL CONDITIONS

- 1. PA 86-87, AAC Workers' Compensation Insurance Requirements for Contractors on Public Works projects and State licenses, prohibits municipalities from entering into a public works contract with an employer without receiving sufficient evidence from the employer that he has workers' compensation insurance and a statement from the state treasurer that the employer does not owe the Second Injury and Compensation Assurance Fund any money.

2. The Town of Simsbury Engineering Department shall be notified at least five (5) days prior to beginning work.
3. Prior to beginning work, the "Call Before You Dig" service shall be notified by the Contractor by calling 811 or 1-800-922-4455, or, if the contractor is registered, by e-ticket entry, such that any underground utilities in the immediate vicinity of the work can be marked.
4. All staking and surveying will be the responsibility of the Contractor.
5. All road monuments and lot pins shall be PRESERVED. Cost of resetting will be back charged to the Contractor.
6. Sales and Use Tax Exempt Purchase Certificate/ The Contractor's attention is called to Regulation 18 as amended promulgated by the Sales and Use Tax Division of the State Tax Department, which provided for the Exemption of the sales and use tax on the purchase of such materials and supplies as are to be physically incorporated in and become a permanent part of the project being performed under this contract. The Contractor or Subcontractor shall furnish his suppliers with a completed certificate, in the prescribed form; a copy of which is attached to these specifications
7. Upon completion or termination of the work, the Contractor shall remove from the vicinity of the work all equipment and all temporary structures, waste materials and rubbish resulting from its operations, leaving the premises in a neat and acceptable condition. In the event of failure to do so, the same may be done by the Owner at the expense of the Contractor.
8. The Contractor shall pay for any broken utility lines, except where the utility company may be liable under the "Call Before You Dig" law. The Owner will only pay for relocations necessary to complete the work of this project.
9. In accordance with Executive Order 11246, the Contractor is obliged not to discriminate against any employee or applicant for employment because of race, color, creed, or national origin. This obligation not to discriminate in employment includes, but is not limited to, the following: hiring, placement, upgrading, transfer, demotion, recruitment, advertising, solicitation for employment training during employment, rates of pay or other forms of compensation, selection for training including apprenticeship, layoff, or termination.
10. For all new underground facilities installed after January 1, 1989 which is practicable and for all repairs, replacements or modifications involving an exposure of existing underground facilities at least 100 feet longitudinally after January 1, 1989, of which the utility has knowledge of such exposure, the utility shall install a warning tape located above the facility, and keep appropriate records thereof. The minimum

separation between the facility and the warning tape shall be 12 inches unless the depth, other underground facilities or other engineering considerations make the minimum separation infeasible. The warning tape shall be durable, designed to withstand extended underground exposure, be of color assigned to the type of facility for surface markings in Section 16-345-5 (h) and durable imprinted with an appropriate warning or message.

SECTION 6

SPECIAL PROVISIONS

SPECIAL PROVISIONS

1. **Cleaning Up:** The Contractor shall at all times keep the site and work free from accumulations of waste material or rubbish caused by his employees or work, or the employees or work of any of his subcontractors.

On completion of the work, the Contractor except as otherwise expressly directed or permitted in writing, shall tear down and remove all temporary structures built by him; shall remove all rubbish and abandoned materials of all kinds from all Contract structures and from any grounds, and shall leave all the grounds which may have been affected by his/her operations in a neat and satisfactory condition. Except as noted, all materials salvaged shall be the property of the Contractor.

2. **Act, Or Failure To Act, On Part Of Town Engineer Does Not Reduce Liability Of Contractor:** Giving notice or failure to give notice; or acting as authorized in the preceding sections, or failure to so act, on the part of the Town Engineer; or any question as to the adequacy of the notice by the Town Engineer, or of his/her acts, as provided in those sections, shall not in any way relieve the Contractor from any part of his responsibility or liability for performing any and all of the acts and assuming any and all of the risks, duties and liabilities which the Contractor is obligated to perform or assume.
3. **Disposal of Surplus Materials:** The Contractor shall be responsible for the removal and satisfactory disposal of all surplus materials unless otherwise specified in the Detail Specifications. Town properties shall not be used for such disposal unless specifically authorized by the Town Engineer in writing. Property owners adjacent to the work may have indicated to the Town that their land might be available for disposal of surplus fill and this fact may be noted on the Contract Drawings. The Contractor shall, however, make his own arrangements for the use of such private lands and shall, if requested by the Town Engineer, evidence that such arrangements have been made before such use. Any required local permits shall be the responsibility of the Contractor.
4. **Utility Notification Prior to Excavation:** In accord with Public Act 77-350, the Contractor is required to notify any utility with facilities in the vicinity of the excavation at least two full days prior to excavation. Notification may be given by using the "Call Before You Dig" state wide, toll free telephone number, 811 or 1-800-922-4455., or if the contractor is registered, by e-ticket entry. Responsibility for proper notification of all utilities shall rest with the Contractor.

The Contractor shall contact the appropriate Town authorities concerning any public or semi-public events that may occur during the construction period and that may have an effect on his construction. The contractor alone shall be responsible for arranging his construction sequence to conform to any restrictions these events may impose on his schedule.

No claims for extras will be allowed because of any delays, caused by the imposed

restrictions; however, additional time may be granted for completion of the work to compensate for any delays caused by said restrictions.

5. **The State of Connecticut** may provide funding for various projects and shall have access and inspection rights to all parts of the work on this project.
6. **Quantities of unit price work** may be increased or decreased by up to 30% with payment to be based on actual quantities of work completed and the bid unit prices.

Town Hall Parking and Safety Improvements – Work to West of Town Hall

Index to Standard Technical Specifications

- 0201001 – Clearing and Grubbing / Tree Removal
- 0202000 – Earth Excavation
- 0209001 – Formation of Subgrade
- 0213100 – Granular Fill
- 0219001 – Silt Sack
- 0219003 – Filter Fabric Fence
- 0304002 – Processed Aggregate Base
- 0406173 – Bituminous Concrete
- 0601650A – Retaining Wall
- 0601108 – Concrete Stairs
- 0703012 – Modified Rip Rap
- 0811001 – Concrete Curb
- 0815001 – Bituminous Concrete Lip Curbing
- 0921001 – Concrete Sidewalk
- 0950005 – Turf Establishment (Loam and Seed)
- 0950013 – Erosion Control Matting

SECTION 0201001
CLEARING AND GRUBBING / TREE REMOVAL

PART 1 – DESCRIPTION

The work consists of clearing and grubbing and disposal of trees, snags, logs, brush, stumps, shrubs, and rubbish from the designated areas. Trees and other vegetation outside of disturbed areas shall be protected from damage throughout the duration of the construction period. Any damages resulting from the contractor's operations or neglect shall be repaired by the Contractor.

PART 2 – MATERIALS

N/A

PART 3 – CONSTRUCTION METHODS

Unless otherwise specified, all stumps, roots, and root clusters that have a diameter of 1 inch or larger shall be grubbed out to a depth of at least 1 foot below subgrade. All materials cleared and grubbed from the designated areas shall be disposed of at the Contractor's means or as directed by the Director of Engineer. The contractor is responsible for complying with all local rules and regulations for proper disposal of these materials and is responsible for any payment and fees that may result for disposal.

PART 4 – MEASUREMENT

This measurement will be by lump sum for all clearing, grubbing, and tree removal of all trees within limits of work as identified on the project plans. Large caliper trees (greater than 6" diameter) have been surveyed and identified on the plan for removal. This lump sum includes any earthen fill material required for voids left from stump and root removal.

PART 5 – PAYMENT

<u>Pay Item</u>	<u>Pay Unit</u>
Clearing & Grubbing	Lump Sum
Tree Removal	Each

SECTION 0202000 EARTH EXCAVATION

PART 1 – DESCRIPTION

This work shall consist of the removal and satisfactory disposal of all unsuitable material taken from the elevation of the existing ground to the finished grade of the new sidewalk, driveway, parking lot, or outside of these limits, when directed by the Engineer. Excavation required for the appropriate installation for bid items is included in the unit price of the type specified.

PART 2 – MATERIALS

N/A

PART 3 – CONSTRUCTION METHODS

Excavation shall be made in conformance to the limits and grades required. Excavation beyond the limits shown on the plans will not be measured for payment. Topsoil, sod and other organic matter shall be removed and disposed of.

When bedrock is encountered, it shall be excavated to the slope lines and depths indicated on the plans. All loose and unstable material shall be removed and disposed of. Any blasting shall conform to applicable local, State and Federal laws and regulations. The Contractor shall be responsible for all damage due either directly or indirectly to such operation.

All suitable excavated material obtained within the project limits shall be used in the formation of embankments. Embankments shall be constructed of earth only. No bituminous concrete or reclaimed waste shall be used in the embankment. The material shall be free from refuse, stumps, roots, rocks, brush, weeds or other unsuitable material.

The depth of each layer, before compaction, shall not exceed twelve inches (12"). The embankment shall be crowned or pitched to provide drainage at the close of each day's operation.

The entire embankment area shall be leveled off by suitable grading equipment and shall be compacted to at least the required minimum density by use of compaction equipment consisting of rollers, compactors or a combination thereof. The dry density after compaction shall not be less than 95 percent of the dry density for that soil when tested in accordance with AASHTO T180, Method D. Each layer shall be compacted at optimum moisture. All surplus excavated material shall become the property of the Contractor and disposed of off of the project site unless otherwise directed by the Engineer.

Earth slopes shall be tracked by traversing the slopes with cleated tracks so that the cleat indentations are horizontal. Tracking shall be completed prior to placing topsoil. After all grading for the roadbed has been substantially completed and all drains installed, the subgrade shall be brought to the lines, grades and cross sections shown on the plans. No particle over 3" shall in its greatest dimension be placed within 12" below the top of the prepared sub base.

All soft and yielding material within the subgrade shall be removed and replaced with suitable material. Compaction shall be as specified in Section 2.02 of CTDOT Form 818. The Contractor shall protect the

SECTION 0202000 EARTH EXCAVATION

completed subgrade from damage. The subgrade shall be checked and approved by the Engineer prior to placing pavement structure thereon.

For test pit excavation, the Contractor shall follow all the requirements of "Call Before You Dig", including requesting utility mark outs and hand-digging in the vicinity of the underground utility. The Contractor shall notify the Engineer 48 hours in advance of digging the test pit so the Engineer and the appropriate utility representative may be present.

Prior to excavation, the Contractor and Engineer shall agree on the exact location of the test pit based upon available mapping and the utility mark out. The Contractor shall adjust the limits of excavation as needed to successfully locate the utility.

Horizontal and vertical locations and size and material of utilities must be obtained during test pit excavation and provided to the Engineer, or his assigned agent, for review. Horizontal utility locations shall be field-surveyed or field-measured with a minimum of two (2) swing-ties from fixed physical features identified on the plans. Vertical utility elevations shall be field-surveyed using a level or other related equipment to provide elevation to the nearest hundredth of a foot (0.01'). The Contractor is made aware that additional test pits may be required, and the proposed design may be modified based on results of test pit information obtained.

PART 4 – MEASUREMENT

Excavation beneath the finished grade for curbs, sidewalk, driveways and pavement will not be measured for pavement; its costs shall be considered as included in the cost for the appropriate item herein. Earth Excavation will be measured for payment by the cubic yard.

PART 5 – PAYMENT

Pay Item

Earth Excavation

Pay Unit

Cubic Yard

SECTION 0209001
FORMATION OF SUBGRADE

PART 1 – DESCRIPTION

This work shall consist of the grading and compaction of the subgrade in accordance with the specifications and in conformity with the typical cross section shown on the Plans or as directed.

PART 2 – MATERIALS

N/A

PART 3 – CONSTRUCTION METHODS

Construction methods and compaction requirements shall conform to Section 2.09 of CTDOT Form 818. If unsuitable material is encountered during this work, it shall be excavated and replaced with granular fill to the depth and limits as directed by the Engineer. This additional work shall be measured and paid for as "Earth Excavation" and "Granular Fill" in accordance with these specifications.

PART 4 – MEASUREMENT

Formation of subgrade for "Concrete Sidewalk" or "Bituminous Concrete" or other specified item will not be measured for this payment, but its costs shall be considered as included in the unit prices of the type specified.

PART 5 – PAYMENT

Item not measured for payment.

SECTION 0213100 GRANULAR FILL

PART 1 – DESCRIPTION

The work includes the furnishing and installation of material to be used as a foundation for structures, to replace unsuitable material in slopes and shoulders, to replace rock and unsuitable material in trenches, and elsewhere as indicated on the Plans or Specifications or where directed by the Engineer. It shall consist of gravel conforming to the requirements of these specifications.

PART 2 – MATERIALS

Granular fill shall conform to the requirements of Section M.02.02 of CTDOT Form 818. Contractors shall supply copies of material test results, certified by an approved testing laboratory prior to commencing construction.

PART 3 – CONSTRUCTION METHODS

When granular fill is used for foundation of structures, as backfill or to replace rock or unsuitable material in trenches, it shall be deposited in layers not over six (6) inches in depth, with each layer thoroughly compacted to at least the required minimum density by use of compaction equipment consisting of rollers, compactors or a combination thereof before the addition of other layers. The dry density after compaction shall not be less than 95 percent of the dry density for that soil when tested in accordance with AASHTO T180, Method D. Each layer shall be compacted at optimum moisture.

PART 4 – MEASUREMENT

Only granular fill used to replace unsuitable material and rock in trenches or other areas directed by the Engineer will be measured for payment. It will be measured in place by the cubic yard after compaction within the payment lines shown or specified by the Engineer.

PART 5 – PAYMENT

Pay Item

Granular Fill

Pay Unit

Cubic Yard

SECTION 0219001

SILT SACK

PART 1 – DESCRIPTION

"Silt Sack" includes the furnishing, placing, maintaining and removal of manufactured geotextile silt sacks specifically made to protect catch basins where shown on the Plans or where directed by the Engineer.

