

City of New Haven

Bureau of Purchases

Bid Documents

NEW HAVEN TRANSFER STATION IMPROVEMENTS

Project #: 07-161-05

Contract # 20755

Honorable John DeStefano, Jr

Mayor

Richard H. Miller, P.E., L.S.

Director of Engineering

City of New Haven Bureau of Purchases Website
www.cityofnewhaven.com/Purchasing



CITY OF NEW HAVEN

BUREAU OF PURCHASES INVITATION TO BID

200 ORANGE STREET RM 401

NEW HAVEN, CONNECTICUT 06510

TEL: (203) 946-8201 FAX (203) 946-8206

Project Name: **New Haven Transfer Station
Improvements**

Project # : 07-161-05

Contract #: 20755

Date: 9-4*07

www.cityofnewhaven.com/Purchasing

The City of New Haven will receive sealed bids for the above named project until 3:00 p.m., Local Time, on Wednesday, October 10, 2007, at the Bureau of Purchases, 200 Orange Street, Room 401, New Haven, Connecticut, at which time all bids will be publicly opened and read aloud.

The work shall include, but is not limited to: **Construction of new drainage structures and piping, sanitary manhole, concrete walls and pads. The work also includes the removal of existing pavement, re-grading, bituminous concrete paving and the demolition of two existing truck scales and scaffolding and the installation of two new truck scales and a tarping station.**

A certified check or bank draft, payable to the City of New Haven; negotiable U.S. Government Bonds (at par value); or a satisfactory Bid Bond, executed by the Bidder, and an acceptable surety in an amount equal to five percent (5 %) of the total bid, shall be submitted with each bid that is in excess of \$100,000, in addition bidders are also required to submit the cost of their bonding. Bids, which fail to contain bid security, as stated, will be rejected as non-responsive.

Attention is called to the following:

- a. The "**INSTRUCTIONS TO BIDDERS**" must be followed in all respects.
- b. Not less than the minimum salaries and wages as set forth in the Contract documents shall be paid on this project.
- c. All pertinent regulations, ordinances, and statutes of the City of New Haven and/or State of Connecticut will be rigidly enforced. If there is a contradiction anywhere within these specifications, the more stringent definition shall prevail.
- d. In the event your bid is in excess of \$100,000, the successful bidder will be required to furnish a one hundred percent (100%) Performance Bond and a one hundred percent (100%) Labor and Material Bond, each in the full amount of the Contract price.
- e. New Haven Based Business Ordinance **does not** apply to this bid.
- f. Good Faith Documents applies if budget is estimated at \$100,000 or more.
- g. Mandatory Pre-bid meeting to be held on September 25th, 2007 at 11.00am in the Engineering Dept Conference Room (Room 503), 200 Orange Street, New Haven,CT

The City reserves the right to reject any and all bids, or to waive any informalities in the bids. All contracts are bid with the intention of awarding a contract as a result of the bid. Any and all awards and actual contract execution by the City of New Haven is contingent upon availability of appropriate funds. In the event that funding is not available at the time of award and/or execution of the contract the City reserves the right to cancel the bid.

Bids may be held by the City for a period not to exceed ninety (90) days from the date of the opening of the bids, for the purpose of reviewing the bids and investigating the qualifications of bidders prior to awarding the Contract.

Michael V. Fumiatti
Purchasing Agent

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CITY OF NEW HAVEN

BUREAU OF PURCHASES

JOHN DeSTEFANO, JR.
Mayor

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200 ORANGE STREET
ROOM 401
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INSTRUCTIONS TO BIDDERS

1. USE OF SEPARATE BID FORMS

1. These Contract Documents include a complete set of bidding and agreement forms which are for the convenience of bidders and can be detached from the Contract Documents, filled out, and executed. In an effort to conserve resources we have posted the General and Standard Special Conditions on our Web-site in a PDF Format.
2. You may not qualify or alter the terms of the solicitation or Calculation Sheet, if done your submittal will be rejected. The City of New Haven cannot accept on-line submission for Bids, RFP's and RFQ's.

2. INTERPRETATIONS OR ADDENDA

No oral interpretation will be made to any bidder as to the meaning of the Contract Documents or any part thereof. Every request for such an interpretation shall be made in writing to the Purchasing Agent, Hall of Records, 200 Orange Street, New Haven, CT. Any inquiry received seven or more business days prior to the date fixed for opening of bids will be given consideration. Every interpretation made to a bidder will be in the form of an Addendum to the Contract Documents, and when issued will be on file at the Bureau of Purchases at least five days before Bids are opened.

The addendum will be posted on the City of New Haven web-site not less than (5) calendar days prior to the bid opening unless it is to extend the bid opening date which can happen until 5:00 PM on the day before the opening. Vendors that do not have web access or for oversized documents, the Bureau will endeavor to fax or mail addenda. In any event all such addenda shall become part of the contract and each bidder shall be bound by such addenda whether or not received by the bidder.

It is imperative that vendors check the Website for addendum - www.cityofnewhaven.com/purchasing

3. INSPECTION ON SITE

Each Bidder should visit the site of the proposed work and fully acquaint itself with the existing conditions there relating to construction and labor, and should fully inform itself as to the facilities involved, the difficulties and restrictions attending the performance of the Contract. The Bidder should thoroughly examine and familiarize itself with the Drawings, Technical Specifications and all other Contract Documents. The Contractor by the execution of the Contract shall in no way be relieved of any obligation under it due to its failure to receive or examine any form or legal instrument or to visit the site and acquaint itself with the conditions there existing and the City of New Haven will reject any claim based on the facts regarding which it should have been on notice.

4. ALTERNATE BIDS

No alternate bids will be considered unless alternate bids are specifically requested.

5. BIDS

A. Each bid must be submitted on the prescribed, separately bound bid forms. All blank spaces must be filled in as noted in ink. Bids must give the prices proposed both in words and figures and no changes shall be made in the forms or in the items mentioned therein. Erasure and other changes in the bid must be explained or noted over the initials of the bidder. In the event of any discrepancy between the written amounts and the figures, the written amounts shall govern.

B. The bidder shall sign its bid in the blank space provided for this purpose. If the bid is made by a partnership, or corporation, the name and address of the partnership or corporation shall be indicated, together with the names and addresses of the partners or officers. If the bid is made by a partnership, it must be acknowledged by one of the partners; if made by a corporation, by one of the officers.

Bidders shall furnish with their bids the following:

1. Bid Bond and Form of Surety Guaranty
2. Non-Collusion Affidavit of Prime Form # 1421
3. Disclosure & Certification Document Form #1420
- 4 Statement of Bidder's Qualifications
5. Good Faith document – MBE/WBE Utilization Form
6. Certification of Bidder Regarding Equal Employment Opportunity

The information required under (1) to (6), inclusive, shall be furnished on the forms included in the separately bound Bid Insert, and shall be subject to all requirements of the General Conditions, Special Conditions, the Specifications and Drawings.

C. The Bidder is specifically advised that any person, firm, or other party to whom it is proposed to award a subcontract under this Contract must submit a certification regarding Equal Employment Opportunity, similar to that submitted by the bidder. Approval of the subcontractor award cannot be given by the owner unless and until the proposed subcontractor has submitted the certification and/or other evidence that it has fully complied with any reporting requirements to which it is or was subject.

Although the bidder is not required to attach such certification by proposed subcontractors to its bid, the bidder is herein advised of this requirement so that appropriate action can be taken to prevent subsequent delay in subcontract awards.

D. The Owner will consider informal any bid not prepared and submitted in accordance with the provisions hereof, and may at its option waive any informalities, or accept or reject any and all bids. Any bid received after the time, date and place specified shall not be considered. No bidder may withdraw a bid within one hundred twenty (120) days after the actual date of the opening thereof.

6. BID GUARANTY

A. The bid must be accompanied by a bid guaranty, which shall not be less than specified in the invitation to bid. At the option of the bidder, the guaranty may be a certified check, bank draft, negotiable U.S. Government Bonds (at par value), or a bid bond in the form attached.

The bid bond shall be secured by a guaranty or surety company authorized and qualified to do business in the State of Connecticut and listed in the latest issue of the U.S. Treasury Circular 570. The amount of such bid bond shall be within the maximum amount specified for such company in said Circular 570. Bids will be considered nonresponsive unless accompanied by the required guaranty. Certified check or bank draft must be made payable to the order of the City of New Haven. Cash deposits will not be accepted. The bid guaranty shall insure the execution of the Agreement and the furnishing of the surety bond or bonds by the successful bidder, all as required by the Contract Documents.

B. Revised bids submitted, before the opening of the bids, whether forwarded by mail or telegram, if representing an increase in excess of two percent (2%) of the original bid, must have the bid guaranty adjusted accordingly; otherwise the Bid will not be considered.

C. Certified checks or bank drafts, or the amount thereof, bid bonds and negotiable U.S. Government bonds of successful bidders, will be returned as soon as practicable after the -opening of the bids.

7. COLLUSIVE AGREEMENT

A. Each bidder submitting a bid to the City of New Haven for any portion of the work contemplated by the documents on which bidding is based, shall execute and attach thereto an affidavit substantially in the form herein provided, to the effect that it has not colluded with any other person, firm or corporation in regard to any bid submitted.

B. Before executing any subcontract, the successful bidder shall submit the name of any proposed subcontractor for prior approval and an affidavit substantially in the form herein provided in the section SUBCONTRACTS under General Conditions.

8. STATEMENT OF BIDDER'S QUALIFICATIONS

Each bidder shall, as noted in the Bid Package, submit on the form furnished for that purpose (a copy of which is included in the Contract Documents), a statement of the bidder's qualifications, its experience record in constructing the type of improvements embraced in the Contract, and its organization and equipment available for the work contemplated; and, when specifically requested by the City, shall also submit a detailed financial statement. The City shall have the right to take such steps as it deems necessary to determine the ability of the bidder to perform its obligations under the Contract and the bidder shall furnish the City all such information and data for this purpose as it may request. The right is reserved to reject any bid where an investigation of the available evidence or information does not satisfy the City that the bidder is qualified to carry out properly the terms of the Contract.

9. UNIT PRICES

The unit prices for each of the several items in the proposal of each bidder shall include its prorata share of overhead so that the sum of the products obtained by multiplying the quantity shown for each item by the unit price represents the total bid. Any bid not conforming to this requirement may be rejected as informal. The special attention of all bidders is called to this provision, for should conditions make it necessary to revise the quantities, increase or decrease thereof may be made without limit and adjustment and compensation shall be made on the basis of the unit prices for such items.

10. CORRECTIONS

Erasures or other changes in the Bids must be noted over the signature of the bidder.

11. TIME FOR RECEIVING BIDS

A. Bids received prior to the advertised hour of opening will be securely kept sealed. The officer whose duty it is to open them will decide when the specified time has arrived, and no bid received thereafter will be considered, except that when a bid arrives in the mail after the time fixed for opening, but before the reading of all other bids is completed, and it is shown to the satisfaction of the City that the non-arrival on time was due solely to delay in the mails for which the bidder was not responsible, such bid will be received and considered.

B. Bidders are cautioned that while facsimile modification of bids may be received as provided above, such modifications, if not explicit and if in any sense subject to misrepresentations, shall make the bid so modified or amended, subject to rejection.

12. OPENING OF BIDS

At the time and place fixed for the opening of bids, the City will cause to be opened and publicly read aloud every bid received within the time set for receiving bids, irrespective of any irregularities therein. Bidders and other persons properly interested may be present, in person or by representative.

13. WITHDRAWAL OF BIDS

Bids may be withdrawn on written or facsimile request dispatched by the bidder and received by the City of New Haven in time for the bid opening; provided, that the written confirmation of any facsimile withdrawal over the signature of the bidder shall be placed in the mail and postmarked prior to the time set for bid opening. The bid guaranty of any bidder withdrawing its bid in accordance with the foregoing conditions will be returned promptly.

14. AWARD OF CONTRACT; REJECTION OF BIDS

- A. The Contract will be awarded within one hundred twenty (120) days after the date of the bid opening, to the responsible bidder submitting the lowest bid complying with the conditions of the Invitation for Bids. The bidder to whom the award is made will be notified at the earliest possible date. The City, however, reserves the right to reject any and all bids or to waive any informality in submitted bid documents whenever such rejection or waiver is in its interest.
- B. The City reserves the right to consider as unqualified to do the work required by these Contract Documents any bidder who does not habitually perform with its own forces the major portion of the work involved in construction of the improvements in these Contract Documents.
- C. The ability of any bidder to obtain a performance bond will not be regarded as the sole test of such bidder's competency or responsibility.
- D. The City will not award the Contract to any contractor who is, at the time of the award ineligible for such Contract under the provisions of any applicable regulations issued by the Secretary of Labor, United States Department of Labor, or is not qualified under applicable State and local laws and regulations.
- E. If the Contract is awarded, it will be awarded by the City to a responsible bidder on the basis of the lowest Base Bid. The Contract will require the completion of work in accordance with the Contract Documents.
- F. Availability of funds- All contracts are bid with the intention of awarding a contract as a result of the bid. Any and all awards and actual contract execution by the City of New Haven is contingent upon availability of appropriate funds. In the event that funding is not available at the time of award and/or execution of the contract the City reserves the right to cancel the bid.

15. INSURANCE

The contract resulting from this bid requires the contractor to enter upon City property, the contractor will supply insurance as specified elsewhere in these documents, at the discretion of the Purchasing Agent. In addition, the contractor and all subcontractors shall carry workers' compensation insurance or self-insurance as required by the Purchasing Agent and shall certify that they are not in arrears to the State of Connecticut Second Injury Fund.

- a. The Contractor shall carry or require that there be carried Worker's Compensation Insurance for all his employees and those of his subcontractors engaged in work at the site, in accordance with State Worker's Compensation Laws.
- b. The Contractor shall carry or require that there be carried Manufacturer's and Contractors' Public Liability Insurance with limits of **\$1,000,000 / \$2,000,000** to protect the Contractor and his subcontractors against claims for injury to or death of one, or more than one, person because of accidents which may occur or result from operations under the Contract; such insurance shall cover the use of all equipment, including but not limited to excavating machinery, trenching machines, cranes, hoists, rollers, concrete mixers, motor vehicles, etc., in the construction of the improvements embraced in this Contract.
- c. The Contractor shall carry, during the life of the Contract, Property Damage Insurance in an amount of not less than **\$1,000,000 (1 Million)** to protect him and his subcontractors from claims for property damage which might arise from operations under the contract.
- d. The Contractor shall carry, and require that his subcontractors carry, Automotive Insurance, covering all motor vehicles used on the work with a combined limit of **\$1,000,000** personal injury liability, and \$50,000 property damage liability, to protect against claims which might arise from the operations of this contract.
- e. The successful bidder shall provide certificates of insurance showing coverage by an insurance carrier authorized by the State of Connecticut to write insurance in the state. The certificates shall

show the City of New Haven as an additional named insured. Said Certificate should contain the following endorsements.

1. The Contractor agrees to hold harmless and indemnify the City arising out of negligence, gross negligence and/or willful acts of the Contractor or any of its sub-contractors in the performance of its services under this agreement.
2. Endorsement of the work description, contract name, number and location;
3. An endorsement that the insurance company will give at least thirty (30) days written notice to the City prior to any modification or cancellation of any such insurance coverage; and
4. An endorsement that the Contractor will be responsible for the payment of all-insurance premiums and/or charges.

f. At the discretion of the City, the Contractor may be asked to submit copies of his Worker's Compensation and Manufacturer's and Contractor's Public Liability, Property Damage, Automobile, Fire and Extended Coverage, if applicable, insurance policies to the City of New Haven for review and approval. The City of New Haven may, in writing, notify the Contractor of any disapproval of any such policies, and satisfactory policies shall be provided in place of those disapproved. The Contractor shall submit an insurance certificate in addition to a copy of each policy. The Contractor shall require its subcontractors to obtain policies of similar insurance before each commences work. All such insurance shall be carried with financially responsible insurance companies, licensed in the State and approved by the City of New Haven and shall be kept in force until the Contractor's work is accepted by the City of New Haven. Contracts of insurance, covering all operations under this contract, which expire before the Contractor's work is accepted by the City of New Haven shall be renewed and submitted to the City of New Haven for its approval.

16. EXECUTION OF AGREEMENT, PERFORMANCE, LABOR AND MATERIAL BOND.

- A. Subsequent to the notice of award and within ten (10) days after the prescribed forms are presented for signature, the successful bidder shall execute and deliver to the City the Agreement in the form included in the Contract Documents, in such number of copies as the City shall require.
- B. Having satisfied all conditions of award as set forth elsewhere in these documents, the successful bidder shall, within the period specified in paragraph "A" above, furnish a surety bond in a penal sum not less than the amount of the Contract as awarded, as security for the faithful performance of the Contract, and a labor and material bond for payment of all persons, firms or corporations to whom the Contractor may become legally indebted for labor, materials, tools, equipment, or services of any nature including utility and transportation services, employed or used by him in performing the work. Such bonds shall be in the same form as those included in the Contract Documents and shall bear the same date, or a date subsequent to that of the Agreement. These bonds shall be signed and issued by a guaranty or surety company satisfactory to the City, authorized and qualified to do business in the State of Connecticut, and listed in the latest issue of the U.S. Treasury Circular 570, and the penal sum of any such bond shall be within the maximum specified for such company in said Circular 570. The current power of attorney for the person who signs for any surety company shall be attached to such bonds.
- C. The failure of the successful bidder to execute such Agreement and to supply the required bonds or submit the insurance policies required in the section INSURANCE of the GENERAL CONDITIONS within ten (10) days after the prescribed forms are presented for signature, or within such extended period as the City grants based upon reasons determined sufficient by the City, shall constitute a default and the bidder's bid bond or guaranty shall be forfeited to the City of New Haven as liquidated damages. The City may either award the Contract to the next lowest responsible bidder or re-advertise for bids, and may charge against the defaulting bidder the difference between the amount of the bid and the amount for which a Contract for the work is subsequently executed, irrespective of whether the favorable Bid is received by re-advertising, the defaulting bidder shall have no claim against the City for a refund.

17. NOTICE TO PROCEED

A notice to proceed will be issued by the City Engineer within sixty (60) calendar days after the execution of the Contract by the City or the deposition of the required bonds and insurance policies whichever is last.

18. WAGES AND SALARIES

A. Attention of the bidders is particularly directed to the requirements concerning the payment of not less than the prevailing wage and salary rates specified in the Contract Documents, and the classification of employees.

B. The rate of pay set forth in the Contract Documents is the minimum to be paid during the life of the Contract. It is therefore, the responsibility of the bidders to inform themselves as to local labor conditions, such as the length of work day and the work week, overtime compensation, health and welfare contributions, labor supply and prospective changes and adjustments of rates.

19. EQUAL EMPLOYMENT OPPORTUNITY

Attention of bidders is particularly called to the requirements for insuring that employees and applicants for employment are not discriminated against because of their race, creed, color or national origin or physical handicap.

A pre-award conference concerning equal employment opportunity compliance by the Contractor will be scheduled the week prior to formal action authorizing the award of a Contract by the City. The contractor will receive forms and other documentation which must be completed and returned to the City prior to the date of the pre-award conference. The required information will detail the status of minority and women employment participation in the Contractor's current labor force, and the intended the utilization of the minorities and women in completing the work as included in the Contract Document. This information will be the Contractor's Affirmative Action/Equal Opportunity Compliance report, and will represent the major focus of discussion at the pre-award conference. The contractor is responsible for satisfying the affirmative action/equal opportunity provisions as set forth in or referred to in these Contract Documents.

20. TAXES

Bids should not include federal excise or state sales taxes; (State Sales Tax exempt under Connecticut General State Statute Sec. 12-412 (1) as the City is exempt from payment of any such taxes. The City is also exempt from transportation taxes when goods are consigned to the City. Tax Exemption certificates will be furnished by the Supervisory Auditor - Accounts Payable upon satisfactory proof of delivery to the City. Shipments should be consigned to the City in care of the Contractor.

21. UTILIZATION OF MINORITY HANDICAP AND WOMEN BUSINESS ENTERPRISES

The following requested information is for the sole purpose of gathering statistical information.

Prior to award of this Contract and in a period not more than thirty (30) days after bid opening, the contractor must furnish the following information for each Minority, Handicap Business Enterprise and Women Business Enterprise the bidder will use:

1. The name, address, and contact person for each Minority Business Enterprise, Handicap Business Enterprise and for each Women business Enterprise the bidder will use.
2. The nature of the work to be undertaken by each Minority Business Enterprise, Handicap Business Enterprise and Women Business Enterprise.
3. The dollar amount of the work to be undertaken by the Minority Business Enterprise, Handicap Business Enterprise and Women Business Enterprise.

The Contractor agrees for itself and its subcontractors, to facilitate and encourage the employment of minority, handicap and women owned businesses, small business in the construction project.

22. CITY OF NEW HAVEN POLICY ON CITY BASED BUSINESSES (when applicable)

For the purpose of this section, "City Based Business" shall mean a business with a principal place of business located within the City of New Haven. A business shall not be considered a "city-based business" unless evidence satisfactory to the purchasing agent has been submitted with **each bid submittal** by the said business to establish that said business has a principal place of business in New Haven. A "city-based business" shall maintain such status throughout the term of any Contract with the City of New Haven. Failure to maintain such status shall be grounds for the City to terminate said Contract.

On any contracts or purchases, the lowest responsible bidder shall be determined in the following order:

1. On contracts or purchases, the cost of which are one million dollars total Contract price or less, any city based bidder which has submitted a bid not more than ten (10) percent higher than the low bid, provided such city-based bidder agrees to accept the award of the bid at the amount of the low bid. If more than one city-based bidder has submitted bids not more than ten (10) percent higher than the low bid, and has agreed to accept the award of the bid at the amount of the low bid, the lowest responsible bidder shall be that one of such city-base bidder which submitted the lowest bid.
2. On contracts or purchases, the cost of which are over one million dollars, but less than five million dollars total Contract price, any city based bidder which has submitted a bid not more than five (5) percent higher than the low bid, provided such city-based bidder agrees to accept the award of the bid at the amount of the low bid. If more than one city-based bidder has submitted bids not more than five (5) percent higher than the low bid, and has agreed to accept the award of the bid at the amount of the low bid, the lowest responsible bidder shall be that one of such city-base bidder which submitted the lowest bid.
3. On contracts or purchases, the cost of which are over five million dollars total Contract price, any city based bidder which has submitted a bid not more than three (3) percent higher than the low bid, provided such city-based bidder agrees to accept the award of the bid at the amount of the low bid. If more than one city-based bidder has submitted bids not more than three (3) percent higher than the low bid, and has agreed to accept the award of the bid at the amount of the low bid, the lowest responsible bidder shall be that one of such city-base bidder which submitted the lowest bid.
4. The responsible low bidder.

The City's policy on city-based businesses shall be stated in the Invitation to Bid.

On any contracts or purchases that are put out to competitive bid, and where the City and the Contractor are to share in the revenue generated by the Contractors services, the provisions of paragraph (b) (1), (2), and (3) above shall apply.

23. Good Faith Efforts

It is a qualification for contract approval that bidders objectively demonstrate to the City positive efforts to meet the City's 25% goal for the use of minority and women-owned small businesses ("Targeted Enterprises") in the project.

If a bidder fails to meet the Targeted Enterprise goals outlined herein, the City will determine whether the bidder actively and aggressively sought to meet the goals. A bidder shall provide evidence that it took the following actions in order to establish that it made a reasonable good faith effort to meet the City's contract goals:

24. Internet Access

The City of New Haven cannot guarantee that equipment involved in this technology will be available to provide information or receive transmittals. It is your responsibility to ensure that you have current information and that submittals are received at the designated location complete and on time. The City of New Haven is not responsible for the confidentiality of information transmitted over the Internet.

Downloading Commodity/Service Bids, RFP/RFQs, Quotes or Construction Bid Documents does not obligate the city to send you future notification of addendum updates. You will need to check the web-site periodically, however no addendum will be issued later than 5 business days prior to the solicitation due Date. The only exception would be in the event of an extension, which can occur up to 24 hours prior, to the opening date.

25. Paperwork Reduction

In an effort to conserve resources we have posted the General and Standard Special Conditions on our Website in a PDF Format www.cityofnewhaven.com/purchasing

26. Construction Related Permits:

The contractor is responsible for any fees associated with sewer disconnects and reconnects

27. Billing/Invoicing/Contract Value

The Contractor agrees and understands that it is incumbent upon the Contractor to track billing. The Contractor shall send written notice to the City's Purchasing Agent and the City's department contact when eighty per cent (80%) of the total value of the contract has been performed. Said notice shall identify the RFP/Contract, reference the fact that eighty percent (80%) of the total contract has been reached, and shall include an up-to-date statement of invoices. The Contractor acknowledges that any work performed in excess of the total value of the contract shall not be paid by the City if the Contractor: (A) failed to provide notice to the City as described herein, and/or, (B) failed to obtain written permission to proceed with additional work. Work Orders sent to the contractor by City personnel are **NOT** considered as written permission to exceed the contract value.

BID

City of New Haven, Connecticut

Project Name:	NEW HAVEN TRANSFER STATION IMPROVEMENTS
City Project #:	07-161-05
Bid #:	20755

Bid Submitted by:

<i>Company Name</i>

<i>Street Address</i>

<i>City, State & Zip Code</i>

<i>Contact</i>
_____(_____)_____ (_____)_____
<i>Telephone #</i> <i>Fax #</i>

Michael V. Fumiatti
Purchasing Agent
200 Orange Street
New Haven, CT 06510

Dear Mr. Fumiatti:

The undersigned, having familiarized themselves with the existing conditions of the project area affecting the cost of the work, and with the Contract Documents (which includes Invitation to Bid, Bid Form, Bid Bond, Instructions to Bidders, Non-Collusion Affidavit, Addenda, General Conditions, Special Conditions, Technical Specifications, Drawings as listed in the Schedule of Drawings, and form of Surety Bond or Bonds as prepared by the City of New Haven, and on file at the Bureau of Purchases, 200 Orange Street, New Haven, Connecticut) hereby proposes to furnish all machinery, tools, appurtenances, equipment, and services, including utility and transportation services required to construct and complete the work, all in accordance with the above listed Documents, and submits herewith in conformity with the project manual and subsequent addenda, the following bid:

Calculation Sheet –Please view a separate document in MS Excel format posted with this solicitation.

When submitting your bid please submit information in the following format

- **Coversheet-The first page of this section**
- **Calculation sheet**
- **Required City of New Haven Forms**

It is understood an agreed that the Written Unit Prices bid for the quantities of work in the various items above shall control the Contract award; that the quantities noted above are approximate (estimated only for use in comparing bids); and that the sum obtained by multiplying the Unit Prices by the estimated quantities, and also the Total of these sums, are inserted for the purpose of checking this bid and for the convenience of the Bidder. The above Unit Prices are to be paid for the actual quantities of the several classes of work in the completed work or structure.

Should quantities be less than those shown for the Unit Prices above, only lesser, actual quantities will be allowed in calculating cost.

The City of New Haven reserves the right to make the award on the basis of the above Base Bid.

Notice to Bidders:

The Bidder's attention is called to Section 9 of the "Instructions to Bidders" and Section 306 of the Special Conditions regarding the significance of the as-bid unit prices for this project.

The Bidder understands, by signing this Bid that the City of New Haven shall REJECT any bid that has unit prices which are, in the opinion of the Purchasing Agent, obviously unbalanced. The Bidder is required to calculate the value of the various bid items on the basis of reasonable labor, material, equipment, pro rata profit and pro rata overhead costs to perform the work described in the Contract Documents. Examples of unbalanced unit prices, which would result in the Bid being rejected, are as follows:

Unbalanced Low:	
Portland Cement Concrete Paving:	\$ 1.00 per square yard
Unbalanced High:	
Portland Cement Concrete Paving:	\$100.00 per square yard
Quarry Tile:	\$ 25.00 per square foot

The above prices are cited only as examples of unbalanced high or low unit prices that are not based in any reasonable way to the actual labor/material cost of performing the work described within the Contract Documents.

In submitting this Bid, the Bidder understands that the City of New Haven reserves the right to reject any and all bids, or to waive any informality in submitted bid documents. The Bidder also understands that the City of New Haven reserves the right to accept any, all, or none of the Alternates which may be listed above, and may accept Alternates in any order at the City's sole discretion. The Bidder agrees to perform the work of each accepted Alternate for the sum quoted above for each, and to include such accepted Alternates in the Contract for Construction.

If written notice of the acceptance of this Bid and any or all of the Alternates is mailed, telegraphed, or otherwise delivered to the undersigned within ninety (90) days after the opening of the Bid, or at any time thereafter before the Bid is withdrawn, the undersigned agrees to execute and deliver any Contract in the prescribed form, and furnish the required bonds within ten (10) days after the Contract is presented to them for signature.

Bid Bond: Applicable If your bid is in excess of \$100,000

The undersigned herewith submits security equal to five percent (5%) of the Base Bid, the sum of: _____ dollars and no cents, \$ _____.

This security shall be the sole and exclusive property of the City of New Haven as liquidated damages to the City, if the undersigned fails to execute a Contract in conformity with the accompanying forms, after due date notification therefore in the Contract Documents.

Other Conditions:

Attached hereto is an affidavit in proof that the undersigned has not colluded with any person with respect to this Bid, or any other bid, or in the submitting of this Bid.

The Bidder is enclosing a statement of its qualifications and is prepared to submit a financial statement upon request.

The acceptance of subcontractors shall rest with the City and its decision shall be final.

Addendum Acknowledgement (if applicable)

Respondents should check website to confirm addendum.

<http://www.cityofnewhaven.com/purchasing> If you do not have Internet access, you must contact the Bureau of Purchases @ 203-946-8201.

The Respondent hereby acknowledges receipt of the following Addenda
Include signed copies of addenda with your bid submittal:

Addendum Number	Date received	Signature

Bidder's Official Name and Address::		

Company Name		

Street Address		

City, State & Zip Code		

Contact		

E-mail address		

Signature	Title	Date

BID BOND (Applicable if your base bid is in excess of \$100,000)

KNOW ALL MEN BY THESE PRESENTS, THAT we the undersigned,

_____ (Name of Principal)

as PRINCIPAL, and _____

as SURETY are held and firmly bound unto the City of New Haven hereinafter called the "City", in the penal sum of _____ dollars (_____), lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITIONS OF THE OBLIGATIONS IS SUCH THAT whereas the principal has submitted the accompanying bid dated _____, 200_ for _____

NOW THEREFORE, if the principal shall not withdraw said bid within the period specified therein after the opening of same or if no period be specified within 60 days after the said opening, and shall within the period specified therefore, or, if no period be specified within 10 days after the prescribed forms are presented to him for signature, enter into a written Contract with the City of New Haven in accordance with the bid as accepted, and give bond with good and sufficient surety or sureties, as may be required for the faithful performance and proper fulfillment of such Contract, or in the event of the withdrawal of said bid within the period specified, or the failure to enter into such Contract and give such bond within the time specified, if the principal shall pay the City of New Haven the difference between the amount specified in said Bid and the amount for which the City of New Haven may procure the required work or supplies or both, if the latter amount be in excess of the former, than the above obligations shall be void and of no effect, otherwise to remain in full force and effect.

