



# Town of Fairfield

Sullivan Independence Hall  
725 Old Post Road

Fairfield, Connecticut 06824  
Purchasing Department

(203) 256-3060  
FAX (203) 256-3080

## BID #2017-32 RETAINING WALL & RAMP FAIRFIELD WARDE HIGH SCHOOL

TOWN OF FAIRFIELD  
PURCHASING AUTHORITY  
725 OLD POST ROAD  
INDEPENDENCE HALL  
FAIRFIELD, CT 06824.

Date Submitted \_\_\_\_\_ 2016.

SEALED BIDS are subject to the standard instructions set forth on the attached sheets. Any modifications must be specifically accepted by the Town of Fairfield, Purchasing Authority.

Bidder:

\_\_\_\_\_

Doing Business As (Trade Name)

\_\_\_\_\_

Address

\_\_\_\_\_

Town, State, Zip

\_\_\_\_\_

(Mr/Ms) Name and Title, Printed

\_\_\_\_\_

Signature

\_\_\_\_\_

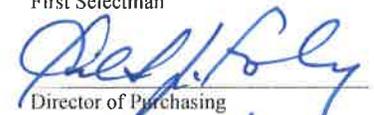
Telephone Fax

\_\_\_\_\_

E-mail

  
\_\_\_\_\_

First Selectman

  
\_\_\_\_\_

Director of Purchasing

Date

9/29/2016

Sealed bids will be received by the Purchasing Authority at the office of the Director of Purchasing, First Floor, Independence Hall, 725 Old Post Road, Fairfield, Connecticut 06824, up to:

**11:00AM, Thursday, 20<sup>th</sup> October, 2016**

To provide labor, materials, equipment and all else necessary, to demolish existing and installation of new concrete retaining wall and ramp, located at Fairfield Warde High School.

### NOTES:

1. Bidders are to complete all requested data in the upper right corner of this page and must return this page and the proposal page with their bid.
2. No bid shall be accepted from, or contracts awarded to, any person/company who is in arrears to the Town of Fairfield upon debt, or contract or who has been within the prior five (5) years, a defaulter as surety or otherwise upon obligations to the Town of Fairfield.
3. Bid proposals are to be submitted in a sealed envelope and clearly marked "BID #2017-32" on the outside of the envelope, including all outer packaging, such as, DHL, FedEx, UPS, etc.
4. Bid proposals are not to be submitted with plastic binders or covers, nor may the bid proposal contain any plastic inserts or pages.

## INVITATION TO BID

The Town of Fairfield (Town) on behalf of its Board of Education (BOE) is seeking competitive bids from qualified contractors to provide labor, materials, tools, equipment, and all else necessary, to demolish existing and installation of new retaining wall and ramp, located at Fairfield Warde High School, 755 Melville Avenue, Fairfield.

Work shall consist of, but not limited to:

- Demolish existing concrete retaining wall.
- Construct new concrete retaining wall and ramp with railings, including all related components as specified.
- New retaining wall and ramp shall be in accordance with all applicable requirements, regulations and codes, including installation of all equipment as necessary for project completion.

**Schedule:** Site access will be available upon award of contract for any work that does not interfere with school operations in immediate work areas. All work must be completed in a timely manner.

Refer to appended project manual and drawing prepared by Philip H. Cerrone III, Architect, 421 Meadow Street, Fairfield for the complete scope of work.

### PRE-BID MEETING

A site meeting will commence inside the Main Entrance, Fairfield Warde High School, 755 Melville Avenue, Fairfield, CT at 9:00AM on Thursday, 6<sup>th</sup> October, 2016 for prospective bidders to scope the conditions.

- While the meeting is non-mandatory, prospective bidders are strongly encouraged to attend and will be required to sign-in at commencement of the meeting. The sign-in sheet will be posted on the Purchasing Dept website as below. Copies will not be made available at the meeting, nor will they be faxed out.
- All requests for information will be answered in writing as specified below under RFI / Addenda.

### REQUESTS FOR INFORMATION (RFI) / ADDENDA

Direct requests in writing to: Town of Fairfield, Purchasing Department  
Attention: Phillip Ryan, Buyer  
725 Old Post Road, Fairfield, CT 06824  
E-mail: [PRyan@fairfieldct.org](mailto:PRyan@fairfieldct.org)

NOTE: Written requests for information will not be accepted after 12:00PM on Tuesday, 11<sup>th</sup> October, 2016.

Response will be in the form of an addendum that will be posted approximately Thursday, 13<sup>th</sup> October at the close of business to the Purchasing Department website: [www.fairfieldct.org/purchasing](http://www.fairfieldct.org/purchasing)

It is the responsibility of each bidder to retrieve addenda from the website. Any contact about this bid between a Bidder and any other Town official and/or department manager and/or Town of Fairfield employee, other than as set forth above, may be grounds for disqualification of that Bidder. No questions or clarifications shall be answered by phone, in person or in any other manner than specified above. Addenda will not be mailed, e-mailed or faxed out.

### BID BOND / BID SECURITY

A five (5) percent bid bond or equal approved security as stated per the Terms and Conditions must be submitted with the proposal. Any bid submitted without such security will be excluded from the bidding process. No exceptions.

### CONTRACT DOCUMENTS

Contract documents may be viewed and downloaded at no cost from the Town of Fairfield, Purchasing Dept website at [www.fairfieldct.org/purchasing](http://www.fairfieldct.org/purchasing)

Note printed hard copies of Contract Documents are NOT available to be purchased from the Town of Fairfield.

## **REQUIREMENTS**

- A. Any sizes or Estimate of Quantities as shown on the attached sheets and/or drawings are approximate and are not guaranteed in any respect. Prospective Bidders are to visit the site to verify scope of the work, measurements, quantities, etc., prior to bidding. The Town reserves the right at all times to increase or decrease the amount of work if deemed in the best interest of its Board of Education.
- B. Price is to include all labor, materials, permits, disposal, etc., required to properly complete the project, including but not limited to, the following:
  - 1. Local building department approval of drawings and specifications, and obtaining building permit prior to construction and installation.
  - 2. Preparation and site layout as required and specified.
  - 3. Demolition as illustrated on the drawings and delineated in the specification.
  - 4. Concrete foundations.
  - 5. Ramp and railings.
  - 6. Final grading and paving of areas as specified.
  - 7. Construction of new replacement retaining wall and ramp, equipment and components as specified.
  - 8. Clean up and proper disposal offsite of all surplus waste material and items.
  - 9. Final grading and seeding of site.
- C. The Bidder must not discriminate, nor permit discrimination, against any person on the grounds of race, color, national origin, religion, sex, handicap, or veteran status, in their employment practices, in any of their contractual arrangements, in all service and accommodations they offer to the public, and in any of their other business operations.
- D. The successful bidder MUST secure all required permits prior to commencing work on the site. Upon application for a building permit the Town of Fairfield will waive the cost of the permit, exclusive of the State of Connecticut Education Fee.
- E. The awarded contractor will have access to the building immediately upon award of contract. All work must be completed in a timely manner. Time is of the essence. Access to each building shall be from 7:00am to 3:30pm, Monday through Friday. At the Contractor's option, he/she may have access to the building on holidays, Saturdays and Sundays, if the Contractor pays the cost (including all overtime) of the custodial services for this time. All work time must be coordinated with the Manager of Facilities or Manager of Safety, Security & Construction.
- F. Award of the project, either partial or in its entirety, is contingent upon funding approval by the applicable boards of the Town of Fairfield.

## **INSTRUCTION TO BIDDERS**

### PRICES

Prices quoted must be firm, for acceptance by the Town of Fairfield, for a period of ninety (90) days. Price shall include all applicable duties. Bidders shall be required to deliver awarded items at prices quoted in their original bid. The price(s) and amount of the bid will have been arrived at independently and without consultation, communication or agreement with any other contractor or bidder.

### GUARANTEE

Equipment, materials and, or work executed shall be guaranteed for a minimum period of one (1) year against defective material and workmanship. The cost of all labor, materials, shipping charges and other expenses in conjunction with the replacement of defective equipment, and, or unsatisfactory work, shall be borne by the Contractor.

For a period of one (1) year from the date of substantial completion of this contract as determined by the Architect, the Contractor shall upon written notice remedy any and all defects in materials or workmanship resulting from work done under this contract and repair any damage to any structures or property caused by the Contractor incidental to this work, all such repairs to be done in accordance with instructions furnished by the Manager of Facilities and paid for by the Contractor.

### OBLIGATION OF CONTRACTOR

The Contractor shall do all the work and furnish all the materials, tools, and appliances necessary or proper for performing and completing work required by this contract in a manner specified. All the work, labor, and materials to be done and furnished under this contract shall be done and furnished strictly pursuant to and in conformity with the specifications hereto attached and other directions of the Owner, as given from time to time during the progress of the work under the terms of the contract. The Contractor shall complete all work to be done under this contract to the satisfaction of the Owner and in accordance with the specifications and drawings herein mentioned at the prices herein agreed upon.

### METHOD OF DOING WORK

The work must be started and done by the Contractor in such a manner as not to encounter delays to the traveling public owing to delays in doing the work. It must be pushed to completion with all possible speed and no inconvenience to traffic will be permitted where such inconvenience may be avoided.

The Contractor shall conduct the work in such a manner so as not to interfere with or willfully annoy employees and officials of the Board of Education, employees of public utilities, residents adjacent to the work and general public.

The Contractor shall employ only competent employees to do work and whenever the Owner shall notify the Contractor, in writing, that any employee on the work is, in the Owners opinion, incompetent, unfaithful, disorderly and otherwise unsatisfactory, such employee shall be discharged from the work and shall not again be employed on it, except with the consent of the Owner.

At the site of the work, the Contractor shall employ at all times while work is in progress, a construction superintendent or foreman who shall have full authority to act for the Contractor and who shall be acceptable by the Owner.

In connection with the execution of the bid, subsequent purchase orders and/or contracts, the Contractor shall not discriminate against any employee or applicant for employment because of age, race, religion, color, sex, or natural origin.

Executive order #11246 inclusive of all its amendments thereto relative to equal employment opportunities and implementation rule and regulations of the Department of Labor and equal employment opportunities are incorporated herein by specific reference.

The Town of Fairfield reserves the right to require the successful bidder(s) to enter into such security arrangements and/or written contracts as deemed necessary by the Town of Fairfield and/or Board of Education to protect the Owner's property and goods and interests.

### EXECUTION OF AGREEMENT

The form of Agreement that the successful bidder will be required to execute will be decided by the Owner. The bidder to whom the Contract is awarded, must sign and deliver required copies to the Owner within seven (7) business after notice of award and receipt of Agreement forms from the Owner.

At or prior to delivery of the signed Agreement, the bidder to whom the contract is awarded shall deliver to the Owner those Certificates of Insurance required by the Contract Documents and such Labor and Materials Payment Bonds and Performance Bonds as required by the Owner.

Bonds and Certificates of Insurance shall be approved by the Owner before the successful bidder may proceed with the work. Failure or refusal to provide Bonds or Certificates of Insurance in a form satisfactory to the Owner shall subject the successful bidder to loss of time from the allowable construction period equal to the time of delay in furnishing the required material.

### LIABILITY OF CONTRACTOR

The Contractor shall at all times safely guard the Owner's property from injury or loss in connection with this contract. The Contractor shall at all times safely guard and protect the work and that of adjacent property (as provided by law and the contract documents) from damage. The Contractor shall take all responsibility for the work and take precautions for preventing injuries to persons and property in or about the work. The Contractor shall assume the defense of and indemnify and save harmless the Owner and its officers, agents, and employees from all claims relating to labor and materials furnished for the work, to inventions, patents and patent rights used in doing the work, or in consequence of any improper materials, implements or labor used therein and to any act, omission or neglect of the Contractor and his/her employees therein.

The Contractor shall conduct the work in such a manner as to interfere as little as possible with travel on the highways and observe all ordinances and statutes relating to obstructing the highway. The Contractor shall provide railing or suitable barricades as good safe practice requires as outlined in the latest revised edition of the Manual of Accident Prevention in Construction published by the Associated General Contractors of America and as required by the Owner to prevent accidents or injury to persons, vehicles or animals.

Signs warning the public of construction in the near vicinity shall be maintained at a reasonable distance from either end of the location of active construction or hazardous condition arising therefrom. All barricades, machinery and other hazards or obstructions to the public use of the highway shall be brightly and properly lighted at night.

### ASSIGNMENTS

The Contractor shall not sublet, sell, transfer, assign or otherwise dispose of the contract or any portion thereof or of the work provided for therein, or of his/her right, title, interest therein, to any person, firm, partnership or corporation without the written consent of the Owner. If any part of the work is sublet, sold, transferred, assigned or otherwise disposed of, the Contractor will not be relieved of any responsibility in connection therewith.

The Contractor may not subcontract a total of work in excess of 50% of the original total contract value.