PART 2 – MATERIALS

Geotextile shall conform to Section M.08.01.19 of CTDOT Form 818. Silt Sack shall be Hi-Flow Siltsack® Type A (for Type "C-L" catch basin tops) and Type B with curb deflector (for Type "C" catch basin tops or other structure with curb inlets) or approved equal. Silt sack shall be provided with internal overflows and meet the following criteria:

<u>Properties</u>	<u>Test Method</u>	<u>Units</u>
Grab Tensile Strength	ASTM D-4632	265 lbs.
Gran Tensile Elongation	ASTM D-4632	20%
Puncture	ASTM D-4833	135 lbs.
Mullen Burst	ASTM D-3786	420 psi
Trapezoid Tear	ASTM D-4533	45 lbs.
UV Resistance	ASTM D-4355	90%
Apparent Opening Size	ASTM D-4751	#20 U.S. Sieve
Flow Rate	ASTM D-4491	200 gal/min/sq. ft.
Permittivity	ASTM D-4491	1.5/sec

PART 3 – CONSTRUCTION METHODS

It is the Contractor's sole responsibility to provide and continually inspect and maintain all silt sacks on site. Failure to do so may result in enforcement actions by the Town of Simsbury or State of Connecticut. The erosion and sedimentation control measures in these Specifications are intended as a guideline on the minimal control measures required based on the intended construction. Additional control measures may be necessary depending on the Contractor's operations and scheduling of the project.

Silt sacks shall be installed in accordance with manufacturer's instructions and shall be emptied when they have collected 6" of sediment and when directed by the Engineer. Silt sacks shall be inspected every 1 to 2 weeks and after every major rainfall event. Silt sacks shall be installed prior to any excavation, grubbing or other operation that disturbs existing ground.

PART 4 – MEASUREMENT

Silt sacks will be measured as one each per downgradient catch basin or inlet grate within the watershed of the disturbed area.

PART 5 – PAYMENT

<u>Pay Item</u>	<u>Pay Unit</u>
Silt Sack	Each

SECTION 0219003 FILTER FABRIC FENCE

PART 1 – DESCRIPTION

The work includes the furnishing, placing, maintaining and removal of manufactured geotextile silt fence where directed by the Engineer.

PART 2 – MATERIALS

Geotextile shall conform to Section M.08.01.19 of CT DOT Form 818.

PART 3 – CONSTRUCTION METHODS

It is the Contractor's sole responsibility to provide and continually inspect and maintain all filter fabric fence on site. Failure to do so may result in enforcement actions by the Town of Simsbury or State of Connecticut. The erosion and sedimentation control measures in these Specifications are intended as a guideline on the minimal control measures required based on the intended construction. Additional control measures may be necessary depending on the Contractor's operations and scheduling of the project.

Geotextile sedimentation control systems may consist of either a prefabricated geotextile fence or a geotextile fence assembled by the Contractor in the field. Geotextile sedimentation control systems shall be installed so that the bottom four (4) inches of the fabric is buried by either trenching or by laying the four (4) inch section horizontally on the ground and burying by ramping the soil up to the control fence. All geotextile fences shall be a least 36 inches in exposed height as installed, with not less than a two (2) degree and not more than a 20-degree inclination toward the potential silt source. Hardwood posts shall have a minimum cross-section size of at least 1.5 inches by 1.5 inches and a minimum length of 30 inches. Steel posts shall be at least 0.5 pound per linear foot with a minimum length of 48 inches. Spacing between posts shall not exceed ten (10) feet, and all posts shall be driven a minimum of 12 inches into the ground. When joints between sections of geotextile sedimentation control systems are necessary, geotextile shall be spliced together only at a support post, with a minimum six (6) inch overlap, and securely sealed.

The installations shall be maintained or replaced until they are no longer necessary for the purpose intended or are ordered removed by the Engineer. Cleanout of accumulated sediment shall be accomplished when one-half of the original height of the sedimentation control system, as installed, becomes filled with sediment or as ordered by the Engineer. The geotextile fence systems will be completely removed from the project at the completion of the project, unless specifically authorized by the Engineer to be left in place.

Filter Fabric Fence shall be installed prior to any excavation, grubbing, or other operation that disturbs existing ground.

PART 4 – MEASUREMENT

Filter Fabric Fence will be measured by linear foot along the downgradient limits of disturbed areas.

PART 5 – PAYMENT

Pay Item

Filter Fabric Fence

Pay Unit

Linear Foot

SECTION 0304002

PROCESSED AGGREGATE BASE

PART 1 – DESCRIPTION

This work shall consist of furnishing and installing processed aggregate base as a foundation for bituminous concrete roadways, concrete sidewalks, curbs, driveways and other items in accordance with these Specifications and in conformity with the lines, grades, compacted thickness and typical cross-section as shown on the Plans.

PART 2 – MATERIALS

Contractors shall supply copies of material test results, certified by an approved testing laboratory, prior to commencing construction. The materials for this work shall conform to the requirements of Section M.05.01, Processed Aggregate Base and Pavement of CTDOT Form 818.

PART 3 – CONSTRUCTION METHODS

Coarse aggregate shall be broken stone. Only one type of coarse aggregate shall be used on a project unless otherwise permitted by the Engineer.

Prior to placing the bottom course of the processed aggregate base, the prepared sub base shall be maintained true to line and grade. After the aggregate is spread, it shall be thoroughly compacted and bound by use of equipment approved by the Engineer. Water may be used during the compaction and binding operation.

When the bottom course has been completed, as specified above, the top coarse aggregate shall be spread over it to such thickness that, after final compaction and binding, the total thickness of the two courses will equal that thickness specified for the completed base. The top course shall be spread, compacted and bound exactly as specified above for the bottom course.

The final surface of the subbase course shall be fine graded so that, after final compaction and just prior to placement of base or pavement courses, the surface elevation shall not vary more than one-quarter inch above or below the design grade at any location. The surface shall be completed to the above tolerance and approved by the Engineer prior to any work at a given location to place an overlying course. If after approval, the course becomes displaced or disturbed in any way for any reason, the Contractor shall repair and regrade the damage to the satisfaction of the Engineer prior to placing the overlying course. All repaired sections shall be re-compacted until they meet the requirements as stated herein.

PART 4 – MEASUREMENT

Processed Aggregate Base material used as the base for "Concrete Curb", "Concrete Sidewalk", "Bituminous Concrete", "Bituminous Concrete Lip Curbing" will not be measure for payment, but its costs shall be considered as included in the unit prices for those items.

PART 5 – PAYMENT

This item is not measured for payment.

SECTION 0406173 BITUMINOUS CONCRETE

PART 1 – DESCRIPTION

This work shall consist of a bituminous concrete surface parking lot, driveway, or driveway apron, constructed on a processed aggregate base course in the locations and dimensions and details shown on the Plans, as directed by the Engineer, and in accordance with these specifications.

PART 2 – MATERIALS

Processed Aggregate Base shall conform to the requirements of "Processed Aggregate Base" elsewhere in these Specifications.

Bituminous concrete shall meet the requirements of "Bituminous Concrete (Hot Mix Asphalt)" elsewhere in these Specifications.

The tack coat to be used on all cold joints shall conform to the requirements of Section M.04.04.1 of CTDOT Form 818.

Joint seal shall conform to the requirements of Section M.04.01.8 of CTDOT Form 818.

PART 3 – CONSTRUCTION METHODS

Patching shall only be done at the locations and at such time as deemed necessary by the Engineer. Prior to placing the patching material, the areas to be patched shall be cleaned of dirt and other debris and be reasonably dry. Compaction of the patching material shall be attained by methods approved by the Engineer.

The final "finished grade" surface of the wearing course shall be placed to final elevations as identified on the Plans. Sections and thickness of the bituminous concrete surface are identified and shall be in accordance with the Plans, or as directed by the Engineer.

PART 4 – MEASUREMENT

Bituminous Concrete will be measured by the actual number of square yards of Bituminous Concrete constructed and accepted. The following items will not be measured separately for payment, but shall be considered as included in this unit price for "Bituminous Concrete":

Excavation below finished grade, Processed Aggregate Base, removal or disposal of existing surfaces within limits of new bituminous concrete, tack coat, saw cutting, joint sealant.

PART 5 – PAYMENT

Pay Item
Bituminous Concrete

Pay Unit
Square Foot

SECTION 0601108 CONCRETE STAIRS

PART 1 – DESCRIPTION

Work includes manufacturing, transportation, and erection of precast concrete stairs and landings to the lines and grades shown on the plans and as specified herein. Alternatively, the Contractor may submit for the casting of stairs and landings to the lines and grades shown on the plans. If the wet-casting is to be considered, the Contractor shall submit all plans and specifications of the alternative.

The contractor is solely responsible for safety. The Engineer shall not be responsible for means or methods of construction or for safety of workers or the public.

PART 2 – MATERIALS

Quality Assurance

Comply with provision of following codes, specifications and standards, except as otherwise indicated: ACI 301 "Specifications for Structural Concrete". ACI 318 "Building Code Requirements for Structural Concrete". Concrete Reinforcing Steel Institute, "Manual of Standard Practice". Precast Prestressed Concrete Institute MNL 116, Manual for Quality Control for Plants and Production of Precast Concrete Products". Precast Prestressed Concrete Institute MNL 135, "Tolerance Manual for Precast and Prestressed Concrete Construction". Precast Prestressed Concrete Institute MNL 120, "PCI Design Handbook". American Welding Society, AWS D1.1 "Structural Welding Code-Steel", D1.4 "Structural Welding Code – Reinforcing Steel", D1.6 "Structural Welding Code - Stainless Steel", C5.4, "Recommended Practices for Stud Welding".

Delegated Design: Design precast concrete stairs, including comprehensive engineering analysis by a qualified professional engineer, using performance requirements and design criteria indicated.

Structural Performance: Provide precast structural concrete units and connections capable of withstanding the following design loads within limits and under conditions indicated: Stairs shall be designed to support the full dead load plus 100 psf live load. Short term and long term deflection shall be no greater than Table 9.5 (b) of ACI-318.

Materials

Portland cement: 1. ASTM C 150, Type I or III

Reinforcing Bars: ASTM A 615/A 615M, Grade 60, deformed.

Plain-Steel Welded Wire Reinforcement: ASTM A 185 or A497 fabricated from plain steel wire into flat sheets having a minimum yield strength of 70,000psi.

Plates and Angles: Cast-in loose plates and angles shall conform to ASTM 36.

Water: Potable, clean and free from oils, acids, salts or other injurious substances.

SECTION 0601108 CONCRETE STAIRS

Admixtures: Air entrainment agents shall conform to ASTM C 260. Precast elements exposed to weather or vulnerable to deicers shall have 6% + 1.5% of air entrainment. Water reducing agent shall conform to ASTM C 494, Type A. 4. High range water reducing agent shall conform to ASTM C494 Type A.

Normal-Weight Aggregates: Fine Aggregates: ASTM C 33, washed natural sand. Course Aggregates: Crushed stone conforming to ASTM C 33. Aggregate shall be graded crushed stone with a resulting weight of concrete up to 155 lbs./cu. ft.

Grout: Cement shall be gray Portland cement, free from soluble salts and complying with ASTM C 150, Type I or Type III High Early Strength, one brand throughout work. Strength shall be 4,000 psi in 28 days.

Concrete Mixes:

28-day compressive strength: Minimum of 5,000 psi.

Use of calcium chloride or admixtures containing chlorides is not permitted.

Fabrication:

Casting shall be done in rigidly constructed forms designed to produce dimensionally correct members with uniform surfaces per shop drawings.

At time of casting, manufacturer shall incorporate all accessories, reinforcing steel and handling devices required for proper installation and handling of units.

Provide finished units, which are straight, true to size and shape, and within specified casting tolerances.

Make exposed edges sharp, straight, and square. Make flat surfaces into a true plane.

Place and secure in the forms all anchors, clips, stud bolts, inserts, lifting devices, shear ties, and other devices required for handling and installing the precast units and for attachment of subsequent items indicated and specified. 5

Curing: Form curing by moisture retention without supplemental heat until concrete reaches adequate strength for removal of product from forms, a minimum of 2,500 psi. Precast units shall be cured to the required 28 day strength prior to shipment.

Casting tolerances: Maintain casting, bowing, warping and dimension tolerances within PCI MNL-116 and PCI MNL-135.

Execution:

Delivery and Handling: Carefully transport and handle precast concrete stairs so as to prevent soiling or damage. Store clear of ground in manner to prevent cracking, distortion, warping and to protect from damage and dirt. Soiling or staining of precast units may be cause for rejection of units. Lift and support units only at designated lifting or supporting points as shown on approved shop drawings.

SECTION 0601108 CONCRETE STAIRS

Delegated-Design Submittal: For precast concrete stairs indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

Examination: Examine supporting structural frame or foundation and conditions for compliance with requirements for installation tolerances, true and level bearing surfaces, and other conditions affecting performance of the Work. Proceed with installation only after unsatisfactory conditions have been corrected. Do not install precast concrete units until supporting, building structural framing has attained minimum allowable design compressive strength or until supporting steel or other structure is complete.

PART 3 – CONSTRUCTION METHODS

Erection

Work to be performed by a PCI Qualified Erector. Install in accordance with shop drawings and manufacturer's recommended installation procedures.

Handling and Erection: Temporarily stabilize all precast work until permanent connections and/or adjoining cast-in-place concrete work or masonry has been completed and the framework is stable.

Grouting

After precast units have been placed and secured, grout open spaces at connections and joints between platforms and stairs, and between platforms and floor plank.

Place grout in a manner to finish smooth, plumb, and level with adjacent concrete surfaces.

Welding

Welding shall be continuous with Low-Hydrogen rods per AWS A5.1 or A5.5

Patching

Patch precast units if strength and appearance has not been impaired. Manufacturer of precast units shall point up all chopped areas. Pointed up areas shall have minimum variation in texture and color. Amount of variation shall be acceptable to the Architect.

Cleaning

Remove rubbish and debris resulting from precast concrete stair work from premises upon completion.

PART 4 – MEASUREMENT

Formation of base and subgrade shall be measured under the item "Concrete Stairs". Formation of subgrade outside of the limits of the concrete stairs shall be measured under the item "Formation of Subgrade" and backfill required along the slope outside of the limits of the concrete stairs shall be measured under "granular fill" or as identified in the specifications herein or the Plans, or as directed by the Engineer. Removal of vegetation required for the stairs shall be measured under "Clearing and Grubbing / Tree Removal".