IN WITNESS WHEREOF, the above bounded parties have executed this instrument under their several seals this _____ day of _____, 200____, the name and Corporate Seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

For Sole Proprietor

In presence of:

_____	_____ (Seal)
(Witness Signature)	(Individual Principal)
_____	_____
(Witness Signature)	(Business Address)

For Partnership

In presence of:

(Seal)

(Witness Signature)

(Partnership)

(Witness Signature)

By: _____

(Business Address)

For Corporation

Attest:

(Corporate Principal)

(Business Address)Affix
Corporate
Seal

By: _____

Attest:

(Corporate Surety)

Countersigned

(Business Address)Affix
Corporate
Seal

By: _____

By: _____

Attorney-in-Fact, State of _____

CERTIFICATE AS TO CORPORATE PRINCIPAL
(Applicable if your base bid is in excess of \$100,000)

I, _____, certify that I am the
_____ of the Corporation named as principal in the
within
bond, that _____ who signed the said bond
on behalf
of the principal was then _____ of said Corporation;
that I know
its signature, and its signature thereto is genuine, and that said bond was duly signed,
sealed and attested to for and in behalf of said Corporation by authority of its governing
body.

_____(Corporate)
(Seal)

Title: _____

FORM OF SURETY GUARANTY
(Applicable if your base bid is in excess of \$100,000)

KNOW ALL MEN BY THESE PRESENTS, that for and in consideration of the sum of \$1.00, lawful money of the United States, the receipt whereof is hereby acknowledged, paid the undersigned corporation, and for other valuable consideration, the

(Name of Surety Company)

a corporation organized and existing under the laws of the State of _____ and licensed to do business in the State of Connecticut, certified and agrees, that if Contract _____ Project number _____ is awarded to _____, the undersigned Corporation will execute
(Name of Bidder)
the bond or bonds as required by the Contract Documents and will become Surety in the full amount of the Contract Price for the faithful performance of the Contract and for payment of all persons supplying labor or furnishing materials in connection thence with.

(Surety)

(The Surety Company must append statement of its financial condition and a copy of the resolution authorizing the execution of bonds by officers of the company, and the power-of-attorney of the surety company's attorney-in-fact, authorized to act within the State of Connecticut).

(To be accompanied by the usual proof of authority of officers of surety company to execute the same).

THE CITY OF NEW HAVEN

BUREAU OF PURCHASES

200 Orange Street

Room 401

New Haven, Connecticut 06510

(203) 946-8201 - FAX (203) 946-8206

JOHN DeSTEFANO, JR.

Mayor



Michael V. Fumiatti

Purchasing Agent

NON-COLLUSION AFFIDAVIT OF PRIME BIDDER/PROPOSER

State of _____ County of (_____) ss.

_____, being first duly sworn, deposes and says that:

1. He/She is (owner, partner, officer, representative, or agent) of _____, the bidder/proposer that has submitted the attached bid/proposal. (Bidder/Proposer's name)

2. He/She is fully informed respecting the preparation and contents of the attached bid/proposal and of all pertinent circumstances respecting such Bid/Proposal;

3. Such Bid/Proposal is genuine and is not collusive or sham Bid/Proposal;

4. Neither the said Bidder/Proposer nor any of its officers, partners, owners, agents, representative, employees, or parties in interest, including this affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly with any other bidder/proposer, firm or person to submit a collusive or sham Bid/Proposal in connection with the Contract for which the attached Bid/Proposal has been submitted or to refrain from bidding/proposing in connection with such Contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other bidder/proposer, firm or person to fix the price or prices in the attached Bid/Proposal or of any other bidder, or to fix any overhead, profit or cost element of the bid/proposal prices or the Bid/proposal price of any other bidder/proposer, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the City of New Haven or any person interested in the proposed Contract;

5. The price or prices quoted in the attached /Proposal are fair and proper and are not tainted by any collusion, conspiracy, connivance, or unlawful agreement on the part of the bidder/proposer or any of its agents, representatives, owners, employees, or parties in interest, including this affiant; and

6. That no Alderman or other officer or employee or person whose salary is payable in whole or in part from the City Treasury is directly or indirectly interested in the Bid/Proposal, or in the supplies, materials, equipment, work or labor to which it relates, or in any of the profits thereof.

(Signed) _____

(Title) _____

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

(Title)

My commission expires _____, ____.

THE CITY OF NEW HAVEN

BUREAU OF PURCHASES

200 Orange Street

Room 401

New Haven, Connecticut 06510

(203) 946-8201 - FAX (203) 946-8206

JOHN DeSTEFANO, JR.

Mayor



Michael V. Fumiatti

Purchasing Agent

DISCLOSURE & CERTIFICATION AFFIDAVIT OF OUTSTANDING OBLIGATIONS TO THE CITY OF NEW HAVEN

Vendor Name	
VENDOR ADDRESS	
TELEPHONE /FAX	
E-MAIL ADDRESS	
BID TITLE	
BID #	

For the purposes of this Disclosure of Outstanding Financial Obligations, the following definitions apply:

- (a) "Contract" means any Public Contract as defined below.
- (b) "Person" means one (1) or more individuals, partnerships, corporations, associations, or joint ventures.
- (c) "Public Contract" means any agreement or formal commitment entered into by the city to expend funds in return for work, labor, services, supplies, equipment, materials or any combination of the foregoing, or any lease, lease by way of concession, concession agreement, permit, or per agreement whereby the city leases, grants or demises property belonging to the city, or otherwise grants a right of privilege to occupy or to use said property of the city.
- (d) "City" means any official agency, board, authority, department office, or other subdivision of the City of New Haven.

State of _____)

SS.

County of _____)

_____, being first duly sworn, deposes and says that:

1. I am (*circle one*) [owner, partner, officer, representative, agent or _____] of _____, the Contractor that has submitted the attached agreement.
(Contractor's name)
2. I am fully informed respecting the preparation and contents of the attached Agreement and of all pertinent circumstances respecting such Agreement;

3. **That as a person desiring to contract with the City (check all that apply):**

The Contractor and each owner, partner, officer, representative, agent or affiliate of the Contractor has filed a list of taxable personal property with the City of New Haven for the most recent grand list, as required by Conn. Gen. Stat. §12-42.

Neither the Contractor nor any owner, partner, officer, representative, agent or affiliate of the Contractor are required to file a list of taxable personal property with the City of New Haven for the most recent grand list, as required by Conn. Gen. Stat. §12-42.

Neither the Contractor nor any owner, partner, officer, representative, agent or affiliate of the Contractor either directly or through a lease agreement, owes back taxes to the City of New Haven

Neither the Contractor nor any owner, partner, officer, representative, agent or affiliate of the Contractor either directly or through a lease agreement, has any other outstanding obligations to the City of New Haven

The Contractor or an owner, partner, officer, representative, agent or affiliate of the Contractor owes back taxes and has executed an agreement, satisfactory to the tax collector, to pay said back taxes in installment payments and the payments under said agreement are not in default. **The agreement shall be attached**, and incorporated herein by reference.

4. **The following list is a list of the names of all persons affiliated with the business of the Contractor, if none state none. Use additional sheet if necessary (Must be on company letterhead and notarized):**

Name	Title	Affiliated Company (if none state NONE)	Service or Material	DOB
1				
2				
3				
4				
5				
6				
7				

5. **That as a person desiring to contract with the City:**

(a) **The Contractor or an owner, partner, officer, representative, agent or affiliate of the Contractor provides, or has provided, services or materials to the City within one (1) year prior to the date of this disclosure, if none, state none.** Use additional sheet if necessary (Must be on company letterhead and notarized):

Name	Title	Affiliated Company (if none state NONE)	Service or Material	DOB
1				
2				
3				
4				
5				
6				

(b) **The Contractor possesses an ownership interest in the following business organizations, if none, state none.** Use additional sheet if necessary (Must be on company letterhead and notarized) :

Organization Name	Address	Type of Ownership		
1				
2				
3				
4				

(c) **The following persons possess an ownership interest in the Contractor. If the Contractor is a corporation, list all of the officers of the corporation and the names of each stockholder whose shares exceed twenty-five (25) percent of the outstanding stock, if none, state none.** Use additional sheet if necessary (Must be on company letterhead and notarized):

Name	Title	DOB	Stock %	
1				
2				
3				
4				
5				
6				
7				

(d) Of the following of the affiliates, individuals or business entities identified in this affidavit, list each that owns, owned, or within one (1) year prior to the date of this disclosure has owned, taxable property situated in the City of New Haven, if none state none. Use additional sheet if necessary (Must be on company letterhead and notarized):

Name	Title	Affiliated Company (if none state NONE)	Address	DOB
1				
2				
3				
4				
5				
6				
7				

(e) If the Contractor conducts business under a trade name, the following additional information is required: the place where such entity is incorporated or is registered to conduct such business; and the address of its principal place of business, if none, state none:

TRADE NAME	PLACE OF INCORPORATION/REGISTRY	PRINCIPAL PLACE OF BUSINESS
1		
2		
3		
4		
5		
6		

I hereby certify that the statements set forth above are true and complete, and I understand that any incorrect information or omission of information from this affidavit may result in the immediate termination of the Contractor's agreement with the City of New Haven.

(Signed) _____
Title:

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

(Title)
My commission expires _____, _____.

This Form Must be Notarized

STATEMENT OF BIDDER'S QUALIFICATIONS
(Required submittal with your Bid)

All questions must be answered and the data given must be clear and comprehensive. This statement must be notarized. If necessary questions may be answered on separate attached sheets. The Bidder may submit any additional information it desires.

1	Name of Bidder	
2	Bidder's Tax Identification #	
3	Permanent Main Office Address	
4	When Organized	
5	If a Corporation, What state are you incorporated in?	
6	How many years have you been engaged in construction under your present firm or trade name:	
7	Contracts on hand and recently completed: (Schedule these, showing gross amount of each Contract and the appropriate anticipated dates of completion).	
8	General character of work performed by you	
9	Have you ever failed to complete or defaulted on any work awarded to you? If so, where and why	
10	List your major equipment available for this Contract	
11	Experience in work similar in importance to this project	
12	Background and experience of the principal members of your organization, including the officers.	
13	Give Bank reference	
14	Will you upon request, fill out a detailed financial statement and furnish any other information that may be required by the City of New Haven?	

15. The undersigned hereby authorizes and requests any persons, firm, or corporation to furnish any information requested by the City of New Haven in verification of the recitals comprising this statement of the Bidder's qualifications.

Dated at _____ this _____ day of _____ 200__.

(Name of Bidder)

By: _____

Title: _____

State of _____)

) SS

County of _____)

_____ being duly sworn, deposes and says that
he/she is

_____ of _____ and that
he/she answers to the foregoing questions and all statements therein are true and correct.

Subscribed and sworn to before me this _____ day of _____ 200_

(Notary Public)

My Commission Expires: _____

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

**CERTIFICATION OF BIDDER REGARDING
EQUAL EMPLOYMENT OPPORTUNITY**

INSTRUCTIONS

This certification is required pursuant to Executive Order 11246 (30 F.R.12319-25). The implementing rules and regulations provide that any bidder or prospective contractor, or any of their proposed subcontractors, shall state as an initial part of the bid or negotiations of the Contract whether it has participated in any previous contracts or subcontract subject to the equal opportunity clause; and, if so, whether filed all compliance reports due under applicable instructions.

Where the certification indicates that the bidder has not filed a compliance report due under applicable instructions, such bidder shall be required to submit a compliance report within seven calendar days after bid opening. No contract shall be awarded unless such report is submitted.

CERTIFICATION BY BIDDER

Bidder's Name: _____

Address and zip code: _____

1. Bidder has participated in a previous contract or subcontract subject to the Equal Opportunity Clause.

Yes [] No [] (If answer is yes, identify the most recent contract).

2. Compliance reports were required to be filed in connection with such contract or subcontract.

Yes [] No [] (If answer is yes, identify the most recent contract).

3. Bidder has filed all compliance reports due under applicable instructions, including SF-100.

Yes [] No [] None required

4. If answer to item 3 is "NO", please explain in detail on reverse side of this certification.

Certification - The information above is true and complete to the best of my knowledge and belief.

Name and address of the signer (please type)

Signature

Date

EQUAL EMPLOYMENT OPPORTUNITY AGREEMENT

During the performance of this contract, the Contractor agrees as follows:

- a. To comply with all provisions of Executive Order 11246 and Executive Order 11375, Connecticut Fair Employment Practices Act, and the contract compliance ordinance of the City of New Haven, including all standards and regulations which are promulgated by the government authorities who established such acts and requirements, and all standards and regulations are incorporated herein by reference;
- b. Not to discriminate against any employee or applicant for employment because of race, color, religion, age, sex, physical disability or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to race, color, religion, sex, age, or national origin and physical handicap. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship;
- c. To post, in conspicuous place available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause;
- d. To state, in all solicitations or advertisement for employees placed by or on behalf of the contract, that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, age, physical disability or national origin;
- e. To send to each labor union representative of workers with whom it has a collective bargaining agreement, or other contract or understanding, a notice advising a labor union or worker's representative of the contractor's commitments under the equal opportunity clause of the City of New Haven, and shall post copies of the notice in conspicuous places available to employees and applicants for employment. The contractor shall register all workers in the skilled trades, who are below the journeyman level, with the Apprentice Training Division of the Connecticut State Labor Department;
- f. To utilize labor department and city sponsored manpower programs as a source of recruitment and to notify the contract compliance unit and such programs of all job vacancies;
- g. To take affirmative action to negotiate with qualified minority contractors for any work which may be proposed for subletting, or for any additional services, or work which may be required as a result of this contract;
- h. To cooperate with city departments in implementing required contract obligations for increasing the utilization of minority business enterprises;
- i. To furnish all information and reports required by the Contract Compliance Director pursuant to section 12 1/2 -1, 12 1/2-19 through section 12 1/2-32, 12 1/2-48 through 12 1/2-52 and to permit access to his books, records and accounts by the contracting agency, the Contract Compliance Officer, and the Secretary of Labor for purposes of investigation to ascertain compliance with the program;
- j. If such contractor employs three or more employees to refrain from paying such employees dues and related expense for clubs that restrict membership use of their facilities on the basis of race, color, sex, religion, national origin or ancestry;
- k. To take such action, with respect to any subcontractor, as the City may direct as a means of enforcing the provisions of sub-paragraphs (a) through (m) herein, including penalties and sanctions for noncompliance, provided however that, in the event the contractor becomes involved or threatened with litigation as a result of such direction by the City, the City will intervene in such litigation to the extent necessary to protect the interest of the City and to effectuate the City's Equal Employment Opportunity Program, in the case of funded directly or indirectly, in whole, or in part, under one or more Federal Assistance Programs, the contractor or the City may ask the United States to enter into such litigation to protect the interest if the United States;
- l. To file, along with his subcontractors, if any, compliance reports with the City in the form and to the extent prescribed in the contract by the Contract Compliance Director of the City of New Haven. Compliance reports filed at such times as directed shall contain information as to the employment practices, policies, programs and statistics of the contractor and his subcontractors, if any;

m. To include the provisions of sub-paragraphs (a) through (m) of this Equal Opportunity Clause in every subcontract or purchase order so that said provisions will be binding upon each such subcontractor or vendor;

n. That a finding, as hereinafter provided, of a refusal by the contractor, or subcontractor, to comply with any portion of this program as herein stated and described, may subject the offending party to any or all of the following penalties:

1. Withholding of all future payments under the involved public contract to the contractor in violation until it is determined that the contractor, or subcontractor, is in compliance with the provisions of the contract;
2. Refusal of all future bids for any public contract with the City of New Haven, or any of its departments or divisions, until such time the contractor or subcontractor, is in compliance with the provisions of the contract;
3. Cancellation of the public contract;
4. Recovery of specified monetary penalties;
5. In case of a substantial or material violation, or the threat of substantial or material violation of the compliance procedure or as may be provided in for by the contract, appropriate equitable or legal proceedings may be brought to enforce these provisions against contractors, subcontractors or other organizations, individuals or groups who directly or indirectly are not in compliance with the policy herein outlined. (Ord. of 12-5-77).

IN WITNESS WHEREOF, on the _____ day of _____, 200__, the contract has caused three counterparts of this Agreement to be executed and delivered.

WITNESS:

(Contractor)

(Signature)

By: _____
(Signature)

(Signature)

MBE SUB CONTRACTOR UTILIZATION AGREEMENT

During the performance of this **Contract**, the **Contractor** agrees to comply with all provisions of the Small Business Enterprise Construction Opportunity Initiative Ordinance section 12 1/4 9. The City's provisions are as follows:

(a) The City's specific goals for utilization of MBE subcontractors are defined in Section 12 1/4 -5 of this Ordinance. The City hereby requires that all parties bidding or otherwise seeking to be qualified as a Contractor with respect to a City Construction Contract (a "Potential Contractor") shall aggressively make every effort to obtain MBE participation in order to achieve the utilization goals.

(b) The provisions of this section 12 1/4 - 9 shall apply to all City Construction Contracts that are over \$100,000 and that are not bid through the Set-Aside program.

(c) The City intends to award City Construction Contracts to the lowest responsible bidder that has achieved or made a good faith effort to achieve the MBE utilization goals. Failure by any Potential Contractor to demonstrate that they have either achieved the utilization goals, or that they have made good faith efforts to achieve the utilization goals as required hereunder, will result in a determination by the Purchasing Agent that the Potential Contractor is not a responsible bidder with respect to the City Construction Contract in question.

(d) In order to achieve the MBE utilization goals, a Contractor may award contracts to Subcontractors that are certified as MBEs for the purpose of this program, or may enter into a joint venture (or other commercially reasonable relationship which is satisfactory to the City for the purposes of this program) with one or more MBEs, for the purpose of carrying out the City Construction Contract. The MBE(s) must perform actual construction work (or construction-related work such as site preparation, etc.) and not merely act as a passive conduit.

(e) A Potential Contractor shall submit signed contracts or letters of commitment with the MBEs that will be utilized by the Potential Contractor in the carrying out such City Construction Contract, together with a list of the respective dollar amounts payable to each such MBE. For credit to be given, each MBE must be registered as an MBE prior to submittal of such list by the Potential Contractor.

(f) A general Contractor will be considered in compliance with the goals if they have achieved at least 25% overall MBE utilization on their subcontracts for a particular project.

(g) If the Potential Contractor can demonstrate that it has successfully achieved the 25% overall MBE utilization goals for subcontracting, the Bureau of Purchases is not required to evaluate other efforts the prime bidder made to achieve the goal. If, however, the Potential Contractor has failed to meet this goal to be considered for the bid, the Potential Contractor's good faith effort will be evaluated, verified and will generally be recognized if a Contractor has accomplished at least four of the following:

(1) The placing of the subcontracting opportunity on an approved City Construction opportunity website, at least 10 days in advance of selection.

(2) The placing of advertisements in at least two local newspapers and at least one specialist publication aimed at small Contractors not less than two weeks prior to submittal of its bid or proposal, which advertisements shall have described the type of work being solicited, set forth the name, address and telephone number of a contact person at the Potential Contractor with knowledge of the project to which the City Construction Contract relates and stated where appropriate plans and specifications could be obtained.

(3) The mailing of notices (certified mail, return receipt requested) to at least four business associations and/or development agencies which disseminate bid and other construction-related information to businesses within the Greater New Haven area, not less than two weeks prior to its bid or proposal, which advertisements shall have described the type of work being solicited, set forth the name, address and telephone number of a contact person at the Potential Contractor with knowledge of the project to which the City Construction Contract relates and stated where appropriate plans and specifications could be obtained.

(4) Verification of quotes received from subcontractors that were denied because of cost, quality, availability, etc.

(5) Verification of outreach to and collaboration with the Regional Contractor's Alliance.

(6) A detailed description of any attempts made to enter into joint ventures or other such arrangements with MBEs and /or assistance provided to MBEs relative to review of plans and specifications or other documents issued by the City, review of work to be performed, encouragement of other Subcontractors to utilize MBEs, and any other such efforts undertaken to encourage the participation of MBEs and all actions taken by the Potential Contractor with respect to any proposals received from MBEs, including, where appropriate, the reasons for the rejection of any such proposals.

(7) Other efforts as determined in advance by the Purchasing Agent.

(h) The burden of proof is on the bidder. Whether or not any such Potential Contractor made a good faith effort to achieve the utilization goals shall be a question of fact to be decided by the City, acting in its reasonable discretion. A committee composed of a representative from Small Business Initiative, the Corporation Counsel’s Office, and the Bureau of Purchasing will evaluate whether such good faith effort was achieved in accordance with the provisions of this Ordinance.

(i) The Potential Contractor shall be required to document their good faith efforts in the form of an affidavit signed by a principal or other authorized person of the Contractor and submitted with their bid. If the affidavit or other the documentation submitted by the Potential Contractor does not provide compelling, verifiable evidence of a good faith effort, the bidder will be considered a non-responsive bidder for failing to meet the City’s good faith effort requirements, and the bid may be rejected. If a bidder submits more than one non-responsive bid within a 12-month period, that bidder will be disqualified from all future bids within the next 12 months.

(k) If at least one bidder has met the utilization goal or demonstrated a good faith effort, all non-responsive bids will be rejected, and the contract shall be awarded to the bidder who has demonstrated a good faith effort, so long as rejection of the non-responsive bids, in the discretion of the Purchasing Agent, will not lead to gross inefficiency of public resources.

(l) If all Potential Contractors are non-responsive bidders, the Purchasing Agent will have discretion to reject all bids and to rebid the project, or to accept the lowest, otherwise-responsible, bidder in accordance with the provisions of this Section.

IN WITNESS WHEREOF, on the _____ day of _____, 200__, the contract has caused three counterparts of this Agreement to be executed and delivered.

(Contractor)

WITNESS:

_____ (signature)

By: _____ (signature)
(signature)

_____ (signature)

_____ (title)

City of New Haven

MBE Utilization Documentation – Subcontractor Listing

Project Name and Number: _____

The Contractor herewith submits a complete list all Subcontractors to be used on the project by name address, type of work, dollar amount, outreach method used to secure subcontractor and appropriate company classification. If no Subcontractors are to be utilized, please indicate below.

Name of Contractor	Address	Telephone	Contact	Type of Work	Dollar Amount	Ty Out

I _____ representing _____ Certify that I have
 read the City of New Haven's goals _____
Company Name
 for use of minority and women owned small businesses and I have achieved the Goal of 25% participation.

Signature

Type Name & Title

Date

City of New Haven

Current Workforce Certificate

Equal Opportunities

Bidder/Proposer : _____

Address _____

City, State _____

Zip Code _____

	Racial Group													
	MALE					FEMALE								
	W	AA	HA	H	O	W	AA	HA	H	O			TOTAL	
JOB CATEGORIES														
Officials & Managers														
Professionals														
Technicians														
Sales Force														
Office & Clerical														
Craftsmen (skilled)														
Operatives (semi-skilled)														
Laborers (unskilled)														
Service Workers														
Total														

Are you a disadvantaged business enterprise ?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Are you a women's business enterprise ?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Does your company have an affirmative action plan ?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>

W - White (Caucasian)
 HA - Hispanic American
 O - Other

AA - African American
 H - Handicapped



BUREAU OF PURCHASES

CITY OF NEW HAVEN

200 Orange Street, New Haven, Connecticut 06510

Telephone (203) 946-8201

Facsimile (203) 946-8206

E-mail: Purchasing@newhavenct.net

"No Bid" Form

(Return of this form indicates " No Bid")

Date:		
Project Name:		
Company Name:		
Contact Name:		
Telephone:		
Reason for No Bid:		
Would you like to remain on our Bidder's List?	YES	NO
Signature:		

City of New Haven
Bid Contract Documents
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SPECIAL CONDITIONS

301. **PROJECT SITE**

The project area is shown on the plans within the City of New Haven, Connecticut. The contractor shall respect the limit lines as shown. Any areas outside the project limits for operations shall be approved by the City Engineer or other applicable City Departments.

302. **CONTRACT AUTHORITY**

The contracting authority for this project is the **Department of Engineering** of the City of New Haven, acting through the City Engineer.

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The work performed under this Contract consists of providing labor, supervision, materials, equipment and all incidentals required to: Construct the work as described in the Contract Documents or as directed by the Engineer.

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If applicable see Contract Drawings

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The Contractor shall commence work under this contract within ten (10) days of the date of "Notice to Proceed" issued by the City Engineer and shall fully complete all the work stipulated in these Contract Documents within 240 days after commencement date, except as modified.

306. **SEQUENCE OF OPERATIONS**

The work on this Contract shall be coordinated with other work, which may be under construction or contemplated in the same general area. So that work under this Contract may conform to the conditions under which it has been undertaken, the City Engineer will determine the point or points and time or times when portions of the work will be commenced or carried on, and will issue work orders relative thereto. Such determination of orders will have no effect on the contract cost and will not be considered as the basis of claims for additional compensation.

307. LIQUIDATED DAMAGES FOR DELAY

The Contractor guarantees that he can and will complete the work within the time limit stated in the Contract Documents or within the extended time limit provided elsewhere in the Documents. Since the damages and losses to the City which will result from the failure of the Contractor to complete the work within the stipulated time will be most difficult or impossible to accurately assess, the damages to the City for such delay and failure on the part of the Contractor will be liquidated in the sum of **Five Hundred Dollars and No Cents (\$500.00)** each calendar day, Sundays and Holidays included, by which the Contractor fails to complete the work of any part thereof, in accordance with the provisions hereof and such liquidated damages will not be considered a penalty. The City will deduct and retain from the moneys due or become due hereunder, the amount of the liquidated damages, and in case those amounts are less than the amount of liquidated damages, the Contractor shall be liable to pay the difference upon demand by the City.

308. LIMITS OF INCREASE AND DECREASE OF UNITS

The unit price for each of the several items in the proposal of the contractor shall include its pro rata share of overhead, so that the sum of the products obtained by multiplying the unit price by the shown quantity for each item represents the total cost. Should conditions necessitate revision of the quantities, increases and decreases thereof may be made without limit and adjustment, and payment shall be made on the basis of the unit prices for such items provided the net value of such additive and subtractive changes in quantities of such items of work (i.e. difference in cost) shall not increase or decrease the original price of the total contract by more than one hundred percent (100 %).

309. CALL BEFORE-YOU-DIG

The Contractor's attention is called to the fact that they are obligated, by State Law, to notify the Public Utilities Control Authority (1-800-922-4455) 48 hours prior to beginning any digging or discharging of explosives. This "One Call Before-You-Dig" system will assure that each utility company will have marked its lines in the field before any digging activity commences. The Contractor assumes all responsibilities for any damage to the various utility services, and all liabilities arising therefrom. The following companies have public utility services within the City limits:

Southern New England Tel. Co.
P.O. Box 1562
4 Hamilton Street
New Haven, Connecticut

South Central Connecticut
Water Authority
90 Sargent Drive
New Haven, Connecticut

Comcast Cable
630 Chapel Street.
New Haven, CT

Southern Connecticut Gas Co.
60 Marsh Hill Rd.
Orange, Connecticut

United Illuminating Co.
157 Church Street
New Haven, Connecticut

AT&T Fiber Optics
75 Pent Highway
Wallingford, CT 06492

The Contractor shall make the necessary arrangements with the respective Utility Companies and provide grades for the resetting and adjusting of private utility company manholes and grade boxes, and the relocation of poles and hydrants; all at no additional cost to the City. Any delays, which are caused by conflicts with utility lines, shall not be considered as a basis of extending the time for completion.

310. DUST CONTROL

The Contractor shall be responsible for controlling dust from its operations, and when ordered by the Engineer shall use whatever methods necessary for dust control, in a manner satisfactory to the Engineer. No additional payment for this work will be made, and all costs including labor, materials, and equipment shall be considered to be included in the various contract unit prices.

311. OTHER CONSTRUCTION AND CONTRACTORS

The Contractor's attention is called to the following:

Utility Companies' crews may be working at the project site from time to time. It shall be the Contractor's responsibility to coordinate and schedule its operations so as not to cause any conflicts between themselves and the various utilities. All costs incurred in coordinating and scheduling the various operations shall be included in all the Contract Unit Prices and no additional payments for this work will be allowed.

312. SAFETY

The Contractor will ensure compliance with the Federal "Safety and Health Regulation for Construction" by the Department of Labor, Bureau of Labor Standards' "Construction Safety Codes", amended to date, whichever is more stringent for the applicable requirement.

313. WAGES

The wages paid on this Contract shall meet or exceed the prevailing wages at the time of the bid, as documented and issued by the Connecticut Department of Labor.

314. LAWS

All work will be in conformance with any and all applicable laws of the Federal Government, State of Connecticut, and City of New Haven relating to the Contract and are hereby included by reference.

315. BASIS OF PAYMENT

Payment shall be made at the various Contract unit prices for all work performed. Prices shall include the cost of all labor, materials, equipment, and all incidentals necessary to complete the work in accordance with the Specifications and to the satisfaction of the City Engineer.

316. WATER POLLUTION ABATEMENT

Under no circumstances shall the Contractor allow sanitary sewage to be discharged into any storm sewer, river, brook, stream, creek, storm ditch, or the New Haven Harbor. In case of the failure of any component of the sewer system, the Contractor shall take immediate action to insure that sanitary sewage does not discharge into any storm sewer, river, brook, stream, creek, storm ditch, or the New Haven Harbor. These immediate actions shall include whatever labor (including overtime), materials, and equipment as may be required and all work shall be done at no cost to the City. If no action is taken within twelve (12) hours of discovery or notification that the sewage system has failed or is any way defective, the City may proceed with corrective work and deduct whatever costs are incurred from future payments to the Contractor.

317. DESCRIPTION OF WORK

All materials furnished and used in the completed work shall be new, of best quality, and recognized as standard in construction practices. Whenever a specification number of reference is given, the subsequent amendments (if any) shall be included. The standards set forth in the selection of materials and supplies are intended to conform to those standards adopted by the Owner. Preference in manufacture shall be given to adopt standards, and the Contractor shall further familiarize themselves with the requirements of the Owner when the occasion or choice of materials or supplies so demands.