### EXTRA WORK

The Owner shall notify the Contractor, in writing, of the necessity of such extra work, stipulating its character and extent. Upon receipt of such notification, the Contractor shall advise the Owner, in writing, of the compensation, whether unit price or lump sum as requested, for which he/she proposes to perform the extra work required. The Owner may accept the compensation proposed by the Contractor, or if the Owner considers the prices submitted to be excessive, the Owner may order the work done on a "Cost Plus" basis. In either case, the character and extent of the extra work together with the accepted basis of compensation shall be communicated to the Contractor by means of a change order which, when signed by the Contractor and the Owner, shall become part of the contract.

Unforeseen work made necessary by changes in plan or work necessary to complete the improvements for which no price is provided in the contract, shall be done in accordance with the requirements of the specifications and as directed by the Owner.

### RIGHT OF OWNER TO TERMINATE CONTRACT

If the work to be done under this Contract shall be abandoned, or if at any time the Owner is of the opinion that the Contractor is willfully violating any of the conditions of this contract or is not executing said contract in good faith or that the work is unnecessarily delayed and will not be finished within the prescribed time, the Owner may notify the Contractor and Surety, in writing to that effect. If the Contractor does not, within five (5) business days thereafter, take such measures as will, in the judgment of the Owner, insure the satisfactory completion of the work aforesaid, the Owner shall have the power to notify the Contractor to discontinue all work or any portion thereof, under this contract. A copy of this contract shall go to the surety.

Thereupon the Contractor shall cease to continue said work, on such part thereof as the Owner shall designate. The Owner shall thereupon have the power to place such and so many persons as deemed proper, by contract or otherwise, to work at and complete the work herein described and to use such materials, tools, and appliances found upon the work or to procure other materials, tools, and appliances for the completion of the same and charge the expenses of said labor, materials, tools, and appliances to the Contractor; and the expense so charged shall be deducted and paid by the Owner out of such money as may be then due, or may at any time thereafter grow due to the Contractor under and by virtue of this agreement, or any part thereof; and in case the expense so charged is less than the sum which would have been payable under this contract if the same had been completed by the Contractor, the Contractor shall be entitled to receive the difference; and in case greater, the Contractor shall pay amount of such excess so due.

### DEFINITIONS

Whenever the words defined occur in this Contract and in the specifications hereto attached, they shall have the meaning:

1. Owner: The Owner shall mean the Town of Fairfield or any duly authorized official thereof acting in an official capacity.
2. Contractor: Whenever the word "Contractor" is used in these specifications, it shall be understood to mean the person or persons, co-partnership or corporation, who has entered into this contract as the party of the second part, or his/her or their legal representative.
3. Sub-Contractor: Any individual, firm, partnership, or corporation to whom the Contractor sublets or assigns any part or parts of the project covered by the contract with the approval of the Owner.

### DRAWING CONFLICT

In the event of conflict between the drawings and specifications, the more stringent shall apply and be included in the contract.

### PRE-CONSTRUCTION MEETING

Prior to the commencement of any work, the contractor shall attend the pre-construction meeting at a date and time set that is convenient to all parties.

### CHANGE ORDERS

The maximum amount of overhead and profit that will be permitted on any change order is a total amount of 10%.

### TERMS AND CONDITIONS OF BID

In order to receive consideration, make bids in strict accordance with the following:

1. Make bids upon the forms provided, properly signed and with all items filled out. Do not change the wording of the bid form, and do not add words to the bid form. Unauthorized conditions, limitations, or provisions attached to the bid may be cause for rejection of the bid. If alterations by erasure or interlineations are made for any reason, explain over such erasure or interlineations with a signed statement from the bidder.
2. Bid proposals are to be submitted in a sealed envelope and clearly marked with the bid number on the outside of the envelope. All prices and notations must be printed in ink or typewritten. No erasures permitted. Bid proposals are to be in the office of the Purchasing Agent, First Floor, Independence Hall, 725 Old Post Road, Fairfield, Connecticut, prior to date and time specified, at which time they will be publicly opened. It is the sole responsibility of the bidder to see that the bid is received on time.
3. No telegraphic bid or telegraphic modification of a bid will be considered. No bids received after the time fixed for receiving them will be considered. Late bids will be returned to the bidder unopened.

### PROTESTS

No protest regarding the validity or appropriateness of the specifications or of the invitation for bids will be considered, unless the protest is filed in writing with the Director of Purchasing, prior to the closing date for the bids.

### EXCEPTION TO SPECIFICATIONS

All bid proposals rendered shall be considered meeting the attached specifications unless exceptions are noted on a separate page dated and signed by the bidder.

### EXAMINATION OF DOCUMENTS AND SITE OF WORK

Before submitting a bid, each bidder shall examine the drawings carefully, shall read the specifications and all other proposed contract documents, and shall visit the site of the Work. Each bidder shall be fully informed prior to bidding as to existing conditions and limitations under which the Work is to be performed, and shall include in the bid a sum to cover the cost of items necessary to perform the Work set forth in the proposed contract documents. No allowance will be made to a bidder because of lack of such examination or knowledge. The submission of a bid will be considered conclusive evidence that the bidder has made such examination.

Bidders must examine for themselves the plans, profiles, detail drawings, specifications, etc and the location of the proposed work, and must exercise their judgment as to the nature and difficulty of the whole proposed undertaking. The Contractor must assume all risk or variance in any computation or statement by the contract, by whomsoever made and must agree to furnish all tools, machinery, material and labor to clean up, all debris and to complete fully the said work in accordance with the plans and contained either in the specifications or in any of the drawings but omitted from the other will be considered an essential part of the work. The Contractor whose bid is accepted will be responsible for every loss or error arising from ignorance concerning the requirements of the work of the difficulties to be encountered.

Bidders, if requested, must be able to present satisfactory evidence that they have been regularly engaged in the business of constructing such work as they propose to execute and that they are fully prepared with the necessary capital, materials, and machinery to conduct the work to be contracted for the satisfaction of the Owner and to begin work promptly when ordered.

The Owner, or its designated representative, reserves the right to reject any proposal in whole or in part offering equipment and/or materials and/or construction proposals, which in his/her opinion does not meet the quality standards desired. Such decision will be considered final and not subject to further recourse.

### INTERPRETATION OF CONTRACT DOCUMENTS PRIOR TO BIDDING

Any person contemplating submitting a bid for the construction of the work is in doubt as to the true meaning of any part of the proposed contract documents, or finds discrepancies in or omissions from any part of the proposed contract documents, he/she may submit to the person responsible a written request for interpretation thereof no later than the time and date as indicated. The person submitting the request shall be responsible for its prompt delivery.

Interpretation of correction of proposed Contract Documents will be made only by Addendum posted to the Town of Fairfield website [www.fairfieldct.org/purchasing](http://www.fairfieldct.org/purchasing)

The Owner will not be responsible for any other explanations or interpretations of the proposed Contract Documents.

# BID PROPOSAL FORM

PAGE 1 OF 2

PROPOSAL TO: Town of Fairfield, Purchasing Department  
First Floor, Sullivan Independence Hall  
725 Old Post Road, Fairfield, Connecticut 06824

I, \_\_\_\_\_ have received the following contract documents,

1. Bid Document #2017-32
2. Project Manual
3. Drawing A1.0 Proposed Plan and Elevation; A1.1 Ramp and Retaining Wall Details.
4. Addenda \_\_\_ through \_\_\_ posted at [www.fairfieldct.org/purchasing](http://www.fairfieldct.org/purchasing) and have included their provisions to:

Supply all labor, materials, tools, equipment, permits, taxes and insurances, etc., to demolish existing and construction of new concrete retaining wall and ramp with railings, grading and seeding, including all associated work to complete the project, located at Fairfield Warde High School.

Labor: \$ \_\_\_\_\_ /lump sum

Materials: \$ \_\_\_\_\_ /lump sum

Equipment: \$ \_\_\_\_\_ /lump sum

General Cond: \$ \_\_\_\_\_ /lump sum

Miscellaneous: \$ \_\_\_\_\_ /lump sum

**Total:** \$ \_\_\_\_\_ /lump sum

Total Lump Sum: \_\_\_\_\_ Dollars  
(Written Amount)

State any exceptions or omissions to specifications: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Lump sum amount shall include, but not limited to, the cost of all labor, materials, equipment, tools, mobilization, delivery, permits (where not waived by the Town), licenses, overhead and profit, taxes (except from which Owner is exempt) and insurances.

The Bidder hereby certifies that any and all defects, errors, inconsistencies or omissions of which he/she is aware, either directly or by notification from any sub-bidder or material supplier found in the Contract Documents are listed herewith in this Bid Form.

Name \_\_\_\_\_ Title \_\_\_\_\_ Signature \_\_\_\_\_ Date \_\_\_\_\_

# BID PROPOSAL FORM

PAGE 2 OF 2

## For additional work upon request:

**Hourly Rates:** Supervisor \$\_\_\_\_\_/hr Foreman \$\_\_\_\_\_/hr Journeyman \$\_\_\_\_\_/hr Apprentice \$\_\_\_\_\_/hr

**Mark-up over Cost for Materials** shall be \_\_\_\_\_% for any additional work where requested.

Work shall be completed \_\_\_\_\_ days after receipt of written notice to proceed / purchase order.

A complete itemized schedule of values shall be required to be provided by the Contractor, prior to award of contract.

## CHECKLIST

The following must be submitted with proposal:

- Cover page, completed and signed.
- Addenda acknowledged per Item 4 on Bid Proposal Form, or
- Signed and submitted with modified pricing if requested.
- List of references where projects performed of comparable size and scope within the past three years.
- Schedule of values.
- List of all subcontractors identifying each trade, hourly rates, and Tax ID number.
- Price submitted contains Prevailing Wage Rates, if total project amount exceeds \$100,000.00
- Bid Bond or equal approved security. No exceptions.
- Exceptions itemized and attached to Bid Form.

The Bidder hereby certifies that any and all defects, errors, inconsistencies or omissions of which he/she is aware, either directly or by notification from any sub-bidder or material supplier found in the Contract Documents are listed herewith in this Bid Form.

Name \_\_\_\_\_ Title \_\_\_\_\_ Signature \_\_\_\_\_ Date \_\_\_\_\_

**PURCHASING AUTHORITY  
TOWN OF FAIRFIELD  
INSTRUCTIONS FOR BIDDERS  
TERMS AND CONDITIONS OF BID**

**BID PROPOSALS**

Bid proposals are to be submitted in a sealed envelope and clearly marked on the outside “**BID #2017-32**” including all outer packaging such as DHL, FedEx, UPS, etc. All prices and notations must be printed in ink or typewritten. No erasures are permitted. Bid proposals are to be in the office of the Purchasing Authority, First Floor, Independence Hall, 725 Old Post Road, Fairfield, Connecticut, prior to date and time specified, at which time they will be publicly opened.

**RIGHT TO ACCEPT / REJECT**

AFTER REVIEW OF ALL FACTORS, TERMS AND CONDITIONS, INCLUDING PRICE, THE PURCHASING AUTHORITY OF THE TOWN OF FAIRFIELD RESERVES THE RIGHT TO REJECT ANY AND ALL BIDS, OR ANY PART THEREOF, OR WAIVE DEFECTS IN SAME, OR ACCEPT ANY PROPOSAL DEEMED TO BE IN THE BEST INTEREST OF THE TOWN OF FAIRFIELD.

**QUESTIONS**

Questions concerning conditions, bidding guidelines and specifications should be directed in writing to:

**Phillip Ryan, Buyer: [PRyan@fairfieldct.org](mailto:PRyan@fairfieldct.org)**

Inquiries must reference date of bid opening, requisition or contract number, and must be received no later than as indicated in the bid documents prior to date of bid opening. Failure to comply with these conditions will result in the bidder waiving the right to dispute the bid specifications and conditions.

**PRICES**

Prices quoted must be firm, for acceptance by the Town of Fairfield, for a period of ninety (90) days. Prices shall include all applicable duties. Bidders shall be required to deliver awarded items at prices quoted in their original bid.

**F.O.B. DESTINATION**

Prices quoted shall be Net – Delivered to destination. Bids quoting other than F.O.B. Destination may be rejected.

**BID BOND**

The BID BOND furnished, as bid security, must be duly executed by the bidder as principal. It must be in the amount equal to five percent (5%) of the total estimated bid, as guarantee that, in case the contract is awarded to the bidder, the bidder will, within ten days thereafter, execute such contract and furnish a Performance Bond and Payment Bond.

Small businesses may elect to obtain an irrevocable letter of credit or cashier’s check in lieu of the Bid Bond. Such surety must also be in an amount equal to at least five percent (5%) of the total estimated bid.

Failure to provide a Bid Bond or equivalent security is not cause for a waiver defect. Any bid not accompanied by such security will be excluded from consideration.

**PERMITS**

The contractor will be responsible for securing all necessary permits, state and local, as required by the Town of Fairfield. The Town will waive its application and permit fees for Town of Fairfield projects.

**PAYMENT PROCEDURES**

No voucher, claim or charge against the Town shall be paid without the approval of the Fiscal Officer for correctness and legality. Appropriate checks shall be drawn by the Fiscal Officer for approved claims or charges and they shall be valid without countersignature unless the Board of Selectmen otherwise prescribed.