PART 5 – PAYMENT

SECTION 0601108
CONCRETE STAIRS

Pay Item
Concrete Stairs

Pay Unit
Lump Sum

SECTION 0213100 GRANULAR FILL

PART 1 – DESCRIPTION

Work includes furnishing and installing Stone Strong precast modular blocks (PMB) to the lines and grades shown on the plans and as specified herein. Also included is furnishing and installing appurtenant materials required for construction of the complete system. The contractor is solely responsible for safety. The Engineer shall not be responsible for means or methods of construction or for safety of workers or the public.

PART 2 – MATERIALS

Precast modular blocks shall be Stone Strong units manufactured under license from Stone Strong LLC. Wall units shall conform to ASTM C1776. Dimension tolerances for precast modular blocks shall be +/- 1/8 inch for height, +/- 1/8 inch for length (along face), and +1/2 to -1/4 inch for width (face to tail). Concrete for precast modular blocks shall have a minimum 28-day compressive strength of 4,000 psi (28 MPa). Entrained air content shall be between 5 and 7%. Internal unit reinforcement or unreinforced units shall be provided according to published Stone Strong engineering guidance. Reinforced units shall be marked with the type of reinforcement. The face pattern shall be selected from the manufacturer's standard molds. The color of the units shall be natural gray. A concrete stain may be field applied to color the units if specified by the Engineer. **Equivalent or similar products to the Stone Strong units may be submitted by the Contractor to the Engineer for cost savings on the product or cost savings to the fill required for the areas up-slope of the retaining wall.** The product specified herein is specific to the Stone Strong product:

Wall Units: Construction methods and compaction requirements shall conform to Section 2.09 of CTDOT Form 818. If unsuitable material is encountered during this work, it shall be excavated and replaced with granular fill to the depth and limits as directed by the Engineer. This additional work shall be measured and paid for as "Earth Excavation" and "Granular Fill" in accordance with these specifications.

Wall Base: The wall base shall consist of dense graded crushed aggregate. A minimum of 75% of coarse material shall have 2 or more fractured faces. Wall base material shall meet the following gradation:

<u>US Standard Sieve Size</u>	<u>Metric Standard Sieve Size</u>	<u>Percent Passing</u>
1-1/2"	37.5 mm	80-100
3/4"	19.0 mm	50-90
#4	4.75 mm	0-40
#200	75 µm	0-10

The contractor may substitute concrete with a minimum 28-day compressive strength of 3,000 psi (21 Mpa) for the granular base material. Concrete may be placed full thickness or as a topping over a compacted granular the base. If used as a topping, the concrete shall have a minimum thickness of 3 inches (75 mm).

Unit Fill: Unit fill shall consist of a screened crushed aggregate. A minimum of 75% of coarse material shall have 2 or more fractured faces. Unit fill material shall meet the following gradation:

<u>US Standard Sieve Size</u>	<u>Metric Standard Sieve Size</u>	<u>Percent Passing</u>
1-1/2"	37.5 mm	100
3/4"	19.0 mm	50-90
#4	4.75 mm	0-10
#8	2.36 mm	0-5

SECTION 0213100 GRANULAR FILL

Backfill: Shall consist of fill sand or other clean aggregate meeting the following gradation:

<u>US Standard Sieve Size</u>	<u>Metric Standard Sieve Size</u>	<u>Percent Passing</u>
3/4"	19.0 mm	100
#200	75 µm	0-5

All other backfill behind and in front of the wall shall consist of suitable on-site soil or imported borrow and shall be approved by the Geotechnical Engineer. Backfill shall generally consist of sands, silts, or lean clays with a liquid limit less than 45 and a plasticity index less than 20. Fat clay soils, cobbles, and large rock should generally be avoided unless approved by the Engineer. Frozen soils, excessively wet or dry soils, debris, and deleterious materials should not be used.

PART 3 – CONSTRUCTION METHODS

Excavation:

Excavate as required for installation of the retaining wall system. Excavate to the base level for a sufficient distance behind the face to permit installation of the base.

Slope or shore excavation as necessary for safety and for conformance with applicable OSHA requirements.

Wall Base:

Foundation soils shall be excavated to the dimensions shown on the plans. Foundation soil shall be observed by the Geotechnical Engineer to confirm that the bearing soils are similar to the design conditions or assumptions.

Construct the wall base to the lines and grades shown on the plans. Place and consolidate concrete, strike, and finish plane and level. Over excavated areas shall be filled with additional concrete or granular base material. Compact granular base material to provide a hard and level surface to support the wall units. Base material shall be compacted to a minimum of 95 percent of the maximum dry density (ASTM D698, Standard Proctor). Final base elevation shall be within 0.1 feet (30 mm) of plan elevation.

Prepare and smooth the granular material to ensure complete contact of the first course with the base. The base may be dressed with fine aggregate to aid leveling.

Unit Installation:

Place the first course of units directly on the wall base. Check units for level and alignment. Units shall be within 1/8 inch (3 mm) of level from end to end and from front to back. Adjacent units should be in contact. If possible, begin placing units at the lowest section of the wall.

Fill all voids between and within the blocks with granular unit fill. Additional unit fill is not required behind the units, but may be placed for the convenience of the contractor.

Place backfill behind the units in maximum loose lifts of 8 inches (200 mm) and compact. Compact all backfill to a minimum of 95 percent of the maximum dry density (ASTM D698, Standard Proctor). For cohesive soils, the moisture content at the time of compaction should be adjusted to within -2 and +3 percent of optimum. Place backfill in successive lifts until level with the top of the facing unit.

SECTION 0213100 GRANULAR FILL

Remove all excess aggregate and other materials from the top of the units before laying up the next course.

For Paraweb reinforced walls, place the correct Paraweb strap at the locations and elevations shown on the plans or the shop drawings. Paraweb reinforcement shall be placed horizontally on compacted backfill in a V-layout. The length of the Paraweb is measured from the embedded connector in the back of the facing unit. Wrap the Paraweb strap around the embedded connector at the point of the V-shaped strap layout. Paraweb straps may be spliced following the manufacturer's guidance.

Ends of the Paraweb straps shall be staked or held in place. Slack shall be removed from straps using an approved method.

Do not operate equipment directly on the Paraweb straps. A minimum backfill depth of 6 inches (150 mm) should be placed before operating equipment over the reinforcing straps.

For geogrid reinforced walls, place the correct geogrid at the locations and elevations shown on the plans or the shop drawings. Geogrid reinforcement shall be placed horizontally on compacted backfill. The length of the geogrid is measured from the front face of the wall. Extend the grid onto the front face flange of the facing unit. Orient the geogrid with the strong axis (machine direction) placed perpendicular to the wall face. Geogrid shall not be spliced by any means in the roll direction.

Geogrids shall be placed side by side to provide complete coverage along the wall face. No overlap is required between adjacent grids on straight sections of the wall. On convex curves, place a minimum of 3 inches (75 mm) of backfill material between overlapping geogrid layers.

Pull geogrids taught and stake or hold the loose end in place before placing the next course of backfill. Backfill shall be placed, spread, and compacted in such a manner that minimizes the development of wrinkles in the geogrid and/or movement of the geogrid. Do not operate equipment directly on the geogrid. A minimum backfill depth of 6 inches (150 mm) should be placed before operating equipment over the grids.

Place the next course of precast modular block units in running bond with the previous course. Place the web recess over the alignment hoop protruding from the unit below, and pull the unit forward to contact the hoop. Batter should be within ¼ inch (6 mm) tolerance (4 inches/102 mm from 24 SF unit below, 2 inches/51 mm from 6 SF unit below).

Continue placing successive courses to the elevations shown on the plans. Construct wall in level stages, placing the units at each course for the entire length of the wall, if possible. Unit fill and backfill should be placed to the level of the top of the facing unit before placing the next course.

Provide temporary swales to divert runoff away from wall excavation and away from face.

Final grade above and below the retaining wall shall provide for positive drainage and prevent ponding. Protect completed wall from other construction. Do not operate large equipment or store materials above the wall that exceed the design surcharge loads.

Where tail extensions are indicated on the plans, concrete shall be placed in a continuous placement inside the side voids between the blocks extending to the minimum width behind the blocks indicated on the drawings. Tail extensions may be formed or may be placed directly against a cut embankment. Tail extensions should be placed in lifts not to exceed 4½ feet (1.4 m) until the previous lift has fully set. The tail extension should be allowed to reach 2,000 psi (14 MPa) compressive strength before backfill is placed above the top of the extension.

Construction Quality Control:

The contractor is responsible to ensure that all installation and materials meet the quality specified in the construction drawings.

SECTION 0213100 GRANULAR FILL

The contractor shall verify that installation is in accordance with the specifications and construction drawings.

Quality Assurance:

Compaction testing shall be done a minimum of every 1 foot (300 mm) of vertical fill and every 100 lineal feet (30 m) along the wall.

Testing shall be done at a variety of locations to cover the entire backfill zone.

The independent inspection professional should perform sufficient testing and observation to verify that wall installation substantially conforms to the design drawings and specifications.

PART 4 – MEASUREMENT

Formation of base shall be measured under the item “Retaining Wall”. Formation of subgrade beneath the base of the wall shall be measured under the item “Retaining Wall”. Formation of subgrade outside of the limits of the retaining wall shall be measured under the item “Formation of Subgrade” and backfill required along the slope outside of the limits of the retaining wall shall be measured under “earthen fill” and as identified in the specifications herein or the Plans, or as directed by the Engineer.

PART 5 – PAYMENT

Pay Item

Retaining Wall

Pay Unit

Square Foot for Face of Wall

SECTION 0811001 CONCRETE CURB

PART 1 – DESCRIPTION

This work shall consist of furnishing and placing all materials, equipment, and services necessary to furnish and deliver Concrete Curb as shown on the Plans and as specified herein, or as directed by the Engineer.

PART 2 – MATERIALS

All materials and construction methods shall conform to Form 818 – State of Connecticut Department of Transportation "Standard Specification for Road, Bridges, and Incidental Construction" latest edition, unless otherwise specified herein.

Design mix to produce normal weight concrete, consisting of portland cement, aggregate, airentaining admixture and water to produce the following properties:

Compressive Strength: Class "C" - 3,000 psi minimum at 28 days.

Slump Range: Eight inches minimum for concrete containing high-range water-reducing admixture (superplasticizer); three inches for other concrete.

Air Content: 5% - 7%

Forms: Steel, wood, or other suitable material of size and strength to resist movement during concrete placement and to retain horizontal and vertical alignment until removal. Use forms that are straight and free of distortion and defects. Use flexible spring steel forms or laminated boards to form radius bends as required. Coat forms with a non-staining form release agent that will not discolor or deface surface of concrete.

Reinforcing Bars: Deformed bars of new billet steel conforming to ASTM A 615, grade 60' unless otherwise shown.

Water: Clean water suitable for drinking purposes and free from injurious amount of mineral and organic substances.

Joint Filler: Premolded, non-extruding joint filler conforming to ASTM D-1751, 1/4" and 1/2" thick as required.

PART 3 – CONSTRUCTION METHODS

FORM CONSTRUCTION

Set forms to the required grades and lines, rigidly braced and secured. Install sufficient quantity of forms to allow continuous progress of work and so that forms can remain in place at least 24 hours after concrete placement.

Check completed form work for grade and alignment to the following tolerances:

SECTION 0811001 CONCRETE CURB

Top of Form Units: Not more than 1/8" in 10'.

Vertical Face: Not more than 1/4" in 10' on longitudinal axis.

Clean forms after each use and coat with form release agent as often as required to ensure separation from concrete without damage.

REINFORCEMENT

Storage: Bars and mesh shall be free from scale, oil, ice and structural defects, and kept in this condition on the job site. Bars and mesh shall be stored out of contact with the ground.

Appliances: Adequate chairs and other devices shall be galvanized. Continuous mesh reinforcing shall be lapped at least one wire space.

Preparation: All reinforcing steel within the limits of 1 days' pour shall be in place and firmly wired before concrete pouring starts. Bending of bars by use of heat will not be permitted.

Placement: Locate, place, and support reinforcement in accordance with all applicable requirement of ACI-318-77.

CONCRETE PLACEMENT – GENERAL

Placement of concrete shall be according to the accepted practice of A.C.I. Do not place concrete until subgrade and forms have been checked for line and grade. Moisten subgrade as required to provide uniform dampened condition at the time concrete is placed. Do not place concrete around manholes or other structures until they have been brought to the required grade and alignment.

Place concrete using methods, which prevent segregation of the mix and with as little re handling as possible. Consolidate concrete along the face of forms and adjacent to transverse joints with an internal vibrator. Keep vibrator away from the joint assemblies, reinforcement or side forms. Use only square faced shovels for hand spreading and consolidation. Consolidate with care to prevent dislocation of reinforcing dowels and joint devices.

Deposit and spread concrete in a continuous operation between joints as far as possible. If interrupted for more than 1/2 hour, place a construction joint.

CONCRETE CURBS

Construct as detailed at locations as shown on drawings. Accurately place and brace form work with tops at finish elevations and curved sections on the true radii with radial joints.

Finish exposed surfaces as detailed.

CURING

General: Protect concrete so that the temperature at the surface will not fall below 50 degrees F., and there will be no loss of moisture from concrete surfaces for a period of seven days. Cover concrete surfaces with approved Kraft paper, burlap, or polyethylene sheeting.

SECTION 0811001 CONCRETE CURB

Antispalling Treatment: Apply treatment to concrete surfaces no sooner than 28 days after placement, to clean, dry concrete free of oil, dirt, and other foreign material. Apply curing and sealing compound at a maximum coverage rate of 300 s.f. per gallon. Apply antispalling compound in 2 sprayed applications. First application at rate of 40 sq. yds. per gal.; second application, 60 sq. yds. per gallon. Allow complete drying between applications.

REPAIRS

Where new site concrete has been cracked or damaged, remove the entire panel/section wherein the damage occurs and install a new panel/section. No patching is permitted.

Patching/repairing of surface defects (honey-combed areas, etc.) may be permitted if damaged areas are not extensive.

PROTECTION

Protect concrete from damage until acceptance of the work. Exclude traffic from pavement for at least 14 days after placement. No construction traffic is permitted.