318. METHODS OF CONSTRUCTION

No materials shall be used which are known or found to be defective in any way. Notice shall be given to the Owner of any defective or imperfect material. Defective or unfit material, found to have been used, shall be removed and replaced by the Contractor with sound and unobjectionable material without additional expense to the Owner. All materials furnished by the Contractor are subject to thorough inspections and tests by the Owner. The Contractor shall submit samples as required by the Owner, of the various materials used on the contract for testing purposes. All ordering lists shall be submitted for approval to the Owner by the Contractor. Materials shall not be ordered until the ordering lists have been approved.

319. MOBILIZATION AND DEMOBILIZATION

This item shall consist of all the work necessary for the movement of personnel and equipment to and from the project site. No separate payment shall be made for this work, unless specifically specified, and all costs incurred shall be considered to be included in the contract unit prices.

320. EXISTING CONDITIONS

The site conditions are as of the day the Contractor begins work. All work to be performed will be based on the conditions found at that time. It is the obligation of the Contractor to inform the City of any substantial changes in the site conditions that have occurred between the time the bid is opened and the notice to begin work. Any substantial change in the site during this period will be evaluated as to its impact on the contract cost and its impact on the notice to proceed. A substantial change may require re-bidding the entire project. This will be at the sole discretion of the City and the Contractor awarded the project will have no

adverse claim against the City if such determination has been made. No claims or extras will be allowed for any changes in site conditions due to the contractor discovery after the commencement of work, unless there is an approved change order.

The City assumes that the contractor, during the process of developing his bid, has thoroughly examined the site or project area and has disclosed any obvious defects in the plans and specifications prior to bid and has entered into this agreement to complete all work required in the contract at the bid price(s) submitted and accepted.

321. EXISTING SEWERS AND CULVERTS

The Contractor shall be responsible for maintaining and protecting all existing sewers and culverts encountered in the work under this contract. Hand excavation and adequate bracing and shoring shall be employed where required to insure the structural integrity of said existing structures. The Contractor shall save the City of New Haven harmless and shall be solely responsible for any liabilities or damages arising from their work near, under, or through existing sewers and culverts. The Contractor shall repair and replace, as required by the Engineer, any existing sewers or culverts damaged as a result of their work. No payment by the CITY for work covered in this section, unless authorized in writing by the Engineer. The Contractors shall schedule their operations so that the existing sewers will have uninterrupted flow at all times.

322. SURPLUS AND REJECTED EXCAVATED MATERIAL

All surplus excavated material determined by the Engineer to be suitable, but not required for use within the limits of work, shall remain the property of the City. All such material shall be transferred to the City owned landfill located at Middletown Avenue or any other City stockpile area and deposited in areas assigned by the Engineer. All costs involved in the removal, hauling and depositing of the suitable surplus excavated material shall be considered to be included in the various Contract Unit Prices, and no separate payment will be made for any work involved in this section. The determination of whether or not surplus excavated material is suitable rests solely and exclusively with the Engineer.

All unsuitable excavated material, and/or construction/demolition material shall become the Contractor's property and it shall be removed from the site and disposed of by the Contractor in a legally acceptable manner. The City **will not accept** any of the following material, examples of which include, but are not limited to: sanitary and/or storm sewer pipe, brick, block, concrete, bituminous asphalt, boulders, lumber, plastics, ferrous and non-ferrous metals, vegetation of any type, fine grained impervious soils, muck, peat, etc. The costs involved in the removal, hauling and legal disposal of these materials shall be considered to be included in the various contract unit prices. No separate payment will be made for any work involved in this section.

323. REPORTS, RECORDS AND DATA

The contractor and each of his subcontractors shall submit to the City, schedules of quantities and costs, progress schedules, payroll reports, estimates, records and other data as the City may request concerning the work performed or to be performed under this contract.

324. TRAFFIC AND CONSTRUCTION

The Contractor shall maintain and protect traffic in accordance with the following additional requirements:

1. Where referred to herein, "Authorized Work Hours" are to be 7:00 AM to 7:00 PM, Monday through Friday only.
2. At no time shall work occur on any portion of this project without prior written approval from City Engineer for work outside Authorized Work Hours.
3. All trenches must be either backfilled or covered with steel plate, all public rights-of-way clean of debris, material, equipment, supplies, etc. And all streets must be fully open to traffic by 7:00 PM it is the Contractor's responsibility to notify the City Engineer immediately, should conditions require the delay of opening any street after 7:00 p.m.
4. No detouring of traffic is allowed except as shown in the contract documents.
5. The Contractor shall maintain access to all driveways.
6. No plates shall be used during winter because of interference with snow plowing.
7. The Contractor shall provide and install all new pavement markings damaged or removed during construction.
8. Alternating one-way traffic operations will be allowed only with specific prior written approval of the New Haven Department of Traffic and Parking.
9. Prior to the commencement of any activity which could interfere in or impede the normal movement of traffic, the Contractor shall notify the City of New Haven Department of Police Services and request an off duty police officer to act as a trafficman. Should the Department of Police Services fail to provide an officer, the Contractor shall provide uniformed flagmen to direct traffic in the areas of construction. The Contractor shall be paid under the item "Trafficperson".
10. No Street shall be completely closed to traffic at any time, unless specifically approved by the Department of Traffic and Parking or shown in the contract documents.
11. The Contract unit prices for traffic maintenance and protection shall include all costs for labor, equipment, and services involved in the erection, maintenance, moving, adjusting, relocating, and storing of all traffic control devices such as signs, barricades, cones, drums, and markings. Trenches must be backfilled or covered with plates at the end of each day at no additional cost to the CITY.

325. DAILY CLEAN UP

The Contractor shall at the end of each workday, keep the project area clean, and free from debris, excavation materials, or any other items considered as trash. These items shall be disposed of daily in a legal manner at an approved dumpsite. No extra payment shall be made for any work involved in this section.

326a. AVAILABILITY OF FUNDS

All contracts are bid with the intention of awarding a contract as a result of the bid. Any and all awards and actual contract execution by the City of New Haven is contingent upon availability of appropriate funds. In the event that funding is not available at the time of award and/or execution of the contract the City reserves the right to cancel the bid.

326b. RIGHT TO ELIMINATE WORK

The City reserves the right to eliminate from the Contract any of the items of work shown on the Bid Form. This includes limiting the scope of work, in the event it deems it to be in the best interest of the City.

327. TESTS AND CERTIFICATION OF MATERIALS

At the discretion of the Engineer, periodic tests may be taken to satisfy the quality of the work or materials to be used on the project. The responsibility of payment for such tests will be the City's unless the quality of the Contractor's work or materials does not meet the specifications. In such cases, the contractor will pay for all unsatisfactory tests taken.

Upon request of the Engineer, The Contractor shall, at his expense, provide certifications of materials used on the project. If the Contractor chooses to do tests to prove a substitute item would be acceptable to the City, the Contractor shall be responsible for all costs involved to satisfy the City of the acceptability of the material.

328. STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION (DOT) SPECIFICATIONS

All references to D.O.T. specifications DOT Form 816 and supplemental changes issued shall apply at the Date of the Bid opening.

329. TRANSFER STATION SITE OPERATIONS

The transfer station site will remain in operation at all times during the construction. Also, as outlined in the technical specifications, at least one truck scale shall be kept operational during construction and a minimum of two bays of the tipping floor building shall remain in operation during the floor repairs.

The Contractor shall coordinate all their work activities with the Department of Public Works and the Operator of the facility to avoid conflicts with site operations. No additional compensation shall be made for delays or inconvenience sustained by the Contractor due to interference from transfer station operations. The Contractor shall without additional compensation reschedule and complete his activities as required.

330. SALES TAX

The Contractor's attention is drawn to the fact that he may purchase materials or supplies to be consumed in the performance of this contract without payment of Connecticut sales tax.

331. SAFETY REQUIREMENTS

The Contractor shall comply with all requirements of the Federal Occupational Safety and Health Act (OSHA). When any excavation is underway that is covered by OSHA Regulations, the Contractor shall submit to the Engineer the name of the competent person assigned to each location.

When any excavation support system is used that requires design by an engineer, copies of the design stamped by a registered professional engineer shall be submitted to the Owner.

The Contractor has full responsibility to comply with all provisions of Connecticut General Statutes, Title 31, Chapter 571 concerning Occupational Safety and Health. Any fines levied against the Contractor for violations of Federal or State Occupational Safety and Health statutes or regulations shall be his responsibility.

Contractor personnel working in hazardous areas shall have satisfied federal OSHA regulations codified at 29 CFR 1910.120 and shall be familiar with health and safety practices, including training and medical surveillance requirements. The Contractor shall provide a site Health and Safety Plan subject to the review of the Owner. For the purposes of the Health and Safety Plan, hazardous areas include but are not limited to monitoring well installations, production well installations, trench installations in areas where soil may be contaminated and all process piping and equipment areas containing contaminated groundwater or product. Data pertinent to the development of proper Contractor Health and Safety plans and practices is provided in the Specifications and plans.

If blasting is required, the Contractor shall comply with blasting and explosive requirement of the Occupational Safety and Health Administration (OSHA), 29 CFR 1926, Subpart U, and the State of Connecticut, Department of Safety, Division of Fire and Building Safety. The Contractor shall submit to the Engineer the name of the qualified blaster assigned to each location.

The Contractor shall assure that all Subcontractors at the Work Sites comply with the State and Federal occupational safety and health laws and regulations outlined above. The Contractor shall indemnify and hold harmless from and against any liabilities attributed to Owner for violations of these laws and regulations associated with the Work.

The Contractor has full responsibility to comply with all provisions of State of Connecticut Public Act No. 73-379 concerning Occupational Safety and Health. Any fines levied against the Contractor for violations shall be his responsibility.

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New Haven, CT

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Orange, Connecticut

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New Haven, Connecticut

AT&T Fiber Optics
75 Pent Highway
Wallingford, CT 06492

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The Contractor's attention is called to the following:

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The Contractor will ensure compliance with the Federal "Safety and Health Regulation for Construction" by the Department of Labor, Bureau of Labor Standards' "Construction Safety Codes", amended to date, whichever is more stringent for the applicable requirement.

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The wages paid on this Contract shall meet or exceed the prevailing wages at the time of the bid, as documented and issued by the Connecticut Department of Labor.

314. LAWS

All work will be in conformance with any and all applicable laws of the Federal Government, State of Connecticut, and City of New Haven relating to the Contract and are hereby included by reference.

315. BASIS OF PAYMENT

Payment shall be made at the various Contract unit prices for all work performed. Prices shall include the cost of all labor, materials, equipment, and all incidentals necessary to complete the work in accordance with the Specifications and to the satisfaction of the City Engineer.

316. WATER POLLUTION ABATEMENT

Under no circumstances shall the Contractor allow sanitary sewage to be discharged into any storm sewer, river, brook, stream, creek, storm ditch, or the New Haven Harbor. In case of the failure of any component of the sewer system, the Contractor shall take immediate action to insure that sanitary sewage does not discharge into any storm sewer, river, brook, stream, creek, storm ditch, or the New Haven Harbor. These immediate actions shall include whatever labor (including overtime), materials, and equipment as may be required and all work shall be done at no cost to the City. If no action is taken within twelve (12) hours of discovery or notification that the sewage system has failed or is any way defective, the City may proceed with corrective work and deduct whatever costs are incurred from future payments to the Contractor.

317. DESCRIPTION OF WORK

All materials furnished and used in the completed work shall be new, of best quality, and recognized as standard in construction practices. Whenever a specification number of reference is given, the subsequent amendments (if any) shall be included. The standards set forth in the selection of materials and supplies are intended to conform to those standards adopted by the Owner. Preference in manufacture shall be given to adopt standards, and the Contractor shall further familiarize themselves with the requirements of the Owner when the occasion or choice of materials or supplies so demands.

318. METHODS OF CONSTRUCTION

No materials shall be used which are known or found to be defective in any way. Notice shall be given to the Owner of any defective or imperfect material. Defective or unfit material, found to have been used, shall be removed and replaced by the Contractor with sound and unobjectionable material without additional expense to the Owner. All materials furnished by the Contractor are subject to thorough inspections and tests by the Owner. The Contractor shall submit samples as required by the Owner, of the various materials used on the contract for testing purposes. All ordering lists shall be submitted for approval to the Owner by the Contractor. Materials shall not be ordered until the ordering lists have been approved.

319. MOBILIZATION AND DEMOBILIZATION

This item shall consist of all the work necessary for the movement of personnel and equipment to and from the project site. No separate payment shall be made for this work, unless specifically specified, and all costs incurred shall be considered to be included in the contract unit prices.

320. EXISTING CONDITIONS

The site conditions are as of the day the Contractor begins work. All work to be performed will be based on the conditions found at that time. It is the obligation of the Contractor to inform the City of any substantial changes in the site conditions that have occurred between the time the bid is opened and the notice to begin work. Any substantial change in the site during this period will be evaluated as to its impact on the contract cost and its impact on the notice to proceed. A substantial change may require re-bidding the entire project. This will be at the sole discretion of the City and the Contractor awarded the project will have no

adverse claim against the City if such determination has been made. No claims or extras will be allowed for any changes in site conditions due to the contractor discovery after the commencement of work, unless there is an approved change order.

The City assumes that the contractor, during the process of developing his bid, has thoroughly examined the site or project area and has disclosed any obvious defects in the plans and specifications prior to bid and has entered into this agreement to complete all work required in the contract at the bid price(s) submitted and accepted.

321. EXISTING SEWERS AND CULVERTS

The Contractor shall be responsible for maintaining and protecting all existing sewers and culverts encountered in the work under this contract. Hand excavation and adequate bracing and shoring shall be employed where required to insure the structural integrity of said existing structures. The Contractor shall save the City of New Haven harmless and shall be solely responsible for any liabilities or damages arising from their work near, under, or through existing sewers and culverts. The Contractor shall repair and replace, as required by the Engineer, any existing sewers or culverts damaged as a result of their work. No payment by the CITY for work covered in this section, unless authorized in writing by the Engineer. The Contractors shall schedule their operations so that the existing sewers will have uninterrupted flow at all times.

322. SURPLUS AND REJECTED EXCAVATED MATERIAL

All surplus excavated material determined by the Engineer to be suitable, but not required for use within the limits of work, shall remain the property of the City. All such material shall be transferred to the City owned landfill located at Middletown Avenue or any other City stockpile area and deposited in areas assigned by the Engineer. All costs involved in the removal, hauling and depositing of the suitable surplus excavated material shall be considered to be included in the various Contract Unit Prices, and no separate payment will be made for any work involved in this section. The determination of whether or not surplus excavated material is suitable rests solely and exclusively with the Engineer.

All unsuitable excavated material, and/or construction/demolition material shall become the Contractor's property and it shall be removed from the site and disposed of by the Contractor in a legally acceptable manner. The City **will not accept** any of the following material, examples of which include, but are not limited to: sanitary and/or storm sewer pipe, brick, block, concrete, bituminous asphalt, boulders, lumber, plastics, ferrous and non-ferrous metals, vegetation of any type, fine grained impervious soils, muck, peat, etc. The costs involved in the removal, hauling and legal disposal of these materials shall be considered to be included in the various contract unit prices. No separate payment will be made for any work involved in this section.

323. REPORTS, RECORDS AND DATA

The contractor and each of his subcontractors shall submit to the City, schedules of quantities and costs, progress schedules, payroll reports, estimates, records and other data as the City may request concerning the work performed or to be performed under this contract.

324. TRAFFIC AND CONSTRUCTION

The Contractor shall maintain and protect traffic in accordance with the following additional requirements:

1. Where referred to herein, "Authorized Work Hours" are to be 7:00 AM to 7:00 PM, Monday through Friday only.
2. At no time shall work occur on any portion of this project without prior written approval from City Engineer for work outside Authorized Work Hours.
3. All trenches must be either backfilled or covered with steel plate, all public rights-of-way clean of debris, material, equipment, supplies, etc. And all streets must be fully open to traffic by 7:00 PM it is the Contractor's responsibility to notify the City Engineer immediately, should conditions require the delay of opening any street after 7:00 p.m.
4. No detouring of traffic is allowed except as shown in the contract documents.
5. The Contractor shall maintain access to all driveways.
6. No plates shall be used during winter because of interference with snow plowing.
7. The Contractor shall provide and install all new pavement markings damaged or removed during construction.
8. Alternating one-way traffic operations will be allowed only with specific prior written approval of the New Haven Department of Traffic and Parking.
9. Prior to the commencement of any activity which could interfere in or impede the normal movement of traffic, the Contractor shall notify the City of New Haven Department of Police Services and request an off duty police officer to act as a trafficman. Should the Department of Police Services fail to provide an officer, the Contractor shall provide uniformed flagmen to direct traffic in the areas of construction. The Contractor shall be paid under the item "Trafficperson".
10. No Street shall be completely closed to traffic at any time, unless specifically approved by the Department of Traffic and Parking or shown in the contract documents.
11. The Contract unit prices for traffic maintenance and protection shall include all costs for labor, equipment, and services involved in the erection, maintenance, moving, adjusting, relocating, and storing of all traffic control devices such as signs, barricades, cones, drums, and markings. Trenches must be backfilled or covered with plates at the end of each day at no additional cost to the CITY.

325. DAILY CLEAN UP

The Contractor shall at the end of each workday, keep the project area clean, and free from debris, excavation materials, or any other items considered as trash. These items shall be disposed of daily in a legal manner at an approved dumpsite. No extra payment shall be made for any work involved in this section.

326a. AVAILABILITY OF FUNDS

All contracts are bid with the intention of awarding a contract as a result of the bid. Any and all awards and actual contract execution by the City of New Haven is contingent upon availability of appropriate funds. In the event that funding is not available at the time of award and/or execution of the contract the City reserves the right to cancel the bid.

326b. RIGHT TO ELIMINATE WORK

The City reserves the right to eliminate from the Contract any of the items of work shown on the Bid Form. This includes limiting the scope of work, in the event it deems it to be in the best interest of the City.

327. TESTS AND CERTIFICATION OF MATERIALS

At the discretion of the Engineer, periodic tests may be taken to satisfy the quality of the work or materials to be used on the project. The responsibility of payment for such tests will be the City's unless the quality of the Contractor's work or materials does not meet the specifications. In such cases, the contractor will pay for all unsatisfactory tests taken.

Upon request of the Engineer, The Contractor shall, at his expense, provide certifications of materials used on the project. If the Contractor chooses to do tests to prove a substitute item would be acceptable to the City, the Contractor shall be responsible for all costs involved to satisfy the City of the acceptability of the material.

328. STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION (DOT) SPECIFICATIONS

All references to D.O.T. specifications DOT Form 816 and supplemental changes issued shall apply at the Date of the Bid opening.

329. TRANSFER STATION SITE OPERATIONS

The transfer station site will remain in operation at all times during the construction. Also, as outlined in the technical specifications, at least one truck scale shall be kept operational during construction and a minimum of two bays of the tipping floor building shall remain in operation during the floor repairs.

The Contractor shall coordinate all their work activities with the Department of Public Works and the Operator of the facility to avoid conflicts with site operations. No additional compensation shall be made for delays or inconvenience sustained by the Contractor due to interference from transfer station operations. The Contractor shall without additional compensation reschedule and complete his activities as required.

330. SALES TAX

The Contractor's attention is drawn to the fact that he may purchase materials or supplies to be consumed in the performance of this contract without payment of Connecticut sales tax.

331. SAFETY REQUIREMENTS

The Contractor shall comply with all requirements of the Federal Occupational Safety and Health Act (OSHA). When any excavation is underway that is covered by OSHA Regulations, the Contractor shall submit to the Engineer the name of the competent person assigned to each location.

When any excavation support system is used that requires design by an engineer, copies of the design stamped by a registered professional engineer shall be submitted to the Owner.

The Contractor has full responsibility to comply with all provisions of Connecticut General Statutes, Title 31, Chapter 571 concerning Occupational Safety and Health. Any fines levied against the Contractor for violations of Federal or State Occupational Safety and Health statutes or regulations shall be his responsibility.

Contractor personnel working in hazardous areas shall have satisfied federal OSHA regulations codified at 29 CFR 1910.120 and shall be familiar with health and safety practices, including training and medical surveillance requirements. The Contractor shall provide a site Health and Safety Plan subject to the review of the Owner. For the purposes of the Health and Safety Plan, hazardous areas include but are not limited to monitoring well installations, production well installations, trench installations in areas where soil may be contaminated and all process piping and equipment areas containing contaminated groundwater or product. Data pertinent to the development of proper Contractor Health and Safety plans and practices is provided in the Specifications and plans.

If blasting is required, the Contractor shall comply with blasting and explosive requirement of the Occupational Safety and Health Administration (OSHA), 29 CFR 1926, Subpart U, and the State of Connecticut, Department of Safety, Division of Fire and Building Safety. The Contractor shall submit to the Engineer the name of the qualified blaster assigned to each location.

The Contractor shall assure that all Subcontractors at the Work Sites comply with the State and Federal occupational safety and health laws and regulations outlined above. The Contractor shall indemnify and hold harmless from and against any liabilities attributed to Owner for violations of these laws and regulations associated with the Work.

The Contractor has full responsibility to comply with all provisions of State of Connecticut Public Act No. 73-379 concerning Occupational Safety and Health. Any fines levied against the Contractor for violations shall be his responsibility.

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**TECHNICAL SPECIFICATION 10.01A
MAINTENANCE AND PROTECTION OF TRAFFIC**

10.01A.1 SCOPE OF WORK

This work shall consist of identifying traffic safety hazards, then furnishing all labor, materials, tools, and equipment that are needed to maintain and protect vehicular and pedestrian traffic through and adjacent to the project area, including - but not limited to - signs, barricades, traffic drums, traffic cones, flashers, construction fencing, flaggers, warning devices, temporary pavement markings, delineators, etc. These measures and actions shall safely maintain public and construction traffic by attenuating potential construction hazards. This work shall also include all costs associated with the erecting, maintaining, moving, adjusting, cleaning, relocating, and storing of the aforementioned materials as are necessary to ensure safe movement of vehicular and pedestrian traffic throughout the project area.

The transfer station site will remain in operation at all times during the construction, and at least one truck scale shall be kept operational during construction. The Contractor may request that the City approve the detouring of traffic around the construction area if it is in the best interest of public safety and the City. Detouring shall be limited to normal construction hours, and two-way traffic patterns shall be re-established at the end of each work day.

10.01A.2 MATERIALS

All materials employed for this work, including any warning devices such as signs, barricades, flashers, traffic cones, traffic drums, traffic vests, paddle signs, delineators, and other incidentals necessary to delineate the work area and to maintain vehicular and pedestrian traffic through and adjacent to the work area, shall be in accordance with the latest revision of the Federal Highway Administration's Manual on Uniform Traffic Control Devices, or shall be as approved by the Engineer.

10.01A.3. TRAFFIC CONTROL

All proposed construction area traffic control shall be subject to review and approval by the Engineer. The Contractor shall keep the site under construction open to vehicular and pedestrian traffic for the full length of the project. Alternating one-way traffic may be utilized during construction hours. Lane width for alternating one-way traffic shall be kept to a minimum of 10 feet, or as directed by the Engineer. A sufficient number of vehicle travel ways and pedestrian passageways shall be provided to maintain that traffic ordinarily using the site. The vehicle travel ways and pedestrian passageways shall have storm water drainage and shall be kept reasonably smooth, and otherwise in a suitable condition at all times - to provide minimum interference to traffic.

Where flashers, signs, and/or other warning devices are used, all such devices shall be erected and located in accordance with the Manual on Uniform Traffic Control Devices. The Contractor shall furnish a sufficient number of traffic control devices such as signs, barricades, traffic drums, traffic cones, flashers, construction fencing, flaggers, warning devices, temporary pavement markings, and

delineators to forewarn traffic of the impending construction and to guide the traveling public through the construction zone safely.

10.01A.4 MEASUREMENT

This item will be measured for payment as Calendar Days expended divided by the original allowable Contract Time, expressed as a percentage of the Contract lump sum price for “Maintenance and Protection of Traffic” - as long as the Contractor adequately provides maintenance and protection of traffic and is making a reasonable effort to complete the project on time. Should the project be increased in scope due to construction changes beyond the original intent, the Contractor may request additional compensation for additional traffic maintenance and protection features and/or work at that time. Likewise, for any reduction in the scope of project, the City may request an appropriate credit for traffic maintenance and protection features and/or work not provided.

10.01A.5 PAYMENT

Payment for this item will be based on the Contract lump sum price for “Maintenance and Protection of Traffic”, prorated over the original allowable number of Calendar Days. The Contract Price shall include all Contractor-provided labor, materials, tools, and equipment necessary to perform the work, but shall not include any costs for the services of City Police Officers that the Engineer may direct or agree to. If the Contractor is required to engage the traffic control services of City Police Officers due to circumstances beyond the control of the Contractor, then the Contractor may request additional compensation for the cost of City Police Officers.

**TECHNICAL SPECIFICATION 15.01A
CONSTRUCTION STAKING**

15.01A.1 SCOPE OF WORK

This work shall consist of the furnishing of all labor, materials, tools and equipment necessary to perform all construction layout, control, and reference staking for satisfactory completion of the project.

15.01A.2 MATERIALS

Hubs shall be 1½ inch x 1½ inch x 16 inch oak and witness stakes shall be 1 inch x 1 inch x 36 inch oak or other hardwood.

15.01A.3 CONSTRUCTION METHODS

Hubs with tacks shall be used for all control points, centerline or baseline offsets and structure stakeout and shall be accompanied by witness stakes marked with the pertinent information. For supplemental stakeout only, witness stakes alone may be used. For laser grade control and the verification of the laser elevation, a hub with witness shall be provided.

All staking shall be performed under the direct supervision of a Land Surveyor licensed by the State of Connecticut and shall meet the requirements of “MINIMUM STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT” adopted by the Connecticut Association of Land Surveyors on September 26, 1996, Connecticut General Statutes Section 20-300b, and the applicable provisions of Form 816, Article 9.80.03.

In addition, reference stakeout (line and grade) for areas involving horizontal or vertical curves shall be placed at intervals no greater than 25 feet, or at sufficient intervals to provide the Contractor with necessary information to meet the designed lines and grades.

Work in this section also requires that, where the Drawings indicate a graphical boundary and/or street line intersection, all efforts will be made prior to construction activities, to locate any and all existing merestones, iron pins and any other boundary marker, as well as those identified on the plans (except for those indicated to be set or reset) using prescribed methods for Class A-2 accuracy, or using 3 ties for each marker.

If impacted during construction activities, each removed marker shall be re-established by the Contractor’s surveyor.

15.01A.4 MEASUREMENT

Measurement of this item for partial payments shall be the estimated percentage of required construction staking completed in accordance with these specifications, as determined by the Engineer.

15.01A.5 PAYMENT

Payment for this item will be at the Contract lump sum price for “Construction Staking”, prorated over the duration of the project, which price shall include all labor, materials, tools and equipment necessary to complete the work as specified.

**TECHNICAL SPECIFICATION 20.02A
TRENCH EXCAVATION AND BACKFILL**

20.02A.1 SCOPE OF WORK

Trench excavation shall consist of the removal of all surface and subsurface materials including water – the removal of which is required for construction of storm drainage pipes and structures, underdrains, and sanitary sewer pipes and structures – and the removal of which is required to dispose of abandoned items such as drainage or utility structures, pipes, and storage tanks. Trench excavation shall be to the dimensions shown on the Drawings, specified herein, or directed by the Engineer.

Rock in trench excavation shall be defined as rock in definite ledge formation; boulders or portions of boulders that have a volume of 1/2 cubic yard or more; and concrete or masonry objects or structures that have a volume of 1/2 cubic yard or more – removed from within the pay limits for trench excavation.

The work shall include backfilling of the excavated trench as appropriate with bedding material, suitable excavated material from within the project limits, and compacted granular fill if there is a deficiency of suitable excavated material.

20.02A.2 MATERIALS

Bedding material shall be ¾-inch crushed stone meeting the requirements of Form 816, Article M.01.01 for No. 6 stone.

Compacted granular fill shall meet the requirements of Form 816, Article M.02.02.

20.02A.3 CONSTRUCTION METHODS

Trenching and backfilling methods shall meet the applicable requirements of Form 816, Article 2.05.03. Safety precautions shall be taken, and those precautions shall meet the requirements of the State of Connecticut Department of Labor Construction Safety Code and the U.S. Department of Labor Occupational Safety and Health Regulations - pertaining to trenching.

All trench backfill shall be thoroughly compacted utilizing a method approved by the Engineer. In all trench areas, compaction density shall not be less than 95% of the maximum dry density achieved by AASHTO T180, Method D. If any of the compaction tests fail, the Contractor shall, at no additional cost to the City, recompact the area until acceptable test results are achieved.

20.02A.4 MEASUREMENT

Trenching to normally required lengths, widths, and depths and backfilling of normal trenches will not be measured separately for payment.

Additional trenching and backfilling that is ordered by the Engineer to remove unsuitable material outside the normal limits of trench excavation – and additional bedding material that is required to backfill additional trench excavation that was ordered by the Engineer - will be measured volumetrically by a method that is specified or agreed to by the Engineer.

Rock in trench excavation will be measured volumetrically in accordance with Form 816, Article 2.05.04.

Compacted granular fill that is required due to a deficiency in the quantity of excavated suitable material will be measured and paid for in accordance with Technical Specification 40.02A.

20.02A.5 PAYMENT

Trenching to normally required lengths, widths, and depths and backfilling of normal trenches will not be paid for separately; the cost of this work shall be included in the price bid for the Contract Item that requires the trenching and backfilling.

Additional trenching and backfilling that is ordered by the Engineer to remove unsuitable material outside the normal limits of trench excavation will be paid for at the Contract unit price per cubic yard for “Additional Trench Excavation”.

Rock in trench excavation will be paid for at the Contract unit price per cubic yard for “Rock in Trench Excavation”.

Additional bedding material that is required to backfill additional trench excavation that was ordered by the Engineer will be paid for at the Contract unit price per cubic yard for “Additional Bedding Material”.

The Contract unit prices shall include all labor, materials, tools, and equipment that are necessary to complete the work.

TECHNICAL SPECIFICATION 20.03A
TEST PITS

20.03A.1 SCOPE OF WORK

This work shall consist of the furnishing of all labor, materials, tools, and equipment necessary to perform the excavation - and backfilling if required - of test pits for the purpose of locating underground utilities or objects and/or investigating soil types and conditions.

20.03A.2 MATERIALS

The material removed during excavation of test pits shall be employed to backfill the test pits, unless the material is unsuitable or unless impending work makes backfilling unnecessary, as determined by the Engineer.

20.03A.3 CONSTRUCTION METHODS

Test pits shall be excavated at the locations specified in the Contract Documents and/or where directed by the Engineer. Test pits shall be of the minimum practicable size to accomplish the intended investigations.