**PAYMENT PERIOD**

The Town of Fairfield shall put forth its best effort to make payment within thirty days (30) after delivery of the item acceptance of the work, or receipt of a properly completed invoice, whichever is later. Payment period shall be net thirty days (30) unless otherwise specified. For projects that do not require a performance or bid bond, The Town of Fairfield reserves the right to retain five percent (5%) of total bid amount, which is payable ninety (90) days after final payment or acceptance of the work.

**PURCHASING AUTHORITY  
TOWN OF FAIRFIELD  
INSTRUCTIONS FOR BIDDERS  
TERMS AND CONDITIONS OF BID**

**THE CONTRACTOR**

The Contractor for the work described shall be thoroughly familiar with the requirements of all specifications, and the actual physical conditions of various job sites. The submission of a proposal shall be construed as evidence that the Contractor has examined the actual job conditions, requirements, and specifications. Any claim for labor, equipment, or materials required, or difficulties encountered which could have been foreseen had such an examination been carefully made will not be recognized.

**ASSIGNMENT OF CONTRACT**

No contract may be assigned or transferred without the consent of the Purchasing Authority.

**AWARD OF BIDS**

Contracts and purchases will be made or entered into with the lowest responsible bidder meeting specifications, except as otherwise specified in the invitation. If more than one item is specified in the invitation, the Town of Fairfield reserves the right to determine the low bidder on an individual basis or on the basis of all items included in the Invitation for Bids, unless otherwise expressed by the Town.

**PERFORMANCE AND LABOR AND MATERIAL BOND**

The successful bidder, within seven (7) business days after notification of award, will be required to furnish Performance and Labor and Material Bond provided by a company authorized to issue such bonds in the State of Connecticut, or Certified Check or properly executed Irrevocable Letter of Credit equal to a hundred per cent (100%) of the award.

In the event that the Contractor were required to provide evidence of insurance and a performance bond does not do so before beginning work, the Town of Fairfield reserves the right to withhold payment from such supplier until the evidence of insurance and performance bond has been received by the Town.

**BOND REQUIREMENT – NON-RESIDENT CONTRACTORS**

1. Non-resident contractors are required to deposit with the Department of Revenue Services a sum equivalent to 5% of the total contract value, as assurance that personal property taxes and/or any other State taxes assessed and due the State during the contract will be paid.
2. If this surety is not deposited with the State, the Town is required to deduct and submit to the State 5% of the total contract value.

**GUARANTEE**

Equipment, materials and/or work executed shall be guaranteed for a minimum period of one (1) year against defective material and workmanship. The cost of all labor, materials, shipping charges and other expenses in conjunction with the replacement of defective equipment, and/or unsatisfactory work, shall be borne by the Contractor.

**CATALOGUE REFERENCE**

Unless expressly stated otherwise, any and all reference to commercial types, sales, trade names and catalogues are intended to be descriptive only and not restrictive; the intent is to indicate the kind and quality of the articles that will be acceptable. Bids on other equivalent makes, or with reference to other catalogue items will be considered. The bidder is to clearly state exactly what will be furnished. Where possible and feasible, submit an illustration, descriptive material, and/or product sample.

**OSHA**

The bidder will certify all equipment complies with all regulations and conditions stipulated under the Williams-Steiger Occupational Safety and Health Act of 1971, as amended. The successful bidder will further certify that all items furnished under this project will conform and comply with Federal and State of Connecticut OSHA standards. The successful bidder will agree to indemnify and hold harmless the Town of Fairfield for any and all damages that may be assessed against the Town.

**PURCHASING AUTHORITY  
TOWN OF FAIRFIELD  
INSTRUCTIONS FOR BIDDERS  
TERMS AND CONDITIONS OF BID**

**LIFE CYCLE COSTING**

Where applicable, Life Cycle Costing will be used as a criterion for awarding bids. This is a method of calculating total cost of ownership of an item over the life of the product, which may include operation and maintenance expenses, transportation, salvage value, and/or disposal costs.

**INSURANCE**

A. Insurance: The Contractor shall not commence any work under this Contract until all insurance required by this and the preceding Article has been obtained and Certificates evidencing its issuance have been submitted to and approved by the Owner.

Such policies shall stipulate that no coverage can be changed or canceled, unless the Owner has had thirty (30) days prior notice in writing. Certificates of renewals or changes in policies shall be delivered to the Owner at least thirty (30) days prior to the expiration of the policy.

The following insurance is required to be maintained in full force until all work required by the contract has been fully completed, except that Products/Completed Operations coverage shall be maintained for 5 years.

B. Workmen's Compensation Insurance: The Contractor shall carry Workmen's Compensation and Employer's Liability Insurance in the form and in such amounts as may be currently required to comply with the Labor Laws of the State of Connecticut.

C. Automobile Insurance: The Contractor shall carry and maintain during the life of the Contract:

Comprehensive Automobile Bodily Injury Liability Insurance with:

- \$ 500,000 each person and
- \$1,000,000 each accident; together with

Property Damage Liability with limits of:

- \$ 500,000 each accident and
- \$1,000,000 aggregate.

Or Contractor may carry a policy with a combined single limit of \$1,000,000.

This policy shall include all liability of the Contractor arising from the operation of all self-owned motor vehicles used in the performance of the Contract; and shall also include a "non-Ownership" provision covering the operation of motor vehicles not owned by the Contractor, but used in the performance of the work.

D. Comprehensive General Liability:

- Bodily Injury: and Property Damage \$1,000,000
- Products/Completed Operations \$1,000,000
- Umbrella policy \$5,000,000

This policy shall include SubContractor's Liability coverage, protecting the Contractor and the Town against liability arising out of the activities of Subcontractors engaged by him in the performance of the work.

The following entities shall be named as additional insured on the General Contractor's and Subcontractors' Comprehensive General Liability, Umbrella:

- Town of Fairfield, its officers, employees and agents, and the Board of Education, its officers, employees and agents.

E. Subcontractor's Insurance: Each Subcontractor engaged by the Contractor to perform any of the work under the Contract shall comply with the foregoing insurance requirements stipulated under paragraphs a) and b) and c) and d) with respect to his own operations; and Certificates of such insurance coverage shall be filed with the Owner before commencing any work, as hereinbefore stipulated.

**HOLD HARMLESS**

Contractor shall defend, indemnify, and hold harmless the Town of Fairfield, its officers, employees, agents or volunteers, from and against any and all claims and demands of any nature for any loss, damage or injury which any person may suffer by reason of, or in any way arising out of, this Agreement, unless caused by the sole negligence of the Town.

**PURCHASING AUTHORITY  
TOWN OF FAIRFIELD  
INSTRUCTIONS FOR BIDDERS  
TERMS AND CONDITIONS OF BID**

**FEDERAL, STATE, AND LOCAL LAWS**

All applicable Federal, State and local laws, rules and regulations of all authorities having jurisdiction over the locality of the project shall apply to the contract and are deemed to be included herein. If the total amount of the project, including any current or future change orders, exceeds \$100,000.00 all work is to be done in accordance with the Davis-Bacon Act as amended; that is conditions of Prevailing Wage shall apply. All current Davis Bacon wage information may be accessed online at no cost at [www.ctdol.state.ct.us](http://www.ctdol.state.ct.us) (The Town will apply the most current wage decision applicable at the time of contract award.)

**CONFLICT OF INTEREST**

No officer or employee or member of any elective or appointive board, commission or committee of the Town, whether temporary or permanent, shall have or acquire any financial interest gained from a successful bid, direct or indirect, aggregating more than one hundred dollars (\$100.00), in any project, matter, contract or business within his/her jurisdiction or the jurisdiction of the board, commission, or committee of which he/she is a member. Nor shall the officer / employee / member have any financial interest, direct or indirect, aggregating more than one hundred dollars (\$100.00) in any contract or proposed contract for materials or services to be furnished or used in connection with any project, matter or thing which comes under his/her jurisdiction or the jurisdiction of the board, commission, committee of which he/she is a member.

**SCOPE OF WORK/SITE INSPECTIONS**

The bidder declares that the scope of the work has been thoroughly reviewed and any questions resolved (see above for name and number of individual to contact for questions). If applicable, the bidder further declares that the site has been inspected as called for in the specifications (q.v.).

**EXCEPTION TO SPECIFICATIONS**

No protest regarding the validity or appropriateness of the specifications or of the Invitation for Bids will be considered, unless the protest is filed in writing with the Purchasing Authority prior to the closing date for the bids. All bid proposals rendered shall be considered meeting the attached specifications unless exceptions are noted on a separate page dated and signed by the bidder.

**UNLESS OTHERWISE NOTED**

It will be assumed that all terms and conditions and specifications will be complied with and will be considered as part of the Bid Proposal.

**TAX EXEMPT**

Federal Tax Exemption 06-75-0063-K

Exempt from State Sales Tax under State General Statutes Chapter 219-Section 12-412 Subsection A.

No exemption certificates are required and none will be issued.

**REFERENCES**

Provide reference details of most recent similar scope projects performed:

**REFERENCE #1:**

Name of Company \_\_\_\_\_ Phone \_\_\_\_\_  
Contact Person \_\_\_\_\_ Cell \_\_\_\_\_  
Company Address \_\_\_\_\_ Fax \_\_\_\_\_  
Date work completed \_\_\_\_\_ Email \_\_\_\_\_

**REFERENCE #2:**

Name of Company \_\_\_\_\_ Phone \_\_\_\_\_  
Contact Person \_\_\_\_\_ Cell \_\_\_\_\_  
Company Address \_\_\_\_\_ Fax \_\_\_\_\_  
Date work completed \_\_\_\_\_ Email \_\_\_\_\_

**REFERENCE #3:**

Name of Company \_\_\_\_\_ Phone \_\_\_\_\_  
Contact Person \_\_\_\_\_ Cell \_\_\_\_\_  
Company Address \_\_\_\_\_ Fax \_\_\_\_\_  
Date work completed \_\_\_\_\_ Email \_\_\_\_\_

**REFERENCE #4:**

Name of Company \_\_\_\_\_ Phone \_\_\_\_\_  
Contact Person \_\_\_\_\_ Cell \_\_\_\_\_  
Company Address \_\_\_\_\_ Fax \_\_\_\_\_  
Date work completed \_\_\_\_\_ Email \_\_\_\_\_

**REFERENCE #5:**

Name of Company \_\_\_\_\_ Phone \_\_\_\_\_  
Contact Person \_\_\_\_\_ Cell \_\_\_\_\_  
Company Address \_\_\_\_\_ Fax \_\_\_\_\_  
Date work completed \_\_\_\_\_ Email \_\_\_\_\_

**SUBCONTRACTORS**

Provide subcontractor details if any are to be employed as part of this contract, including labor rates:

**SUBCONTRACTOR #1:**

Name of Company \_\_\_\_\_ Fed ID # \_\_\_\_\_  
Contact Person \_\_\_\_\_ Title \_\_\_\_\_  
Company Address \_\_\_\_\_ Phone \_\_\_\_\_  
Trade \_\_\_\_\_ Email \_\_\_\_\_  
Rates: Supervisor \$ \_\_\_\_\_/hr Foreman \$ \_\_\_\_\_/hr Journeyman \$ \_\_\_\_\_/hr Apprentice \$ \_\_\_\_\_/hr

**SUBCONTRACTOR #2:**

Name of Company \_\_\_\_\_ Fed ID # \_\_\_\_\_  
Contact Person \_\_\_\_\_ Title \_\_\_\_\_  
Company Address \_\_\_\_\_ Phone \_\_\_\_\_  
Trade \_\_\_\_\_ Email \_\_\_\_\_  
Rates: Supervisor \$ \_\_\_\_\_/hr Foreman \$ \_\_\_\_\_/hr Journeyman \$ \_\_\_\_\_/hr Apprentice \$ \_\_\_\_\_/hr

**SUBCONTRACTOR #3:**

Name of Company \_\_\_\_\_ Fed ID # \_\_\_\_\_  
Contact Person \_\_\_\_\_ Title \_\_\_\_\_  
Company Address \_\_\_\_\_ Phone \_\_\_\_\_  
Trade \_\_\_\_\_ Email \_\_\_\_\_  
Rates: Supervisor \$ \_\_\_\_\_/hr Foreman \$ \_\_\_\_\_/hr Journeyman \$ \_\_\_\_\_/hr Apprentice \$ \_\_\_\_\_/hr

**SUBCONTRACTOR #4:**

Name of Company \_\_\_\_\_ Fed ID # \_\_\_\_\_  
Contact Person \_\_\_\_\_ Title \_\_\_\_\_  
Company Address \_\_\_\_\_ Phone \_\_\_\_\_  
Trade \_\_\_\_\_ Email \_\_\_\_\_  
Rates: Supervisor \$ \_\_\_\_\_/hr Foreman \$ \_\_\_\_\_/hr Journeyman \$ \_\_\_\_\_/hr Apprentice \$ \_\_\_\_\_/hr

**NOTE: All sub-contractors are subject to approval by the Town of Fairfield and are required to provide Fed ID #.**

# **PROJECT MANUAL**

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## **RETAINING WALL AND RAMP**

### **FAIRFIELD WARDE HIGH SCHOOL**

755 Melville Avenue  
Fairfield, Connecticut

#### **OWNER**

Town of Fairfield  
725 Old Post Road  
Fairfield, Connecticut 06824

TOWN OF FAIRFIELD

BID #2017-32

September 16, 2016

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List of Drawings

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01400	Quality Control
01500	Temporary Facilities
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**DIVISION 2 - DEMOLITION**

02110	Demolition
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**DIVISION 3 - CONCRETE**

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03300	Cast-in-place Concrete

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05450	Miscellaneous Metals
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**LIST OF DRAWINGS**

Drawings titled Fairfield Warde High School, 755 Melville Avenue, Fairfield, CT, dated September 22, 2016.