Sweep concrete pavements and wash all concrete surfaces free of stains, discoloration, dirt and other foreign materials just prior to final inspection.

Protection of finished work is the responsibility of the Contractor until final acceptance of all work. All damaged work shall be replaced by the Contractor at no additional cost to the Contract Sum.

CLEAN-UP

Keep grounds clean of rubbish caused by work and of unused materials at all times. Dispose of rubbish off-site.

Remove unused materials and equipment. Leave area clean.

PART 4 – MEASUREMENT

“Concrete Curb” will be measured by the actual number of cubic yards of “Concrete Curb” constructed and accepted. This Concrete Curb is identified as the wet-cast curb along the precast stairs. If the alternative concrete stairs are wet-cast, Concrete Curb shall be measured within “Concrete Stairs”.

PART 5 – PAYMENT

Pay Item

Concrete Curb

Pay Unit

Linear Foot

SECTION 0815001

BITUMINOUS CONCRETE LIP CURBING

PART 1 – DESCRIPTION

This work shall consist of machine laid bituminous concrete, constructed on the pavement to the dimensions and details shown on the plans, or as ordered by the Engineer, and in accordance with the specifications.

PART 2 – MATERIALS

Materials for this work, including tack coat, shall conform to the requirements of CTDOT Form 818, Article M.04.01, Class 3 Curb Mix. Contractors shall supply copies of material test results, certified by an approved testing laboratory, prior to commencing construction.

PART 3 – CONSTRUCTION METHODS

"Bituminous Concrete Curbing" shall be constructed in accordance with the following requirements:

1. Prior to the arrival of the mixture on the Project Site, the surface of the pavement where the curbing is to be constructed shall be cleaned of all loose and foreign material. The surface, which shall be perfectly dry and clean at the time the mix is placed, shall be coated with an approved tack coat just prior to placing the mixture.
2. On arrival at the Site, the mixture shall be transferred from the truck to the hopper of the curbing machine; and the mixture shall be kept clean and free from dirt and foreign materials at all times.
3. The surface of the curbing shall be tested with a 10-ft straightedge, and any variation from a true line exceeding 1/4 in shall be satisfactorily corrected. The only compaction required shall be that obtained by the approved mechanical curbing machine.
4. Where machine work is impractical, the Director of Public Works/ Town Engineer, or his assigned agent, may permit hand-laid curbing to be constructed.
5. If the design of the curbing machine is such that the outside wheels operate outside of the curb, the Contractor will be required to obtain a smooth surface by grading and consolidating the area on which the outside wheel of the machine rides, and this work shall be done at the Contractor's expense.
6. After the completion of curbing, traffic shall be kept at a safe distance for a period of not less than 24 hours and until the curbing has set sufficiently to prevent injury or damage to the work.
7. Once curbing has been laid the area between the curb and the sidewalk can be filled, per detail, with process aggregate and bituminous asphalt.

PART 4 – MEASUREMENT

Bituminous Concrete Lip Curbing shall be measured for payment along the top of the curb and will be the actual linear feet of bituminous concrete lip curbing completed and accepted. The following will not be measured for payment, but shall be considered included in the unit "Bituminous Concrete Lip Curbing": Earth Excavation, Removal and disposal of existing surface, tack coat, backfill and lawn restoration, and materials and labor.

PART 5 – PAYMENT

Pay Item

Bituminous Concrete Lip Curbing

Pay Unit

Linear Foot

SECTION 0921001 CONCRETE SIDEWALK

PART 1 – DESCRIPTION

This work shall consist of furnishing and placing all materials, equipment, and services necessary to furnish and deliver Concrete Sidewalk and Landings as shown on the Plans and as specified herein, or as directed by the Engineer. This will include the materials and preparation of the processed aggregate base course and excavation limits of the Concrete Sidewalk and Landings.

PART 2 – MATERIALS

1. Concrete: Contractors shall supply copies of material test results, certified by an approved testing laboratory, prior to commencing construction.
- a. All Portland Cement Concrete shall conform to the following specifications:

All concrete used shall be proportioned by weight for one cubic yard as follows:

Cement (7 Sacks)	658 lbs.
Sand	1,244 lbs.
3/8" Crushed Stone	700 lbs.
3/4" Crushed Stone	1,080 lbs.
Water	34 gals.
Darex II (A.E.A.)	3.29 oz
Air Entrainment	6 +/- 1%
Slump	3 +/- 1"
Strength (28 Day)	4,000 PSI (min.)

- b. The proportions listed are based on the weight of cement and surface dry aggregates with a bulk specific gravity of 2.65 for sand with a fineness modulus of 2.70 and trap rock with a specific gravity of 2.90.
- c. Portland Cement shall be Type II or IIA and shall comply with AASHTO M-85. Type III or IIIA may not be used except as directed by the Director of Public Works/ Town Engineer, or his assigned agent, for special conditions. All cements must meet requirements of ASTM C-150. Should air entraining cement be used, it must be capable of producing entrained air within the specified limits without air entraining admixtures.
- d. The air entraining agent used shall be of the vinsol resin type and shall conform to CTDOT Form 818, Sections M.03.01-5. The air entraining agent shall be added to the mixing water prior to its addition to the mix, for non-air entrained cement mixes only. Air entraining agent may not be used with air entrained cement.
- e. All Portland Cement Concrete used shall be "ready-mixed concrete", (Portland Cement Concrete manufactured for delivery to a purchaser in a plastic state and delivered to the job site suitably mixed for placing in the work). Ready-mixed concrete shall be either (1) mixed completely at a central mix plant and transported to the job in a truck mixer operating at agitator speed or (2) mixed completely in a truck mixer while in transit or at the point of delivery. Ready-mixed concrete shall be obtained from suppliers approved by the Inspector. Batching equipment, stationary mixes and truck mixers shall conform to the requirements of CTDOT Form 818, Section 4.01.03 and Section 6.01.03, as applicable, and be in good condition and operated as designated by the manufacturer. The concrete shall be discharged at the site of the work in a thoroughly mixed and uniform mass of the consistency and workability required without

SECTION 0921001 CONCRETE SIDEWALK

the use of additional mixing water. The slump of the concrete at and during discharge will be consistent with the mix design.

- f. As determined in accordance with AASHTO T-119, discharge of the batch shall be complete within one (1) hour of the addition of water to the mix. Concrete delivered in outdoor temperatures lower than 40° F shall be discharged at the work site having a temperature not less than 60° F nor greater than 90° F. Every load of concrete delivered to the job site shall have a ticket clearly marked indicating the proportionment of the batch and stamped by a time clock indicating the time the batch was placed in the truck mixer. This ticket shall be presented to the Inspector on the job prior to beginning discharge. Additional water for tempering will be added to the mix only on direction of the Inspector. The concrete supplier shall guarantee proper frequency of delivery to allow conformance with placing requirements of these specifications. Failure to conform with all the requirements of this technical specification will result in the rejection of the nonconforming load(s). Rejected loads that have been "doctored up" will not be accepted. Repeated failure of a supplier to conform to these specifications will result in loss of approval by the Engineer as an approved source of material for construction within the Town.

- g. No additional materials will be added to the concrete mix at the job site without the prior approval of the Engineer.

2. Reinforcing:

- a. Welded Wire Mesh: WWM shall be used in all driveways and sidewalk locations. The WWM shall be W1.4xW1.4 and conform to the latest AASHTO M 55M/M 55"Standard Specifications for Welded Steel Wire Fabric for Concrete Reinforcement."

Written requests may be made to substitute synthetic fibers such as Fibermesh or approved equal for welded wire mesh with written approval of the Director of Public Works/ Town Engineer. The addition rate shall be 1.5 lb./cu yard.

- b. Smooth Metal Dowels: Smooth metal dowels shall be "I's" in diameter and 18 inches in length. All metal dowels shall conform to the requirements of AASHTO M31-92, Grade 60.
 - c. Deformed Bars: Deformed bars shall conform to AASHTO M31-92, Grade 60.
 - d. Bond breaker shall be Reed Wax #100 Emulsion as manufactured by Roger A. Reed, Inc., Reading, MA (1-781-944-4640) or approved equal.
- 3. Construction Joint: Construction joints other than those shown on the plans will not be permitted without prior approval of the Engineer. In joining fresh concrete to concrete that has already set, the work already in place shall have all loose and foreign material removed, and the surface roughened and thoroughly drenched with water. All reinforcing steel shall extend continuously through joints. Where unplanned construction joints may be needed, they shall be constructed as directed by the Engineer.
- 4. Expansion and Contraction Joints: Expansion and contraction joints shall be constructed at the locations and in accordance with the details specified in the Contract. The forming of joint openings shall be dimensioned in accordance with the joint manufacturer's design requirements. Joints include open joints, filled joints, joints sealed with sealants, joints reinforced with steel armor plates or shapes, paraffin coated joints, and joints with combinations of these features. Open joints shall be placed at locations designated on the plans and shall be formed by the insertion and subsequent removal of templates of wood, metal or other suitable material. The templates shall be so constructed that their

SECTION 0921001 CONCRETE SIDEWALK

removal may be readily accomplished without damage to the work. Filled joints shall be made with joint filler, of bituminous cellular type and shall conform to the requirements of AASHTO M 213

5. Forms: The forms used shall be straight and firmly supported and staked to the line and grades as shown on the plans or as directed by the Director of Public Works/ Town 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.
6. Curing Materials:
 - Liquid Membrane-Forming Cure: The liquid curing compound shall be as specified in CTDOT specification M.03.04-3. When resin-based curing compound is used; it shall be applied following the final finishing immediately after the disappearance of the water sheen and before any surface checking or marked dehydration of the concrete occurs. When water-soluble, linseed oil based compound is used; it shall be applied immediately following the final finishing.
7. Processed Aggregate Base: Processed aggregate base shall conform to the requirements of "Processed Aggregate Base" elsewhere in these Specifications.
8. Granite Stone Transition Curb: Granite stone transition curb and associated concrete and mortar shall conform to the requirements of "Granite Stone Curb" elsewhere in these Specifications.

PART 3 – CONSTRUCTION METHODS

1. Excavation

Excavation, including the removal and disposal of any type of existing sidewalk, curb, ramp, steps or pavement, shall be made to the required depths below the finished grade as shown on the plans or as directed. All soft and yielding material shall be removed and replaced with suitable material.

2. Processed Aggregate Base

The base course shall be placed in layers not to exceed six inches (6") in depth and to such a depth that after compaction it shall be at the specified depth below the finished grade of the walk.

3. Forms

Forms shall be straight, free from warp and of sufficient strength to resist springing from the pressure of the concrete. Forms shall be of minimum 5" depth and shall have a flat surface on the top. Forms shall be securely staked, braced and held firmly to the required line and grade and shall be sufficiently tight to prevent leakage of mortar. All forms shall be cleaned and oiled or wetted before concrete is placed against them. Sheet metal templates one-eighth (1/8) inch in thickness, of the full depth and width of the walk, shall be spaced at intervals of fifteen feet (15') or as directed by the Engineer. If the concrete is placed in alternate sections, these templates shall remain in place until concrete has been placed on both sides of the template. As soon as the concrete has obtained its initial set, the templates shall be removed.

Removal of Forms: The Contractor shall consider the location and character of the structure, the weather, the materials used in the mix, and other conditions influencing the early strength of the concrete when removing forms. Methods of removal likely to cause damage to the concrete surface shall not be used. Supports shall be removed in such a manner as to permit the structure to uniformly and gradually take the stresses due to its own weight. When the results of field-cured cylinder tests are unavailable, Form Removal Requirements for Slabs on grade are min. 24 hours, exclusive of days when

SECTION 0921001 CONCRETE SIDEWALK

the temperature drops below 40°F. The Contractor may submit for review and approval by the Engineer, alternate methods to determine the in-place strength of the concrete for removal of forms.

4. Joints

- a. Construction Joints: At maximum intervals of thirty feet (30'), install a construction joint as detailed on the drawings. Install dowels as shown on the drawings, and all expansion joints. Minimum embedment on each side of the joints shall be six inches (6"). All dowels shall be straight, square on the ends with no burrs. Locate 12" from the edge of the slab. Bars must be carefully aligned and square with the form face. Prevent bonding to the concrete on one side of the joint by using a plastic sleeve over the dowel or coat with an approved bond breaker. Alternate protected end on each side of the joints.

Dowels are also to be installed between new and existing concrete slabs. Where new or repaired walks abut existing concrete sidewalks, the contractor shall drill holes measuring 3/4 of an inch in diameter and twelve (12) inches in depth at 24" on centers into the existing concrete slab. The dowels dipped in a liquid asphalt and coated with an approved bond breaker or plastic sleeve, shall be set into the existing sidewalk slab prior to the placement of concrete. The dowels are to be level with the latitude pitch of the sidewalk and shall conform to the details of these specifications. Any variations in dowel installation procedures must be approved by the Engineer.

Other locations to which dowels may be required will be directed by the Engineer.

- b. Control Joints: Follow joint spacing as shown on the drawings. At intervals of approximately twenty (20) feet, a full control joint shall be provided. A tooled joint, to the depth of 3/8 of an inch, shall be installed at approximately five (5) foot intervals along the sidewalk. The resulting areas should be as square as practical. All joints shall be installed using straight guides set at right angles to the longitudinal direction of the walk.
- c. Isolation Joints will be installed wherever concrete is placed against already installed concrete of structures such a curbing, building, or other, previously existing paving.

If it becomes necessary to adjust the locations, horizontal or vertical dimensions of the above listed items due to interference with utilities or for other valid reasons, the Contractor, with the approval of the Engineer, shall construct said items to the modified dimensions and locations.

5. Concrete Placement and Finishing

- a. Subgrade preparation: The subgrade shall be approved by the Engineer, prior to placement of concrete. The grade will be free of soft areas, roots, rubble and large stones. It shall be fully compacted and graded to provide the specified slab thickness within $\pm 1/4"$.
- b. Forms: Align forms as shown on drawings and secure to provide straightedges and uniform curves. Removal of forms subject to previously specified requirements.
- c. Where required, install welded wire mesh. Support the mesh on concrete bricks or other supports so that it will remain in the upper third of the slab.
- d. Moisten the subgrade before starting concrete placement to eliminate water loss.