Where permanent restoration of the test pit location is called for immediately, the backfill material(s) and method of placement shall be appropriate for the permanent features of that location. Where backfilling takes place but permanent restoration is not required due to impending construction activities, the area shall be maintained at grade using the materials that are necessary to provide a safe surface for pedestrian and vehicular traffic. Where no backfilling is required due to impending construction activities, the open excavation shall be cordoned off and/or covered in such a way as to clearly indicate that a hazard is present.

20.03A.4 MEASUREMENT

Measurement of this work will consist of counting the number of individual test pits completed.

20.03A.5 PAYMENT

This work will be paid for at the Contract unit price each for “Test Pit”, completed, including all labor, material, tools, and equipment necessary to complete the work as specified.

**TECHNICAL SPECIFICATION 20.04A
EXCAVATION AND BACKFILL FOR STRUCTURES**

20.04A.1 SCOPE OF WORK

Structure excavation shall consist of the removal of all surface and subsurface materials including water – the removal of which is necessary for the construction of retaining walls, truck scale foundations, and any other structures for which Technical Specification 20.02A does not apply. Structure excavation shall be to the dimensions shown on the Drawings, specified herein, or directed by the Engineer.

Rock in structure excavation shall be defined as rock in definite ledge formation; boulders or portions of boulders that have a volume of 1 cubic yard or more; and concrete or masonry objects or structures that have a volume of 1 cubic yard or more – removed from within the pay limits for structure excavation.

The work shall include backfilling of the excavation as appropriate with bedding material, compacted granular fill, processed aggregate base, and pervious structure backfill. The work shall also include placement and compaction of excavated material for the formation of embankments or to fill voids, and it shall include the disposal of surplus or unsuitable material.

20.04A.2 MATERIALS

Bedding material shall be ¾-inch crushed stone meeting the requirements of Form 816, Article M.01.01 for No. 6 stone.

Compacted granular fill shall meet the requirements of Form 816, Article M.02.02.

Processed aggregate base shall meet the requirements of Form 816, Article M.05.01.

Pervious structure backfill shall meet the requirements of Form 816, Article M.02.05.

20.04A.3 CONSTRUCTION METHODS

Excavating and backfilling methods shall meet the applicable requirements of Form 816, Article 2.03.03.

20.04A.4 MEASUREMENT

Excavating to normally required lengths, widths, and depths and backfilling of normal excavations for structures will not be measured separately for payment.

Additional excavating and backfilling that is ordered by the Engineer to remove unsuitable material outside the normal limits of structure excavation – and additional bedding material that is required to

backfill additional structure excavation that was ordered by the Engineer - will be measured volumetrically by a method that is specified or agreed to by the Engineer.

Rock in structure excavation will be measured volumetrically in accordance with Form 816, Subarticle 2.03.04.2.

20.04A.5 PAYMENT

Excavating to normally required lengths, widths, and depths for structures and backfilling of normal excavations will not be paid for separately; the cost of this work shall be included in the price bid for the Contract Item that requires the excavating and backfilling.

Additional excavating and backfilling that is ordered by the Engineer to remove unsuitable material outside the normal limits of structure excavation will be paid for at the Contract unit price per cubic yard for "Additional Structure Excavation".

Additional bedding material that is required to backfill additional structure excavation that was ordered by the Engineer will be paid for at the Contract unit price per cubic yard for "Additional Bedding Material".

Rock in structure excavation will be paid for at the Contract unit price per cubic yard for "Rock in Structure Excavation".

The Contract unit prices shall include all labor, materials, tools, and equipment that are necessary to complete the work.

SECTION 20.05

BORROW

20.05.1 DESCRIPTION

When the amount of suitable material excavated within the limits of the work contracted for is not sufficient to form the subgrade, slopes, etc., **additional suitable material shall be furnished by the Contractor from borrow pits obtained by him at his expense and located beyond the limits of the project.** This material shall be known as "Borrow" and shall be of a satisfactory quality for the purpose for which it is intended. Borrow shall include the furnishing, removing and satisfactory placing of the additional material necessary to complete the subgrade, slopes, etc.

20.05.2 MATERIALS

Borrow, excluding hydraulically dredged borrow, shall conform to all the requirements of Section **20.10A** of these contract specifications for performance when incorporated in embankments for roadways. For performance other than embankments for roadways, it shall be of a satisfactory quality as determined by the Engineer for the purpose intended. Hydraulically dredged borrow shall contain not more than 20 per cent by weight passing the No. 200 sieve when placed in the embankment.

20.05.3 CONSTRUCTION METHODS

Borrow will be permitted only to the extent necessary to complete the subgrade and similar details and only after all suitable material from the site excavation has been placed. With the approval of the Engineer, the contractor may be permitted to place borrow before the excavation is completed, but he will be held responsible for the proper placing of all suitable excavated material and no payment will be allowed for any borrow placed in lieu of suitable excavated material. The Engineer may revoke this permission at any time, if in his opinion, satisfactory progress is not maintained on other operations.

The Contractor shall notify the Engineer at least five days prior to obtaining material from any borrow pits so that an examination may be made of the fitness of the material and so that the necessary measurements may be taken.

Borrow shall be placed where directed and in accordance with the provisions for the formation of embankments of Section **20.10A** of these contract specifications.

20.05.4 METHOD OF MEASUREMENT

The amount of borrow to be paid for will be determined by the average end area method, from the results of cross sectional elevations taken before and after the borrow material has been excavated and as determined by the Engineer.

20.05.5 BASIS OF PAYMENT

Payment will be made at the contract unit price per cubic yard for "Borrow" complete in place, which price shall include furnishing and placing the material and all equipment, tools and labor necessary thereto. Also included shall be the cost of furnishing free-draining material for use at locations where free water exists and the cost of the work involved in the formation of embankments with such material.

**TECHNICAL SPECIFICATION 20.06A
FORMATION OF SUBGRADE**

20.06A.1 SCOPE OF WORK

This work shall consist of the furnishing of all labor, materials, tools, and equipment that are necessary to shape, compact, and otherwise prepare the pavement subgrade at the appropriate lines, grades, and cross-sections to produce the finish grades shown on the plans.

20.06A.2 MATERIALS

At locations to be paved where existing material at subgrade elevation is unsuitable for compaction, additional excavation shall be performed in accordance with Technical Specification 20.10A. If there is an insufficient quantity of existing suitable soil onsite to produce the subgrade elevations called for by the plans, then compacted granular fill shall be provided in accordance with Technical Specification 40.02A.

20.06A.3 CONSTRUCTION METHODS

All locations to be paved shall be subject to formation of subgrade methods that meet the requirements of Form 816, Article 2.09.03. The in-place dry density of the completed subgrade shall be not less than 95% of the maximum dry density for that material when tested in accordance with AASHTO T 180, Method D.

20.06A.4 MEASUREMENT

Payment lines for formation of subgrade shall be coincident with the intended outside edges of pavement. Compacted granular fill that is employed to replace unsuitable material in the subgrade will be measured for payment in accordance with Technical Specification 40.02A.

20.06A.5 PAYMENT

Formation, protection, and any required correction of the subgrade that is completed and accepted in place will be paid for at the Contract unit price per square yard for "Formation of Subgrade".

Additional excavation that is performed to remove unsuitable material from the subgrade will be paid for at the Contract unit price per cubic yard for "Earth Excavation".

Compacted granular fill that is employed to replace unsuitable material in the subgrade and that is compacted and accepted in place will be paid for at the Contract unit price per cubic yard for "Compacted Granular Fill".

The Contract unit prices shall include all labor, materials, tools and equipment necessary to complete the work as specified.

SECTION 20.07
CLEARING AND GRUBBING

20.07.1 DESCRIPTION

This work shall consist of clearing the land within the limits of construction and appurtenant designated areas which are a part of the contract, of trees, bushes, iron railings, iron posts, stone walls, rubbish and all objectionable material as indicated or directed and in strict accordance with the contract documents.

20.07.2 NOT APPLICABLE

20.07.3 CONSTRUCTION METHODS

Within the excavation lines all trees shall be cut off and stumps removed to a depth of not less than 12 inches below the graded surface.

Within the fill lines where an embankment is to be made not more than three feet in depth, trees, stumps, roots, etc., shall be cut off to within six inches of the ground surface.

All railings, iron posts and stone walls within the limits of construction shall be removed as directed.

The Contractor shall dispose of all such trees, stumps, bushes, railings, iron posts, stone walls, etc., in a satisfactory manner and shall remove all rubbish and refuse to such a point beyond the limits of the work as may be directed.

20.07.4 METHOD OF MEASUREMENT

No separate measurement shall be made for "Clearing and Grubbing".

20.07.5 BASIS OF PAYMENT

No separate payment will be made for Clearing and Grubbing and all costs in connection therewith shall be included in the general cost of the contract.

**TECHNICAL SPECIFICATION 20.10A
GENERAL EXCAVATION**

20.10A.1 SCOPE OF WORK

General excavation shall consist of the removal and satisfactory disposal, in the manner herein required, of all materials, including water, that are taken from within the limits of the work contracted for, the removal of which materials being necessary for the construction of roadways, shoulders, entrances, parking areas, concrete pads, sidewalks, slopes, channels, and any other miscellaneous and incidental construction shown on the plans or otherwise called for, as directed by the Engineer. Rock excavation shall include rock in definite ledge formation plus boulders, concrete objects and concrete masonry objects of 1 cubic yard or more in volume that is/are removed. General excavation shall also include placement and compaction of excavated material for the formation of embankments or to fill voids, and it shall include the disposal of surplus or unsuitable material.

20.10A.2 MATERIALS

Not applicable.

20.10A.3 CONSTRUCTION METHODS

The construction methods utilized shall meet the requirements of Form 816, Article 2.02.03.

All excavated suitable material shall be placed within the project limits to the lines and grades indicated on the plans or as directed by the Engineer, unless there is an excess of material that is suitable for project use. Any excavated unsuitable material and excess excavated suitable material, including rock or blasted rock, shall be removed from the limits of the project and shall be deposited and spread uniformly where directed by the Engineer on property that is owned by the City of New Haven.

Bituminous concrete pavement shall be cut to neat lines prior to removal. Pavement removal shall consist of the satisfactory removal and disposal of bituminous pavements designated on the plans or directed by the Engineer to be removed.

If rock is encountered and rock excavation requires blasting, the blasting shall be performed in accordance with City of New Haven ordinances, Connecticut General Statutes or other pertinent regulations governing handling, placement, and detonation of explosives. Such ordinances or regulations shall not relieve the Contractor of any responsibility for damages caused by the Contractor's or any subcontractor's use of explosives. All blasting work shall be performed or supervised by licensed blasters who shall at all times have their blasting licenses on their persons and shall permit examination of the licenses by the Engineer or officials having jurisdiction.

20.10A.4 MEASUREMENT

Payment lines for general excavation shall coincide with the slope and subgrade lines shown on the plans or shall be as specified elsewhere in the Contract Documents or as directed by the Engineer. Where payment is based on the volume of material removed, the quantity of general excavation will be determined by the method of average end areas and/or by other acceptable method based on field measurements that are performed by or accepted by the Engineer.

The quantity of cut bituminous concrete pavement will be the actual linear feet of pavement cuts made by approved methods at the locations delineated on the plans or where directed by the Engineer.

Payment lines for removal of bituminous concrete pavement shall coincide with the locations depicted on the plans or shall be where directed by the Engineer. The depth of bituminous concrete pavement is not a factor in payment for the removal of that material, as payment is based on the area of pavement that is removed. The Contractor shall afford the Engineer the opportunity to measure the area of pavement to be removed before the Contractor embarks on the removal of the pavement.

The Contractor shall expose ledge rock, concrete objects, and cement masonry objects that are to be measured for payment sufficiently in advance of the actual removal that the Engineer make take or arrange for the necessary measurements to be taken before the removal takes place.

20.10A.5 PAYMENT

Payment for general excavation will be at the Contract unit prices for the various pay items - per cubic yard, per linear foot, or per square yard – as tabulated below. The Contract unit prices shall include all labor, tools, equipment, and transport of excavated material necessary to complete the work as specified.

<u>PAY ITEM</u>	<u>PAY UNIT</u>
Earth Excavation	C.Y.
Rock Excavation	C.Y.
Cut Bituminous Concrete Pavement	L.F.
Removal of Pavement	S.Y.

**TECHNICAL SPECIFICATION 20.15A
TRUCK SCALE AND TARPING STATION DEMOLITION**

20.15A.1 SCOPE OF WORK

Truck scale and tarping station demolition shall consist of furnishing all labor, tools, and equipment that are necessary for the demolition, removal, and satisfactory disposal of truck scales and tarping stations that are designated on the Drawings to be removed and disposed of. Truck scale components, tarping station scaffolding, and foundations for these items are included in the work.

20.15A.2 MATERIALS

Not applicable.

20.15A.3 CONSTRUCTION METHODS

The Contractor shall remove and dispose of existing truck scales and all associated components including but not limited to the steel deck, load cells, foundations and concrete approach slabs. The Contractor shall remove and dispose of the existing tarping station which includes but is not limited to the metal scaffolding, steps, hardware and concrete sidewalk and foundations. All materials shall be the property of - and be disposed of - by the Contractor.

20.15A.4 MEASUREMENT

Truck scale demolition and tarping station demolition will be measured for payment as units, completed and accepted, including disposal of removed components.

20.15A.5 PAYMENT

This work will be paid for at the Contract unit prices each for the pay items tabulated below. The Contract unit prices shall include all labor, tools, and equipment that are necessary to complete the work as specified.

<u>PAY ITEM</u>	<u>PAY UNIT</u>
Truck Scale Demolition	EA.
Tarping Station Demolition	EA.

**TECHNICAL SPECIFICATION 30.01A
DRAINAGE PIPES, CULVERTS, and UNDERDRAINS**

30.01A.1 SCOPE OF WORK

This work shall consist of furnishing all labor, materials, tools, and equipment necessary to excavate, lay and join drainage pipes, culverts, underdrains, and appurtenant fittings; then backfill and compact trenches, as shown on the plans or as directed by the Engineer. Work under this item shall also include all handling of water, support of trench walls, and connecting new drainage pipes to new or existing drainage systems or structures.

30.01A.2 MATERIALS

Materials used for the construction of drainage pipes, culverts, and underdrains shall meet the requirements of Form 816, Article M.08.01.

Bedding material shall be ¾-inch crushed stone meeting the requirements of Form 816, Article M.01.01 for No. 6 stone.

Aggregate for underdrains shall be 3/8-inch crushed stone meeting the requirements of Form 816, Article M.01.01 for Size No. 8 stone.

Geotextiles, when specified, shall meet the requirements of Form 816, Subarticle M.08.01.26.

Compacted granular fill, if needed, shall meet the requirements of Form 816, Article M.02.02.

Non-shrink grout shall meet the requirements of Section M.03.01 (12) of Form 816.

30.01A.3 CONSTRUCTION METHODS

All pipes shall be properly stored and protected to prevent damage. Any material deemed unsuitable by the Engineer shall be immediately removed from the project site. When pipe is being installed, all trenches shall be kept dry. Pipes and fittings shall be laid accurately to the required line and grade using laser beam techniques unless otherwise approved by the Engineer. Pipe shall be uniformly supported along its entire length on bedding material as described and shown on the details. Pipes shall be properly haunched, and bedding material shall be tamped to firmly hold the pipes in place. All other backfill shall be suitable granular material approved by the Engineer. If the excavated materials are not suitable for use as backfill, the Contractor shall employ suitable backfill materials from elsewhere on the project or, if no other suitable materials are available from the project, from outside sources. Further construction methods shall be in accordance with Form 816, Article 6.51.03.

The Contractor is fully responsible for the type of equipment used and as a result the Contractor at no extra cost to the City shall repair any damage inflicted on the existing structure.

The work for connecting the pipe to the existing drain in the building shall include making a hole in the existing building wall, furnishing and installing the required pipe and fittings, making a connection to existing PVC drain and restoring the building wall. Seal the building opening with non-shrink grout.

Installation of foundation underdrains shall be in accordance with Form 816, Article 7.51.03.

30.01A.4 MEASUREMENT

Drainage pipes, culverts, and underdrains will be measured for payment by the linear foot of the various sizes and types of pipes, completed and accepted in place, measured from the interior face of a structure to the interior face of a structure or to the end of a terminating length of pipe.

Normal trenching and backfilling will not be measured separately for payment, but additional trenching and backfilling will be measured and paid for in accordance with Technical Specification 20.02A.

The work required to make the pipe connection to the existing drain in the building will not be measured for payment but will be a lump sum item that includes all the work described above.

30.01A.5 PAYMENT

Drainage pipes, culverts, and underdrains will be paid for at the Contract unit prices per linear foot for the various sizes and types of pipes, which prices shall include all labor, materials, tools, and equipment necessary to complete the work as specified.

The Contract unit prices for drainage pipes, culverts, and underdrains shall also include all handling of water, support of trench walls, normal trenching and backfilling, bedding material and connecting new drainage pipes to new or existing drainage systems or structures.

The connection to the existing drain in the building will be paid for at the Contract lump sum price for "Pipe Connection to Existing Drain in Building". The Contract Price shall include all labor, materials, tools, and equipment necessary to perform the work. This price shall include making a hole in the existing building wall, furnishing and installing the required pipe and fittings, making a connection to existing PVC drain and restoring the building wall.

**TECHNICAL SPECIFICATION 30.07A
CATCH BASINS AND STORM STRUCTURES**

30.07A.1 SCOPE OF WORK

Work under this technical specification shall consist of furnishing all labor, materials, tools, testing, and equipment necessary to construct, alter, reconstruct, reset, or convert catch basins, drainage manholes, sedimentation structures or other storm drainage structures, in accordance with the plans, detail drawings, specifications, or as directed by the Engineer. This work shall include excavating, removing and disposing of unsuitable material (which shall include existing manhole or catch basin structures), any necessary base or bedding material, dewatering, precast concrete components, masonry units and bricks, backfilling, cover frames and covers, inlet grates, cleaning and incidentals necessary to complete the work as specified or as directed. Also included is the installation of sedimentation control at catch basins.

30.07A.2 MATERIALS

Materials for catch basins and manholes shall meet the applicable requirements of Form 816, Article 5.07.02. Red brick shall not be used. Manhole steps shall be of steel reinforced polypropylene plastic and shall be in accordance with City of New Haven Construction Standards.

The precast concrete oil separator/sedimentation structure shall have a minimum 1000 gallons capacity and be in accordance with the detail. The interior epoxy sealant shall be “Ebony” by Bay Oil Company or approved equivalent and the exterior waterproof sealant shall be “Florok” Epoxy by The Chargar Corporation or equivalent.

Filter fabric shall be a woven geotextile conforming to Article M.08.01-26 of Form 816

Haybales shall conform to Article 2.18.02 of Form 816.

30.07A.3 CONSTRUCTION METHODS

Drainage structures shall be constructed in accordance with Form 816, Article 5.07.03 and as specified herein or as shown on the plans.

A. General

Manhole steps shall be installed in all drainage structures where the depth of the structure from the top of the frame to the lowest flow line exceeds 4 feet. Manhole steps shall be spaced at 12-inch vertical intervals or as directed by the Engineer, in straight alignment, and firmly set into the structure walls.

Drainage structures shall be constructed or set on a level bed of ¾-inch crushed stone that is at least 12 inches thick.

Catch basins shall have a minimum sump depth of 2 feet.

Cast-in-place concrete floor slabs shall be a minimum of 6 inches thick and shall be level. Backfill material shall be compacted to a minimum density of 95% of the maximum dry density of that material that is achieved by AASHTO T180, Method D. Water shall be employed as required to achieve optimum moisture content of the backfill material. Backfill material shall be placed in lifts that do not exceed 12 inches in thickness before compaction. Care shall be taken in the use of mechanical compaction devices - to avoid damaging the structure.

Manhole cover frames and catch basin inlet frames shall be set to finish grade when the structure is constructed, unless the Engineer permits otherwise. If adjacent paving is not completed prior to the onset of winter weather, temporary asphalt bevels shall be installed as directed by the Engineer to protect against snow plow damage.

The interior floors and sumps of drainage structures shall be cleaned as a condition of acceptance.

B. Precast Units

All precast concrete products shall have the casting date clearly labeled on each product. No precast concrete product shall be transported prior to the expiration of a 7-day curing period following the casting date.

All weakened areas or knockouts that are not used shall be bricked and mortared to maintain design wall thickness.

Riser sections shall have sealed connections as recommended by the manufacturer and approved by the Engineer. Precast sections shall contain knockouts or weakened wall sections only at the required locations for pipes.

C. Concrete Masonry Units

Where concrete masonry units are used, corbelling shall be limited to a maximum of 1 inch per course on the last three courses. On Type "C" catch basins, only the front and side walls may be corbelled. The top course of masonry block may be turned 90 degrees on the front and side walls only. On Type "C-L" catch basins, all 4 sides may be corbelled, and the top course of masonry block may be turned 90 degrees on all four sides.

If the total exterior depth of a concrete masonry catch basin exceeds 10 feet, the wall thickness shall be increased to 12 inches at and below the 10-foot depth.

Drainage structures shall not be backfilled until the walls and pipe connections have been inspected and accepted by the Engineer.

All masonry units and metal fittings for catch basins, manholes and inlets shall be set in a full ½-inch minimum bed of mortar.

D. Sedimentation Control at Catch Basins

Install sedimentation control at existing and proposed catch basins in the project area as directed in accordance with the detail. Hay bales shall be installed in accordance with Section 2.18.03 of Form 816.

Should the sedimentation control measure decompose or become ineffective prior to the end of the expected usable life, the sedimentation control measure shall be replaced promptly.

30.07A.4 MEASUREMENT

Quantities of work will be the actual number of catch basins, drainage manholes, oil separator/sedimentation structures or other storm drainage structures that are constructed or reconstructed, altered, reset, or converted - as shown on the plans, or as ordered by the Engineer.

For the oil separator/sedimentation structure, there will be no measurement of interior and exterior sealant, baffle, pvc pipe and fittings or vent pipe.

Normal trenching and backfilling will not be measured separately for payment, but additional trenching and backfilling will be measured and paid for in accordance with Technical Specification 20.02A.

Hay bales and filter fabric installed at drainage structures will be measured by the actual number of structures protected with sedimentation control. Replacement systems will not be measured for payment.

30.07A.5 PAYMENT

Payment for these items will be based on the Contract unit price for each structure completed and accepted in place, including all labor, materials, tools, and equipment necessary to complete the work as specified.

For the oil separator/sedimentation structure, the unit cost shall also include the interior and exterior sealant, baffle, pvc pipe and fittings and vent pipe.

Payment for hay bales and filter fabric installed at drainage structures will be made at the contract unit price per each "Sedimentation Control at Catch Basins", complete in place, installed and accepted which price shall include all materials, equipment, tools and labor incidental to the installation, maintenance, replacement, removal and disposal of the system and surplus material.

**TECHNICAL SPECIFICATION 30.16A
SPECIAL SANITARY MANHOLES**

30.16A.1 SCOPE OF WORK

Work under this technical specification shall consist of furnishing all labor, materials, tools, testing, and equipment necessary to construct special sanitary manholes on existing sanitary sewers in conformity with the lines, grades, dimensions and details shown on the Drawings, in accordance with the specifications herein, or as directed by the Engineer. This work shall include excavation, dewatering, removal and disposal of unsuitable material, bedding material, cast-in-place concrete bases, precast concrete manhole units, brick or concrete inverts and shelves, concrete-encased pipe drops, suitable backfill material, manhole frames and covers, cleaning, and incidentals necessary to complete the work as specified or as directed.

30.16A.2 MATERIALS

- A. Precast concrete manhole sections shall be similar or equal to those shown on the Drawings and shall meet the requirements of ASTM C 478. Joints shall meet the requirements of ASTM C 990.
- B. Exterior coating on precast concrete manhole sections shall be two coats of Carboline Bitumastic-50, Polyguard CA14 A Mastic, or an approved equal product.
- C. Brick shall meet the requirements of ASTM C 32 for sewer brick. Brick for manhole shelves and inverts shall be dense, hard burned brick and shall be grade SS. All other brick shall be grade MS.
- D. Concrete masonry units shall meet the requirements of ASTM C 139.
- E. Manhole steps shall be of steel reinforced polypropylene plastic and shall be in accordance with City of New Haven Construction Standards.
- F. Manhole frame and cover shall be cast iron and shall be in accordance with City of New Haven Construction Standards. Cast iron shall meet the requirements of ASTM A 48, Class 25B for frame and 30B for cover. Frame and cover shall be manufactured by Campbell Foundry Company or approved equal.
- G. Standard mortar shall consist of one part cement and two parts clean sand. Lime shall not be added to the mortar.
- H. Concrete shall meet the requirements of Section M.03 of Form 816 for Class "A" concrete.
- J. Flexible connectors meeting the requirements of ASTM C 923 shall be used for all new pipe to manhole connections. The connectors shall be similar or equal to the Kor-N-Seal

- line. The opening between the doghouse manhole base section and existing pipes shall be sealed with non-shrink grout meeting the requirements of Section M.03.01 (12) of Form 816.
- K. PVC pipe and fittings used to form manhole pipe drops shall meet the requirements of ASTM D3034, SDR 35.
 - L. Manhole section joint sealant material shall be preformed butyl mastic and shall meet the requirements of ASTM C 990.
 - M. Brick and masonry unit exterior and interior coating shall be a flexible epoxy gel that is similar or equal to Parson Environmental Products' PARSONPOXY SEL-80 or Sika Corporation's Sikagard-62.

30.16A.3 CONSTRUCTION METHODS

Manholes shall stand plumb and shall be watertight; manholes shall be outfitted with a New Haven standard cast iron frame and cover. Assembly of precast concrete manhole units shall not begin until the cast-in-place base has set for at least 48 hours.

Provisions shall be made for all pipes and stubs entering the manhole.

No more than the top 12 inches of each manhole shall be constructed of brick and/or curved masonry units for the purpose of adjusting the elevation of the frame and cover.

The existing sewer shall remain undisturbed during construction to insure uninterrupted operation of the line. The upper half of the existing pipe within the inside limits of the manhole shall be saw cut and removed - leaving a flush, neat and smooth invert through the manhole. The shelf shall be built to provide an invert flow channel depth that is at least eight tenths of the diameter of the outlet pipe. No portion of the invert flow channel shall be narrower than the full inside diameter of the outlet pipe. The shelf shall be sloped to drain to the flow channel.

Manhole steps shall be built into manhole walls as shown on the details. The top step shall be placed 12 inches to 16 inches maximum below the top of the manhole cover frame. Steps shall be placed not more than 12 inches apart unless otherwise directed by the Engineer.

Manhole pipe drops shall be constructed as shown on the plans and shall consist of PVC pipe with the necessary fittings, encased in concrete that is placed within adequate forms and constructed to the dimensions shown on the plans.

Excavation and backfilling for manholes shall meet the requirements of Technical Specification 20.02A. Manhole bases shall be cast level on a bed of compacted ¾-inch crushed stone having a minimum thickness of 12 inches. Precast manhole section joint surfaces shall be thoroughly cleaned, and butyl sealant material shall be carefully set in place before assembly of manhole sections. Sections shall be pushed together tightly and shall stand plumb. Manhole steps shall be carefully

aligned. Manhole section joints shall be pointed with mortar, both inside and outside; lifting holes shall be closed with plastic plugs, and then filled with mortar.

30.16A.4 MEASUREMENT

Special sanitary manholes will be measured for payment as a unit, complete in place and accepted.

Outside manhole pipe drops will be measured for payment by height. The height measured will be the elevation difference between the invert of the upper inlet pipe and the invert of the lower pipe bend, measured at the inside face of the manhole wall.

Excavation and backfilling, normal quantity of bedding stone, inverts and shelves, and frames and covers will not be measured separately for payment.

30.16A.5 PAYMENT

Special sanitary manholes will be paid for at the Contract unit price each for “Special Sanitary Manhole” and manhole pipe drops will be paid for at the Contract unit price per vertical foot for “Manhole Pipe Drop”. The Contract unit prices shall include all labor, materials, tools, testing, and equipment that are necessary to complete the work.

Excavation and backfilling, normal quantity of bedding stone, inverts and shelves, and frames and covers will not be paid for separately.

**TECHNICAL SPECIFICATION 30.20A
CATCH BASIN FILTERS**

30.20A.1 SCOPE OF WORK

Work under this technical specification shall consist of furnishing all labor, materials, tools, and equipment necessary to provide stormwater treatment filters for existing and new catch basins.

30.20A.2 MATERIALS

Materials for this work shall be the “Ultra-Urban Filter with Smart Sponge” that is manufactured by AbTech Industries of Scottsdale, Arizona – Model DI2020N - complete with stainless steel collars that fit the support frames of the catch basin grates, hangers, and any other hardware that may be required to suspend the filters beneath the catch basin grates.

30.20A.3 CONSTRUCTION METHODS

Installation of the filters shall be in accordance with the manufacturer’s instructions.

30.20A.4 MEASUREMENT

Catch basin filters will be measured for payment by the complete unit, suspended in place beneath a catch basin grate and accepted.

30.20A.5 PAYMENT

Payment for catch basin filters will be at the Contract unit price each for “Catch Basin Filter”, which price shall include all labor, materials, tools and equipment necessary to complete the work as specified.

**TECHNICAL SPECIFICATION 40.02A
COMPACTED GRANULAR FILL**

40.02A.1 SCOPE OF WORK

This material shall be used as a foundation for subsequent construction, to backfill trenches or test pits, and elsewhere - where a sufficient quantity of suitable granular material does not exist within the project limits to replace excavated unsuitable material or to achieve the desired grading by filling.

40.02A.2 MATERIALS

Compacted granular fill shall meet the requirements of Form 816, Article M.02.02.

40.02A.3 CONSTRUCTION METHODS

Construction methods shall be in accordance with Form 816, Article 2.14.03.

40.02A.4 MEASUREMENT

Compacted granular fill will be measured in place after compaction within the payment lines shown on the Drawings, specified in these Technical Specifications, or where specified by the Engineer.

40.02A.5 PAYMENT

Compacted granular fill will be paid for at the Contract unit price per cubic yard for “Compacted Granular Fill”, which price shall include all labor, materials, tools, and equipment that are necessary to complete the work.

**TECHNICAL SPECIFICATION 40.07A
CONCRETE SIDEWALKS**

40.07A.1 SCOPE OF WORK

Work under this technical specification shall meet the requirements of Section 9.21 of Form 816, amended as follows:

Article 9.21.01 - Description:

Delete "...gravel or reclaimed miscellaneous aggregate base course..." and replace with:

"...processed aggregate base course..."