**Drawing**

A1.0 Proposed Plan and Elevation

A1.1 Ramp and Retaining Wall Details

SECTION 01085  
APPLICABLE STANDARDS

PART ONE - GENERAL

1.1 DESCRIPTION

Work Included:

Throughout the Contract Documents, reference is made to codes and standards which establish qualities and types of workmanship and materials, and which establish methods for testing and reporting on the pertinent characteristics.

Where materials or workmanship are required by these Contract Documents to meet or exceed the specifically named codes or standards, it is the Contractor's responsibility to provide materials and workmanship which meet or exceed the specifically named code or standard.

It is also the Contractor's responsibility, when so required by the Contract Documents or by written request from the Architect, to deliver to the Architect all required proof that the materials or workmanship, or both, meet or exceed the requirements of the specifically named code or standard. Such proof shall be in the form required to be copies of a certified report of tests conducted by a testing agency approved for that purpose by the Architect.

1.2 QUALITY ASSURANCE

Familiarity with pertinent codes and standards: In procuring all items used in this work, it is the Contractor's responsibility to verify the detailed requirements of the specifically named codes and standards and to verify that the items procured for use in this work meet or exceed the specified requirements.

Rejection of non-complying items: The Architect reserves the right to reject items incorporated into the work which fail to meet the specified minimum requirements. The Architect further reserves the right, and without prejudice to other recourse the Architect may take, to accept non-complying items subject to an adjustment in the Contract Amount as approved by the Architect and the Owner.

Applicable standards: Listed in these Specifications include, but are not necessarily limited to, standards produced by the following agencies and organizations:

1. ACI American Concrete Institute, Box 18150, Redford Station, Detroit, MI 48219.
2. AISC American Institute of Steel Construction, Inc., 1221 Avenue of the Americas, New York, NY 10020.
3. ANSI American National Standards Institute
4. ASTM American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19111.
5. NEC National Electrical Code (see NFPA).
6. NEMA National Electrical Manufacturers Association, 155 East 44th Street, New York, NY 10017.
7. NFPA National Fire Protection Association, 470 Atlantic Avenue, Boston, MA 02210.
8. SDI Steel Deck Institute, 135 Addison Avenue, Elmhurst, IL 60125.
9. TCA Tile Council of America, Inc., P.O. Box 326, Princeton, NJ 08540.
10. UL Underwriter's Laboratories, Inc., 207 East Ohio Street, Chicago, IL 60611.
11. Fed. Specs. and Fed. Standards  
Specifications Sales (3FRI), Building 197 Washington Navy Yard, General Services Administration, Washington, DC 20407.
12. BC State of Connecticut, Basic Building Code.
13. CDOT State of Connecticut Department of Transportation - Standard Specification for Road, Bridges and Incidental Construction.
14. NBFU National Bureau of Fire Underwriters.
15. ASME American Society of Mechanical Engineers, United Engineering Center, 345 East 47th Street, New York, NY 10017.
16. ASHRAE American Society of Heating, Refrigerating, and Air Conditioning Engineers, 345 East 47th Street, New York, NY 10017.
17. SMACNA Sheet Metal and Air Conditioning Contractors National Association, Inc., 1611 North Kent Street, Arlington, VA 22209.

18. AMCA Air Moving and Conditioning Association, 205 West Touhy Avenue, Park Ridge, IL.
19. ADA Americans with Disabilities Act
20. NCAA National Collegiate Athletic Association
21. UFAS Uniform Federal Accessibility Standards
22. CT Connecticut
23. IBC International Building Code
24. BSF State of Connecticut Bureau of School Facilities
25. Applicable Codes
  - 2003 International Existing Building Code
  - 2003 International Building Code
  - Connecticut Supplement, 2005
  - 2009 International Energy Code
  - 2003 International Mechanical Code
  - 2003 International Plumbing Code
  - 2011 NFPA 70, National Electrical Code
  - 2003 NFPA 101, Life Safety Code
  - 2003 International Fire Code
  - 2005 Connecticut State Fire Safety Code
  - 2003 NFPA 1, Uniform Fire Code
  - ICC/ANSI A117.1 – 2003
  - 2009 Connecticut Amendment/State Building & Fire Safety Code
  - 2011 Connecticut Amendment/State Building & Fire Safety Code
  - 2013 Connecticut Amendment/State Building & Fire Safety Code
  - 2009 International Energy Conservation Code
  - Connecticut Supplement/2005 State Fire Safety Code

**END OF SECTION**

SECTION 01300  
SUBMITTALS & SUBSTITUTIONS

PART ONE - GENERAL

1.1 DESCRIPTION

Work Included:

Wherever possible throughout the Contract Documents the minimum acceptable quality of workmanship and materials has been defined by manufacturer's name and catalogue number, reference to recognized industry and government standards, or description of required attributes and performance.

To ensure that the specified products are furnished and installed in accordance with design intent, procedures have been established for advance submittal of design data and for their review by the Architect.

Make all submittals required by the Contract Documents, and revise and resubmit as necessary to establish compliance with the specified requirements.

Related Work Described Elsewhere: Individual requirements for submittals are described in pertinent other Sections of these Specifications.

1.2 QUALITY ASSURANCE

Coordination of Submittals: Prior to each submittal, carefully review and coordinate all aspects of each item being submitted and verify that each item and the submittal for it conforms in all respects with the requirements of the Contract Documents. By affixing the Contractor's signature to each submittal, certify that this coordination has been performed.

Certificates of Compliance:

Certify that all materials used in the work comply with all specified provisions thereof, certification shall not be construed as relieving the Contractor from furnishing satisfactory materials if, after tests are performed on selected samples, the material is found to not meet specified requirements.

1.3 SUBMITTALS

Make all submittals of shop drawings, samples, requests for substitution and other items in strict accordance with this Section.

## PART TWO - PRODUCTS

### 2.1 SUBMITTAL SCHEDULE

General: Compile a complete and comprehensive schedule of all submittals anticipated to be made during progress of the work. Include a list of each type of item for which Contractor's Drawings, Shop Drawings, Certificates of Compliance, Material Samples, Guarantees, or other types of submittals are required.

### 2.2 SHOP DRAWINGS AND COORDINATION DRAWINGS

Shop Drawings:

- a. Scale and Measurements: Make all shop drawings accurately to a scale sufficiently large to show all pertinent aspects of the item and its methods of connection to the work.
- b. Type of prints required: Electronic submittals with the approved stamp and signature of the Contractor on them.
- c. Reproduction of reviewed shop drawings: Printing and distribution of reviewed shop drawings for the Architect's use will be by the Contractor.

### 2.3 MANUFACTURER'S LITERATURE

General: Where contents of submitted literature from manufacturers includes data not pertinent to the submittal, clearly indicate which portion of the contents is being submitted for review.

Number of Copies Required: Submit the number of copies which are required to be returned plus one copy which will be retained by the Architect.

### 2.4 SAMPLES

Accuracy of Samples: Samples shall be of the precise article proposed to be furnished.

Number of Samples Required: Unless otherwise specified, submit all samples in the quantity which is required to be returned plus one which will be retained by the Architect.

Reuse of Samples: In situations specifically so approved by the Architect, the Architect's retained sample may be used in the construction as one of the installed items.

Rejected Sample: Rejected samples will not be returned. A letter of rejection will be issued.

## 2.5 COLORS AND PATTERNS

Unless the precise color and pattern is specifically described in the Contract Documents, and whenever a choice of color or pattern is available in a specified product, submit accurate color and pattern charts to the Architect for review and selection.

## 2.6 SUBSTITUTIONS

### Approval Required:

- a. The Contract is based on the standards of quality established in the Contract Documents.
- b. All products proposed for use, including those specified by required attributes and performance, shall require approval by the Architect before being incorporated into the work.
- c. Do not substitute materials, equipment or methods unless such substitution has been specifically approved for this work by the Architect.

### "Or Equal":

- a. Where the phrase "or equal" or "or equal as approved by the Architect" occurs in the Contract Documents, do not assume that materials, equipment, or methods will be approved as equal unless the items has been specifically approved for this work by the Architect.
- b. The decision of the Architect shall be final.

## PART THREE - EXECUTION

### 3.1 IDENTIFICATION OF SUBMITTALS

General: Consecutively number all submittals. Accompany each submittal with a Letter of Transmittal containing all pertinent information required for identification and checking of submittals. Identify each sample and shop drawing with the project name. Contractors name, producer name and brand and the specification section number.

Re-submittals: When material is resubmitted for any reason, transmit under a new Letter of Transmittal.

### 3.2 COORDINATION OF SUBMITTALS

General: Prior to submittal for approval use all means necessary to fully coordinate all material including, but not necessarily limited to:

1. Determine and verify all interface conditions, catalog numbers, and similar data.
2. Coordinate with other trades as required.
3. Clearly indicate all deviations from requirements of the Contract Documents.

Grouping Submittals: Unless otherwise specified, make all submittals in groups containing all associated items to ensure that information is available for checking each item when it is received. Partial submittals may be rejected as not complying with the provisions of the Contract Documents and the Contractor shall be strictly liable for all delays so occasioned.

### 3.3 TIMING OF SUBMITTALS

General: Make all submittals far enough in advance of scheduled dates for installation to provide all time required for reviews, for securing necessary approvals, for possible revisions and re-submittals, and for placing orders and securing delivery.

Architect's review time: In scheduling, allow at least ten calendar days for review by the Architect following his receipt of the submittal.

Delays: Delays caused by tardiness in receipt of submittals will not be an acceptable basis for extension of the contract completion date.

### 3.4 ARCHITECT'S REVIEW

General: Review by the Architect shall not be construed as a complete check, but only that the general method of construction and detailing is satisfactory. Review shall not relieve the Contractor from responsibility for errors which may exist.

Revisions: Make all revisions required by the Architect. If the Contractor considers any required revision to be a change, he shall so notify the Architect as provided for under "Changes" in the General Conditions. Show each drawing revision by number, date, and subject in a revision block on the drawing. Make only those revisions directed or approved by the Architect.

### 3.5 CONTRACTORS REVIEW

The Contractor MUST review, approve and sign the shop drawings prior to submittal to the Architect. The Contractor is responsible for quantities, dimensions and verification of field conditions.

### 3.6 RESUBMITTALS

When any shop drawing or sample is required to be submitted more than two times for review the Contractor shall pay the cost for the Engineer and/or Architect to review the additional submittals. The Architect/Engineer will bill the Owner for the extra cost and the Owner will back charge the Contractor for this expense.

QUALITY CONTROL  
SECTION 01400

PART 1 - GENERAL

1.1 LABORATORY TESTING

The Owner will select and pay costs of all initial tests and reports listed in the various Sections.

1.2 QUALIFICATION OF LABORATORY

The construction inspection and materials testing laboratory selected will substantially comply with the basic requirements of ASTM E329-77, "Recommended Practice for Inspection and Testing Agencies for Concrete, Steel, and Bituminous Materials as Used in Construction" and will submit to the Architect a copy of the report of inspection of their facilities made by the Materials Reference Laboratory of the National Bureau of Standards during the most recent tour of such inspection, together with a memorandum stating steps taken to remedy deficiencies reported by this inspection.

Testing machines and instrumentation employed by the laboratory shall be calibrated at intervals not exceeding 12 months by devices of accuracy traceable to the National Bureau of Standards; and the laboratory will submit to the Architect applicable documentation of calibration.

1.3 AUTHORITY AND DUTIES OF THE LABORATORY

The Laboratory will not be authorized to revoke, alter, relax, enlarge, or release any requirements of the Contract Documents or to approve or accept any portion of the work. When it appears that the material furnished or work performed by the Contractor fails to fulfill Contract Document requirements, the laboratory will promptly direct the attention of the Architect and the Contractor to such deficiencies.

Results of all testing specified will be documented in report form and four (4) copies of each report will be issued promptly and directly to the Architect for review and distribution.

1.4 RESPONSIBILITIES AND DUTIES OF CONTRACTOR

The use of laboratory services shall in no way relieve the Contractor of his responsibility to furnish materials and construction in full compliance with the requirements of the Contract Documents.

To facilitate testing services, the Contractor shall cooperate with the laboratory and secure and deliver to the Architect or to the laboratory, without extra cost to the Owner,

Preliminary representative samples of the materials he proposes to use and which are required to be tested.

Furnish such casual labor and all facilities which are necessary to obtain and handle samples at the project and to facilitate the specified inspections.