SECTION 0921001 CONCRETE SIDEWALK

- e. Place continuously, using construction joints at locations shown on the drawings or as approved by the Engineer, or his assigned agent. If an interruption occurs of a duration that may cause a cold joint, install a construction joint as described in this specification.
 - f. Water may be added to the truck mixer to adjust the slump when the discharge begins, only if the concrete is below the specified water cement ratio and maximum slump upon arrival at the job site. Water shall not be added to the batch at any later time. If higher slumps are required, use a high range water reducer such as Rheobuild 1000 by Master Builders or equal as approved by the Engineer.
 - g. Screed the concrete to grade, bull float or darby, consolidate formed edges by spading with a hand float, and leave until edging can begin. Allow to harden sufficiently so that a foot leaves only a slight imprint. Floating should not begin until the water sheen has disappeared. The surface shall be worked and floated with a wooden, aluminum or magnesium float or finishing machine using float blades. The outside edges of the slab shall be edged with one- quarter inch radius tool. The slab shall then be broomed crosswise with a fine hair broom leaving the surface free from all tool marks.
 - h. Immediately upon the disappearance of the water sheen following the final finishing and before any marked dehydration or checking occurs, the curing compound shall be applied using an approved spraying device. The sprayer shall deliver a fine spray with uniform coverage. Coverage rate shall be that recommended by the curing compound manufacturer.
 - i. 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. Protect the surface if rain occurs before final set or use for curing in the event of a breakdown of the spray equipment.
 - j. If rain falls on the newly coated sidewalk before the curing film has dried sufficiently to resist damage, or if the film is damaged in any other manner, the contractor shall reapply same. Treated surfaces shall be protected from all foot or vehicular traffic for a sufficient period of time to prevent damage.
6. Reinforcing
Reinforcing of the type specified shall be used in all concrete sidewalk ramps and at concrete sidewalks which cross driveways. Welded wire fabric for concrete reinforcement shall be embedded at mid-depth in the slab.
7. Special Conditions
- a. Low Temperature Placements: No concrete is to be placed when air temperature is below 50°F unless additional precautions are taken and prior approval is given by the Engineer. The Engineer must approve all placements below 50°F. No concrete will be placed on frozen sub-grade or at temperatures below 20°F. Concrete exposed to temperatures below 40°F after placement must be protected through the use of insulating blankets, or other appropriate methods. Any concrete placed during cold weather that is damaged because of freezing shall be replaced at the Contractor's own expense.
 - b. Special consideration for high temperature placements and rapid drying conditions should be discussed with the Engineer. No additional materials will be added to the concrete mix at the job site without the prior approval of the Engineer.
 - c. Where reconstruction of an existing approach walk is required, the reconstructed portion of the approach walk shall match the existing approach walk in color, texture and appearance.

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d. Where the new "Concrete Sidewalk" crosses a driveway, the sidewalk thickness shall be increased to 8".

8. Curb Transitions

Curb transitions shall be provided when sidewalk ramps are adjacent to existing and proposed curb. Granite stone curb transitions shall be provided adjacent to granite curb and concrete curb transitions shall be provided adjacent to concrete curb and bituminous concrete curb unless approved otherwise by the Engineer.

9. Backfilling and Removal of Surplus Material

The sides of all finished concrete work shall be backfilled to the limits shown on the Typical Details or as directed by the Engineer, with suitable material thoroughly compacted and finished flush with the top of the concrete. All surplus material shall be removed, and the site left in a neat and presentable condition to the satisfaction of the Engineer.

10. Protection

The Contractor shall protect newly poured concrete surfaces so as to prevent damage from falling objects, vandalism, etc. The Contractor shall repair or remove and replace any damaged or defaced concrete surface at his own expense. Determination to repair or remove and replace will be at the sole discretion of the Engineer.

11. Utility Adjustments

If an existing utility box, valve box or manhole is located within the limits of the new sidewalk or ramp, the Contractor shall be responsible for the coordination and scheduling with the owner of the facility, for the adjustment of the facility to grade, if necessary.

12. Other Construction Details

- The removal of concrete sidewalks shall be made in conformity with the requirements of the plans and as ordered by the Director of Public Works/ Town Engineer. All concrete shall be removed. The base material, if any, may remain in place if the required depth for the materials to be placed in that area is provided. All existing sidewalks and driveways, which are designated to remain, shall be sawcut at the contract limits or the nearest joint as directed by the Director of Public Works/ Town Engineer. Sawcut edges shall be protected during construction. Any edges damaged shall be recut and any material required to be placed in that area shall not be measured for payment.
- In areas where sidewalks and sidewalk ramps are to be permanently removed, a minimum of 6" of screened topsoil shall be installed. Seeding and mulching shall meet the requirements of "Lawn Restoration" found elsewhere in the specifications. Final surface shall be graded to drain. The Contractor shall protect all existing trees, shrubs and landscaping, fences, mailboxes, utility poles, signs, sidewalks, driveways and pavements that are to remain.
- The Contractor shall repair, reset or replace these items as designated by the Director of Public Works/ Town Engineer, or his assigned agent, at no additional cost. Track type vehicles shall not be allowed on existing pavement areas. Any disturbance of lawn areas outside of the construction limits shall be restored to pre- construction condition and shall not be measured for payment.
- All materials removed for this project shall be disposed of in accordance with all applicable regulations. No stockpiling of removed material shall be allowed on site.

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CONCRETE SIDEWALK

- Access to all private properties shall be maintained at all times, including providing temporary processed aggregate driveways as directed by the Engineer. Temporary driveways shall be provided at no additional cost to the Town of Simsbury.

PART 4 – MEASUREMENT

"Concrete Sidewalk" will be measured by the actual number of square yards of completed and accepted concrete sidewalk of the thickness specified on the plans. The following items will not be measured separately for payment, but shall be considered as included in the unit price bid for "Concrete Sidewalk", Excavation, Processed Aggregate Base (Broken Angular Stone), Dowels and other reinforcement, Saw cutting and removal of existing sidewalks, ramps, driveways or roadway within the sidewalk or excavation limits, Controls, Materials, and Labor.

PART 5 – PAYMENT

Pay Item

Concrete Sidewalk

Pay Unit

Square Foot

SECTION 0950005 TURF ESTABLISHMENT

PART 1 – DESCRIPTION

"Turf Establishment" includes all work required to establish turf, including the furnishing and installation of screened topsoil, finish grading, fertilizing, seeding, mulching where shown on the Plans or where directed by the Engineer.

PART 2 – MATERIALS

Contractors shall supply copies of material test results, certified by an approved testing laboratory, prior to commencing construction.

Fertilizer: 18-18-5, (Nitrogen, Phosphoric Acid, Potassium), water-soluble or an approved equal at a rate of 25-lbs per 1,000-sq. ft. Submit Manufacturer's product specifications and guaranteed purity analysis for fertilizer.

Mulch: Cellulose fiber or hay mulch shall conform to the requirements of Section M.13.05.3 of CTDOT Form 818. Apply at a minimum rate of 40 lbs./ 1,000 SF.

Topsoil: The term topsoil used herein shall mean a soil meeting the soil textural classes established by the United States Department of Agriculture Classification System based upon the proportion of sand, silt, and clay size particles after passing a two (2) millimeter (mm) sieve and subjected to a particle size analysis. The topsoil shall not contain less than 6% nor more than 20% organic matter as determined by loss-on-ignition of oven dried samples dried at 105 degrees centigrade.

The following textural classes shall be acceptable:

Loamy sand, including coarse, loamy fine, and loamy very fine sand Sandy loam, including coarse, fine and very fine sandy loam, Loam, Silt loam with not more than sixty (60) percent silt.

The topsoil to be furnished by the Contractor shall be loose, friable, reasonably free of admixtures of subsoil, free from refuse, stumps, roots, brush, weeds, rocks, and stones ½-inch and over in all Dimensions. The topsoil shall also be free from any material that will prevent the formation of a suitable seedbed or prevent seed germination and plant growth.

Seed: Shall be fresh and clean and new crop seed composed of an evenly graded mixture by proportion and testing minimum percentages of purity and germination indicated, or as approved by the Engineer. The seed mixture for lawns shall conform to the following requirements:

Area where Seeding Mix Applies	Seeding Mixture By Weight	Rate Per 1000 sqft	Reseeding Dates*
All Lawn Areas	Red Fescue: 70% Kentucky Bluegrass: 20% Perennial Ryegrass: 10%	5 lbs.	April 1 – June 15 August 1 – October 1
Road Cuts and Fills	Kentucky Tall Fescue: 80% Annual Ryegrass: 20%	3 lbs.	April 1 – June 15 August 1 – October 1

Initial seeding shall be done upon project completion (Note: Hydroseeding methods may be used)

SECTION 0950005 TURF ESTABLISHMENT

PART 3 – CONSTRUCTION METHODS

Construction methods shall be those established as agronomically acceptable and feasible and which are approved by the Engineer.

The existing ground shall be graded to a reasonably true surface.

Topsoil shall be spread and shaped to meet existing elevation, after settlement and compaction has occurred, and have a minimum depth of six (6) inches with all stone larger than 1/2" removed.

In wetland areas, 8" of native topsoil/organic matter shall be stripped, stockpiled and reused for wetlands plantings.

It shall be the Contractor's responsibility to restore to the 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.

Examine work area before proceeding with any work and notify the Engineer in writing on conditions which may prevent the proper execution of this work. Failure to report unsuitable conditions will require the contractor to rectify unacceptable work at no additional cost to the Town.

Hydroseeding:

1. Allow the planting area soil surface to dry out for one day only prior to the hydroseeding application. Exercise care not to allow the soil surface to be overly saturated with water prior to the hydroseeding installation. At the same time the soil surface should not become too dry during this period. There should be some residual moisture within the first 1/4 inch of the soil surface.
2. Notify the Engineer at least 48 hours prior to starting the hydroseeding operation. The Engineer shall be present during the hydroseeding operation and has final determination if conditions are acceptable for hydroseed application.
3. Application rates for hydroseed shall be as defined by the manufacturer.
4. Apply the hydroseed in the form of slurry consisting of organic soil amendments, commercial fertilizer, and any other chemicals that are called out. When hydraulically sprayed onto the soil, the mulch shall form a blotter-like material. Direct the spray operation so that this procedure will drill and mix the slurry components into the soil, the slurry spray will also penetrate the soil surface, thus ensuring maximum impregnation and coverage. The impregnation and mixing of the components will help in retaining moisture while stabilizing soil surface from superficial erosion.
5. Do not leave the hydroseeding slurry components in the hydroseeding machine for more than two (2) hours because of possible seed destruction. If slurry components are left idle for more than two hours in the machine, add 50% more of the originally specified seed mix to any slurry mixture which has not been applied within the two hours after mixing. Add 75% more of the original seed mix to any slurry mixture which has not been applied eight (8) hours after mixing. All mixtures more than eight (8) hours old, must be disposed, offsite, at the contractor's expense.
6. Spray the area with a uniform visible coat, using the dark color of the cellulose fiber as a visual guide. The slurry shall be applied in a downward drilling motion via a fan stream nozzle. Ensure that all of the slurry components enter and mix with the soil. Insure the uniformity of the hydroseed application.

SECTION 0950005 TURF ESTABLISHMENT

7. Exercise special care to prevent any of the slurry from being sprayed onto any hardscape areas including concrete walks, fences, walls, buildings, etc. Remove all slurry sprayed onto these surfaces at the contractor's expense.

Conventional Seeding:

1. Scarify surface of all areas to be top soiled and place a minimum of six (6) inches of topsoil on all areas to be seeded.
2. Apply lime at a rate of two (2) tons of ground limestone per acre (100 lbs./1000 sq. ft.).
3. Fertilize – meet the above material requirements for fertilizer or the following requirements:
 - a. For spring seeding, apply 10-10-10 fertilizer at a rate of three hundred (300) pounds per acre (7 lbs./1000 sq. ft.) and work into soil. Six (6) to eight (8) weeks later, apply additional three hundred (300) pounds per acre on the surface.
 - b. For fall seeding, apply 10-10-10 fertilizer at a rate of six hundred (600) pounds per acre (14 lbs./1000 sq. ft.) and work into soil.
4. Smooth and firm seedbed apply seed uniformly at the rate specified for the seed type and cover seed with not more than Y-i inch of soil.
5. Mulch immediately with hay free from weed seeds, at a rate of three (3) bales per 1000 sq.ft.

Contractor shall save all seed and fertilizer tags and fiber mulch bags for the Engineer to verify compliance with the drawings and specifications. The Contractor shall maintain the area until sufficient seed growth has occurred to stabilize the soil. This includes the restoration of all eroded areas, and the placing and maintaining of erosion control measures as required to prevent further erosion.

Normal seeding season shall be:

For Grass:

Spring seeding - April 1 through June 15

Fall seeding - August 15 through October 1

For Wildflower:

Spring seeding - March 1 to May 15

Fall seeding - November 15 to December 15

Seeding at other times will be allowed only with permission of the Engineer.

The Contractor may be required to top dress and reseed certain areas to achieve sufficient, uniform turf establishment.

MAINTENANCE

Upon completion of seeding operations, maintain all seeded areas for a period of 90 calendar days as follows:

SECTION 0950005 TURF ESTABLISHMENT

1. Germination stage irrigation: Approximately 24 hours after seeding the planting areas, initiate the watering sequence. Leave the water on long enough to moisten the soil thoroughly, taking care not to super saturate or wash away the seed. Perform frequent, light irrigation until the seed has germinated. Repair all seed washings and erosion.
2. Establishment stage irrigation: After germination, reduce each watering. The specific watering program shall be approved by the Engineer.

Fertilize all hydroseeded areas with an approved commercial fertilizer approximately thirty (30) calendar days from the start of the maintenance period.

ACCEPTANCE

Final approval and acceptance will be given in writing by Engineer following a final acceptance inspection. The Engineer reserves the option to extend the maintenance period to achieve complete germination of all turf or other plant materials with a uniform height, color and density throughout all seeded areas. Final acceptance may be given at the end of the 90-calendar day maintenance period if an acceptable germination of turf and adequate plant establishment has been obtained, as determined by the Engineer.