40.07A.2 MATERIALS

Article 9.21.02 - Materials:

In the first paragraph, delete "Class "C" Concrete" and replace with: "Class "F" Concrete".

Delete the third paragraph and replace with the following:

"The processed aggregate base shall meet the requirements of Article M.05.01."

Add the following:

"Reinforcing steel shall meet the requirements of Article M.06.01."

40.07A.3 CONSTRUCTION METHODS

In the remainder of Section 9.21, replace "gravel or reclaimed miscellaneous aggregate base" with "processed aggregate base" and replace "Class "C" Concrete" with "Class "F" Concrete".

40.07A.4 MEASUREMENT

Article 9.21.04 – Method of Measurement:

At the end of Paragraph 2. Excavation, delete "Section 2.02" and replace with "Technical Specification 20.10A".

Add the following paragraph:

"4. Reinforcing Steel: This work will not be measured separately for payment; the cost thereof shall be included in the price bid for "Concrete Sidewalks."

**TECHNICAL SPECIFICATION 40.20A
PROCESSED AGGREGATE BASE**

40.20A.1 SCOPE OF WORK

Work under this technical specification shall meet the requirements of Form 816, Section 3.04.

**TECHNICAL SPECIFICATION 40.21A
BITUMINOUS CONCRETE PAVEMENT**

40.21A.1 SCOPE OF WORK

Work under this technical specification shall consist of furnishing all labor, materials, tools, and equipment necessary to place a smooth and dense bituminous concrete mixture with a uniform texture - for a pavement base course or surface course - to the proposed grades and cross section shown on the Drawings or as directed by the Engineer.

40.21A.2 MATERIALS

All materials used shall meet the requirements of Form 816, Section M.04.

40.21A.3 CONSTRUCTION METHODS

The methods, tools, and equipment employed in executing any part of the work shall be acceptable to the Engineer and shall meet the requirements of Form 816, Article 4.06.03.

Where bituminous concrete pavement is being constructed as a trench repair or is otherwise meeting an existing pavement, the placement of new bituminous concrete material shall be against a smooth, cut surface of existing bituminous concrete that has received a uniform application of painted-on tack coat; and the completed joint shall be sealed with a hot-poured rubber compound that meets the requirements of AASHTO M-301.

Prior to the placement of the bituminous concrete surface course, all related work within the limits of paving shall be completed. Related work shall include, but not be limited to: adjustments to finish grade of precast concrete catch basin tops, underground structure cover frames, and utility valve boxes; application of tack coat to the portions of the vertical surfaces of pavements, sidewalks, structures, and valve boxes that will abut the surface course; construction of bituminous concrete lip curbing, and pick-up sweeping of the surface of the bituminous concrete base course plus application of tack coat, if required.

40.21A.4 MEASUREMENT

The quantity of bituminous concrete measured for payment will be the net weight in tons measured by the vendor in accordance with Form 816, Subarticle 4.06.03.1 - subject to adjustment in accordance with Form 816, Article 4.06.04 - and accepted by the Engineer.

Sawcutting of existing bituminous concrete will be measured for payment by the linear foot of cut edge that is accepted by the Engineer.

Tack coat and joint sealer will not be measured for payment.

40.21A.5 PAYMENT

Bituminous concrete pavement will be paid for at the Contract unit price per ton for “Bituminous Concrete, Class ()”.

Sawcutting of existing bituminous concrete pavement will be paid for at the Contract unit price per linear foot for “Cut Bituminous Concrete Pavement”.

The Contract unit prices shall include all labor, materials, tools, and equipment necessary to complete the work as specified.

Tack coat and joint sealer will not be paid for separately.

**TECHNICAL SPECIFICATION 40.22A
CONCRETE PAD**

40.22A.1 SCOPE OF WORK

Work under this technical specification shall consist of furnishing all labor, materials, tools, and equipment necessary to construct the concrete dewatering pad at the location indicated on the plans, in accordance with dimensions and details shown, or as directed by the Engineer.

40.22A.2 MATERIALS

Concrete shall meet the requirements for Class “F” type in Form 816, Section M.03. Reinforcing steel shall meet the requirements of Form 816, Article M.06.01. Processed aggregate base shall meet the requirements of Technical Specification 40.20A. The removable 4” x 6” timber shall be pressure treated Yellow Pine or pressure treated Douglas Fir, meeting the requirements of Form 816, Article M.12.13.

40.22A.3 CONSTRUCTION METHODS

Work under this technical specification shall include excavation, dewatering, furnishing and placing base material, formwork, reinforcing steel, concrete, and any other incidentals necessary for construction of the concrete dewatering pad, including the integral curbing, ramp section and 4” x 6” timber, as shown in the detail for the dewatering pad. Excavation and processed aggregate base shall meet the requirements of Technical Specifications 20.10A and 40.20A, respectively. Forms shall be smooth and free of dirt, old concrete, holes, splinters or other defects that, in the opinion of the Engineer, would produce an inadequate finish or prevent concrete from being uniformly distributed throughout the formwork. All exposed corners shall be chamfered, and the concrete shall be smoothed by accepted finishing methods. All other construction methods shall meet the applicable requirements of Form 816, Article 4.01.03 for the slab and Article 6.01.03 for the curb.

40.22A.4 MEASUREMENT

The quantity of concrete shall be the actual volume in cubic yards completed and accepted within the neat lines shown on the plans or as ordered by the Engineer. Excavation below finish grade at the location of the concrete pad, processed aggregate base, reinforcing steel and removable 4” x 6” timber will not be measured separately for payment.

Excavation above finish grade at the location of the concrete pad will be measured and paid for in accordance with Technical Specification 20.10A – General Excavation.

40.22A.5 PAYMENT

This work will be paid for at the Contract unit price per cubic yard for “Concrete Pad”, which price shall include all labor, materials, tools, and equipment necessary to complete the work.

Excavation, processed aggregate base, reinforcing steel, and 4” x 6” timber will not be paid for separately; the cost of these items of work shall be included in the price bid for “Concrete Pad”.

**TECHNICAL SPECIFICATION 40.23A
TEMPORARY PAVEMENT**

40.23A.1 SCOPE OF WORK

Temporary pavement shall include the furnishing, placing, and compaction of bituminous concrete as ordered by the Engineer. Areas where permanent pavement is proposed and where the existing pavement has been removed, shall be brought to grade, base material installed and the base course of bituminous concrete installed prior to winter shut down of bituminous concrete plants. This work will be paid for under the appropriate contract items. **Temporary pavement shall only be used in areas where this is not possible and to provide temporary access areas, ramping etc. when ordered by the Engineer.**

40.23A.2 MATERIALS

Bituminous concrete shall be 3” of Class 4 and conform to the requirements of Article M.04.01.

A suitable base shall be installed prior to placing temporary pavement. If additional material is ordered by Engineer, processed aggregate base conforming to the requirements of Form 816, Section M.05.01 shall be used.

40.23A.3 CONSTRUCTION METHODS

Construction methods shall be in accordance with Technical Specification Section 40.21A.3 for bituminous concrete.

40.23A.4 MEASUREMENT

This work will be measured by the actual number of square yards of temporary pavement completed and accepted.

40.23A.5 PAYMENT

Payment for this work will be made at the contract price per square yard for “Temporary Pavement”, completed and accepted, which price shall include furnishing and placing bituminous concrete, removal of temporary pavement and all other materials, equipment tools and labor incidental thereto.

**TECHNICAL SPECIFICATION 41.04A
PAINTED PAVEMENT MARKINGS**

41.04A.1 SCOPE OF WORK

This work shall consist of providing painted pavement markings of the width and color specified – at the locations indicated on the plans and/or where directed by the Engineer.

41.04A.2 MATERIALS

Materials for this work shall meet the requirements of Form 816, Article M.07.20 for waterborne pavement marking paint.

41.04A.3 CONSTRUCTION METHODS

Construction methods shall meet the requirements of Form 816, Article 12.09.03 for painted legend, arrows, and markings.

41.04A.4 MEASUREMENT

Painted pavement markings will be measured for payment by the linear foot of paint applied to the pavement at the specified width and accepted.

41.04A.5 PAYMENT

This work will be paid for at the Contract unit price per linear foot for “Painted Pavement Markings” of the width and color specified, applied to the pavement and accepted. The Contract unit price shall include all pre-marking layout, cleaning off pavement, paint, glass beads, protection during drying, and all labor, materials, tool, and equipment necessary to complete the work as specified.

**TECHNICAL SPECIFICATION 41.10A
BITUMINOUS CONCRETE CURBING**

41.10A.1 SCOPE OF WORK

Work under this technical specification shall consist of constructing machine-formed bituminous concrete lip curbing on pavement, in accordance with the dimensions and details shown on the plans or as directed by the Engineer.

41.10A.2 MATERIALS

Bituminous concrete shall be Class 3, and tack coat shall be emulsified asphalt grade RS-1. Both shall meet the applicable requirements of Form 816, Section M.04.

41.10A.3 CONSTRUCTION METHODS

The bituminous concrete curbing shall be placed in accordance with Form 816, Article 8.15.03. In new construction, the curb shall be placed on the bituminous concrete pavement that is one course below the final surface. Prior to the placement of the bituminous concrete curbing, the area upon which the curb shall rest shall be cleaned of all loose and foreign materials, and a coating of tack coat emulsion shall be applied.

41.10A.4 MEASUREMENT

Bituminous concrete curbing will be measured for payment by the linear foot of bituminous concrete curbing placed and accepted.

41.10A.5 PAYMENT

This work will be paid for at the Contract unit price per linear foot for “Bituminous Concrete Lip Curbing”, which price shall include all labor, materials, tools, and equipment necessary to complete the work as specified.

**TECHNICAL SPECIFICATION 50.01A
LOAMING, SEEDING, HYDROSEEDING,
AND EROSION CONTROL MATTING**

50.01A.1 SCOPE OF WORK

Work under this technical specification shall consist of providing an accepted uniform stand of perennial turf grasses by furnishing and placing loam, fertilizer, seed or hydroseed, and mulch on areas that are indicated or directed to be grassed.

The work shall also include installation of erosion control matting where shown on the Drawings or where directed by the Engineer.

50.01A.2 MATERIALS

Loam

Loam shall meet the requirements of Form 816, Article M.13.01.

Fertilizer

Fertilizer shall meet the requirements of Form 816, Article M.13.03.

Seed

Lawn seed shall be fresh, clean and new crop seed composed of the following varieties, mixed in proportion, and passing tests for the minimum percentages of purity and germination indicated:

	Proportion By Weight Percent	MIX Minimum Purity Percent	Minimum Germination Percent
Creeping Red or Chewing's Fescue	50	98	90
Kentucky Bluegrass	25	85	75
Merion Kentucky Bluegrass	25	85	75

Mulch

Mulch shall be hay or wood fiber meeting the requirements of Form 816, Article M.13.05.

Erosion Control Matting

Erosion control matting shall meet the requirements of Form 816, Article M.13.09.

50.01A.3 CONSTRUCTION METHODS

Loaming methods shall meet the requirements of Form 816, Article 9.44.03.

Fertilizing, seeding, mulching, and placement of erosion control matting shall meet the requirements of Form 816, Article 9.50.03.

50.01A.4 MEASUREMENT

Furnishing loam from offsite sources will be measured for payment by the cubic yard delivered to the project and accepted, truck measure.

Placing loam plus furnishing and placing fertilizer, seed, mulch, and erosion control matting will be measured for payment by the square yard completed and accepted.

50.01A.5 PAYMENT

Furnishing loam from offsite sources will be paid for at the Contract unit price per cubic yard for "Furnishing Loam".

Placing loam plus furnishing and placing fertilizer, seed, and mulch will be paid for at the Contract unit price per square yard for "Loaming and Seeding".

Furnishing and placing erosion control matting will be paid for at the Contract unit price per square yard for "Erosion Control Matting".

The Contract unit prices shall include all labor, materials, tools, and equipment necessary to complete the work as specified.

**TECHNICAL SPECIFICATION 60.06A
DAMP-PROOFING**

60.06A.1 SCOPE OF WORK

Work under this technical specification shall meet the requirements of Form 816, Section 7.08.

**TECHNICAL SPECIFICATION 60.10A
CONCRETE WALLS**

60.10A.1 SCOPE OF WORK

Work under this technical specification shall consist of constructing reinforced concrete retaining walls at locations indicated on the plans, in accordance with dimensions and details shown, or as directed by the Engineer.

60.10A.2 MATERIALS

Unless otherwise noted, concrete shall be Class “A” meeting the requirements of Form 816, Section M.03. Reinforcing steel shall meet the requirements of Form 816, Article M.06.01. Bagged stone shall meet the requirements of Form 816, Article 7.25.02. Compacted Granular Fill shall meet the requirements of Form 816, Article M.02.02.

60.10A.3 CONSTRUCTION METHODS

Work shall include excavation; dewatering; furnishing and placing compacted granular fill; furnishing and installing formwork, reinforcing steel, steel sleeves for chain link fence, and any other embedments; furnishing and placing concrete; and any other incidentals necessary for construction of reinforced concrete retaining walls. Excavation for construction of the footings shall be in accordance with Technical Specification 20.04A. Placement of compacted granular fill shall be in accordance with Form 816, Article 2.14.03. Formwork for plastic concrete shall be provided in accordance with the requirements of Form 816, Subarticle 6.01.03.3. All exposed corners of walls shall be chamfered. The mixing, transporting and placing of plastic concrete; and the removal of forms from, surface finishing of, and curing of hardened concrete shall be performed in accordance with the applicable requirements of Form 816, Article 6.01.03.

60.10A.4 MEASUREMENT

This work will be measured for payment as the actual volume in cubic yards of concrete completed and accepted within the neat lines shown on the plans or as ordered by the Engineer. Normal quantities of excavation, compacted granular fill, steel sleeves for chain link fence, weepholes, any other embedments, and bagged stone will not be measured for separate payment but rather will be considered as included in the unit price bid for the concrete.

60.10A.5 PAYMENT

This work will be paid for at the Contract unit price per cubic yard for “Class “A” Concrete”, which price shall include all labor, materials, tools, and equipment necessary to complete the work as specified.

No separate payment will be made for normal quantities of excavation, compacted granular fill, steel sleeves for chain link fence, weepholes, any other embedments, and bagged stone.

**TECHNICAL SPECIFICATION 60.11A
PERVIOUS STRUCTURE BACKFILL**

60.11A.1 SCOPE OF WORK

Work under this technical specification shall meet the requirements of Form 816, Section 2.16.

**TECHNICAL SPECIFICATION 65.01A
RESET METAL BEAM RAIL**

65.01A.1 SCOPE OF WORK

This work shall consist of removing existing sections of metal beam rail and posts complete, including metal beam, posts, fittings, and hardware; and then reconstructing the railing in the locations indicated on the plans or as ordered. Any parts of the railing assembly that are damaged or missing shall be replaced with new or accepted used parts that meet the requirements of the specifications. The work shall also include reconstructing metal beam rail end anchorages.

65.01A.2 MATERIALS

Any replacement materials required to properly complete the resetting of metal beam rail shall meet the requirements of Form 816, Article M.10.02.

For any metal beam rail anchorages that need to be relocated, the materials shall meet the requirements of Form 816, Subarticle M.10.02-7.

65.01A.3 CONSTRUCTION METHODS

Care shall be taken in the removal and storage of existing metal beam rail, posts, fittings, and hardware to protect the items from damage. Existing materials shall be reset in accordance with the requirements of Form 816, Article 9.10.03 - at the locations shown on the plans or where ordered by the Engineer.

If any metal beam rail anchorages need to be relocated, the existing concrete anchor shall be abandoned, and a new concrete anchor shall be constructed in accordance with Form 816, Article 9.11.03.

65.01.4A MEASUREMENT

There will be no measurement for separate payment for removing the existing metal beam rail and posts.

Resetting of metal beam rail will be measured for payment by the linear foot, measured from center to center of the end posts to which the reset rail is attached and accepted. There will be no measurement for separate payment for any new or used replacement materials that may be required.

Reconstruction of metal beam rail end anchorages will be measured for payment by the number of anchorages of the particular type that are reconstructed and accepted. The length of metal beam rail that is normally included in the pay limit for the particular type of metal beam rail anchorage shall be included in the reconstruction.

65.01.5A PAYMENT

Resetting of metal beam rail and posts will be paid for at the Contract unit price per linear foot for “Reset Metal Beam Rail”.

Reconstruction of metal beam rail end anchorages will be paid for at the Contract unit price each for “R-B End Anchorage Type ()”.

The Contract unit prices shall include all labor, materials, tools, and equipment necessary to complete the work as specified.

There will be no separate payment for removing existing metal beam rail and posts or for any new or used materials that may be required to reset the metal beam rail and posts.

**TECHNICAL SPECIFICATION 65.02A
METAL BEAM RAIL – WALL MOUNTED**

65.02A.1 SCOPE OF WORK

This work shall consist of furnishing and installing metal beam rail complete on concrete walls as shown on the details.

65.02A.2 MATERIALS

Materials required to properly complete this work shall meet the requirements of Form 816, Article M.10.02.

65.02A.3 CONSTRUCTION METHODS

Work under this technical specification shall meet the requirements of Form 816, Article 9.10.03, as applicable. All welding shall meet the requirements of the current AISC Manual of Steel Construction and Structural Welding Code-Steel of the American Welding Society.

65.02A.4 MEASUREMENT

Metal Beam Rail – Wall Mounted will be measured for payment by the actual number of linear feet completed and accepted, measured from center to center of the end posts to which the rail is attached. Terminal elements will not be measured separately for payment.

65.02A.5 PAYMENT

Payment for Metal Beam Rail – Wall Mounted will be based on the Contract unit price per linear foot for the corresponding item of work, completed and accepted in place with terminal elements, including all labor, materials, tools, testing, and equipment necessary to complete the work as specified.

<u>PAY ITEM</u>	<u>PAY UNIT</u>
Metal Beam Rail Mounted to Existing Wall	L.F.
Metal Beam Rail Mounted on New Concrete Wall	L.F.

**TECHNICAL SPECIFICATION 70.05A
CHAIN LINK FENCE**

70.05A.1 SCOPE OF WORK

Work under this technical specification shall consist of furnishing all labor, materials, tools, and equipment that are necessary to construct woven wire fencing, including gates - as shown on the plans and the attached detail or as directed by the Engineer.

70.05A.2 MATERIALS

All chain link fencing materials shall meet the requirements of Form 816, Article M.10.05. Unless otherwise specified, framework and appurtenances to have epoxy and polyester powder coat finish, except for tension bars, tension wire and tie wire which are to have a polyvinyl chloride coating. All cut ends shall be coated with PVC at the factory. Unless otherwise specified, the finish and coating shall be black in color, and all chain link fences shall have both a top rail and bottom rail. Gates shall be of the same type materials as the chain link fence. Size of all chain link fencing materials shall be as shown on the plans or details. All nuts and bolts shall be stainless steel.

The grout for installation of chain link fence on walls shall be a non-shrink grout that meets the requirements of Form 816, Subarticle M.03.01-12.

70.05A.3 CONSTRUCTION METHODS

The installation of chain link fencing shall meet the requirements of Form 816, Article 9.13.03.

70.05A.4 MEASUREMENT

Chain link fence will be measured for payment by the linear foot of chain link fence of the specified height that is completed and accepted, from outside to outside of terminal posts.

Gates will be measured for payment by the number of gates of the specified height that are completed and accepted.

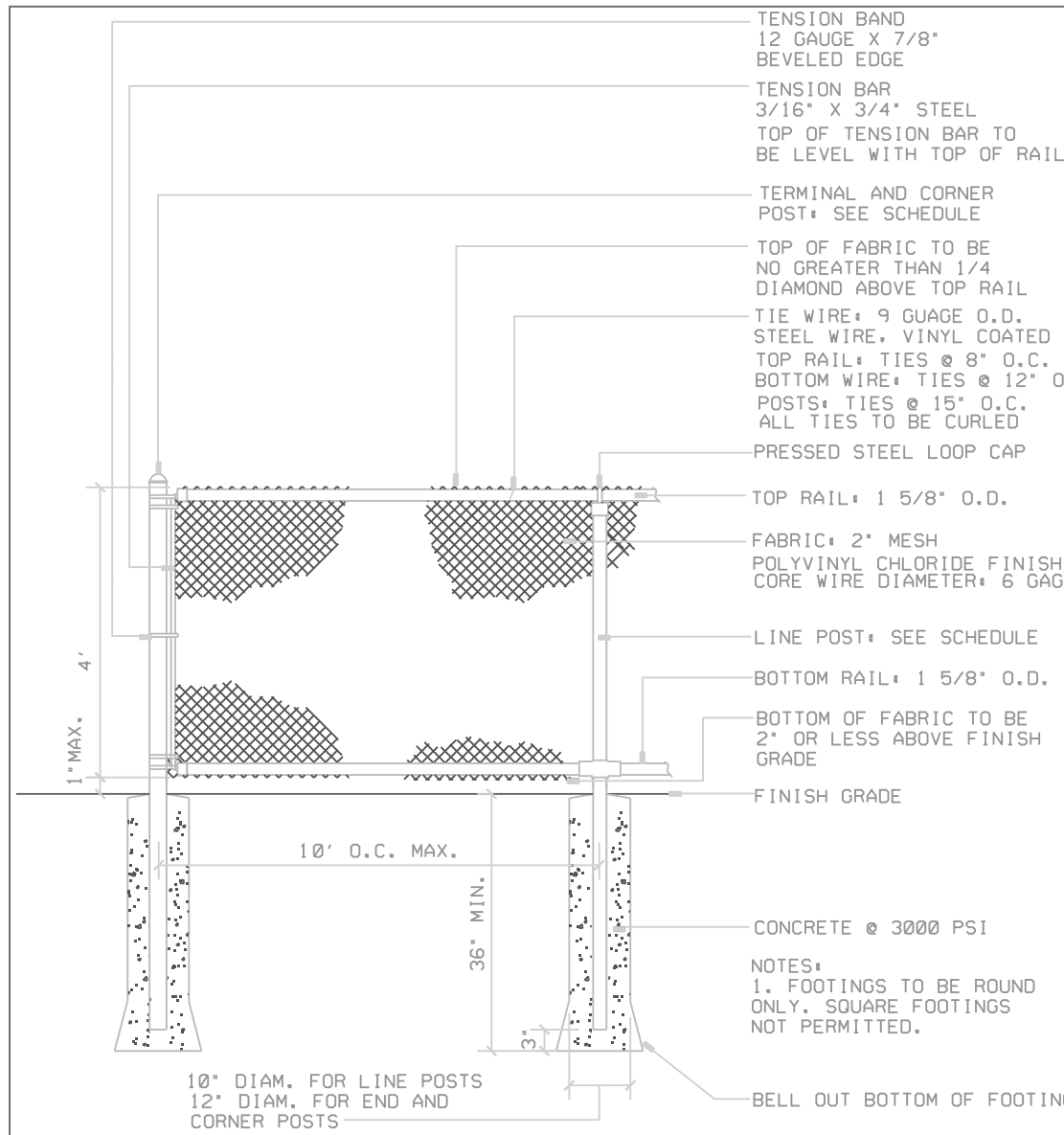
70.05A.5 PAYMENT

Chain link fence will be paid for at the Contract unit price per linear foot for “(Height) Chain Link Fence”.

Chain link gates will be paid for at the Contract unit price each for “(Height) Chain Link Gate”.

The Contract unit prices shall include all labor, materials, tools, and equipment that are necessary to complete the work as specified.

PAY ITEM	UNIT
(Height) Chain Link Fence	L. F.
(Height) Chain Link Gate	EA.



CITY OF NEW HAVEN
 DEPARTMENT OF ENGINEERING

RICHARD H. MILLER, P.E., L.S. 9886
 CITY ENGINEER

DATE: MAY 18, 2004
 DRAWING NO.: STD-NH-31B

FENCE FRAMEWORK SCHEDULE				
FENCE HEIGHT	END AND CORNER POST	LINE POST	TOP AND BOTTOM RAIL	SELVAGE
4' HT	3" OD	2-1/2" OD	1-5/8" OD	KNUCKLED TOP AND BOTTOM

- NOTES:
1. ALL FRAMEWORK AND APPURTENANCES TO HAVE EPOXY AND POLYESTER POWDER COAT FINISH, EXCEPT FOR TENSION BARS, TENSION WIRE AND TIE WIRE WHICH ARE TO HAVE POLYVINYL CHLORIDE FINISH.
 2. ALL NUTS AND BOLTS TO BE STAINLESS STEEL WITH POWDER COAT FINISH.
 3. PROVIDE TRUSS ROD AT ALL CORNERS AND GATES
 4. GATE FRAMEWORK TO BE 1-5/8" O.D.
 5. GATE HARDWARE TO BE BOX HINGES ONLY.

- NOTES:
1. FOOTINGS TO BE ROUND ONLY. SQUARE FOOTINGS NOT PERMITTED.
- BELL OUT BOTTOM OF FOOTING

Chain Link Fence-4' Height

Not to Scale

**TECHNICAL SPECIFICATION 70.22A
TRUCK SCALE WEIGH SYSTEM**

70.22A.1 DESCRIPTION

Work under this technical specification shall consist of furnishing and installing a NTEP (National Type Evaluation Program) certified steel platform truck scale and associated electronic controls, as described below, for a pitless installation. The truck scale weigh system shall also include, but not be limited to excavation, removal and disposal of surplus material, construction of concrete scale foundations, backfilling, and construction of concrete approaches with integral curbs. Also included shall be the connection of the new scale and instrumentation for operation with the City's existing scale software.

70.22A.2 MATERIALS

Shop drawings shall be submitted for approval for the scale foundation and scale outline and shall be sealed by an engineer registered in the State of Connecticut.

Codes and Standards: Work shall meet the applicable requirements of governing authorities having jurisdiction.

All parts and equipment for the scale, including but not limited to the scale weighbridge, load cells, instrumentation, foundation bolts, nuts and bumper plates shall be furnished by the same manufacturer. Equipment shall consist of parts designed to act as a unit by a manufacturer experienced in design, construction, manufacture of electronic components, and operation of equipment for the purpose intended.

Where "N.I.S.T. Handbook 44 Scale Code" is used, it shall mean "National Institute of Standards and Technology Handbook 44" for specifications, tolerances and user requirements. The scale manufacturer shall provide a Certificate of Conformance (NTEP Certification) to these standards upon request.

The scale shall be 70 feet long and 10 feet wide. The scale shall utilize digital or analog load cell technology and shall be manufactured by Fairbanks Scales, Mettler Toledo, equivalent, or approved alternative. The scale deck shall include rub rails. All materials and equipment shall be new.

The scale shall have a minimum gross weighing capacity of 100 tons. The scale shall be designed to accept vehicles that generate up to 80,000 pounds per tandem axle. The scale shall be calibrated to 200,000 pounds by 20-pound increments.

The junction boxes, load cells, load cell mounting hardware, cover bolts, and fasteners shall be constructed of stainless steel. The cables shall be stainless steel sheathed.

The design and manufacture of the scale weighbridge, load cells, digital instrument, and associated accessories shall be of one manufacturer so as to maximize compatibility and availability of components. Also, the manufacturer shall have a quality management system that has been registered to the standards of ISO 9001.

The manufacturer shall provide with the bid proposal a listing of major spare parts and their prices including (but not limited to) replacement load cells, digital instrument, printer, junction box circuit boards, and associated parts.

Weighbridge

The scale weighbridge shall be a steel platform deck.

Welding operators that have been certified to the American Welding Society (AWS) D1.1 Structural Welding Code shall complete all welding in accordance with the AWS D1.1 Structural Welding Code.

All required junction boxes, load cell cables, and interconnecting cables shall be installed and pre-wired prior to shipment by the manufacturer.

There shall be no field welding required for the installation of the scale.

The weighbridge shall be shot blasted to a minimum SSPC-A-SP10 specification prior to painting. All exterior surfaces of the scale shall have a two-part epoxy finish, providing a total dry film thickness of 6-8 mils.

The internal structure of the weighbridge shall be provided with appropriate corrosion protection.

Load Cells

Each load cell shall have a minimum capacity of 45 metric tons (100,000 pounds).

Load cells shall be digital with an integral microprocessor and analog-to-digital conversion function located within the load cell housing or rocker column load cells with a DC analog signal output.

The load cell shall be of stainless steel construction and shall be hermetically sealed with a minimum NEMA 6P (submersible) rating.

The load cell interface cable shall be stainless steel sheathed for environmental and rodent protection.

The load cell shall have a minimum five-year warranty against defects in materials and workmanship. The warranty shall cover all costs associated with replacement parts and on-site labor.

Junction Boxes, Cables and Traffic Signals

All junction boxes shall be NEMA 4X rated and shall be constructed of stainless steel. Junction boxes shall be accessible for inspection and maintenance as required by the manufacturer.

Load cell and scale platform-to-scale instrument cables shall be stainless steel sheathed for environmental and rodent protection.

Traffic signals shall be die cast high-grade aluminum configured for one-way traffic with incandescent lamps with a corrosion resistant finish. The signals shall be mounted on aluminum traffic poles. All necessary cables, conduits and wiring shall meet the manufacturer's requirements.

Scale Instrument

The scale instrument shall be NTEP approved and shall meet or exceed the specifications set forth by NIST H-44 for Class II, III, and III L Devices. The manufacturer, upon request, shall provide a Certificate of Conformance to these standards. The scale instrument shall be UL/cUL listed.

The scale instrument shall be housed in an enclosure that is suitable for desktop mounting. The instrument housing shall be metal and shall have a NEMA 4 environmental rating.

The scale instrument shall be capable of performing calibration, span, zero, and shift adjustment through software calculations that require no in-scale adjustment.

The scale instrument shall receive only digital information from the load cell assemblies. There shall be no analog-to-digital conversion function in the scale instrument. The scale instrument shall be capable of assigning each load cell with its own unique identification number and shall be capable of displaying the weight reading of each individual load cell through the instrument without disconnecting any of the load cells from the system.

The scale instrument shall communicate with each individual load cell and shall display an error code immediately in the event of a load cell failure. This error code shall identify the failed load cell and the cause of the failure.

The scale instrument shall have a transaction counter to automatically assign sequence numbers to transactions.

The display shall be a full graphic display, alphanumeric LCD, LED backlit.

The new scale system shall be connected to operate with the City's existing scale software.

Concrete Scale Foundation and Approaches

Shop drawings of the scale foundation and scale approach slab that are sealed by an engineer licensed in the State of Connecticut shall be submitted for approval. The foundation shall meet all local requirements and the minimum specifications stated in this section, as well as the requirements of the scale manufacturer.

The foundation type shall be concrete piers that span the full width of the weighbridge, installed to a depth 42" below finish grade.