Advise the laboratory sufficiently in advance of operations to allow for completion of tests and for the assignment of personnel.

Provide and maintain for the sole use of the laboratory adequate facilities for safe storage and proper curing of such test specimens which must remain on the project site prior to testing.

Pay the laboratory for such tests or inspections as are performed exclusively for the Contractor's convenience, and for such retests as may be occasioned by initial nonconformance of the materials with the Contract Documents.

**END OF SECTION**

SECTION 01500  
TEMPORARY FACILITIES

PART ONE - GENERAL

1.1 DESCRIPTION

Work Included: Temporary facilities and controls required for this work include, but are not necessarily limited to:

1. Enclosures such as tarpaulins, barricades, and canopies including those required to provide a separation between the area of construction and the remaining areas.
2. All pertinent safety regulations; ladders, planks, hoists, barricades, and similar items normally furnished by the individual trades in execution of their own portions of the work.
3. Temporary electricity for construction.
4. Temporary sanitary (toilet) facilities.
5. Construction fence around the perimeter of the construction area, minimum 5ft high.

1.2 PRODUCT HANDLING

Use all means necessary to maintain temporary facilities and controls in proper and safe condition throughout progress of the work.

PART TWO - PRODUCTS

2.1 UTILITIES

General: All temporary facilities shall be subject to the Architect's approval and shall be provided by the Contractor as required.

Electricity: Electrical contractor shall furnish and install all necessary temporary wiring, as required to provide adequate power and artificial lighting at all points where required for work and safety.

2.2 ENCLOSURES

Furnish, install and maintain for the duration of construction all required scaffolds, tarpaulins, barricades, canopies, warning signs, steps, bridges, platforms, and other temporary construction necessary for proper completion of the work in compliance with all safety and other regulations.

Furnish and install a construction fence around the perimeter of the construction area. Fence shall minimum of 5 ft high.

PART THREE - EXECUTION

3.1 MAINTENANCE AND REMOVAL

Maintain all temporary facilities and controls as long as needed for the safe and proper completion of the work. Remove all facilities at the completion of the project.

**END OF SECTION**

SECTION 01710  
CLEANING

PART ONE - GENERAL

1.1 DESCRIPTION

Work Included: Throughout the construction period, maintain the building and site in a standard of cleanliness as described in this Section.

Related Work Described Elsewhere: In addition to standards described in this Section, comply with all requirements for cleaning up as described in various other sections of these Specifications.

1.2 QUALITY ASSURANCE

Inspection: Conduct daily inspection, to verify that requirements of cleanliness are being met.

Codes and Standards: In addition to the standards described in this Section, comply with all pertinent requirements of governmental agencies having jurisdiction.

PART TWO - PRODUCTS

2.1 CLEANING MATERIALS AND EQUIPMENT

Provide all required personnel, equipment, and materials needed to maintain the specified standard of cleanliness.

2.2 COMPATIBILITY

Use only the cleaning materials and equipment, which are compatible with the surface being cleaned, as recommended by the manufacturer of the material.

PART THREE - EXECUTION

3.1 PROGRESS CLEANING

Retain all stored items in an orderly arrangement allowing maximum access, not impeding drainage or traffic, and providing the required protection of materials.

Do not allow the accumulation of scrap, debris, water material and other items not required for construction of this work.

Maintain the site and building in a neat and orderly condition at all times.

Daily, and more often if necessary, inspect the structures and pick up all scrap, debris, and waste material. Remove all such items to the place designated for their storage.

As required preparatory to installation of succeeding materials, clean the structures or pertinent portions thereof to the degree of cleanliness recommended by the manufacturer of the succeeding materials, using all equipment and materials required to achieve the required cleanliness.

### 3.2 FINAL CLEANING

General: Prior to completion of the work, remove from the job site all tools, surplus materials, equipment, scrap, debris, and waste.

Site: Unless otherwise specifically directed by the Architect, broom clean all paved areas on the site directly adjacent to the area of construction. Completely remove all resultant debris.

**END OF SECTION**

SECTION 01730  
OPERATION AND MAINTENANCE DATA

PART ONE - GENERAL

1.1 DESCRIPTION

Work Included: To aid in the continued instruction of operating and maintenance personnel, and to provide a positive source of information regarding the products incorporated in the work, furnish and deliver the data described in this Section and in pertinent Sections of these Specifications.

Related Work Described Elsewhere:

Make all submittals in strict accordance with the provisions of Sections 01300.

Required contents of submittals may also be amplified in the pertinent other Sections.

1.2 QUALITY ASSURANCE

In preparation of data required by this Section, use only personnel who are thoroughly trained and experienced in operation and maintenance of the described items, completely familiar with the requirements of this Section, and skilled in technical writing to the degree needed for communicating the essential data.

1.3 SUBMITTALS

Manual: Submit three copies of all manuals to the Architect prior to the final acceptance of the work.

PART TWO - PRODUCTS

2.1 INSTRUCTION MANUALS

General: Submit instruction and maintenance manuals in the following form: 8-1/2" X 11" paper, typewritten, with front cover that clearly identifies the manual.

Contents: Include at least the following information in all manuals:

- a. Name and model number of equipment.
- b. Complete instructions regarding operation and maintenance of all equipment involved, including lubrication, disassembly, and reassembly.
- c. Complete nomenclature and part number of all replacement parts, name and address of nearest vendor, and all other pertinent data regarding procurement procedure.
- d. Copy of all guarantees and warranties issued.
- e. Such other data as required in pertinent other Sections of these specifications.

PART THREE - EXECUTION

3.1 INSTRUCTION MANUALS

All manuals shall be prepared to make the Owner aware of all required maintenance of equipment.

**END OF SECTION**

SECTION 01800  
PROJECT CLOSEOUT

PART ONE - GENERAL

CLEAN-UP

Remove all temporary utilities including the construction fence from the site.

At substantial completion of the project clean all surfaces, remove all labels, clean the construction area of the site and remove all debris from the site.

GUARANTEE & WARRANTY

In addition to the warranty & guarantees stipulated in the general conditions the following shall apply:

Warrant and guaranty all work for a period of one (1) year from the date of the certificate of occupancy obtained from the Town of Fairfield, CT. This shall include all work performed by subcontractors, and material supplied by subcontractors.

MAINTENANCE MANUALS

Submit three (3) copies of maintenance and operating manuals that specify full details for care and maintenance of all new equipment and visible surfaces.

**END OF SECTION**

SECTION 02110  
DEMOLITION

PART ONE - GENERAL

1.1 DESCRIPTION

Work Included: Provide all labor and materials required to demolish, remove from site and properly dispose of items indicated to be removed. Work to be performed in school shall include, but not be limited to, the following:

- a. Remove existing concrete retaining wall down to and including the footing.
- b. Remove existing bituminous concrete pavement as required. Sawcut pavement.

Remove all structures or other items, not specifically mentioned herein, but required to be removed to construct the project as indicated on the drawings and in the project manual.

The Contractor shall comply with all applicable codes and ordinances of the State of Connecticut and the local authorities.

Operations during demolition procedures shall not interfere with normal traffic on adjacent areas of the building and in all cases the Contractor shall provide for the protection of the public.

PART TWO - PRODUCTS

No materials are specified for the work of this Section.

2.1 PROCEDURE

Protection: Protect all existing buildings, trees, shrubs, etc. that are designated to remain.

PART THREE - EXECUTION

- 3.1 Disposal: Dispose of all material in strict accordance with all applicable State, Local and Federal Regulations. Contractor to assume full responsibility for the proper removal and disposal of all hazardous and non-hazardous materials.

Hazardous Material: It is the Contractors' responsibility to report the discovery of any suspected hazardous, toxic, or asbestos material to the Owner and the Architect immediately upon discovery.

**END OF SECTION**

SECTION 03131  
FOUNDATION EARTHWORK

PART ONE - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 DESCRIPTION

- A. Furnish all labor, materials, tools, equipment and transportation to complete all excavation and disposal of unsuitable soil and placing and compacting of controlled fill.

1.3 SUMMARY

- A. This Section includes the following:
  - 1. Preparing subgrades for slabs-on-grade.
  - 2. Excavating and backfilling for buildings and structures.
  - 3. Drainage course for slabs-on-grade.

1.4 SUBMITTALS

- A. Product Data: For the following:
  - 1. Footing and underdrainage pipe.
  - 2. Geotextil.
- B. Material Test Reports: From a qualified testing agency for select controlled fill material:
  - 1. Sieve analysis.
  - 2. Modified Proctor moisture-density curve according to ASTM D 1557.
  - 3. Submit a sample of fill material in a 12 oz. labeled jar.

1.5 QUALITY ASSURANCE

- A. The Owner shall engage a Special Inspector and Testing Agency to perform inspections and testing services.

## 1.6 PROJECT CONDITIONS

- A. Existing Utilities: Locate existing underground utilities and fuel storage tanks in areas of work. If utilities are to remain in place, provide adequate means of support and protection during earthwork operations. Contact "Call Before You Dig" prior to any excavation.

## PART TWO - PRODUCTS

### 2.1 SOIL MATERIALS

- A. General: Provide borrow soil materials when sufficient satisfactory soil materials are not available from excavations.
- B. Satisfactory Soils: ASTM D 2487 Soil Classification Groups GW, GP, GM, SW, SP and SM, or a combination of these groups; free of rock or gravel larger than six (6) inches in any dimension, debris, waste, frozen materials, vegetation, and other deleterious matter.
- C. Unsatisfactory Soils: Soil Classification Groups GC, SC, CL, ML, OL, CH, MH, OH and PT according to ASTM D 2487, or a combination of these groups.
- D. Bank-run gravel: Well graded granular soil free of organic material and complying with the following gradation:
  - 3-1/2" sieve: 90% to 100% passing
  - 1-1/2" sieve: 55% to 95% passing
  - 1/4" sieve: 25% to 60% passing
  - #10 sieve: 15% to 45% passing
  - #40 sieve: 5% to 25% passing
  - #100 sieve: 0% to 10% passing
  - #200 sieve: 0% to 5% passing
- E. Crushed stone: Crushed durable stone screened to a uniform size.
- F. Processed stone: Crushed run stone consisting of a blend of crushed stone and stone dust with not more than 5% passing the #200 sieve.
- G. Recycled aggregate: Crushed concrete or brick, free of organic material, with not more than 5% passing the #200 sieve.
- H. Drainage Course: Narrowly graded mixture of crushed stone, ASTM D 448; coarse-aggregate grading Size 57 with 100 percent passing a 1-1/2-inch sieve and 0 to 5 percent passing a No. 8 sieve.
- I. Processed gravel consisting of a blend of recycled aggregate and soil contaminated with petroleum products or other hazardous materials shall not be used for borrow material.

## 2.2 SELECT CONTROLLED FILL MATERIAL

- A. Select material used for the controlled fill shall be clean, well graded sand and gravel containing not more than 10 percent by weight passing the no. 200 sieve.
- B. The maximum size of select material shall be 6 inches except the upper 8 inches of subfloor fill, directly beneath the floor slab shall have a maximum size of 2 inches to facilitate fine grading.
- C. Select material shall be free of organic matter, rubble, frost, petroleum and all deleterious substances.
- D. Samples of the select material shall be obtained and subjected to a sieve analysis and a moisture - density relationship test ASTM D1557 to determine its maximum density and optimum moisture content.
- E. Free draining material shall be crushed stone or processed stone containing less than 30 percent by weight passing the no. 40 sieve and 10 percent by weight passing the no. 100 sieve. The maximum particle size permitted is 6 inches

## 2.3 MATERIALS

- A. Filter fabric: Mirafi 140N non-woven fabric.
- B. Foundation drains: perforated PVC pipe conforming to ASTM D2729 with bell and spigot joints.
- C. Foundation insulation: Dow Styrofoam extruded polystyrene. On exterior of basement walls, Perimate insulation drainage panel shall be used

## PART THREE - EXECUTION

### 3.1 PREPARATION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.
- B. Preparation of subgrade for earthwork operations: remove all vegetation, topsoil, debris, obstructions, and deleterious materials from ground surface .
- C. Protect and maintain erosion and sedimentation controls during earthwork operations.
- D. Provide protective insulating materials to protect subgrades and foundation soils against freezing temperatures or frost.

### 3.2 DEWATERING

- A. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding Project site and surrounding area.
- B. Protect subgrades from softening, undermining, washout, and damage by rain or water accumulation.
  - 1. Reroute surface water runoff away from excavated areas. Do not allow water to accumulate in excavations. Do not use excavated trenches as temporary drainage ditches.
  - 2. Install a dewatering system to keep subgrades dry and convey ground water away from excavations. Maintain until dewatering is no longer required.

### 3.3 ROCK BLASTING

- A. Blasting: Obtain written permission from authorities having jurisdiction before bringing explosives to Project site or using explosives on Project site.
- B. Perform blasting without damaging adjacent structures, property, or site improvements. Use delayed charges and blasting mats.
- C. Perform blasting without weakening the bearing capacity of rock subgrade and with the least-practicable disturbance to rock to remain.
- D. Take precautions to prevent over blasting to a depth greater than required. Blasting contractor will be responsible for any costs associated with extending foundations deeper than required due to over blasting.
- E. All loose and fractured rock shall be removed following blasting. Footings and controlled fill shall be placed over sound bedrock.