GUARANTEE AND REPLACEMENT

Provide a guarantee for a period of one (1) year after final acceptance, that the installed grass areas be at least the quality and condition as at the time of acceptance. Re-seed unacceptable areas during the guarantee period. The guarantee shall not include damage or loss of turf due to acts of God, acts of vandalism or negligence on the part of the Town.

PART 4 – MEASUREMENT

“Turf Establishment” will be measured for the surface of all disturbed areas, except those that are identified as other final surface (such as Concrete, Bituminous Concrete, other).

PART 5 – PAYMENT

Pay Item
Turf Establishment

Pay Unit
Square Foot

SECTION 0950013 EROSION CONTROL MATTING

PART 1 – DESCRIPTION

"Erosion Control Matting" includes the furnishing and installation of Erosion Control Matting over all disturbed areas as identified on the Plans, or where directed by the Engineer.

PART 2 – MATERIALS

MATTING

The Erosion Control Matting shall be comprised of non-degradable U.V. stabilized synthetic fibers, filaments, netting, or wire mesh processed into a three-dimensional reinforced mat. The Erosion Control Matting may include degradable material to assist with vegetation establishment. Soil filled mats must have an erosion control blanket applied on top of the soil filled mat in order to hold the soil in place.

The Erosion Control Matting must meet the following minimum requirements:

<u>Property</u>	<u>Value</u>	<u>Test Method</u>
Minimum tensile strength lbs/ft	150 lbs/ft	ASTM* D6818
U.V. stability (minum % tensile retained)	80%	ASTM D4355
A retained minimum thickness of 0.25” after resiliency testing	80%	(1000 hr exposure)
Allowable shear stress lbs/sqft	8 lbs/sqft	ECTC approved (ASTM D6460) test method & independent lab

STAPLES

"U" shaped wire staples of 0.12 inch in diameter (No. 11 wire gage) or greater, with a minimum leg length of 6 inches and minimum crown of 1 inch shall be used. In sandy soils the minimum leg length of staples shall be 8 inches. Circle-top staples are also acceptable. They should meet the material specifications previously stated.

Footnotes

For TRMs containing degradable components, all property values, including large scale performance testing for allowable vegetated shear stress, must be obtained on the non-degradable portion of the matting alone.

Minimum Tensile Strength:

SECTION 0950013 EROSION CONTROL MATTING

- a. Minimum average roll values, machine direction only for tensile strength determination using the ASTM D6818.
- b. Field conditions with high loading or high survivability requirements may warrant the use of a TRM with a tensile strength of 29kN/m (2,000 lb/ft) or greater.

Channel Applications maximum Shear Stress

- a. Required minimum shear stress TRM (fully vegetated) can sustain without physical damage or excess erosion (>12.7 mm (0.5 in) soil loss) during a 30-minute flow event in large scale testing. These performance test values should be supported by periodic bench scale testing under similar test conditions and failure criteria using Erosion Control Technology Council ECTC Test Method #3.
- b. Acceptable large-scale testing protocol may include ASTM D6460, ECTC Test method #3, or other independent testing deemed acceptable by the engineer.

PART 3 – CONSTRUCTION METHODS

Construction methods shall be those established as agronomically acceptable and feasible and which are approved by the Engineer. The matting shall be keyed in at the top of slope. The erosion control matting shall be inspected and maintained at least once per week following installation, and inspected after every major storm event.

PART 4 – MEASUREMENT

“Erosion Control Matting” will be measured for the surface of all disturbed areas, except those that are identified as other final surface (such as Concrete, Bituminous Concrete, other).

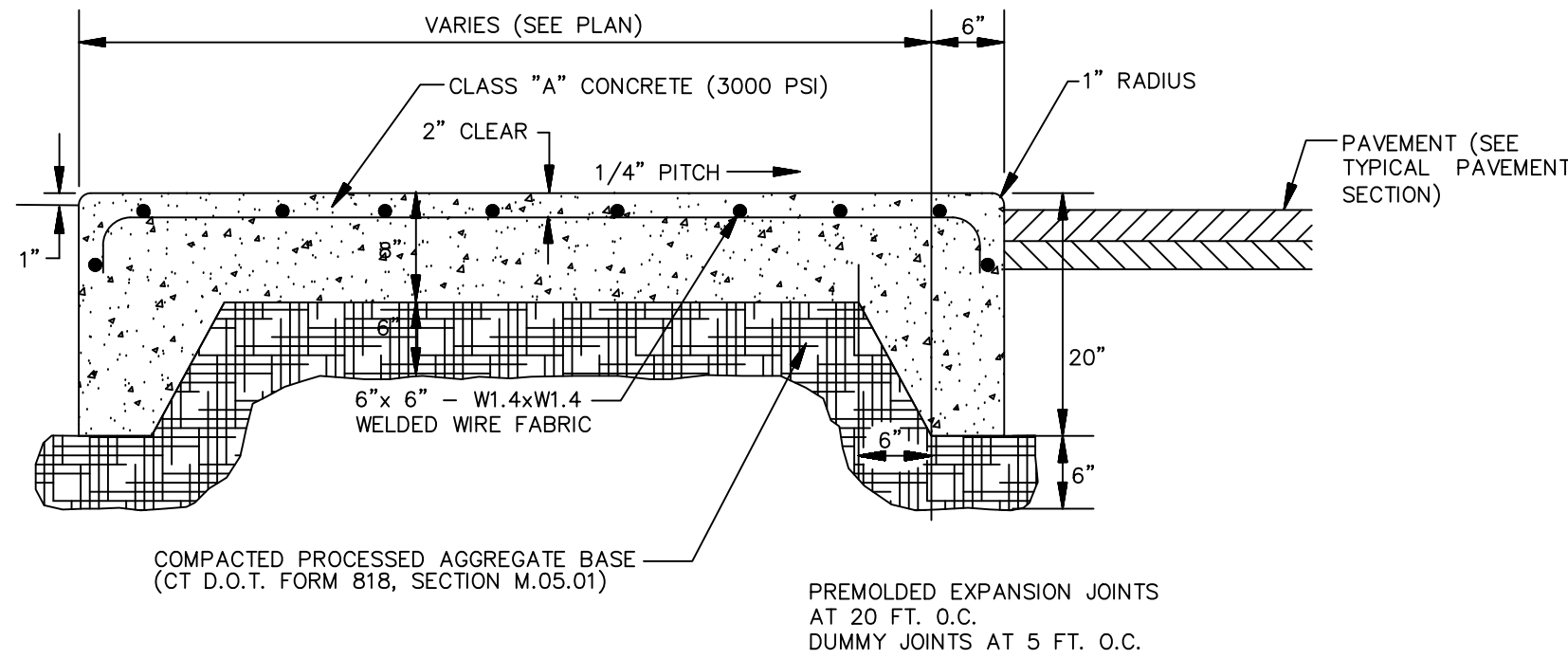
PART 5 – PAYMENT

Pay Item

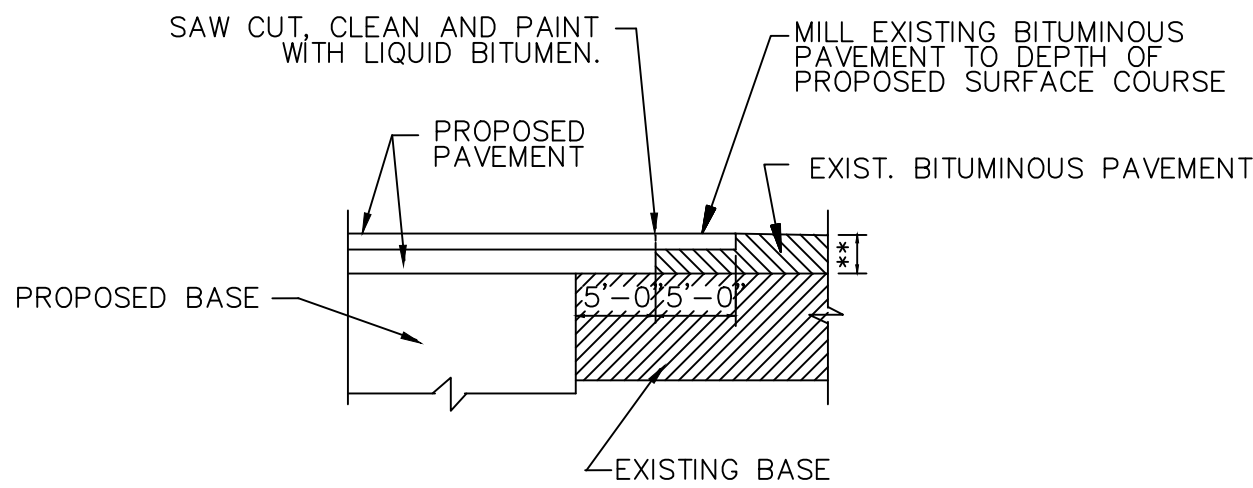
Erosion Control Matting

Pay Unit

Square Foot

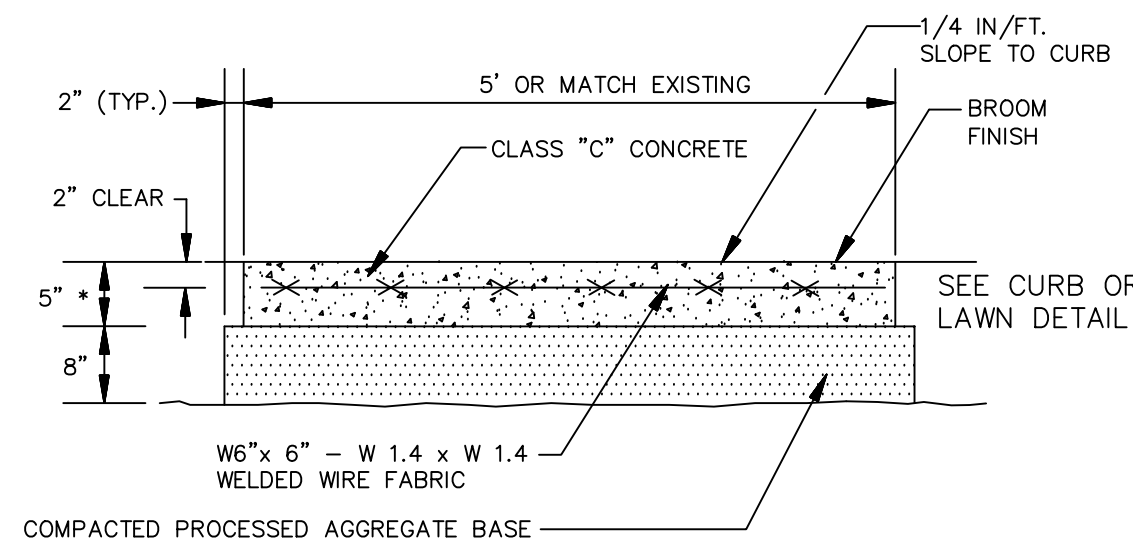


CONCRETE DUMPSTER PAD
N.T.S.



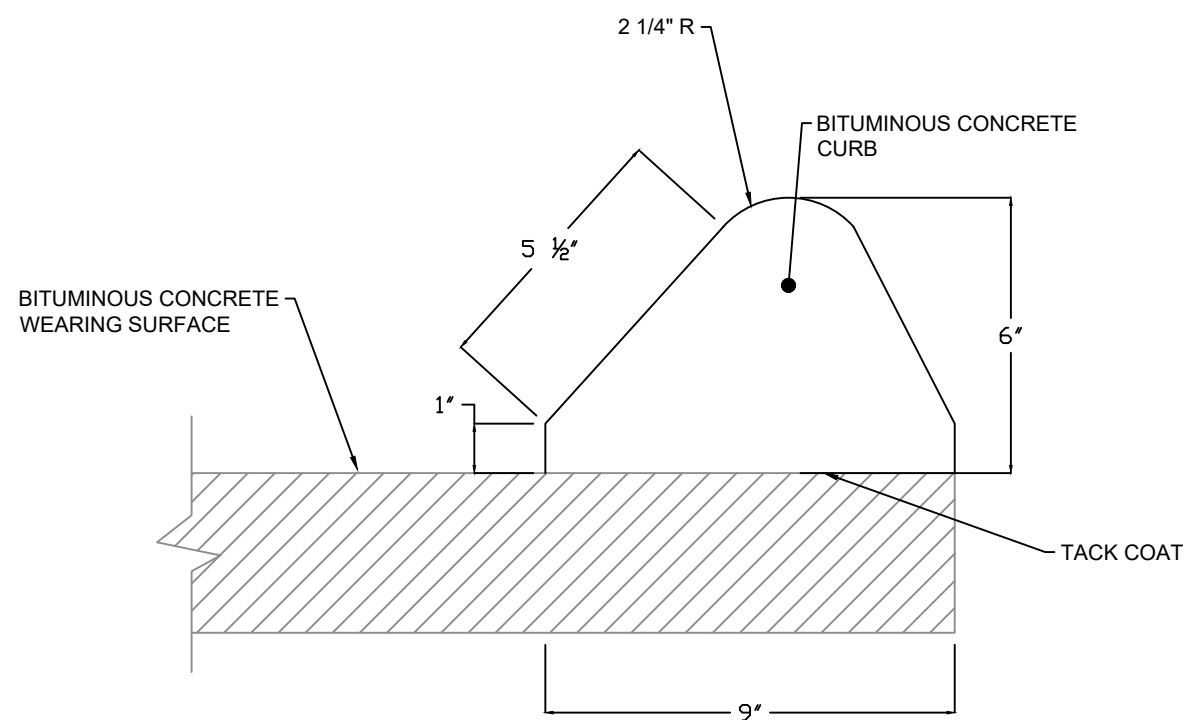
- NOTES:
1. OVERLAP BOTH PROPOSED BITUMINOUS CONCRETE COURSES (CLASS 1 AND CLASS 2) OVER EXISTING SUBBASE.
 2. ** MINIMUM THICKNESS TO BE SAME AS PROPOSED BITUMINOUS CONCRETE OR MATCH THICKNESS OF EXISTING PAVEMENT, WHICH EVER IS GREATER.

PAVEMENT MATCH TREATMENT
N.T.S.