The foundation shall provide the clearance to the weighbridge that is specified by the scale manufacturer. The foundation shall be higher than surrounding grade to promote drainage away from the scale, and the foundation shall be constructed to provide positive drainage away from its center.

The foundation and approaches shall be constructed of Class "F" concrete that meets the requirements of Form 816, Article M.03.01. Reinforcing steel shall meet the requirements of Form 816, Article M.06.01.

The foundation shall be designed to include a concrete approach on each end of the scale in accordance with local regulations and the guidelines of NIST H-44.

The concrete approach foundation shall be installed to a depth 42" below finish grade. It shall be designed to be a 10' x 10' level approach with a 12" wide by 12" high integral curb on each side.

A mud mat of concrete, a minimum of 3" deep shall be installed under the deck.

Lightning Protection

A comprehensive lightning protection system shall be provided with the scale. The system shall not require complicated wiring or complicated devices to provide this protection. The major scale components, including load cells and scale instrument and printer, shall be included in the lightning protection system.

Grounding of all scale components - including load cells, scale instrument, printer, and accessories - shall be to one common point. Multiple ground point systems are not acceptable.

An AC line surge protector shall conveniently plug into a common electrical outlet and have receptacles for the scale instrument, ticket printer, and other scale accessories. Each AC line surge protector required shall have one isolated grounding, hospital grade duplex receptacle, and an internal 15 amp circuit breaker.

Verification of the lightning protection system performance shall be available in writing from a third party verification laboratory upon request.

Guarantee Requirements

The scale manufacturer shall certify that the equipment covered by this guarantee will be free from failure and defects in workmanship and materials, for a period of five years from date of completed installation, or sixty-six months from date of shipment to the buyer. The manufacturer shall promptly correct any such defect appearing within the warranty period.

The scale manufacturer shall warrant all non-abuse related failure of weighbridge structure, suspension assemblies, load cells, junction boxes, load cell cable and digital indicator. Abuse would include, but is not limited to, a vehicle running into the side of an above ground scale.

The guarantee shall support 100% coverage of repair parts, labor and travel time, and mileage from the closest service location, or replacement of the product under warranty.

A service program of regular maintenance by the manufacturer and/or its local representative is required. The level of service, to be determined at the time of sale, will depend upon the site and usage conditions.

70.22A.3 CONSTRUCTION METHODS

The construction of the concrete foundations and approaches shall include excavation, dewatering, placement of base material, installation of formwork, reinforcing steel and concrete, placement of compacted backfill and any other incidentals necessary for construction of the concrete foundations

and approaches. Forms shall be smooth and free of dirt, old concrete, holes, splinters or other defects that, in the opinion of the Engineer, would produce an inadequate finish or prevent concrete from being uniformly distributed throughout the formwork. All exposed corners shall be chamfered, and the hardened concrete shall be smoothed by accepted finishing methods. All other construction methods shall meet the requirements of Form 816, Articles 6.01.03 and 6.02.03 as applicable.

Installation of the truck scale weigh system shall be in accordance with the manufacturer's recommendations and requirements. After installation is complete, the Contractor shall be responsible for calibration and testing of the system. The system shall meet all requirements of the local and State Weights and Measures jurisdiction. The Contractor shall undertake initial certification of the scale by the State. The weight indications, under applied test load, must be within the proper tolerance permitted by N.I.S.T Handbook 44, or other applicable requirements.

The new scale system will be connected to operate with the City's existing scale software.

The traffic signals shall be mounted on aluminum traffic poles and installed in accordance with the manufacturer's requirements. All necessary wiring, conduits and cables shall be installed in accordance with the manufacturer's specifications.

70.22A.4 METHOD OF MEASUREMENT

Each truck scale weigh system will be measured for payment as a unit, constructed as shown on the plans and in accordance with this specification, or as ordered by the Engineer.

70.22A.5 BASIS OF PAYMENT

This work will be paid for at the Contract unit price each for "Truck Scale Weigh System", completed and accepted in place, including all labor, materials, tools, testing, and equipment necessary to complete the work as specified.

**TECHNICAL SPECIFICATION 70.23A
TARPING STATION**

70.23A.1 SCOPE OF WORK

This work shall include the furnishing of all labor, materials, tools, and equipment necessary to construct a tarping station platform and stairway assembly with concrete foundation, as shown on the plans and/or as directed by the Engineer.

70.23A.2 MATERIALS

Shop drawings for the tarping station platform and stairway assembly that are sealed by a professional engineer who is licensed in the State of Connecticut shall be submitted to the Engineer for approval. The design shall meet all local building requirements and, as a minimum, the specifications appearing in this section. The tarping station assembly shall be similar to custom tarping platforms that are produced by Bustin Industrial Products, Inc., East Stroudsburg, PA. A sketch of the basic design elements is attached to these specifications for information only.

The tarping station assembly shall use racking components for the major structural elements. The design loading shall be 50 pounds/SF, and there shall be sufficient capacity for three people or 1,500 pounds. The platform shall be at a height of 9'-6". A railing system with a minimum of two horizontal rails shall be provided on both sides of the platform, and the top rail shall be at a height of 42 inches above the platform. The platform shall be 53 feet long, and the minimum inside width of the platform assembly shall be 36 inches.

The tarping station assembly shall include an attached access stairway with handrails on both sides of the stairway, located on the end of the platform as shown on the plans. The stair width shall be a minimum of 22 inches. The stair assembly shall be designed to meet all local codes and requirements.

The materials for the handrails, stairs and platform grating shall be aluminum with mill finish. The frame legs and support beams shall be steel with a polyester powder coat finish (electrostatic application).

Concrete for the platform assembly foundations shall be Class "A", meeting the requirements of Form 816, Article M.03.01. Reinforcing steel shall meet the requirements of Form 816, Article M.06.01. Compacted granular fill shall meet the requirements of Form 816, Article M.02.02.

70.23A.3 CONSTRUCTION METHODS

The construction of the concrete foundations shall include excavation, dewatering, furnishing and placing of base material, installation of formwork, reinforcing steel and concrete, placement of compacted backfill and any other incidentals necessary for construction of the concrete foundations. Forms shall be smooth and free of dirt, old concrete, holes, splinters or other defects that, in the opinion of the Engineer, would produce an inadequate finish or prevent concrete from being

uniformly distributed throughout the formwork. All exposed corners shall be chamfered, and the surface of the concrete shall be smoothed by accepted finishing methods. All construction methods shall meet the requirements of Form 816, Article 5.06.03 as applicable.

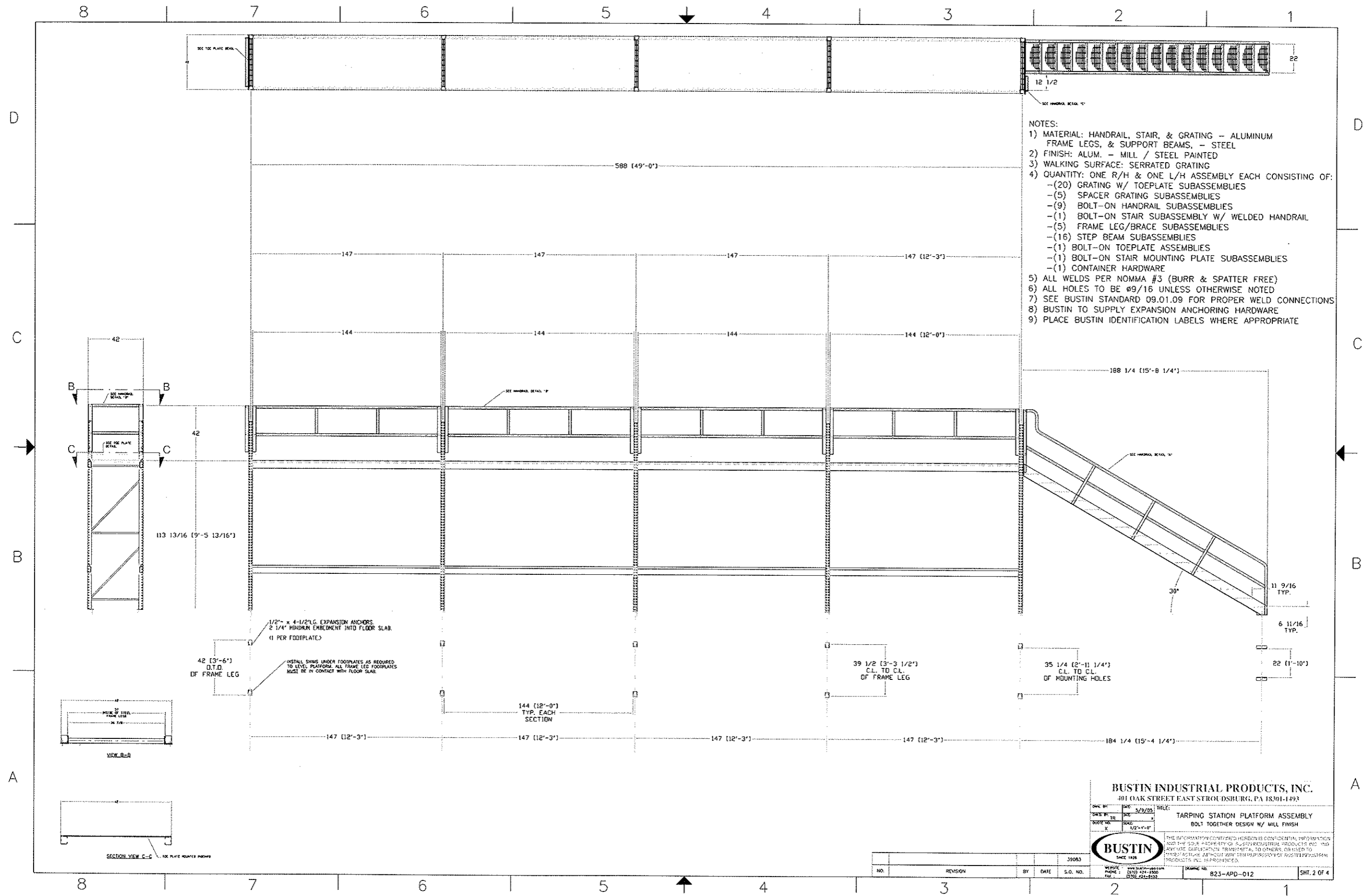
Installation of the tarping station platform and stairway assembly shall be in accordance with the recommendations of the manufacturer.

70.23.4 MEASUREMENT

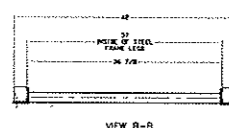
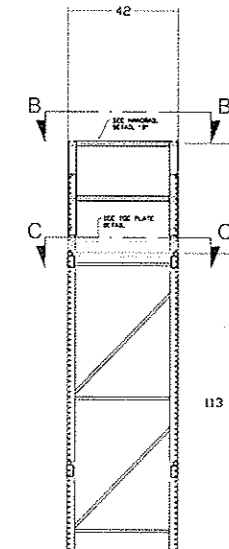
This item of work will be measured for payment as a unit, complete in place, constructed as shown on the plans and in accordance with this specification, and accepted.

70.23.5 PAYMENT

Payment for this item will be at the Contract unit price each for “Tarping Station”, completed and accepted in place, which price shall include all labor, materials, tools, and equipment necessary to complete the work as specified.



- NOTES:
- 1) MATERIAL: HANDRAIL, STAIR, & GRATING - ALUMINUM
FRAME LEGS, & SUPPORT BEAMS, - STEEL
 - 2) FINISH: ALUM. - MILL / STEEL PAINTED
 - 3) WALKING SURFACE: SERRATED GRATING
 - 4) QUANTITY: ONE R/H & ONE L/H ASSEMBLY EACH CONSISTING OF:
 - (20) GRATING W/ TOEPLATE SUBASSEMBLIES
 - (5) SPACER GRATING SUBASSEMBLIES
 - (9) BOLT-ON HANDRAIL SUBASSEMBLIES
 - (1) BOLT-ON STAIR SUBASSEMBLY W/ WELDED HANDRAIL
 - (5) FRAME LEG/BRACE SUBASSEMBLIES
 - (16) STEP BEAM SUBASSEMBLIES
 - (1) BOLT-ON TOEPLATE ASSEMBLIES
 - (1) BOLT-ON STAIR MOUNTING PLATE SUBASSEMBLIES
 - (1) CONTAINER HARDWARE
 - 5) ALL WELDS PER NOMMA #3 (BURR & SPATTER FREE)
 - 6) ALL HOLES TO BE #9/16 UNLESS OTHERWISE NOTED
 - 7) SEE BUSTIN STANDARD 09.01.09 FOR PROPER WELD CONNECTIONS
 - 8) BUSTIN TO SUPPLY EXPANSION ANCHORING HARDWARE
 - 9) PLACE BUSTIN IDENTIFICATION LABELS WHERE APPROPRIATE



1/2" x 4-1/2" LG EXPANSION ANCHORS
2 1/4" MINIMUM EMBEDMENT INTO FLOOR SLAB.
(1 PER FOOTPLATE)

42 (3'-6")
O.T.D.
OF FRAME LEG

INSTALL SHIMS UNDER FOOTPLATES AS REQUIRED
TO LEVEL PLATFORM. ALL FRAME LEG FOOTPLATES
MUST BE IN CONTACT WITH FLOOR SLAB.

39 1/2 (3'-3 1/2")
CL. TO CL.
OF FRAME LEG

35 1/4 (2'-11 1/4")
CL. TO CL.
OF MOUNTING HOLES

11 9/16
TYP.

6 11/16
TYP.

BUSTIN INDUSTRIAL PRODUCTS, INC.
301 OAK STREET EAST STROUDSBURG, PA 18301-1493

DATE: 5/2/05
DRAWN BY: JR
CHECKED BY: JR
SCALE: 1/2" = 1'-0"

TITILE: TARPING STATION PLATFORM ASSEMBLY
BOLT TOGETHER DESIGN W/ MILL FINISH

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NO.	REVISION	BY	DATE	S.O. NO.	39083	VERSION:	DATE:	PHONE:	FAX:	DRAWING NO.	SHT. 2 OF 4
						www.bustin.com	717-434-2800	717-434-2800	717-434-2800	823-APD-012	

**TECHNICAL SPECIFICATION 70.24A
PRECAST CONCRETE BLOCK WALLS**

70.24A.1 SCOPE OF WORK

Work under this technical specification shall consist of providing precast concrete block walls at locations indicated on the plans, in accordance with dimensions and details shown, or as directed by the Engineer. Also included is the removal and relocating of existing concrete blocks. This work further includes furnishing and installing filter fabric, dowels and grout as shown on the plans.

70.24A.2 MATERIALS

Unless otherwise noted, concrete shall be Class “A” meeting the requirements of Form 816, Section M.03. Reinforcing steel dowels shall meet the requirements of Form 816, Article M.06.01. The blocks shall be new and shall have no surface defects. Relocated blocks are allowed for this work only as noted on the plans or approved by the Engineer.

For retaining/push walls, filter fabric shall meet the requirements of Form 816, Subarticle M.08.01-26, except that the word “Geotextile” shall be replaced by the words “Non-Woven Geotextile Fabric.” The Non-Woven Geotextile Fabric shall have a minimum mass of 0.75 lb/SY (405 g/m²) as measured by ASTM D-5261. Materials incidental to and necessary for the installation of the Non-Woven Geotextile Fabric, such as, but not limited to sewing threads, staples, pins, etc., shall meet the requirements of the manufacturer for the specific use or purpose intended, or shall be as otherwise approved by the Engineer. Base material, where required, shall be Compacted Granular Fill meeting the requirements of Form 816, Article M.02.02. The grout shall be a non-shrink grout meeting the requirements of Form 816, Subarticle M.03.01-12.

70.24A.3 CONSTRUCTION METHODS

Precast concrete block walls shall be installed to the lines and grades shown in the Contract plans and details or as directed by the Engineer. Courses of blocks shall be installed to provide staggered joints. Excavation shall be in accordance with Technical Specification 20.10A, and placement of base material shall be in accordance with Form 816, Article 2.14.03. Dowels and grout shall be installed as shown on the details.

Some existing concrete blocks that are removed shall be placed in storage onsite at the location directed by the Engineer. Other removed blocks shall be reset at the locations shown on the plans or directed by the Engineer.

70.24A.4 MEASUREMENT

Existing concrete blocks that are removed and either placed in storage or reset will be measured for payment by the actual number of concrete blocks that are removed and stored or reset, and accepted.

Concrete block freestanding walls will be measured for payment by the actual number of precast concrete blocks that are installed and accepted.

Concrete block retaining/push walls will be measured for payment the linear foot of stacked precast concrete block retaining/push wall that is completed and accepted.

Excavation, base material, filter fabric, dowels and grout will not be measured for separate payment but will be considered as part of the general work.

70.24A.5 PAYMENT

Existing concrete blocks that are removed and either placed in storage or reset will be paid for at the Contract unit price each for “Relocate Concrete Block”.

Concrete block freestanding walls will be paid for at the Contract unit price each for “Freestanding Precast Concrete Block”.

Concrete block retaining/push walls will be paid for at the Contract unit price per linear foot for “Precast Concrete Block Retaining/Push Wall”.

The Contract unit prices shall include all labor, materials, tools, and equipment necessary to complete the work as specified. Excavation, base material, filter fabric, dowels and grout will not be paid for separately, but will be considered as part of the general work.

PAY ITEM	PAY UNIT
Relocate Precast Concrete Block	Each
Freestanding Precast Concrete Block	Each
Precast Concrete Block Retaining/Push Wall	L.F.

**TECHNICAL SPECIFICATION 70.25A
SIGNAGE**

70.25A.1 SCOPE OF WORK

Work under this technical specification shall consist of furnishing and installing regulatory, warning, and informational signage, including metal sign posts and associated hardware, as shown on the plans or as directed by the Engineer.

70.25A.2 MATERIALS

Reflective sheeting shall meet the requirements of Form 816, Subarticle M.18.09-1.

Regulatory, warning, and informational signage properties, including, but not limited to size, font style, font size, colors, symbols, and layout shall meet the requirements of the FHWA Manual on Uniform Traffic Control Devices (MUTCD).

Sheet aluminum sign blanks shall meet the requirements of Form 816, Article M.18.13.

Steel for sign posts shall meet the requirements of ASTM A 36. All steel sign posts shall weigh 3 pounds per foot and shall be galvanized after fabrication in accordance with ASTM A 123. Sign posts shall have a breakaway design that meets the requirements of the AASHTO “Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals”.

Sign mounting bolts shall meet the requirements of Form 816, Article M.18.15

70.25A.3 CONSTRUCTION METHODS

The installation of signage shall meet the requirements of Form 816, Article 12.08.03. When mounting to existing metal beam rail, the Contractor shall cut holes and bolt sign directly to the rail.

70.25A.4 MEASUREMENT

Signage will be measured for payment by the square foot of sign face that is completed and accepted.

70.25A.5 PAYMENT

This work will be paid for at the Contract unit price per square foot for “Sign Face Sheet Aluminum (Enclosed Lens)”, which price shall include all labor, materials, tools, and equipment necessary to complete the work as specified.

**TECHNICAL SPECIFICATION 70.26A
ROLLING GRILLE DOORS**

70.26A.1 SCOPE OF WORK

This work shall consist of furnishing and installing electric rolling grille doors at the transfer station building openings, including but not limited to all electrical appurtenances and connections shown on the plans and/or as directed by the Engineer. The rolling grille shall be an Industrial-Grille Rolling Grille Door as manufactured by Alpine Overhead Doors, Inc, East Setauket, NY, tel. 800-257-4634 or approved equivalent. Attached to this specification are details with general requirements.

70.26A.2 MATERIALS

The rolling doors shall be manufactured by a firm with a minimum of five years experience. A single manufacturer shall provide doors, tracks, motors, and accessories for each type of door. Secondary components shall come from a source acceptable to the manufacturer of the primary components.

Shop drawings that are sealed by an engineer licensed in the State of Connecticut shall be submitted for approval. Include elevation, sections, and details indicating dimensions, materials, finishes, conditions for anchorage and support of each door. The design shall meet all local requirements and the minimum specifications as stated in this specification.

REFERENCES

- A. ASTM A653/A653M — Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process
- B. ASTM A36/A36M— Standard Specification for Carbon Structural Steel, Hot Rolled Steel
- C. ASTM A123/A123M — Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
- D. ASTM A641/A641M — Standard Specification for Zinc-Coated (Galvanized) Carbon Steel Wire
- E. ASTM A312/A312M— Standard Specification for Seamless, Welded, and Heavily Cold Worked Austenitic Stainless Steel Pipes
- F. ASTM A240/A240M — Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications
- G. ASTM A276 — Standard Specification for Stainless Steel Bars and Shapes
- H. ASTM B209— Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate

- I. ASTM B221 — Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes

Curtain:

1. Grille: Furnish 9” straight lattice pattern.
 - a) Horizontal rods: Solid 5/16” galvanized steel rods covered with tubular spacers. Continuous end links shall be designed to prevent the curtain from leaving the side guide rails. Rod Material: ASTM A641/A641M Galvanized Carbon Steel Wire. Finish: Galvanized.
 - b) Vertical spacing: Aluminum clear anodized finish, vertical links 2” on center.
 - c) Tubular Spacer Material: Aluminum with clear anodized finish.
2. Bottom Bar: Double angle bottom bar extending into guides shall be galvanized structural steel with neoprene weatherstrip. (Size dependent on dimensions per manufacturer’s standard)

Guides:

1. Oversized grille shall be wall mounted and shall utilize structural steel mounting angles with powder coat finish sized in accordance with the manufacturer’s design.

Door Support Brackets and Mounting Plates:

1. Steel plate not less than 1/4” thick. Drive end bracket plate shall be fitted with a sealed ball bearing. Bolt plates to wall mounting angles with minimum 1/2” fasteners. Plate supports counterbalance assembly and forms end closures.
 - a) Material: ASTM A36 Carbon Steel; Finish: ASTM A123 Galvanized.
 - b) Stop Lock bearing: To prevent door from free falling in the event drive operation fails.

Counterbalance Assembly: Torsion:

1. Counterbalance assembly: Steel pipe barrel of a size capable of carrying a curtain load with a maximum deflection of 0.03” per foot of door width. Heat-treated helical torsion springs encased in a steel pipe and designed to include an overload factor of 25% to ensure minimum effort to operate. Sealed and prelubricated high-speed ball bearing at rotating support points. Torsion spring charge wheel for applying spring torque and for future adjustments.
 - a) Material: ASTM A36 Carbon Structural Steel; Finish: A123 Hot-Dip Galvanized
 - b) Life Cycle: Design doors of standard construction for normal use of 10,000 cycles standard. (Cycle defined as one time opening and closing of door)

Hood:

1. 24 gauge steel sheet formed to fit the hexagon brackets with reinforced top and bottom edges. Provide support bracing for doors wider than 20 feet at every 10 feet to prevent excessive sag.
 - a) Material: Galvanized Steel in accordance with ASTM A653/A653M; Finish: Powder coated.
2. Fascia: Galvanized, provided where areas behind door hood are open. Materials and finish same as hood.

Locking:

1. Slide locks: For use with 'T' or Double Angle Bottom Bar. Provide padlockable slide locks for latching and locking door on coil side bottom bar at each jamb extending into slots in guides. (Electric Interlocks recommended with motorized doors only).

Motor Operator:

1. Heavy Industrial-Duty, Alpine® Model Redi-Master™ driven by heavy-duty worm gear in oil bath reduction or equivalent. Standard auxiliary chain hoist. The horsepower requirement will be determined by the manufacturer based on the size of the door.
2. Sensing Edges (For double angle bottom bar): For motorized doors, sensing edges allow door to go up in case of obstruction.

70.26A.3 CONSTRUCTION METHODS

Contractor shall verify that dimensions are correct and project conditions are in accordance with manufacturer's installation instructions; do not proceed with installation until unacceptable conditions have been corrected.

Installation of units shall be in accordance with the manufacturer's instructions. Ensure that units are installed plumb and true, free of warp or twist, and within tolerances specified by the manufacturer for smooth operation. The doors shall be tested for regular operation. Submit manufacturer's recommended operation, troubleshooting and maintenance instructions and instruct the owner's personnel in correct operation and maintenance of the units.

Clean units in accordance with manufacturer's instructions. Restore slight blemishes in finishes in accordance with manufacturer's instruction to match original finish.

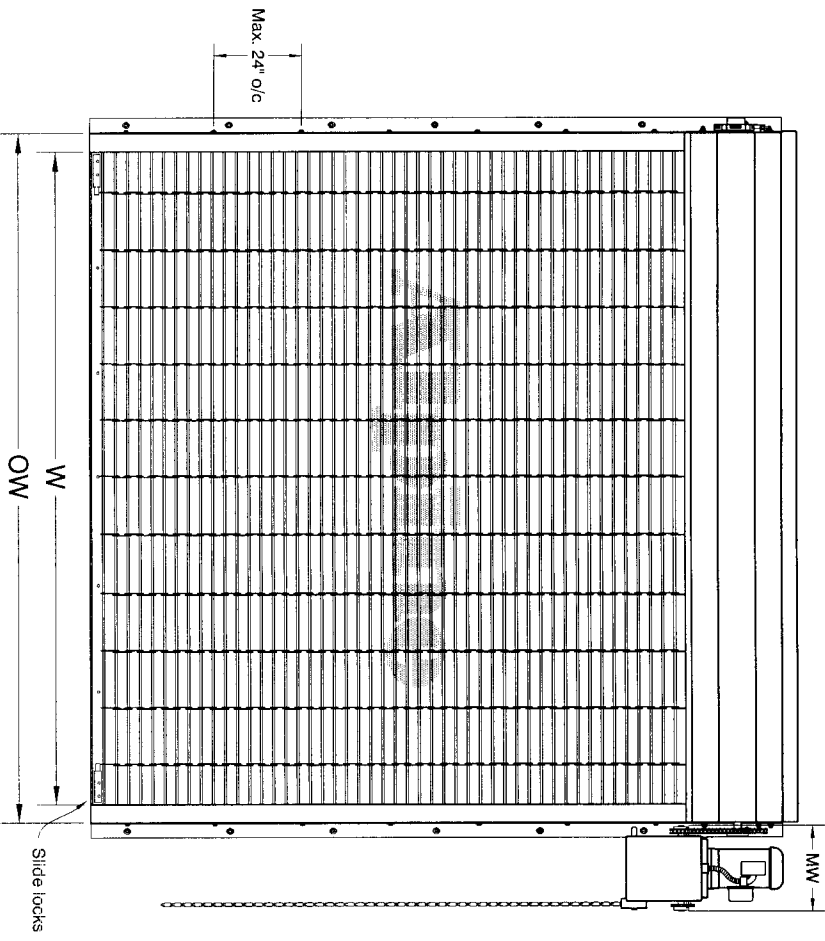
70.26A.4 MEASUREMENT

This work will be measured for payment by counting the actual number of rolling grille doors of the size specified, complete in place, furnished and installed as shown on the plans and in accordance with this specification, and accepted.

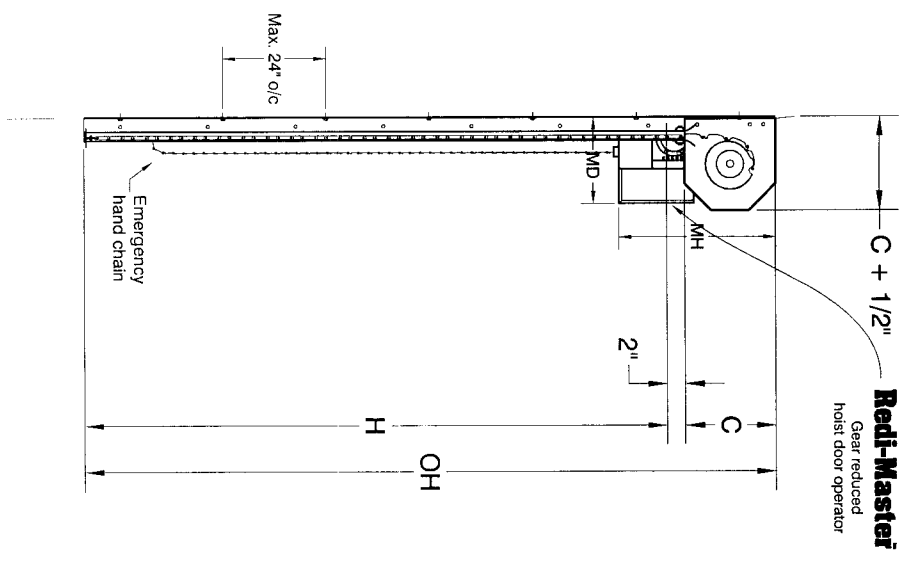
70.26A.5 PAYMENT

This work will be paid for at the Contract unit price each for "Rolling Grille Door", completed and accepted in place, which price shall include all labor, materials, tools, and equipment necessary to complete the work as specified.

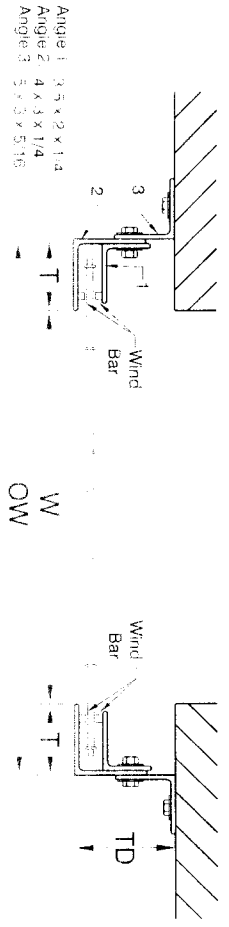
Door is shown right hand drive, left hand is opposite.



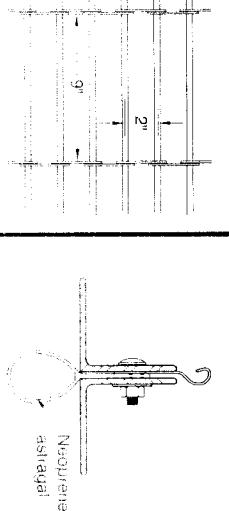
COIL SIDE ELEVATION



VERTICAL SECTION



GUIDE SECTION



CURTAIN

BOTTOM BAR

QTY.	MK	CLEAR OPENING		OVERALL SIZE		C BRACKET	T GUIDES	TD GUIDE DEPTH	OPERATION
		W/ OPENING WIDTH	H/ OPENING HEIGHT	OW/ OVERALL WIDTH	OH/ OVERALL HEIGHT				
1		38'-0"	25'-0"	38'-8"	27'-0"	22"	4"	5"	Motor

DRIVE SIDE	MOTOR SPECIFICATIONS			V	Ø
	MW	MH	MD		
Right Hand	14"	25.25"	13.25"	1/2	230

MATERIAL	
CURTAIN: 9" straight pattern, aluminum vertical links, 5/16" galv rods spaced 2" O/C with sleeves	HOOD: 24 gage galvanized steel sheet formed to fit hexagon brackets
FINISH: Standard	FINISH: galvanized
GUIDES: Designed using angles consisting of structural steel	BOTTOM BAR: Two galvanized steel angles extending into guides, with neoprene weatherstrip
FINISH: Prime, Powder Coat	FINISH: Prime, Powder Coat

PLEASE CHECK APPROPRIATE BOX, SIGN AND RETURN TO ALPINE.