### 3.4 EXCAVATION FOR FOUNDATIONS

- A. Excavate to indicated elevations and dimensions within a tolerance of plus or minus 0.1 feet. If applicable, extend excavations a sufficient distance from structures for placing and removing concrete formwork, for installing services and other construction, and for inspections.
- B. Excavations for Footings and Foundations: Do not disturb bottom of excavation. Excavate by hand to final grade. Compact soil with a vibratory tamper or a jumping soil rammer after subgrade has been inspected and approved.
- C. Slope sides of excavations to produce a safe and stable embankment. Shore and brace where sloping is not possible because of space restrictions or stability of material excavated. The Contractor shall be responsible for the structural adequacy of all shoring and bracing.

- D. Where footings are below the groundwater elevation, place 6 inches of crushed stone under footings. Crushed stone shall be placed after the soil has been inspected, approved, and tamped.
- E. Footings shall bear on undisturbed virgin soil or controlled fill, free of frost, mud, or ice. No footings shall be placed in water.
- F. Where footings bear directly on bedrock, clean and level rock to a slope not exceeding 2 vertical on 12 horizontal. Where it is not practical to level the rock surface, drill and grout steel reinforcing bars into the rock as directed by the Engineer.
- G. Where footings bear on a silty or clay soil which is sensitive to disturbance, place a 6 inch layer of compacted processed stone under footings.
- H. Exterior footings shall be not less than 3'-6 below finish grade unless otherwise protected from frost
- I. Remove all topsoil, uncompacted fill, organic soil, or other unsuitable material from under building and to lateral extent of 10 feet beyond the building line.
- J. Underpin adjacent structures which may be damaged by excavation work.
- K. The Contractor shall comply with all OSHA regulations

### 3.5 BACKFILLING OF FOUNDATIONS

- A. Place and compact backfill in excavations promptly, but not before completing the following:
  - 1. Construction below finish grade including, where applicable, subdrainage, damp proofing, waterproofing, and perimeter insulation.
  - 2. Removing concrete formwork.
  - 3. Removing trash and debris.
  - 4. Removing temporary shoring and bracing, and sheeting.
- B. Place backfill on subgrades free of mud, frost, snow, or ice.
- C. Backfill for foundation walls and retaining walls shall be compacted granular soil with not more than 10% passing the #200 sieve. If on-site soil does not meet these requirements, the Contractor shall furnish soil from off-site at his own expense.
- D. Backfill shall be placed and compacted in 8 inch lifts. Compact to 95% of the maximum density except backfill under landscaped areas need not exceed 90% of the maximum density.
- E. Where foundation walls retain soil, do not backfill walls until floor construction which provides lateral bracing to the walls is in place.

- F. Where foundation walls do not retain soil, place backfill evenly on both sides of the wall.
- G. Recycled aggregate may be used as a backfill material.

### 3.6 SLAB SUB-BASE

- A. Where the slab is within a heated space, the sub-base shall be six (6) inches of bank-run gravel with a maximum size of two (2) inches. Sub-base shall be compacted to 95% of the maximum density.
- B. Where the slab is exposed to frost, the sub-base shall be six (6) inches of 3/4 inch crushed stone.

### 3.7 CONTROLLED FILL

- A. Plow, scarify, bench, or break up sloped surfaces steeper than 1 vertical to 4 horizontal so fill material will bond with existing material.
- B. Place controlled fill on subgrades free of mud, frost, snow, or ice.
- C. The select material shall be compacted at or near the optimum moisture content.
- D. If the select material becomes too wet or too dry it shall be aerated or moistened to the proper moisture content prior to commencing or continuing compaction operations.
- E. Maintain and operate proper and adequate drainage facilities in order to keep the site dry and in such condition that placement and compaction of fill may proceed unhindered by drainage into the site.
- F. If ground water is encountered it shall be pumped and the subgrade of natural undisturbed inorganic soil or bedrock shall be exposed for inspection. The free draining material shall be placed in excavations extending below groundwater level and shall be spread in horizontal layers of not more than 12 inches in loose thickness. Each layer shall be compacted thoroughly while ground water is maintained at least two (2) inches below the surface of the layer being compacted
- G. If the first layer spread on the subgrade pumps, becomes contaminated by injection of subgrade soil, or becomes saturated by water drawn up from the subgrade as a result of compaction, compaction shall be halted and remedial measures taken. These remedial measures may include: removing overly wet material and replacing with crushed stone or processed stone; excavating trenches beyond the limit of the fill to extract free water; placing a layer of filter fabric at the base of a layer of free draining material.
- H. No fill shall be placed prior to the subgrade being inspected and approved by the Special Inspector.

- I. The select material shall be spread in horizontal layers of not more than eight (8) inches in loose thickness and compacted to have a dry density of 95 percent of the maximum dry density obtained by test ASTM D1557.
- J. The select material shall be compacted at or near the optimum moisture content. If the select material becomes too wet or too dry it shall be aerated or moistened to the proper moisture content prior to commencing or continuing compaction operations.
- K. Maintain and operate proper and adequate drainage facilities in order to keep the site dry and in such condition that placement and compaction of fill may proceed unhindered by drainage into the site.
- L. No fill material shall be placed when either the fill material or the previous lift or subgrade on which it is placed is frozen. In the event that any fill which has already been placed, or the subgrade, shall become frozen, it shall be scarified and recompacted before the next lift is placed.
- M. Any soft spots resulting from frost shall be removed or recompacted before new fill is placed.
- N. Equipment used to compact the fill shall be a large self-propelled vibratory roller. In confined areas, smaller vibratory compactors may be used provided the loose thickness of the layer to be compacted does not exceed six (6) inches.
- O. To assure proper coverage, all passes of the roller shall overlap adjoining passes at least 1/3 the roller width. A minimum of three (3) passes per layer is required.

### 3.8 GRADING

- A. General: Uniformly grade areas to a smooth surface, free of irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated.
  - 1. Provide a smooth transition between adjacent existing grades and new grades.
  - 2. Cut out soft spots, fill low spots, and trim high spots to comply with required surface tolerances.
- B. Site Grading: Slope grades to direct water away from buildings and to prevent ponding.
- C. Grading inside Building Lines: Finish subgrade to a tolerance of 1/2 inch when tested with a 10-foot straightedge.

### 3.9 FOUNDATION DRAINS

- A. Lay drain pipe with perforations down and solidly bedded in crushed stone. Provide full bearing for each pipe section throughout its length, to true grades and alignment.

- B. Cover crushed stone with filter fabric prior to backfilling.
- C. Connect drain pipe to storm sewer or drywells.

3.10 SUBGRADE INSPECTION

- A. Notify Special Inspector when excavations have reached required subgrade.
- B. The Special Inspector shall inspect the subgrade prior to the placement of controlled fill and verify that all unsuitable material has been removed.
- C. The Special Inspector shall observe the placement and compaction of the controlled fill.

3.11 TESTING

- A. Testing shall be performed by a NVLAP accredited testing laboratory paid by the Owner and approved by the Engineer and Building Inspector.
- B. The testing laboratory shall maintain a full time Professional Engineer on staff that shall stamp and sign all test reports.
- C. The fill material shall be subjected to a Sieve Analysis and a Modified Procter Test.
- D. Each layer of fill shall be tested by a trained technician. If acceptable results are not obtained, compaction shall continue until requirements are met, or if material cannot be satisfactorily compacted, it shall be removed and replaced with suitable material.
- E. Testing Reports: copies of all testing reports shall be submitted to the Architect, Engineer, Special Inspector, Contractor, and Building Inspector within 10 working days of date of test.

**END OF SECTION**

SECTION 03300  
CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to the work of this section.

1.2 DESCRIPTION

Furnish all labor, materials, tools, equipment, transportation and services to complete all concrete work. Scope of work to include foundation for retaining walls and new concrete ramp. Contractor must verify the height of the foundation piers prior to submitting a bid.

1.3 STANDARDS

Applicable portions of the following codes and standards are hereby made part of this specification in their entirety as though fully set forth herein.

ACI 301-96 "*Standard Specification for Structural Concrete.*"

ACI 318-95 "*Building Code Requirements For Reinforced Concrete*" and commentary.

ACI 315-80 "*Details and Detailing of Concrete Reinforcement.*"

1.4 DELIVERY, STORAGE, AND HANDLING

Reinforcing steel shall be stored off of the ground on wood sleepers.

1.5 Install concrete pier foundation system at new location for walls and ramp.

PART 2 - PRODUCTS

2.1 MATERIALS

Concrete shall be in accordance with ASTM C94-80 "*Standard Specification for Ready-Mixed Concrete.*"

Cement: ASTM C150 TYPE I or II. Only one brand of cement shall be used.

Normal weight aggregates: ASTM C33, aggregates shall be from a single source.

Air entraining admixtures: ASTM C260.

Water-reducing and retarding: ASTM C494, and containing not more than 1% chloride

Mix water shall be clean, fresh, and potable.

Non-shrink grout: Five Star Grout.

2.2 PROPORTIONING

Concrete compressive strength at 28 days: 3000 psi for footings and foundations.

Concrete proportions shall be selected in accordance with ACI 211.1-89.

All concrete shall be air-entrained, except concrete for interior slab-on-grade. Total air content shall be not less than 4% and not more than 8% by volume.

Water-cement ratio shall not exceed 0.50.

Maximum slump:

Five (5) inches for all other concrete.

Minimum slump:

Two (2) inches.

The nominal maximum size of coarse aggregate shall be not larger than:

1. 1/5 the narrowest dimension between sides of forms
2. 3/4 the minimum clear spacing between reinforcing bars.

Calcium chloride shall not be used.

PART 3 - EXECUTION

3.1 FORMWORK

Forms shall result in a final structure that conforms to shapes, lines, and dimensions as required by the design drawings and specifications.

Forms shall be substantial and sufficiently tight to prevent leakage of mortar.

Before placing the reinforcing steel or the concrete, the surface of the forms shall be covered with an acceptable form release coating material that will effectively prevent absorption of moisture, prevent bond with the concrete, and not stain the concrete surfaces.

Clean forms prior to concrete placement. Remove all chips, wood, sawdust, dirt, rubbish, or other debris.

Chamfer strips shall be placed in the corners of forms to produce beveled edges on surfaces exposed to view.

### 3.2 REINFORCEMENT

Reinforcing bars: ASTM A615 grade 60 except beam stirrups and column ties may be grade 40.

Reinforcement shall be maintained free from dust, mud, rust, oil or ice.

Fabrication and placement of reinforcing steel shall be in accordance with CRSI "*Manual of Standard Practice*" and CRSI "*Placing Reinforcing Bars*".

Reinforcing bars shall not be welded.

Minimum cover on reinforcement:

- |    |                                       |        |
|----|---------------------------------------|--------|
| 1. | Concrete cast against earth:          | 3"     |
| 2. | Concrete exposed to earth or weather: |        |
|    | #6 and larger:                        | 2"     |
|    | #5 and smaller:                       | 1-1/2" |
| 3. | Interior surfaces:                    |        |
|    | Slabs, walls, joists:                 | 3/4"   |

Splices shall be lapped 40 bar diameters and securely tied.

Heat shall not be used to bend reinforcing bars.

Reinforcing steel shall be securely wired together at all intersections.

### 3.3 PRODUCTION OF CONCRETE

Concrete shall be batched, mixed and transported in accordance with ASTM C94 and ACI 304R-89.

Batching plant equipment and facilities shall conform to "*Certification of Ready Mixed Concrete Production Facilities*" of the National Ready Mixed Concrete Association.

Admixtures shall be charged into the mixer as solutions and shall be measured by means of an acceptable mechanical dispensing device. The liquid shall be considered a part of the mixing water.

If more than one admixture is used in the concrete, they shall be added separately.

Ready-mixed concrete trucks shall not be loaded in excess of their rated capacity.

### 3.4 PLACING

Do not pour concrete until forms and subgrade have been thoroughly cleaned and are free of frost, mud, ice, or water.

Convey concrete from truck to forms as rapidly as possible by methods which will prevent segregation or loss of ingredients. Place in forms as nearly as practicable to its final position.

When placement is started, carry on as a continuous operation until the placing of a section is complete. Cold joints are not permitted.

Consolidate concrete by mechanical vibration. Do not use vibrators to transport concrete in forms.

No concrete shall be placed in freezing weather or when freezing weather is forecast by Weather Bureau to occur within 36 hours, unless special measures and precautions are taken to heat the water and aggregates and to protect concrete from freezing after being placed.

No concrete shall be placed when the temperature is greater than 90 degrees F. unless special measures are taken to cool the water and aggregate and to protect the concrete from rapid drying.

No concrete shall be placed during rain, sleet, or snow unless protection is provided. The maximum elapsed time between introduction of water and placing shall be one (1) hour.

3.5 CURING AND PROTECTION

Concrete shall be maintained above 50 degrees F and in a moist condition for at least the first seven (7) days after placement.