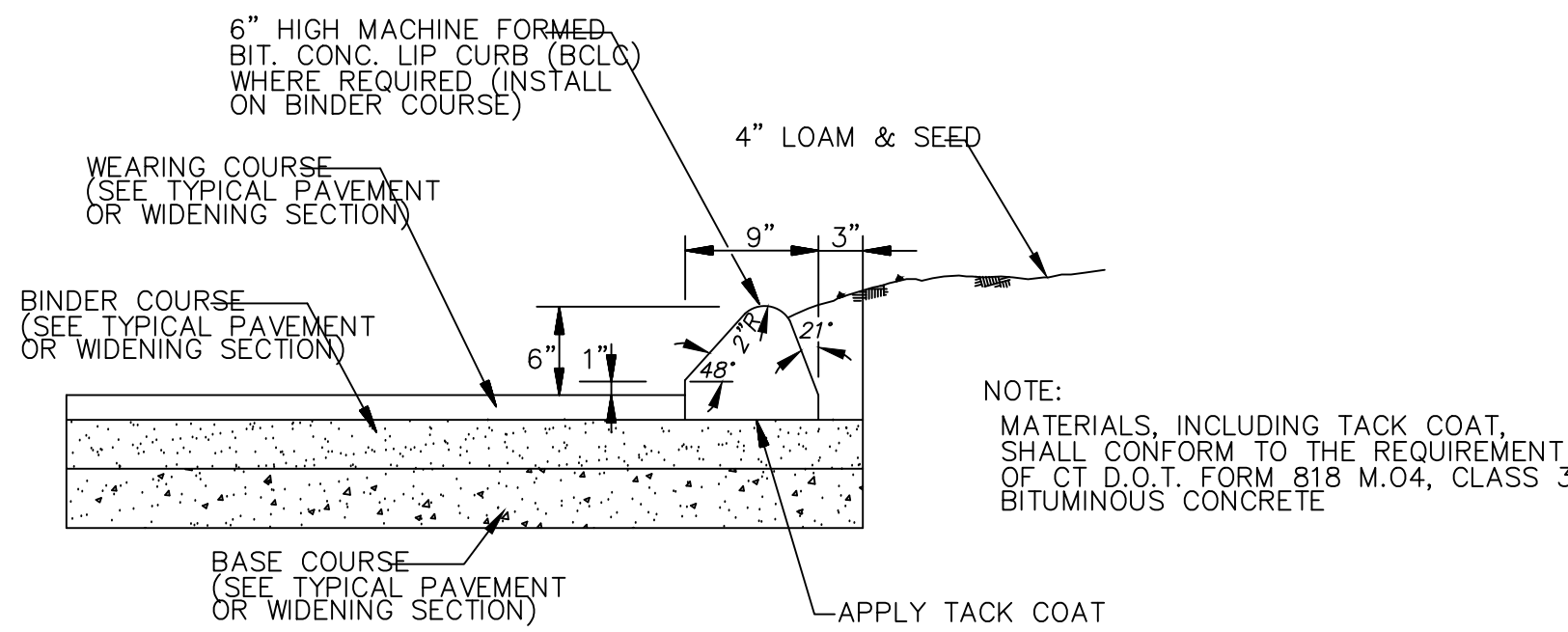


- * INCREASE CONCRETE THICKNESS TO 8" AT DRIVEWAYS
- EXPANSION JOINTS AT 20 FT. O.C. DUMMY JOINTS AT 5 FT. O.C. UNLESS OTHERWISE SPECIFIED

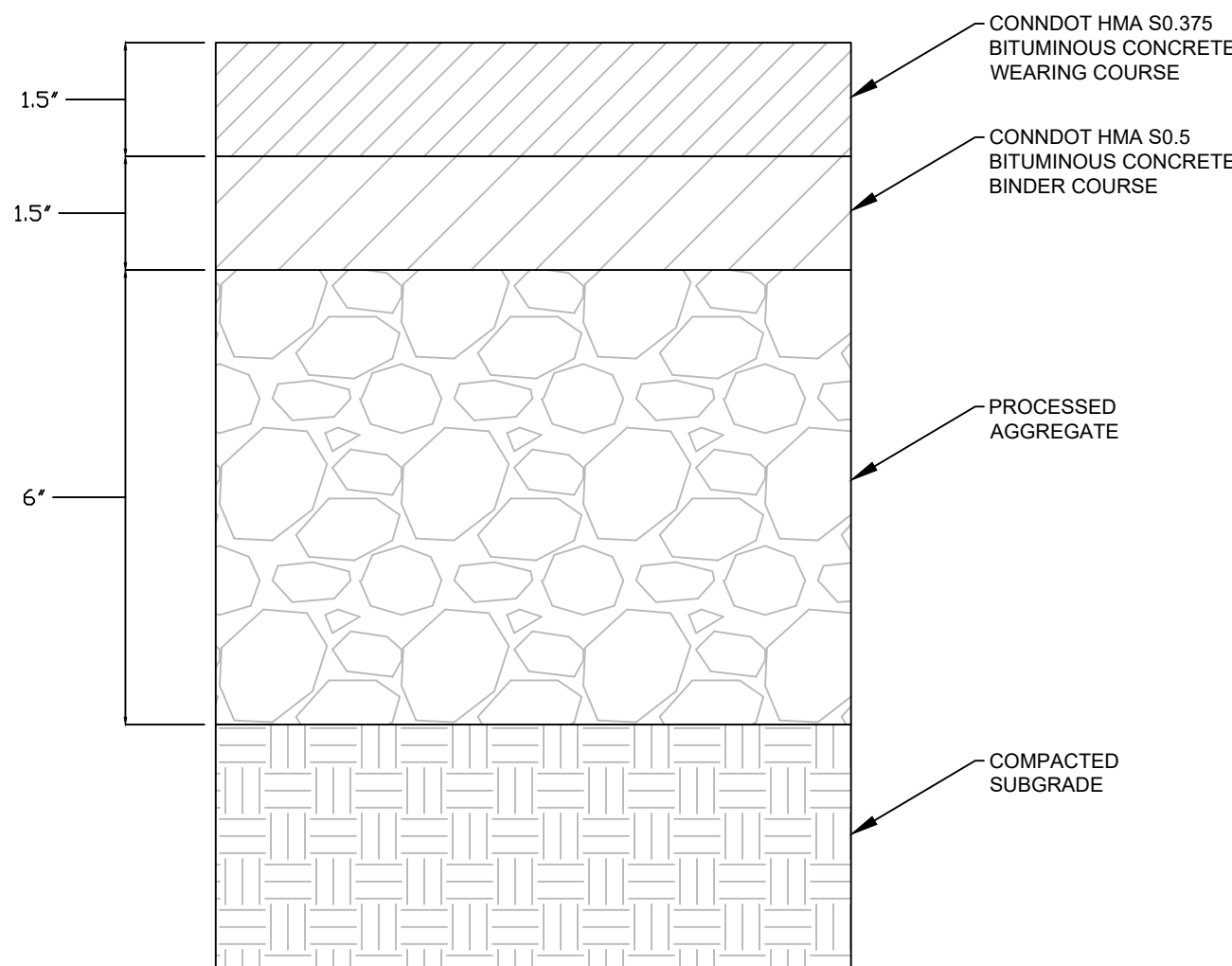
CONCRETE SIDEWALK
N.T.S.



BITUMINOUS CONCRETE CURB
N.T.S.

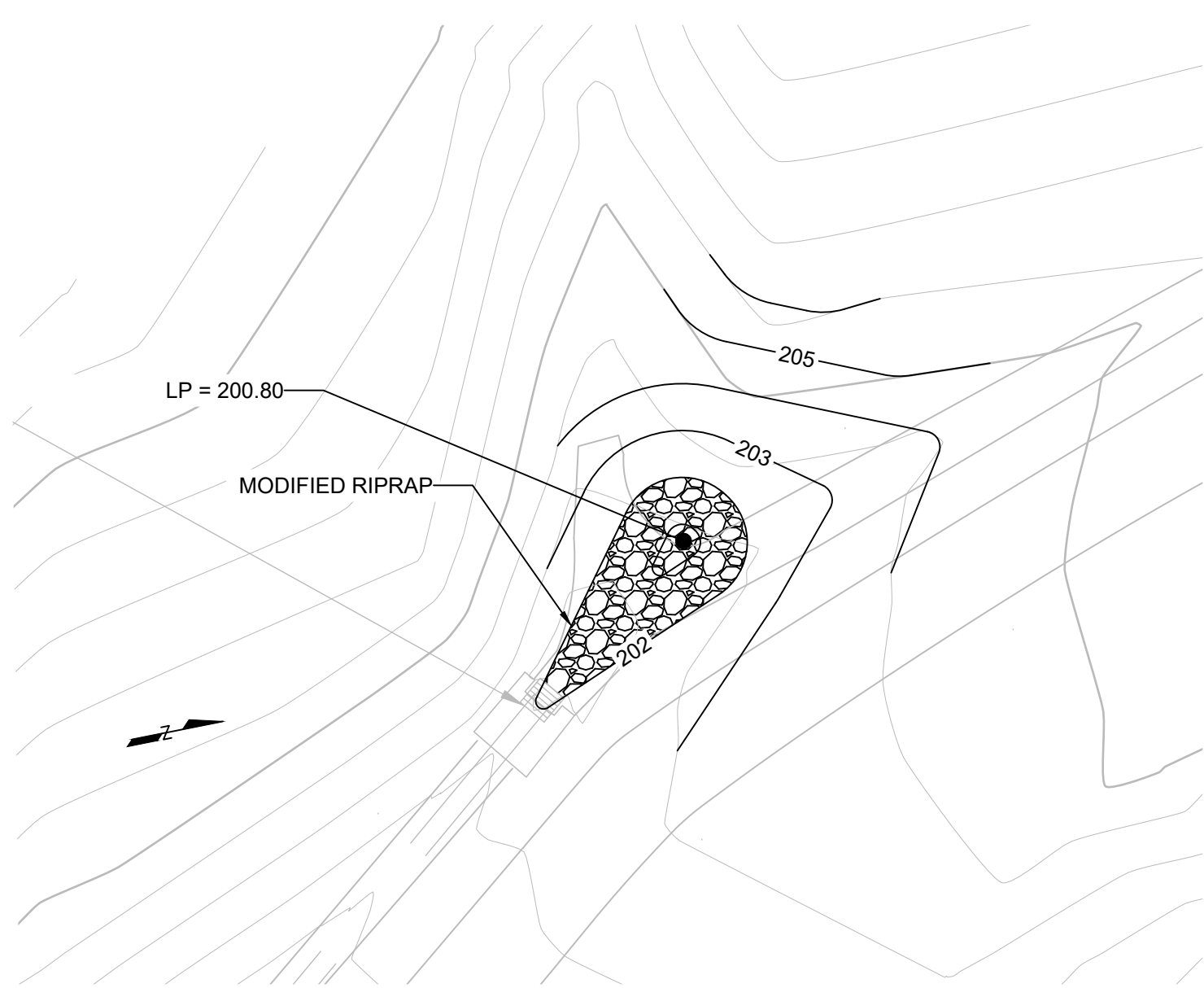


BITUMINOUS CONCRETE LIP CURBING (BCLC)
N.T.S.



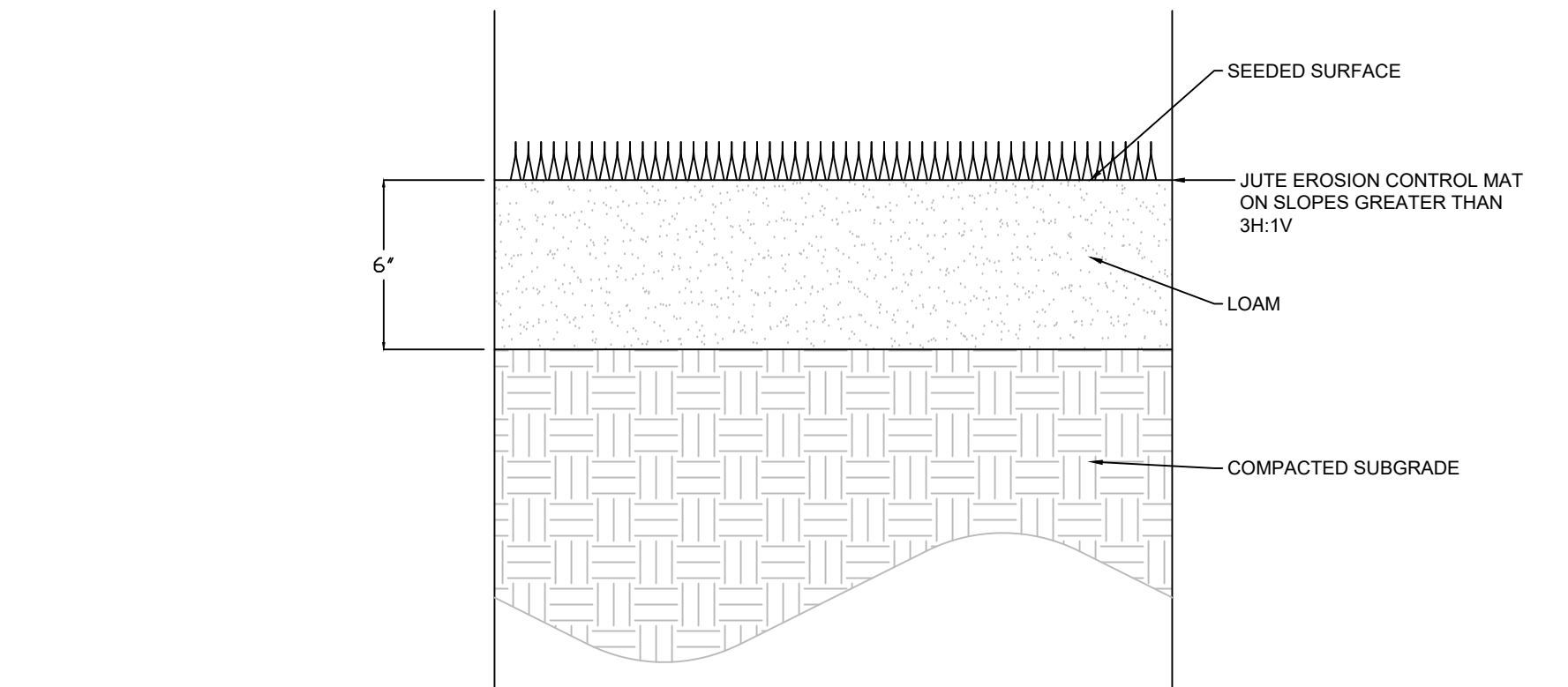
- NOTES:
1. NO RECYCLED MATERIALS WILL BE PERMITTED FOR PROCESSED AGGREGATE BASE WITHOUT ACCEPTANCE BY TOWN OF SIMSBURY TOWN ENGINEER.