APPROVED (O.K. to Fabricate) RESUBMIT
 APPROVED AS NOTED DISAPPROVED

COMPANY NAME _____ TITLE _____

SIGNATURE _____

PRINT NAME _____ DATE _____

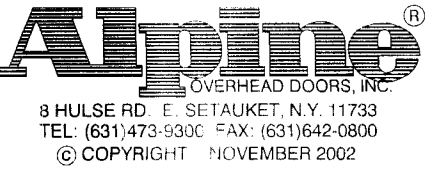
NOTES:

1. Alpine Overhead Doors, Inc. will not be responsible for any damage caused by materials being fastened, by other trades, to our product. In no way should hung ceiling, metal edge strips, fixtures, etc. be attached to or come in contact with guides, hood, etc.
2. Finish: Exposed ferrous surfaces, other than galvanized surfaces, receive one coat of rust inhibitive metal primer.
3. Operation: Doors are motor operated, face of wall mounted

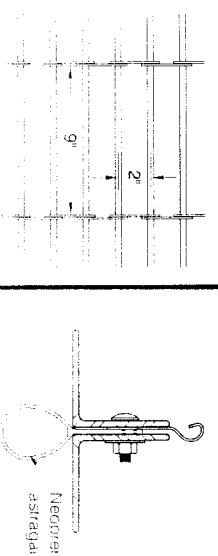
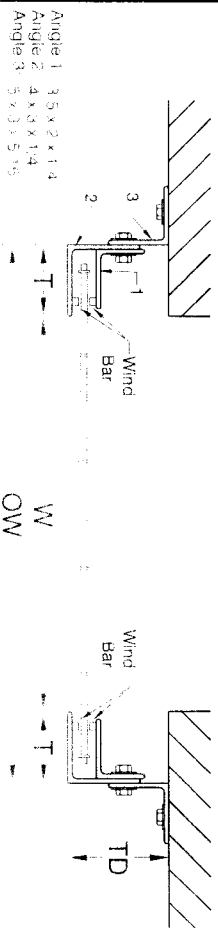
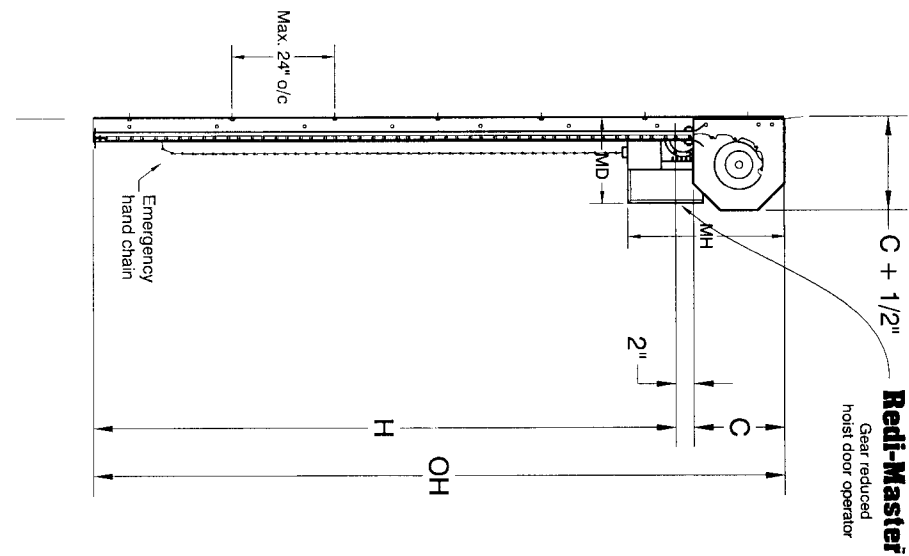
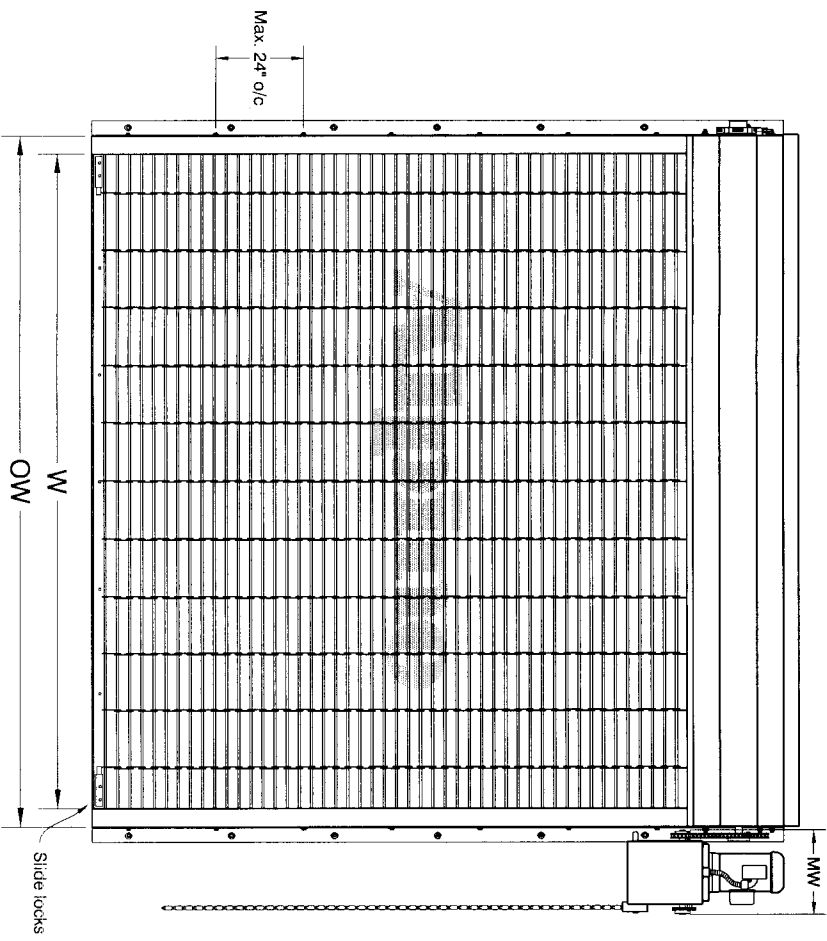
BUILDERS NOTES:

1. Jambos, lintels, sills or other structural element required to prepare openings are not included by Alpine Overhead Doors, Inc.
2. Openings of sound and suitable construction will be provided by the purchaser for the support of Alpine doors.
3. In the construction of new openings, the purchaser will be responsible for the maintenance of certified dimensions on approved shop drawings, or as guaranteed otherwise.
4. Set guides to the "ow" dimension

SALES REP:	John Smith
CUSTOMER:	Denise Lord
CHECK:	
DRAWN BY:	N. Iqbal
DATE:	08-03-07



Door is shown right hand drive, left hand is opposite.



COIL SIDE ELEVATION

VERTICAL SECTION

GUIDE SECTION

CURTAIN

BOTTOM BAR

MATERIAL

QTY.	MK	CLEAR OPENING		OVERALL SIZE		C BRACKET	T GUIDES	TD GUIDE DEPTH	OPERATION
		W OPENING WIDTH	H OPENING HEIGHT	OW OVERALL WIDTH	OH OVERALL HEIGHT				
2		41'-0"	25'-0"	41'-8"	27'-0"	22"	4"	5"	Motor

DRIVE SIDE	MOTOR SPECIFICATIONS				
	MW	MH	MD	H.P.	V
Right Hand	14"	25.25"	13.25"	1/2	230
					3

CURTAIN		BOTTOM BAR	
9" straight pattern, aluminum vertical links, 5/16" galv rods spaced 2" O/C with	FINISH: Standard	HOOD: 24 gauge galvanized steel sheet formed to fit hexagon brackets	FINISH: galvanized
guides: Designed using angles consisting of structural steel	FINISH: Standard	BOTTOM BAR: Two galvanized steel angles extending into guides, with neoprene weatherstrip	FINISH: Prime, Powder Coat
FINISH: Prime, Powder Coat			

PLEASE CHECK APPROPRIATE BOX, SIGN AND RETURN TO ALPINE.

APPROVED (O.K. to Fabricate) RESUBMIT
 APPROVED AS NOTED DISAPPROVED

COMPANY NAME _____ TITLE _____
 SIGNATURE _____
 PRINT NAME _____ DATE _____

NOTES:

1. Alpine Overhead Doors, Inc. will not be responsible for any damage caused by materials being fastened, by other trades, to our product. In no way should hung ceiling, metal edge strips, fixtures, etc. be attached to or come in contact with guides, hood, etc.
2. Finish: Exposed ferrous surfaces, other than galvanized surfaces, receive one coat of rust inhibitive metal primer.
3. Operation: Doors are motor operated, face of wall mounted

BUILDERS NOTES:

1. Jamb, lintels, sills or other structural element required to prepare openings are not included by Alpine Overhead Doors, Inc.
2. Openings of sound and suitable construction will be provided by the purchaser for the support of Alpine doors.
3. In the construction of new openings, the purchaser will be responsible for the maintenance of certified dimensions on approved shop drawings, or as guaranteed otherwise.
4. Set guides to the "ow" dimension

SALES REP:	John Smith
CUSTOMER:	Denise Lord
CHECK:	
DRAWN BY:	N. Iqbal
DATE:	08-03-07

Industrial-Grille
 QUALITY ROLLING GRILLE DOORS



8 HULSE RD. E. SETAUKET, N.Y. 11733
 TEL: (631)473-9300 FAX: (631)642-0800
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**TECHNICAL SPECIFICATION 70.27A
BUILDING TIPPING FLOOR REPAIR**

70.27A.1 SCOPE OF WORK

Work under this technical specification shall consist of repairing the concrete tipping floor within the transfer station building to the widths and depths that are determined by sounding the concrete. Work shall further include the application of epoxy joint filler to construction joints and contraction joints. Also included in this work are removal and disposal of the existing slotted floor drainpipe along the front of the building and filling the resulting void with the manufacturer's recommended mix of "10-60 Rapid Mortar" and 3/8" aggregate.

The transfer station building will remain operational during the Contractor's performance of the floor repair, so the work shall be accomplished in phases. Scheduling of the work shall be coordinated with the City's Public Works Department and the transfer station operating manager. There are three loading bay areas; a minimum of two of these bays shall remain open at all times during transfer station business hours.

The tipping floor area is shown on the attached Floor Plan, A2, dated July 2, 1990. The entire floor area shall be cleaned, prepared and resurfaced - with certain areas requiring additional repair work. The Contractor and City personnel will establish actual repair boundaries in the field. Estimated quantities for bidding purposes are based on the assumption that 50% of the floor area will require a 4-inch depth of repair, including replacement of reinforcing bars, and 50% of the floor area will require just 1.5 inches of resurfacing.

70.27A.2 MATERIALS

The products to be used include 10-60 Rapid Mortar and Masterfill 300 epoxy joint filler by BASF Building Systems. The Northeast Regional Sales Manager, Derek Davis can be reached at (617) 959-1702 or by email at: derek.davis@basf.com.

Applicator Qualifications: Company shall have a minimum of 5 years experience in application of the specified products on projects of similar size and scope, and is acceptable to product manufacturer.

Aggregate shall be a washed, graded 3/8-inch aggregate (pea stone) meeting the gradation for Size No. 8 of Form 816, Article M.01.01.

Reinforcing bars (Size #4) shall be deformed and epoxy coated meeting the requirements of ASTM A615 for Grade 60.

Delivery, Storage and Handling

Delivery – The Contractor shall make all necessary arrangements for material delivery in a manner that does not interfere with the building operations.

Storage and Handling – The material shall be stored at the site at locations that have been coordinated in advance with the transfer station operating manager. The Contractor shall be

responsible for protection of the stored materials. Store materials tightly sealed, off the ground, and away from moisture, direct sunlight, extreme heat and freezing temperatures.

70.27A.3 CONSTRUCTION METHODS

The floor repairs shall be completed in three phases, one bay area at a time. The Contractor shall be responsible for providing acceptable barriers along the side(s) and front of the work area during all work phases. The following sequence of work applies to each phase of work:

The floor surface shall be cleaned with high-pressure water (minimum 4,000 psi) and manufacturer recommended detergent. The cleaning operation shall remove all contaminants such as oil, grease, dirt, debris, etc., but shall not damage the existing concrete slab. After cleaning, a concrete condition survey will be conducted by Contractor and City representative(s) to determine the actual repair boundaries. All areas of delamination shall be determined using sounding techniques. To assure removal of all unsound concrete, the repair limit shall be extended beyond the delaminated or spalled area by 3 to 4 inches. Areas requiring repair of unsound concrete shall be marked on the floor and measured. The Engineer will determine if individual repair areas that are close together should be combined or if adjusting the phase boundary is required to complete a repair extending into the area of an adjacent phase. Coordinate all work with the transfer station operating manager and the City Department of Public Works. The Contractor shall devise a work plan based on the results of the floor condition survey, and the Contractor shall submit that plan, showing the phasing, the anticipated time frame and hours of the day that floor repair work will be taking place, for approval by the Engineer.

Surface preparation, joint preparation, installation of the floor repair material, and finishing of the repair shall be in accordance with the instructions of the repair product manufacturer. A representative of the manufacturer shall be present for the initial placement of each floor repair product, to ensure the Contractor's understanding of the proper surface preparation and repair material application procedures.

Preparation

Surface preparation shall be performed using mechanical equipment / hydro-demolition. Spalled or delaminated concrete shall be removed by shot blast using metal ball bearing, light scabber or fine scarifier to remove a minimum 1/2 inch of the slab surface. Do not cut or remove any existing rebar that is in acceptable condition.

All repair areas shall be squared up as much as possible, and the perimeter edge shall be perpendicular to the surface and a minimum of 1/2 inch deep, using a concrete saw. Remove existing concrete by shot blasting, hydro-demolition, or chipping down to a sound base with a 60 lb. or less pneumatic chipping hammer to a minimum of 1/2 inch. Do not damage square-cut edges. Visible reinforcing bars shall be exposed to provide a minimum 1/2-inch clearance around the bar. Any missing, bent up, worn thin, or corroded rebars shall be corrected by providing new rebars that lap remaining existing rebars a minimum of 10 inches. Remove loose scale and corrosion deposits from exposed existing reinforcement that is to remain. All deteriorated concrete shall be removed.

Construction and contraction joints shall be maintained and all new and existing joints shall be sawcut as directed by the Engineer, at a minimum depth of ½ inch and cleaned. Compressed air shall be used to remove all dirt, dust debris and any loose particles, and the slab shall be vacuumed clean of dust or a final cleaning shall be performed with high-pressure water (minimum 4,000 psi). The cleaning operation shall remove all contaminants such as oil, grease, dirt, debris, etc.

Proper surface preparation to achieve proper bonding of all materials is the Contractor's responsibility. The Contractor is responsible for removal of the debris after demolition.

To ensure a mechanical bond, roughen surface by means of shot blasting or any other mechanical means that does not fracture the coarse aggregate. Chipping the surface down to 1/2-inch profile with a medium square point chisel or mechanical hammer may be used as an alternative.

New reinforcing bars shall be deformed and epoxy coated. The slab shall be reinforced with #4 @ 12 inches each way (minimum 2 inches cover @ top). The new reinforcement shall be connected to the existing slab reinforcement by overlapping and tying the rebars. Splices in the rebars shall be staggered and lapped a minimum of 10 inches. The new reinforcement shall be anchored to the existing slab by drilling and grouting as ordered by the Engineer.

The surface shall be dampened to saturated surface dry (SSD) conditions by wetting, fogging or ponding with clean water for 24 hours. Mixing and installation of concrete repair materials shall be in accordance with the manufacturer's written procedures and instructions including temperature requirements.

Existing grade of the floor shall be maintained with a ¼-inch per foot slope from the back of the building to the front.

Application

The mixed mortar shall be applied by trowel or screed in accordance with the manufacturer's instructions. Ensure proper consolidation of mortar and compaction around reinforcing steel. Patching compound shall be applied in minimum ½-inch depth. For depths greater than ½ inch, extend the mortar material with washed, graded 3/8-inch aggregate at the mortar manufacturer's recommended rates.

Finish completed repair as required, taking care not to overwork the surface. Allow maximum of 15 minutes to mix, place and finish patching material at 70 degrees F. Trowel to smooth finish after initial set.

Cure 10-60 Rapid Mortar immediately after finishing. Use water-based curing compound that complies with ASTM C309.

Protect mortar system finish from damage during construction and from freezing for 24 hours after application.

Construction and contraction joints shall be filled with Masterfill 300 in accordance with the manufacturer's requirements including any necessary primer. The minimum depth of Masterfill 300 is ½ inch. The joint shall be cleaned prior to applying the epoxy joint filler.

70.27A.4 MEASUREMENT

No measurement will be made for separate payment for preparation of the existing floor prior to installation of the repair materials, including (but not limited to) sawcutting, removing old concrete and damaged reinforcement, and roughing the surface.

No measurement will be made for separate payment for providing barriers for each phase of work.

Drilling and grouting dowels for replacement reinforcing bars will be measured for payment by counting the number of dowels that are grouted in place and accepted.

Replacement reinforcing bars will be measured for payment by weight in pounds of bar reinforcement that is installed and accepted. No measurement will be made for any clips, wire, separators, welding or any other material used for fastening and supporting the reinforcement in the correct position.

10-60 Rapid Mortar floor repair will be measured for payment by the actual number of 50 pound bags of 10-60 Rapid Mortar used for the repairs and accepted. The 3/8-inch aggregate will not be measured for separate payment.

Masterfill 300 epoxy joint filler will be measured for payment by the linear foot of joint that is filled and accepted. No measurement will be made for preparation of the joints including (but not limited to) sawcutting, cleaning and furnishing and installing any required primer.

70.27A.5 PAYMENT

No separate payment will be made for preparation of the existing floor prior to installation of the repair materials, including (but not limited to) sawcutting, removing old concrete and damaged reinforcement, and roughing the surface. The cost thereof shall be included in the Contract unit price per each 50 pound bag of the 10-60 Rapid Mortar.

No separate payment will be made for providing barriers.

Drilling and grouting dowels for replacement reinforcing bars will be paid for at the Contract unit price each for "Drilling and Grouting Dowels".

Replacement reinforcing bars will be paid for at the Contract unit price per pound for "Deformed Steel Bars – Epoxy Coated". This price shall also include any clips, wire, separators, welding or any other material used for fastening and supporting the reinforcement in the correct position.

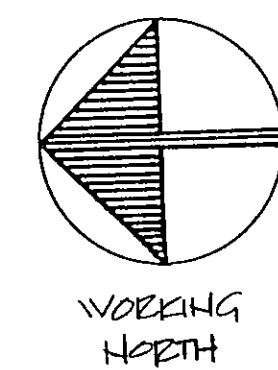
Repair of concrete floors will be paid for at the Contract unit price per 50 lb bag for "10-60 Rapid Mortar Floor Repair" or "10-60 Rapid Mortar Floor Repair With Aggregate". No separate payment

will be made for the 3/8-inch aggregate. These prices shall also include all existing floor preparation as described above.

Epoxy joint filler will be paid for at the Contract unit price per linear foot for “Masterfill 300 Epoxy Joint Filler”. This price shall also include all preparation of the joints as described above.

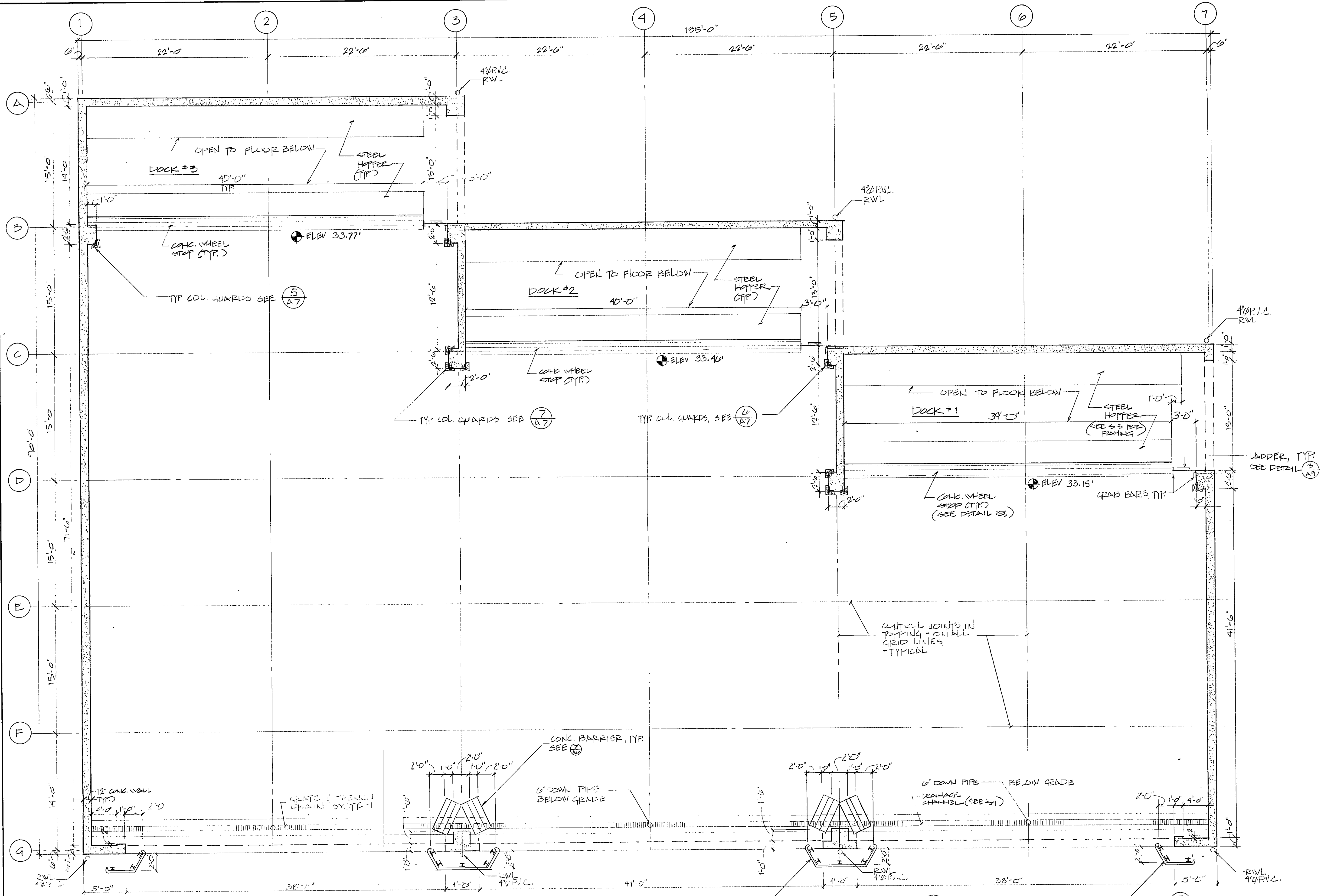
The Contract unit prices shall include all labor, materials, tools, and equipment that are necessary to complete the work as specified.

<u>PAY ITEM</u>	<u>PAY UNIT</u>
Drilling and Grouting Dowels	Ea.
Deformed Steel Bars – Epoxy Coated	Lb.
10-60 Rapid Mortar Floor Repair	Bag
10-60 Rapid Mortar Floor Repair With Aggregate	Bag
Masterfill 300 Epoxy Joint Filler	L.F.



Transfer Station
Middletown Avenue Landfill
New Haven, Connecticut
Floor Plan - Tipping Floor

Drawn by: SKB
Checked by: CKS
Date: JULY 2, 1990
Revisions:



1 FIRST FLOOR PLAN
A2 SCALE 3/16" = 1'-0"

CITY OF NEW HAVEN

NEW HAVEN TRANSFER STATION SITE IMPROVEMENTS

CITY PROJECT #07-161-05

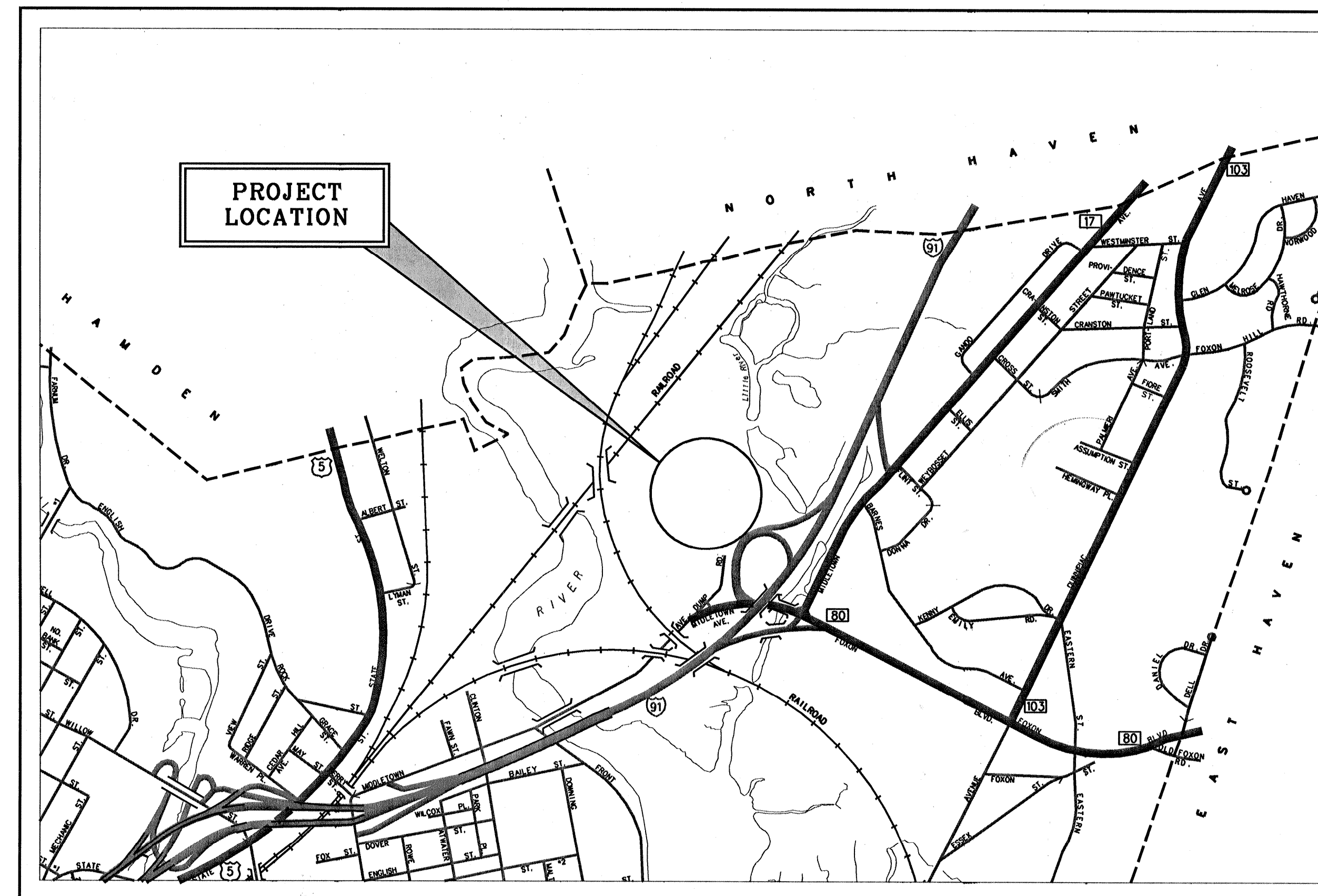
AUGUST 2007



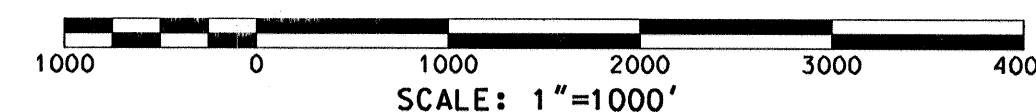
CITY OF NEW HAVEN

HONORABLE JOHN DeSTEFANO JR.
MAYOR

RICHARD H. MILLER, P.E., L.S.
DIRECTOR OF ENGINEERING



LOCATION MAP



LIST OF SHEETS

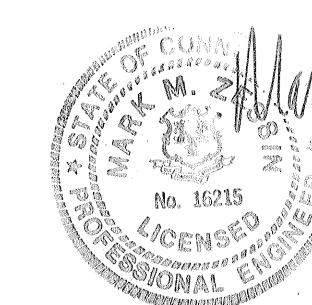
LAYOUT & GRADING PLAN	1
DETAILS	2
DETAILS	3
EXISTING CONDITIONS PLAN	4

PREPARED BY:

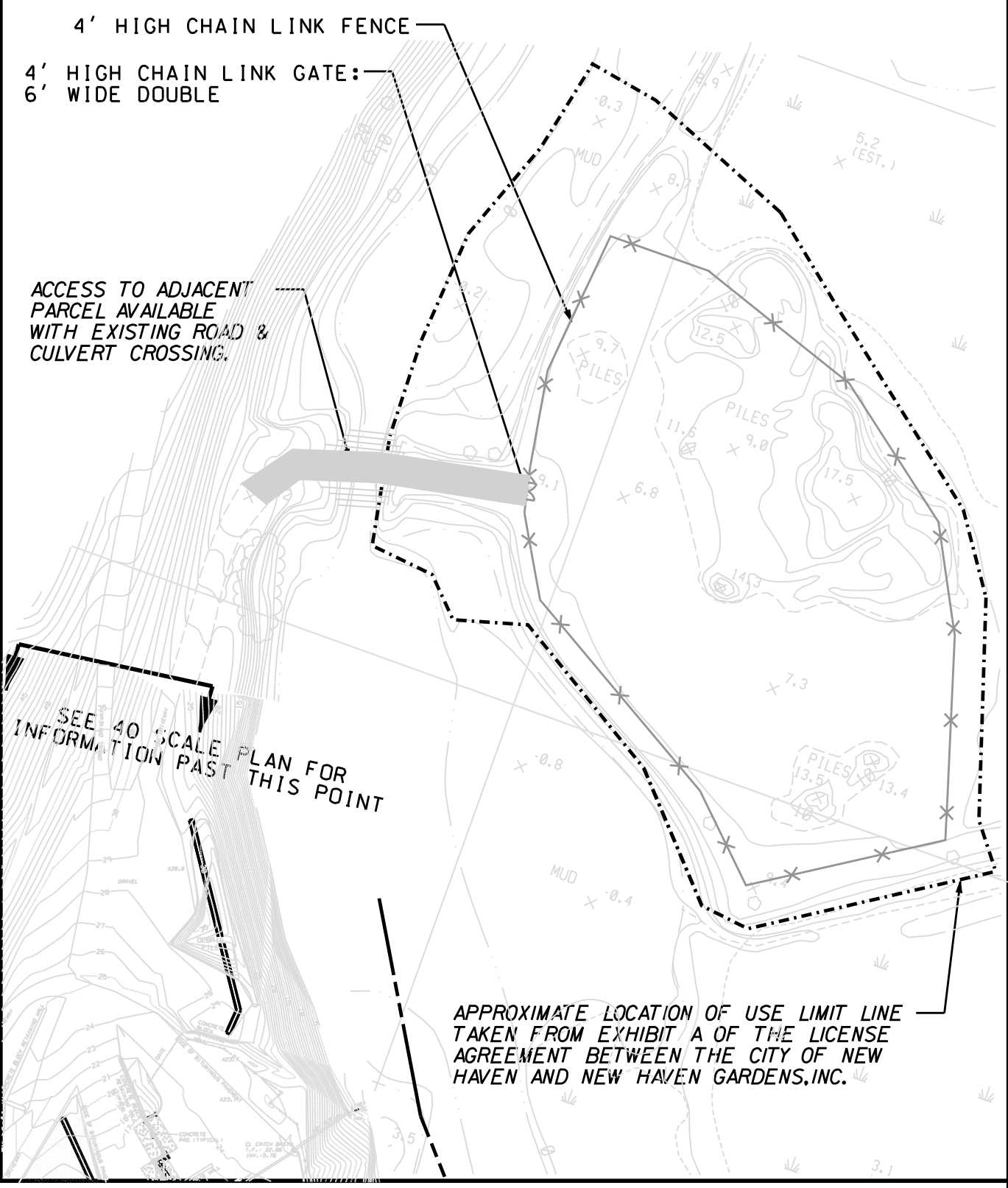
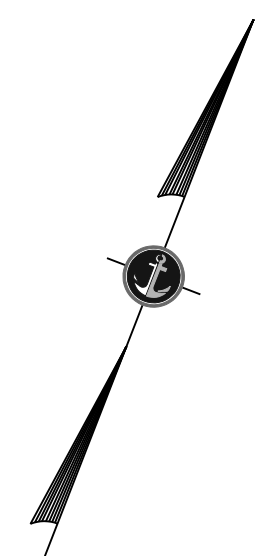
ANCHOR
ENGINEERING SERVICES, INC.