In cold weather, concrete shall be protected in accordance with ACI 306R-88.

In hot weather, concrete shall be protected in accordance with ACI 305R-89.

3.6 FOUNDATION

All foundations must bear on suitable soil with the capacity to support the building load.

3.7 RAMP

Finish on all ramps is to be slip resistant broom finish.

**END OF SECTION**

SECTION 05450  
MISCELLANEOUS METALS

PART ONE - GENERAL

1.1 DESCRIPTION

Work Included:

This contractor shall provide all metal handrails, stair nosings and related components for stairs.

Related Work Described Elsewhere:

Concrete Section 03300

1.2 QUALITY ASSURANCE

Qualifications of Installers:

Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and methods needed for proper performance of the work of this Section.

Welding:

Perform all shop and field welding in connection with the work of this Section, adhering strictly to the current pertinent recommendations of The American Welding Society.

Submittals:

- a. Erection drawings and shop details shall be prepared by the fabricator and three copies submitted to the Architect for review.
- b. Shop drawings and list of proposed components for expansion joints and joint cover systems.
- c. The review of the shop drawings will be for size and arrangement of principal and auxiliary members and strength of connections. Any errors in dimensions shown on shop drawings shall be the responsibility of the Contractor.
- d. Shop drawings shall include all information necessary for fabrication and erection of items specified, as well as manufacturer's specifications and other data required to demonstrate compliance with the specifications.
- e. Welding certificates.

PART TWO - PRODUCTS

2.1 MATERIALS

Metal Surfaces:

For fabrication of the work of this Section which will be exposed to view, use only those materials which are smooth and free from surface blemishes including pitting, seam marks, roller marks, roller trade names, and roughness.

2.2 FABRICATION

Use type of materials shown or specified for the various components of the work. Form exposed work true to line and level, with accurate angles and surfaces with straight edges.

Form bent-metal corners to smallest radius possible without causing grain separation or otherwise impairing work.

Weld corners and seams continuously, complying with AWS recommendations. At exposed connections, grind exposed welds smooth and flush, match and blend with adjoining surfaces.

Form exposed connections with hairline joints, flush and smooth, using concealed fasteners wherever possible. Use exposed fasteners of type shown or, if not shown, use Phillips flat-head (countersunk) screws or bolts. Coordinate with supporting structure. Fabricate and space the anchoring devices to provide adequate support for intended use.

2.3 SHOP PAINTING

Shop paint miscellaneous metal work, except members or portions of members to be embedded in concrete or masonry, surfaces and edges to be field welded, and galvanized surfaces, unless otherwise specified.

Prime metal with fast curing, lead-free, abrasive-resistant, rust inhibitive paint capable of providing a sound system for field applied top coat despite prolonged exposure. Remove scale, rust, and other deleterious materials before applying shop coat.

Apply one shop coat to fabricated metal items except, apply two shop coats to surfaces inaccessible after assembly or erection. Change color of second coat to distinguish it from the first coat.

2.4 GALVANIZED FINISH

All metal exposed to the exterior or where specified to be galvanized shall be hot dipped galvanized, after fabrication, in accordance with ASTM A120, A123, A153 or A386 as applicable. Minimum zinc coating weight shall be 2.0 oz./sq.ft.

Aluminum is an acceptable substitution.

2.5 GROUT

Non-shrinking grout, pre-mixed, factory packaged, non-staining, non-corrosive, non-gaseous. Provide grout specifically recommended for interior and exterior application

2.6 METAL FABRICATIONS

Guards:

Fabricate and erect 1-1/4" NPS, Schedule 40 hollow metal pipe rails with 5/32" wall thickness and balusters as specified on the drawings and to meet code.

Railings shall be welded construction and ground smooth.

Refer to the drawings for design and sizes of components for guards.

Handrails

Handrails shall be 1-1/4" dia. NPS hollow metal pipe, Schedule 40.

Aluminum railings on the exterior are acceptable if they meet all of the code and structural requirements.

MISCELLANEOUS

All fasteners and anchors used on the exterior shall be zinc-coated or stainless steel.

Provide all miscellaneous metal angles, etc. for support of mechanical equipment, counters, etc.

2.7 STRUCTURAL PERFORMANCE

Provide railings capable of withstanding the effects of gravity loads and the following loads and stresses within the limits and under conditions indicated:

Handrails:

- a. Uniform load of 50 lbs/lin. ft applied in any direction.
- b. Concentrated load of 200lbs applied in any direction.
- c. Uniform and concentrated loads need not be assumed to act concurrently.

Top Rails of Guards:

- a. Uniform load of 50 lbs/lin. ft applied in any direction.
- b. Concentrated load of 200lbs applied in any direction.
- d. Uniform and concentrated loads need not be assumed to act concurrently.

Provide railings and guards capable of withstanding the effects of earthquake motions determined according to the Connecticut State Building Code.

PART THREE - EXECUTION

3.1 INSPECTION

Examine the areas and conditions under which miscellaneous metal items are to be installed, and correct conditions detrimental to the proper and timely completion of the work. Do not proceed until unsatisfactory conditions have been corrected.

3.2 INSTALLATION

Fastening to In-Place Construction:

Provide anchorage devices and fasteners where necessary for securing miscellaneous metal fabrications to in-place construction including threaded fasteners for concrete inserts, toggle bolts, through-bolts, lag bolts, wood screws, and other connectors as required.

Cutting and Fitting:

- a. Perform cutting, drilling and fitting required for installation of miscellaneous metal fabrications.
- b. Set work accurately in location, alignment, and elevation, and make plumb level, true and free from rack, measured from established lines and levels.

Handrails:

Install handrails to resist a load of 50 lbs./lin. ft. applied in any direction and a concentrated load of 200 lbs. in any direction. Mount off of wall or guard with 1-1/2" clear between respective wall or guard.

Railings:

Embed railings in concrete. Fabricate sleeves from steel pipe not less than 6" long and with an inside diameter not less than 1/2" greater than the outside diameter of the post, with a steel closure plate welded to the bottom of sleeve. Secure the sleeve with non-shrinking grout specified in the section.

Railing Connections:

Expansion joints: Install expansion joints at locations indicated but not farther apart than required to accommodate thermal movement. Provide slip-joint internal sleeve extending two (2) inches beyond joint on either side, fasten internal sleeve securely to one side, and locate joint within six (6) inches of post.

Anchoring Railing Ends:

Anchor railing ends to concrete and masonry with round flanges connected to railing ends and anchored to wall construction with anchors and bolts.

Anchor railing ends to metal surfaces with flanges bolted to metal surfaces and connected to railing ends using non-welded connections.

Adjusting and Cleaning:

Clean aluminum and stainless steel by washing thoroughly with clean water and soap and rinsing with clean water.

Protection:

Protect finishes of railings from damage during construction period with temporary protective coverings approved by railing manufacturer. Remove protective coverings at time of Substantial Completion.

Restore finishes damaged during installation and construction period so no evidence remains of correction work. Return items that cannot be refinished in the field to the shop; make required alterations and refinish entire unit or provide new units.

Touch-Up:

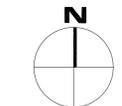
Immediately after erection, clean field welds, bolted connections, and abraded areas of galvanization with same material as used for shop galvanizing.

Manufactured Items:

Items furnished in final finished condition, to be installed by others are to be installed in strict accordance to that manufacturer's specification.

**END OF SECTION**

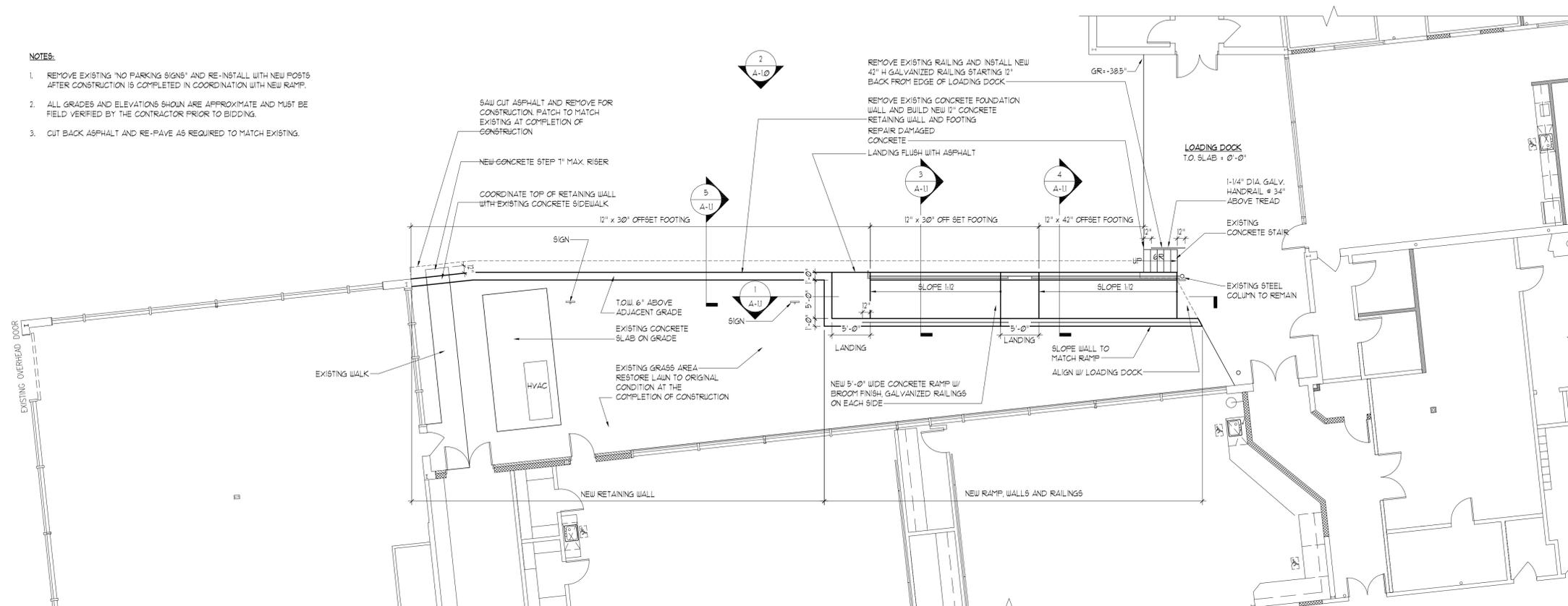
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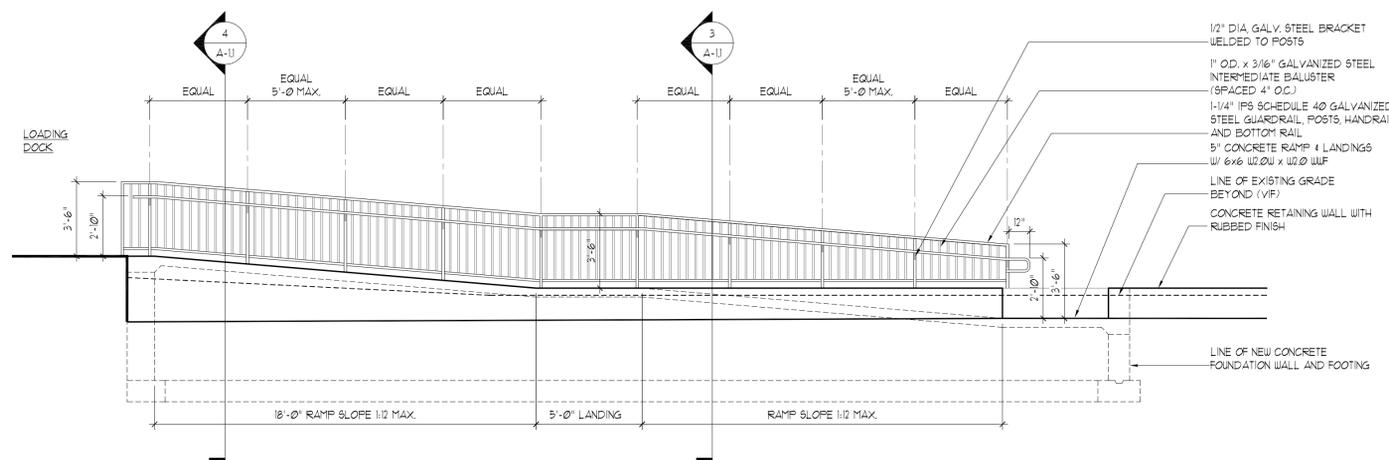
NOTES:

1. REMOVE EXISTING "NO PARKING SIGNS" AND RE-INSTALL WITH NEW POSTS AFTER CONSTRUCTION IS COMPLETED IN COORDINATION WITH NEW RAMP.
2. ALL GRADES AND ELEVATIONS SHOWN ARE APPROXIMATE AND MUST BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO BIDDING.
3. CUT BACK ASPHALT AND RE-PAVE AS REQUIRED TO MATCH EXISTING.