BITUMINOUS CONCRETE SECTION
N.T.S.

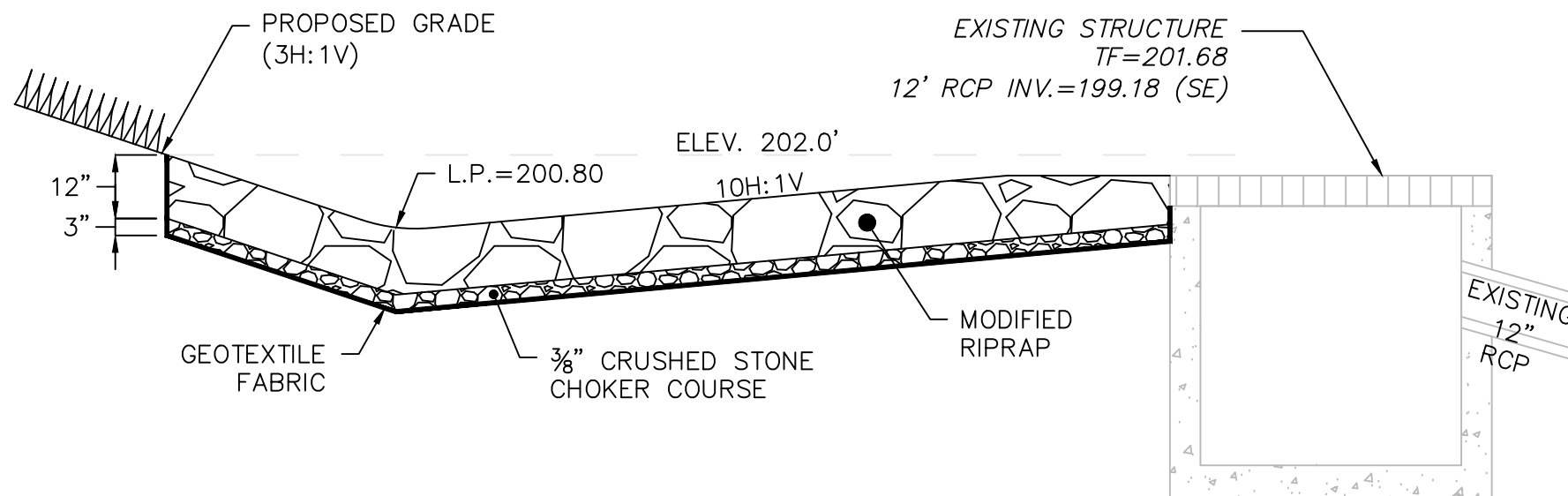


PLAN VIEW

MODIFIED RIPRAP BASIN
N.T.S.



TOPSOIL AND SEED
N.T.S.



PROFILE VIEW

BY	DATE	REVISION	NO.

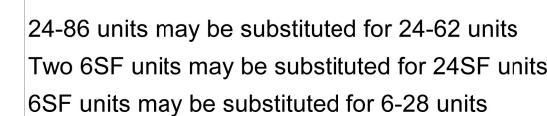


TOWN OF SIMSBURY
ENGINEERING DEPARTMENT
933 HOPMEADOW STREET
SIMSBURY CONNECTICUT

TOWN HALL PARKING AND SAFETY
IMPROVEMENTS
WORK TO WEST OF TOWN HALL

DRAWN BY:
DFG
CHECKED BY:
ADK
DATE:
MARCH 22, 2024
SCALE:
AS NOTED

SHEET
SK-10-DET-1



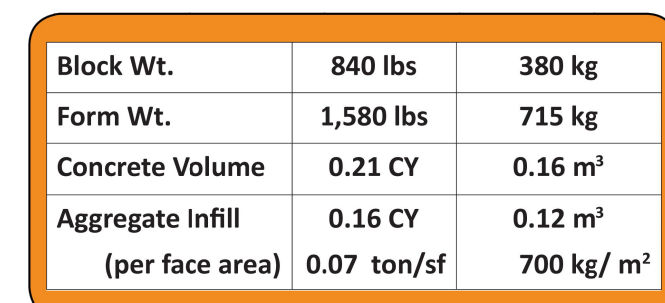
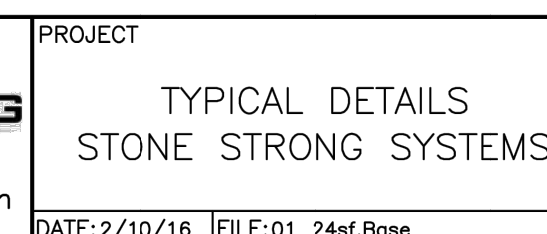
Crushed Stone Base <i>c=38", cD=95", cD=95"=125PDS</i>	Total Wall Height (ft)						
	7.5	9.0	10.5	12.0	13.5	15.0	16.5
8th Course							
7th Course							
6th Course							V6SF
5th Course					V6-28	V24SF	V24SF
4th Course			V6-28	V24SF	V24SF	V24SF	V24SF
3rd Course	V6-28	V24SF	V24SF	V24SF	V24SF	V24SF	V24SF
2nd Course	V24SF	V24SF	V24SF	V24SF	V24-62	V24-62	V24-86
Bottom Course	V24SF	V24SF	V24-62	V24-62	V24-86	V24-86	V24-86



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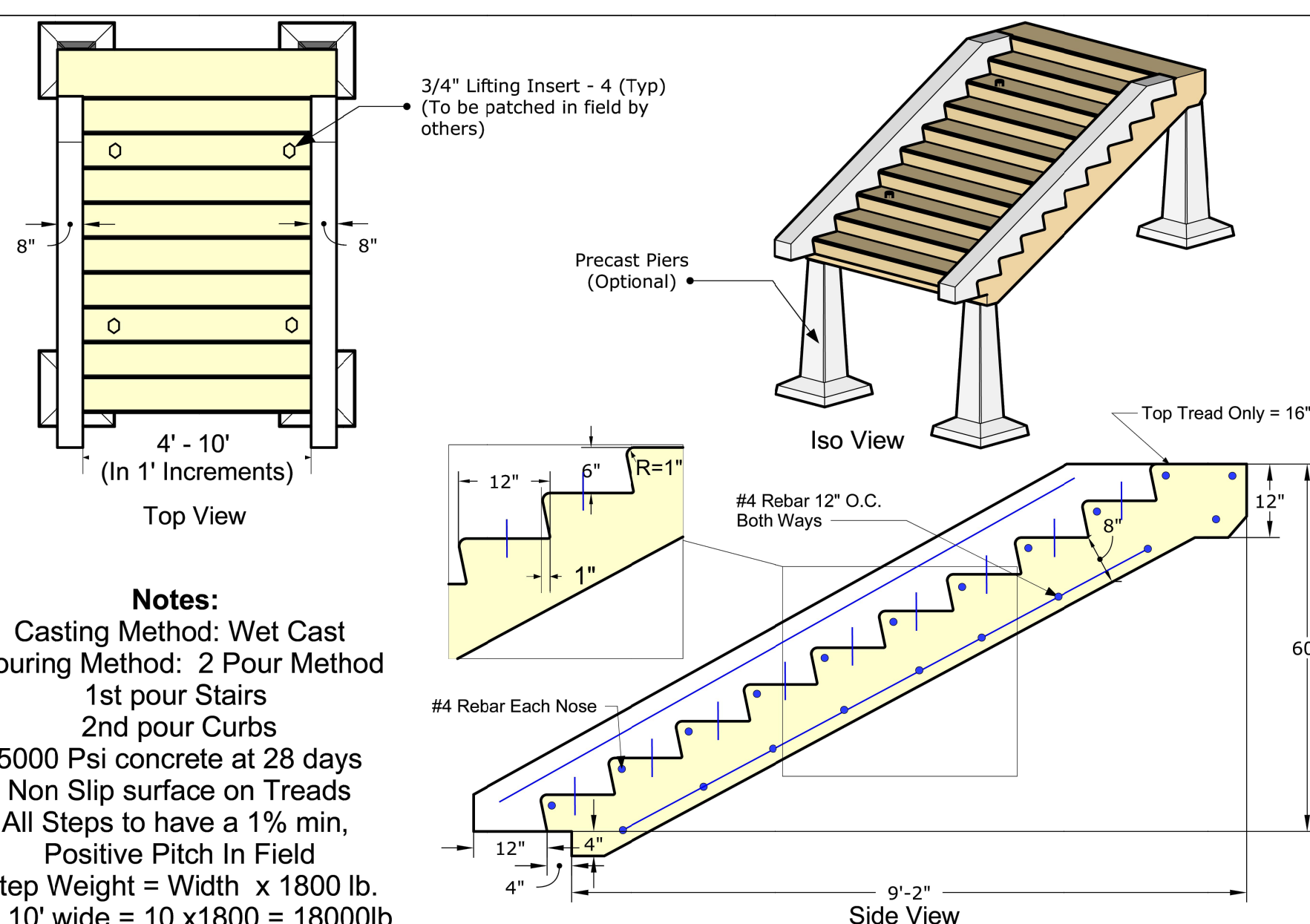
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	PROJECT
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COMPONENTS
STONE STRONG SYSTEMS

DATE: 6/29/18	FILE: 02 Block 24af Vert
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ATLAS CONCRETE PRODUCTS
www.AtlasConcrete.com

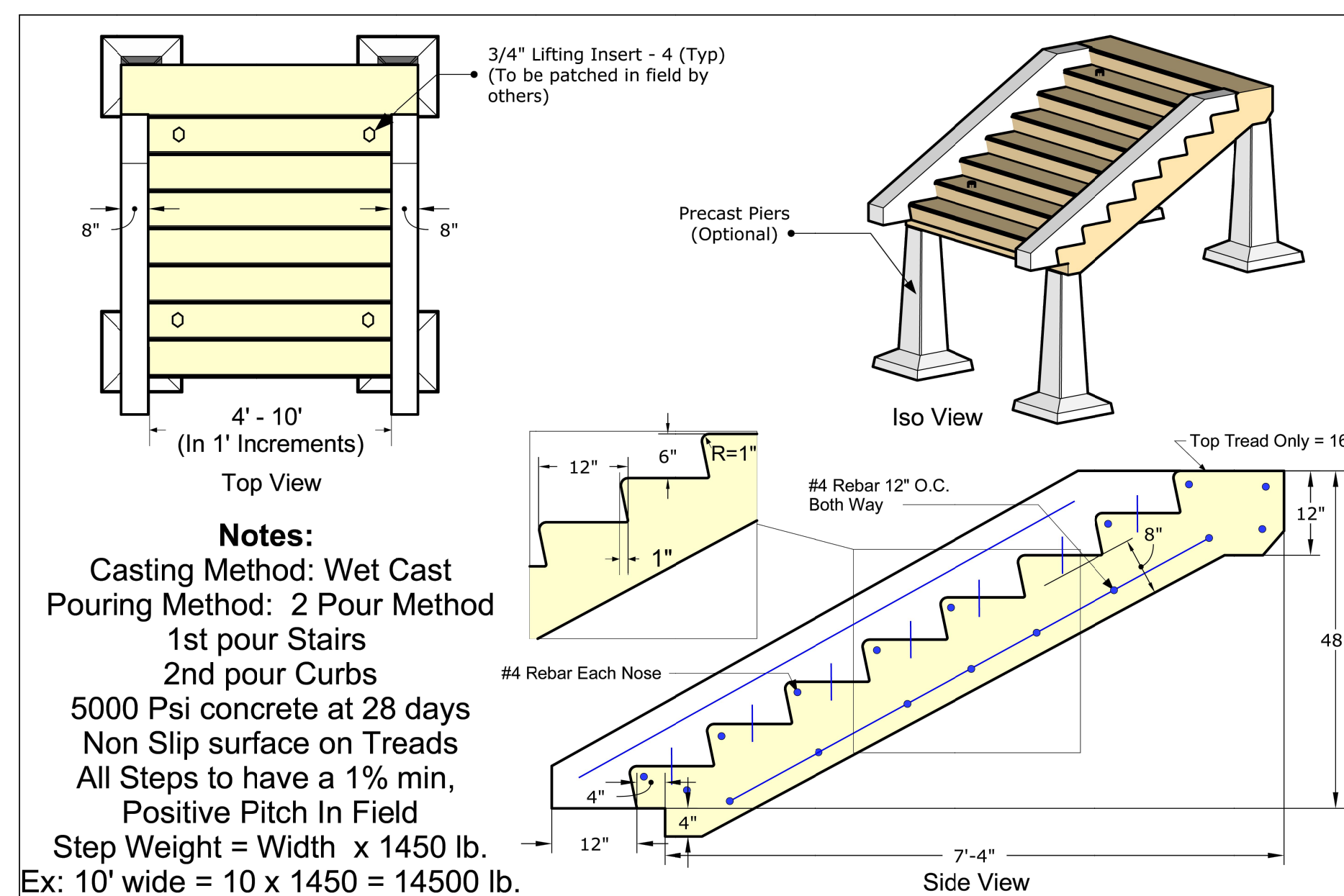
65 Burritt St.
New Britain CT 06053

800-774-1112
860-224-2244
860-224-2255 Fax

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10 Rise Custom
Banking Step with Curbs
Available in widths
from 4' wide to 10' wide



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TOWN HALL PARKING AND SAFETY IMPROVEMENTS

WORK TO WEST OF TOWN HALL

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ENGINEERING DEPARTMENT
933 HOPMEADOW STREET

Simsbury
Connecticut[illegible]

DRAWN BY: DFG	CHECKED BY: ADK
DATE: MARCH 22, 2024	SCALE: AS NOTED

SHEET
SK-10-DET-2