EXISTING REFERENCE PHOTO  
1/2"=1'-0"

1 PROPOSED LOADING DOCK PLAN  
1/8"=1'-0"



2 RAMP ELEVATION  
1/4"=1'-0"

GENERAL REQUIREMENTS

1. All construction shall be performed in strict accordance with all Federal, State, Local Codes, and all agencies having jurisdiction.
2. Contractor shall fully familiarize himself with the Contract Documents and the site and notify the Architect, in writing, of any discrepancies. Contractor shall visit the site, verify existing conditions, dimensions, etc. and notify the Architect, in writing, of any discrepancies directly relating to the new work.
3. Contractor shall perform all work, not necessarily indicated in the Contract Documents, but required to construct the proposed project.
4. The Contractor shall assume full responsibility for construction site safety, construction methods and techniques, and scheduling.
5. Dimensions of work shall not be determined by scale or rule; figured dimensions shall be followed at all times.
6. The General Conditions of the Contract of Construction, A Document A201, Latest Edition, Articles 1 to 14 inclusive, are part of the accompanying specifications and all directions thereof.
7. The Contractor must obtain and pay for all permits. All individual trades, i.e. HVAC, Electrical, Plumbing, must obtain their own respective permits.
8. The General Contractor shall be responsible for cleaning the area of construction, including washing of all windows, and leaving it broom-clean. Each Subcontractor at the completion of his work shall remove from the premises all surplus material, debris, etc. caused by his work as required and specified herein.
9. All work performed under this Contract shall be guaranteed for a period of one (1) year minimum from date of acceptance by the Owner.
10. The General Contractor shall name the Architect and the Owner as additional insured on the Comprehensive General Liability Policies and Builders Risk Policies.
11. All contractors must submit evidence of liability insurance, worker's compensation insurance, and builder's risk insurance. All workers on the jobsite must be covered by workers compensation insurance.
12. Throughout the construction period, maintain the building and site in a standard of cleanliness and in a neat and orderly condition at all times.
13. Daily, and more often if necessary, inspect the construction area and pick up all scrap, debris, and waste material. Remove all such items to the place designated for their storage.
14. Protect all areas of the existing building that may be impacted by the construction, during construction. All occupied areas of the existing building are to remain fully functional and safe during construction.
15. All construction debris shall be stored in trash containers and removed from the site when filled. Location to be agreed upon with the owner.
16. All specified items shall be installed in conformance to manufacturer's recommendations and specifications.
17. No substitutions are permitted without written approval by the Architect in advance.

APPLICABLE CODES

- 2003 International Building Code
- Connecticut Supplement, 2005
- 2003 NFPA 101, Life Safety Code
- 2003 International Fire Code
- 2005 Connecticut State Fire Safety Code
- 2003 NFPA 1, Uniform Fire Code
- ICC/ANSI A117.1-2003
- 2009 Connecticut Amendment State Building & Fire Safety Code
- 2011 Connecticut Amendment State Building & Fire Safety Code
- 2013 Connecticut Amendment State Building & Fire Safety Code
- Connecticut Supplement/2005 State Fire Safety Code

CAST-IN-PLACE CONCRETE

Concrete strength at 28 days: 3,000 psi for footings and walls; 3,500 psi for slabs  
Concrete shall be in accordance with ACI 301-05 and ACI 318-02.  
Do not allow release agent to come in contact with reinforcing steel or hardened concrete.  
Calcium chloride shall not be used.  
Reinforcing steel: ASTM A615 grade 60. Min lap of rebars is 40x diameter  
Air-entrain all concrete exposed to the weather.  
Maximum slump:  
4 inches for slabs  
5 inches for all other concrete  
Exterior slabs shall receive a non-skid broom finish.

Cold weather concrete work shall conform to ACI 306.1. Protect concrete from physical damage or reduced strength that could be caused by frost, freezing actions, or low temperatures. Use non-chloride accelerating admixture in all concrete that will be placed in temperatures below 40°F for 24 hours following pour.

The approved subgrade must be free of mud, ice and water at all times.

A testing laboratory shall cast 4 test cylinders for each 50 yards or each day's pour. Slump, air content and temperature tests shall be performed when cylinders are cast. Test 1 cylinder at 7 days and 2 cylinders at 28 days. Hold 4th cylinder for 56 day break if needed.

FOUNDATION

Design assumption: soil bearing capacity is 2 tons per square foot.

Footings shall bear on undisturbed virgin soil, free of frost, mud and ice, or controlled fill or on bedrock.

Footings sub-grade shall be compacted using a vibratory tamper or a jumping soil rammer after the soil has been inspected and approved.

The Contractor shall be responsible for all dewatering, shoring, sheeting, or bracing required to maintain a safe, dry and stable excavation.

No concrete shall be placed in water.

Soil adjacent to and below footings shall be kept from freezing at all times.

Where foundation walls do not retain soil, backfill evenly both sides.

Provide a granular sub-base under all slabs on grade. The sub-base shall be a minimum of 4 inches of 1/2 inch crushed stone.

The Contractor shall verify the location of all underground utility lines, sewers and fuel storage tanks to avoid any damage. Contractor shall contact "Call Before You Dig" prior to any excavation.

Where footings are below the groundwater elevation, place 6 inches of crushed stone under footings. Crushed stone shall be placed after the subsoil has been inspected and approved.

Exterior footings bearing on soil shall be at least 42" below finished grade.

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REVISIONS:

SCALE:	AS NOTED
DATE:	09/22/2016
DRAWN:	JDL

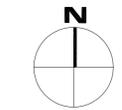
PHILIP H. CERRONE III, AIA, NCARB  
ARCHITECT  
421 Meadow Street  
Fairfield, Connecticut 06824  
203-333-2066

FAIRFIELD WARDE HIGH SCHOOL  
755 MELVILLE AVENUE  
FAIRFIELD, CT 06825

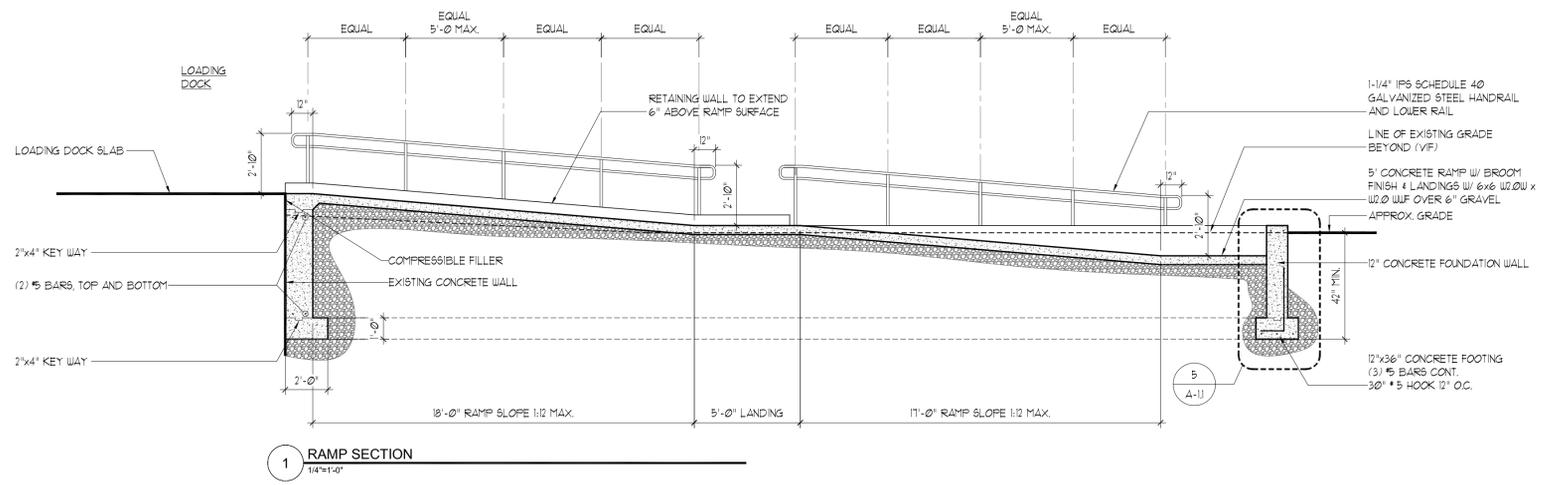
PROPOSED PLAN AND ELEVATION

16-19

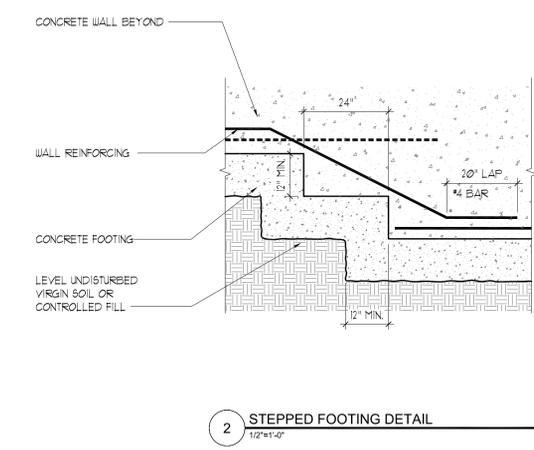
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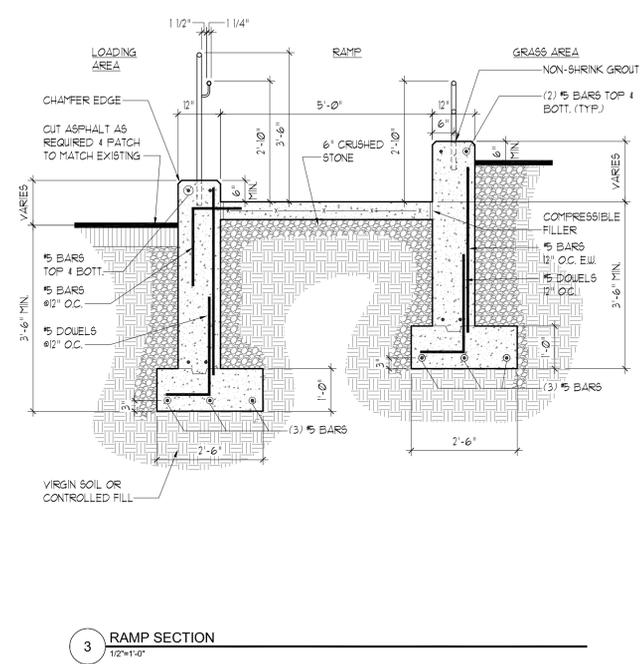
REFERENCE NORTH



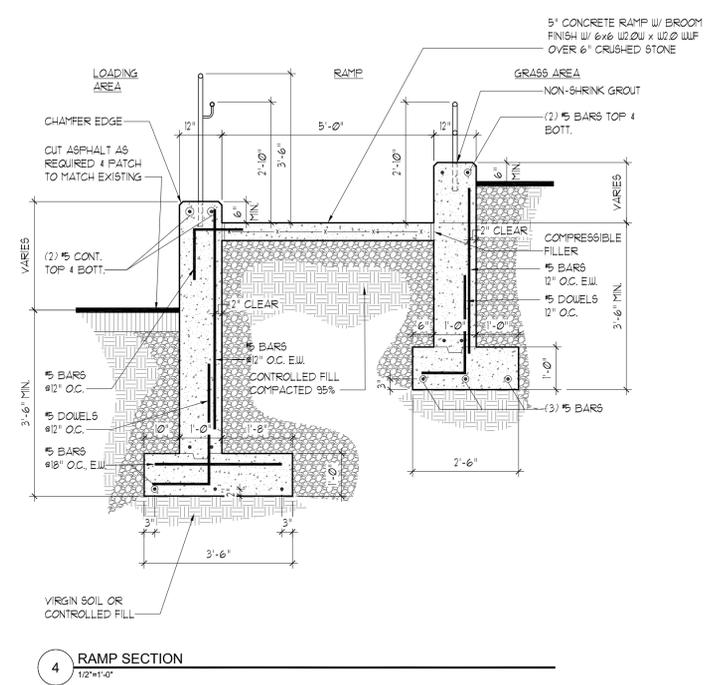
1 RAMP SECTION  
1/4"=1'-0"



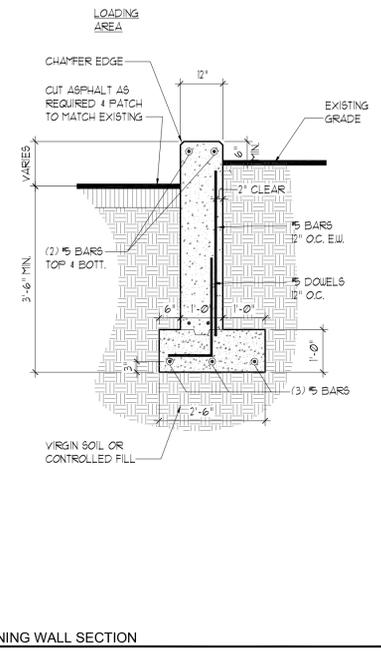
2 STEPPED FOOTING DETAIL  
1/2"=1'-0"



3 RAMP SECTION  
1/2"=1'-0"



4 RAMP SECTION  
1/2"=1'-0"



5 RETAINING WALL SECTION  
1/2"=1'-0"

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RAMP AND RETAINING WALL DETAILS