41 Sequin Drive
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www.anchorengr.com

Civil Engineering
• Environmental Consulting
• Land Surveying
• Construction Management



SEE 100 SCALE INSET PLAN FOR INFORMATION PAST THIS POINT



SCALE: 1"=100'

- REMOVE, STORE AND RESET CONCRETE BLOCKS AND GUIDE RAILING ALONG INCINERATOR BUILDING.
- INSTALL ULTRA-URBAN FILTER WITH SMART SPONGE BY ABTECH INDUSTRIES INTO EXISTING CATCH BASIN (typ.)
- SIGN TO BE MOUNTED ON EXISTING RAIL (typ. of 8) "WARNING: FALL HAZARD"
- 167' - 8" HDPE @ 4.5%
- EXIST. TYPE "CL" CB
T.F. = 18.34
EX INV. = 10.24
NEW INV. = 12.49
- BITUMINOUS CONCRETE LIP CURB
- RELOCATE EXISTING METAL BEAM RAIL
- SEDIMENTATION STRUCTURE
T.F. = 21.0
INV. IN = 16.42
INV. OUT = 16.17
- TYPE "C" CATCH BASIN
DOUBLE GRATE TYPE II
T.F. = 20.0
INV. = 16.5
PLACE CONCRETE BLOCK ON EACH SIDE OF BASIN
- 12" HIGH INTEGRAL CONCRETE CURB (typ.)

CONCRETE BLOCK FREESTANDING WALL

GUIDE RAIL TO BE MOUNTED TO BACK OF EXISTING CONCRETE WALL. INSTALL TERMINAL SECTIONS AT EACH RAIL END.

INSTALL SIGN, "WARNING NO PEDESTRIAN ACCESS"

4" YELLOW PAINTED PAVEMENT MARKINGS AT 45° ANGLE, 2 FEET APART

INSTALL SIGN (typ. of 3), "WARNING: FALL HAZARD"

INSTALL SIGN, "WARNING NO PEDESTRIAN ACCESS"

TYPE "CL" CB
T.F. = 28.8
INV. = 20.0

INSTALL ULTRA-URBAN FILTER WITH SMART SPONGE BY ABTECH INDUSTRIES INTO NEW CATCH BASIN (typ.)

TYPE "CL" CB

T.F. = 31.9
INV. = 29.2

NOTE: BREAKING UP, REMOVING AND DISPOSING OF A PORTION OF A 9"± CONCRETE SLAB THAT MAY EXIST BURIED 4'± DEEP ALONG FRONT OF BUILDING MAY BE REQUIRED. (typ. of 3)

- IMPROVEMENTS AT THE EXISTING BUILDING:
 - a) INSTALL ROLLING GRILLE DOORS AT THE THREE EXISTING OPENINGS (CONTRACTOR TO VERIFY EXACT SIZE FOR MANUFACTURER):
 - 25' HIGH x 41' WIDE
 - 25' HIGH x 38' WIDE
 - 25' HIGH x 38' WIDE
 - b) BUILDING TIPPING FLOOR (UPPER LEVEL) TO BE REPAIRED AND RESURFACED.

REMOVE AND DISPOSE OF EXISTING SCALE AND CONCRETE APPROACHES

40' - 6" HDPE PIPE @ 0.5%

TYPE "CL" CB

T.F. = 32.0
INV. = 29.0

TYPE "CL" CB

T.F. = 32.1
INV. = 28.8

PIPE CONNECTION TO EXISTING DRAIN IN BUILDING: 7'± - 6" PVC PIPE @ 1.0%. CONTRACTOR TO MAKE AN OPENING IN THE EXISTING BUILDING WALL. INSTALL 6" PVC AND CONNECT TO EXISTING PIPE WITH TEE FITTING. CONTRACTOR TO VERIFY LOCATION & ELEVATION (28.3±) OF EXISTING PIPE IN BUILDING PRIOR TO INSTALLATION OF NEW DRAINAGE. RESTORE BUILDING WALL.

10' x 70' SCALE

4' WIDE CONCRETE SIDEWALK

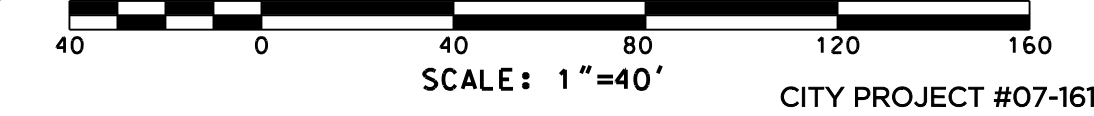
CONCRETE RETAINING WALL WITH CHAIN LINK FENCE

CONCRETE SIDEWALK (MEET EXISTING)

CONCRETE SCALE APPROACH WITH CURB (typ.)

TEST PIT TO VERIFY LOCATION OF 6" DI WATER PRIOR TO WALL CONSTRUCTION

SIGN: STOP HERE FOR SCALE PROCEED WHEN LIGHT IS GREEN



REMOVABLE TIMBER
8' - 6" PVC PIPE @ 1.0%

POLE TO BE RELOCATED (BY OTHERS)

CONCRETE RAMP PORTION OF DEWATERING PAD
CONCRETE DEWATERING PAD

CONCRETE BLOCK PUSH WALL

POSSIBLE LOCATION OF RELOCATED POLE

24' - 6" PVC PIPE @ 1.0%

CUT BITUMINOUS CONCRETE PAVEMENT & MEET EXISTING PAVEMENT (typ.)

SANITARY MANHOLE - INSTALL OVER EXISTING 12" SANITARY AND 6" CONDENSATE LINE - TEST PIT TO VERIFY LOCATION. REMOVE CONCRETE BLOCKS & STORE ON SITE AS DIRECTED BY CITY.

T.F. = 26.0
INV. NEW DROP = 15.93
EXIST. INV. 12" SAN = 9±
EXIST. INV. 6" COND. = 9.5±

REMOVE AND DISPOSE OF EXISTING TARPING STATIONS

4" YELLOW PAINTED PAVEMENT MARKINGS (typ.)

CONCRETE RETAINING WALL WITH METAL BEAM RAIL

10' x 70' SCALE

CONCRETE SCALE APPROACH WITH CURB (typ.)

REMOVE AND DISPOSE OF EXISTING SCALE AND CONCRETE APPROACHES

TARPING STATION PLATFORM AND STAIRS

CONCRETE SIDEWALK

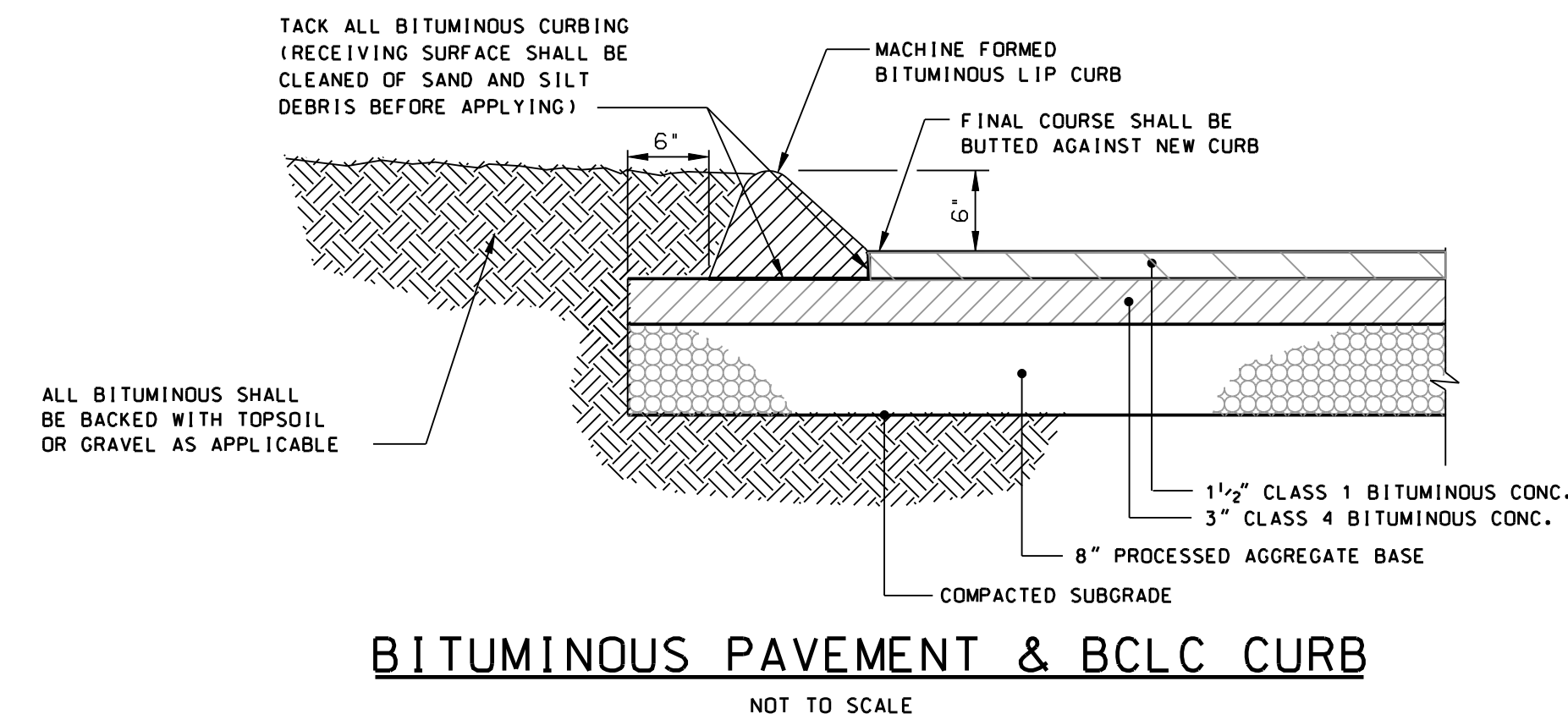
BITUMINOUS CONCRETE PAVEMENT

BITUMINOUS CONCRETE LIP CURB

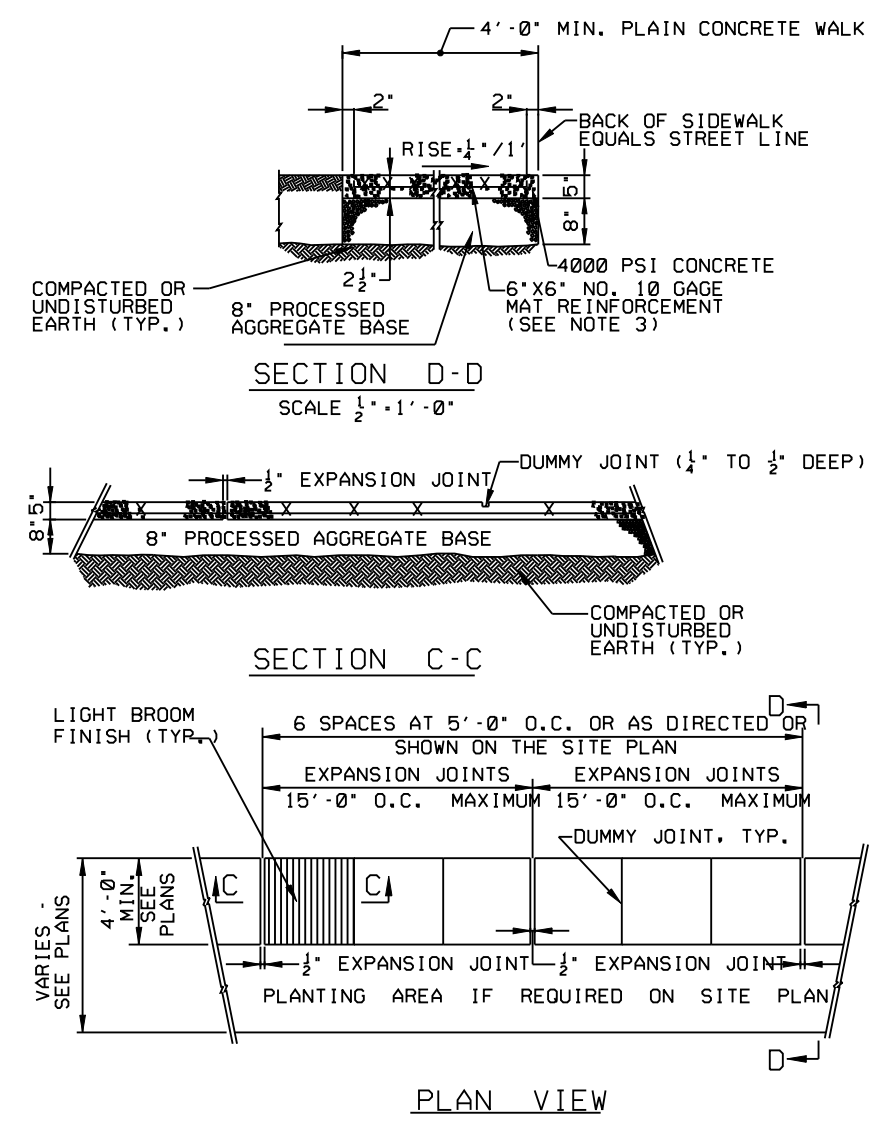
SCALE TRAFFIC SIGNAL

CONCRETE SIDEWALK (MEET EXISTING)

<p>ANCHOR ENGINEERING SERVICES, INC.</p> <p>41 Sequin Drive Glastonbury, CT 06033 Phone: (860) 633-9770 Fax: (860) 633-5971 www.anchorengr.com</p>		<p>CITY PROJECT #07-161-05</p>	
		<p>PROJ. ENGINEER DPL PROJ. MANAGER MMZ OFFICE REVIEW MMZ</p>	
<p>REVISIONS</p>		<p>TRANSFER STATION IMPROVEMENTS PREPARED FOR CITY OF NEW HAVEN SITE LAYOUT & GRADING</p>	
<p>290 MIDDLETOWN AVENUE PROJECT 119-07</p>		<p>NEW HAVEN, CT DATE 08/30/07 SHEET NO. 1 OF 4</p>	
<p>SCALE: 1"=40'</p>		<p>SCALE: 1"=40'</p>	

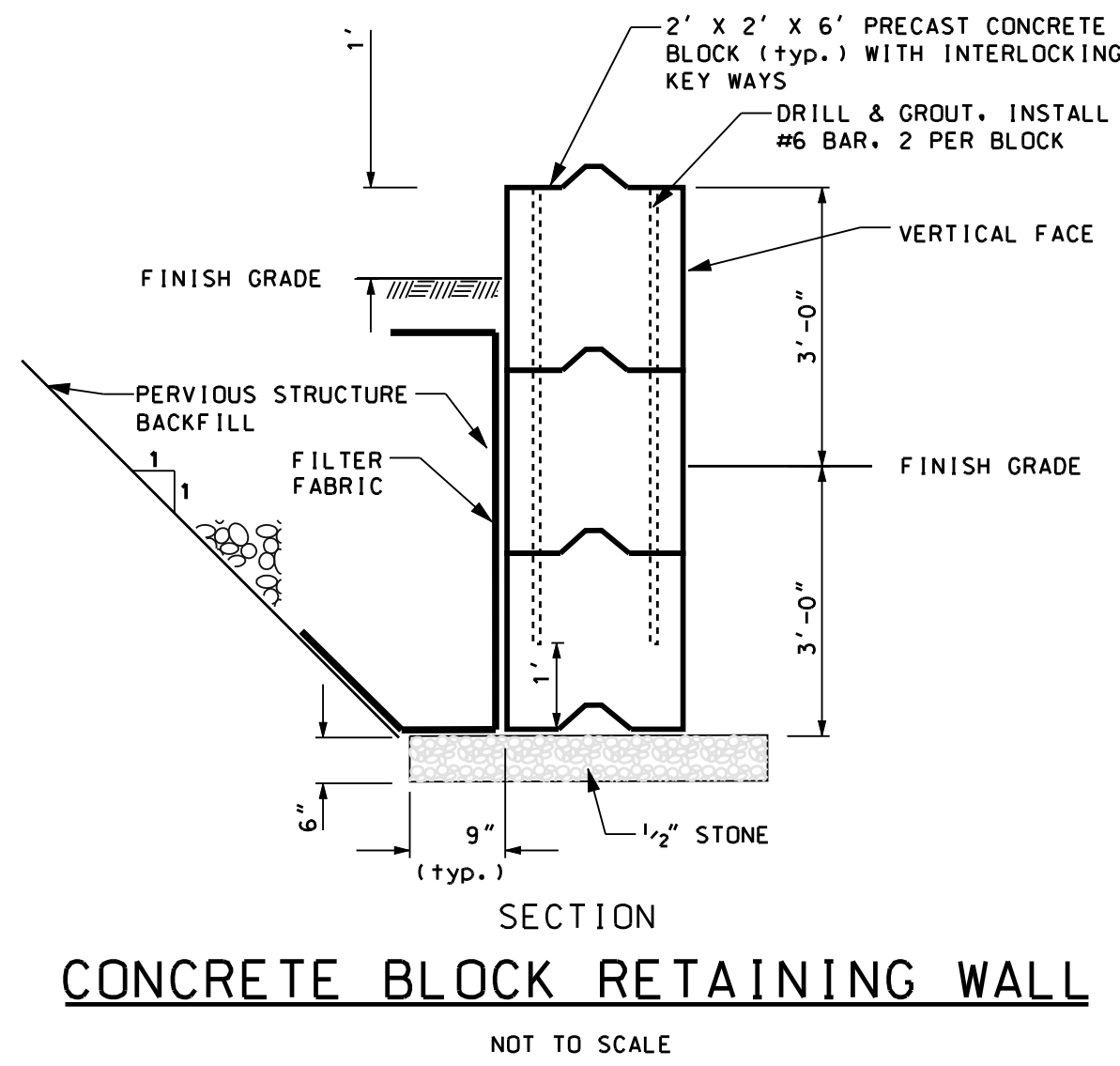


BITUMINOUS PAVEMENT & BCLC CURB
NOT TO SCALE

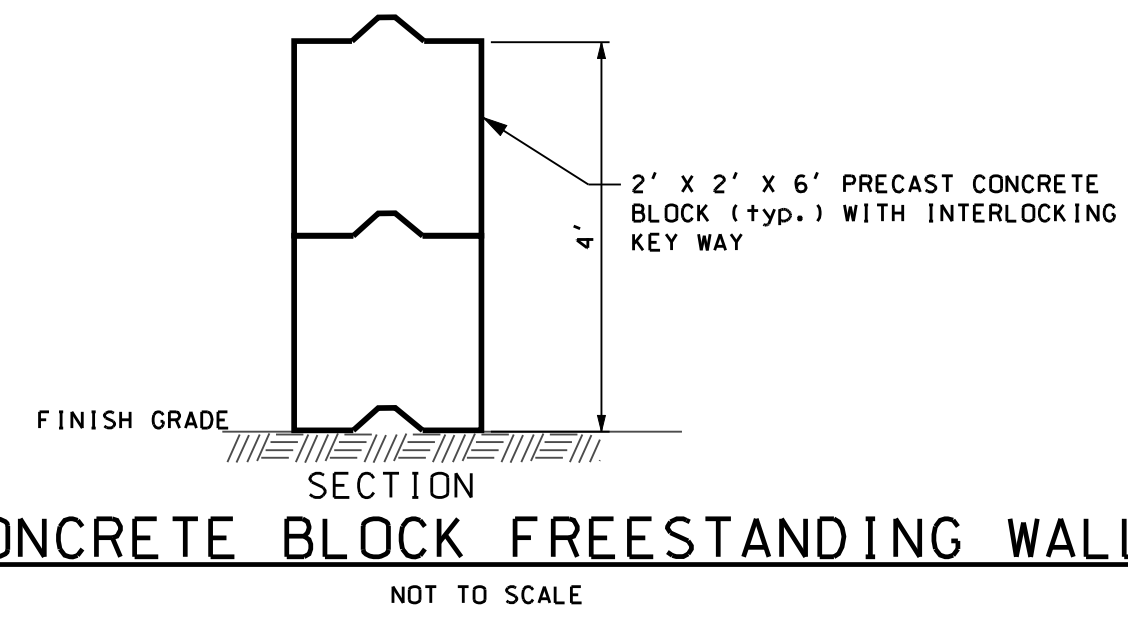


- NOTES:**
1. MATERIALS, METHODS OF INSTALLATION, CURING, TESTING, SHALL CONFORM TO STATE OF CT DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FORM 616, 2004 OR CURRENT SPECIFICATION FOR SUCH WORK.
 2. ANY WALKING SURFACE SHALL BE LIGHTLY BROOMED PERPENDICULAR TO THE TRAVEL WAY.
 3. WIRE MESH SHALL BE PLACED 2 1/2" BELOW THE SIDEWALK SURFACE. MATERIAL SHALL BE 6" X 6" NO. 18 GAGE AND IN ACCORDANCE WITH ASTM 185 (AASHTO M55). AS SHOWN ON THE PLANS OR AS DIRECTED. WIRE MESH TO BE USED IN ALL COMMERCIAL SIDEWALK APPLICATIONS. MESH MAY BE OMITTED ONLY WITH THE SPECIFIC AUTHORIZATION OF THE CITY ENGINEER ON A CASE-BY-CASE BASIS.

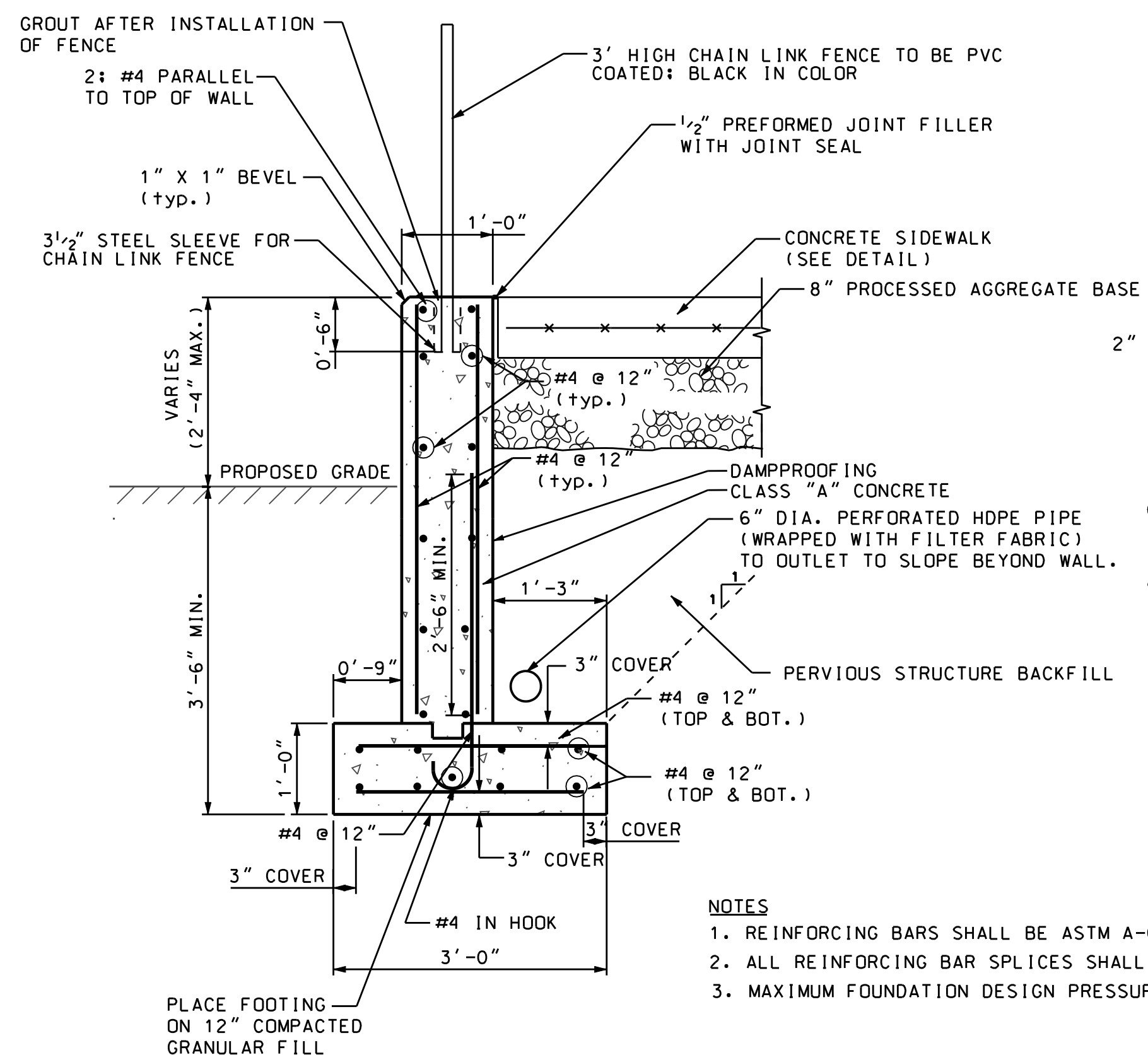
TYPICAL SIDEWALK DETAILS
NOT TO SCALE



CONCRETE BLOCK RETAINING WALL
NOT TO SCALE

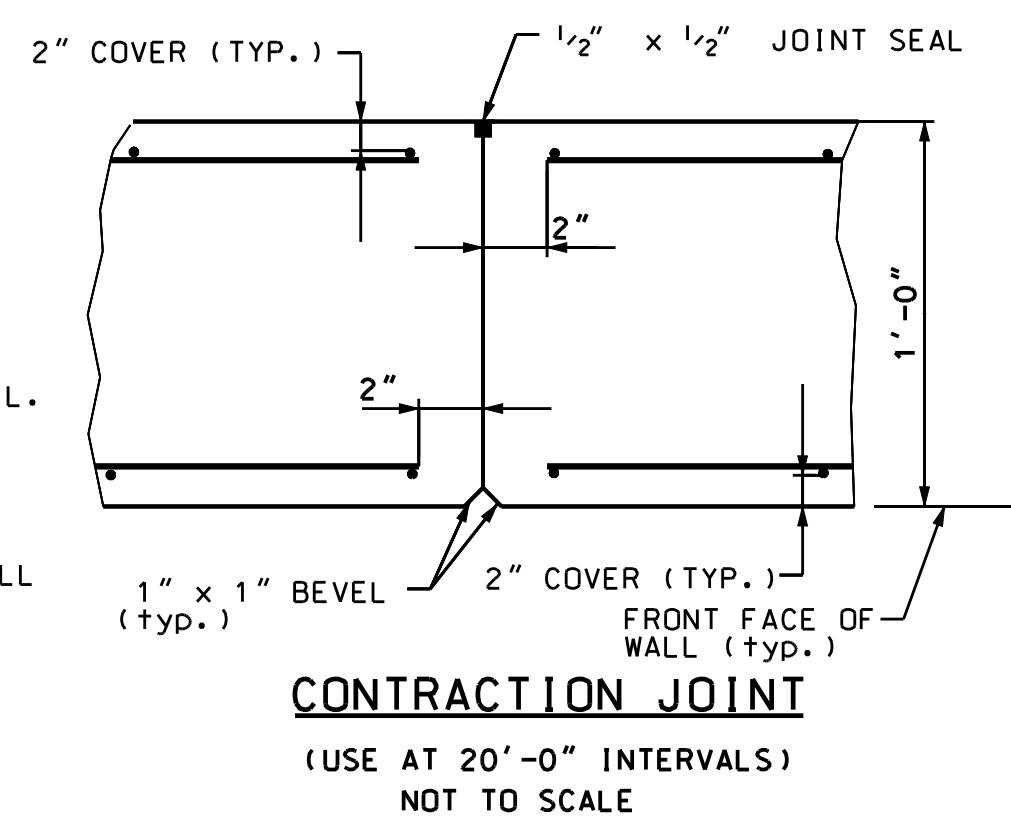


CONCRETE BLOCK FREESTANDING WALL
NOT TO SCALE

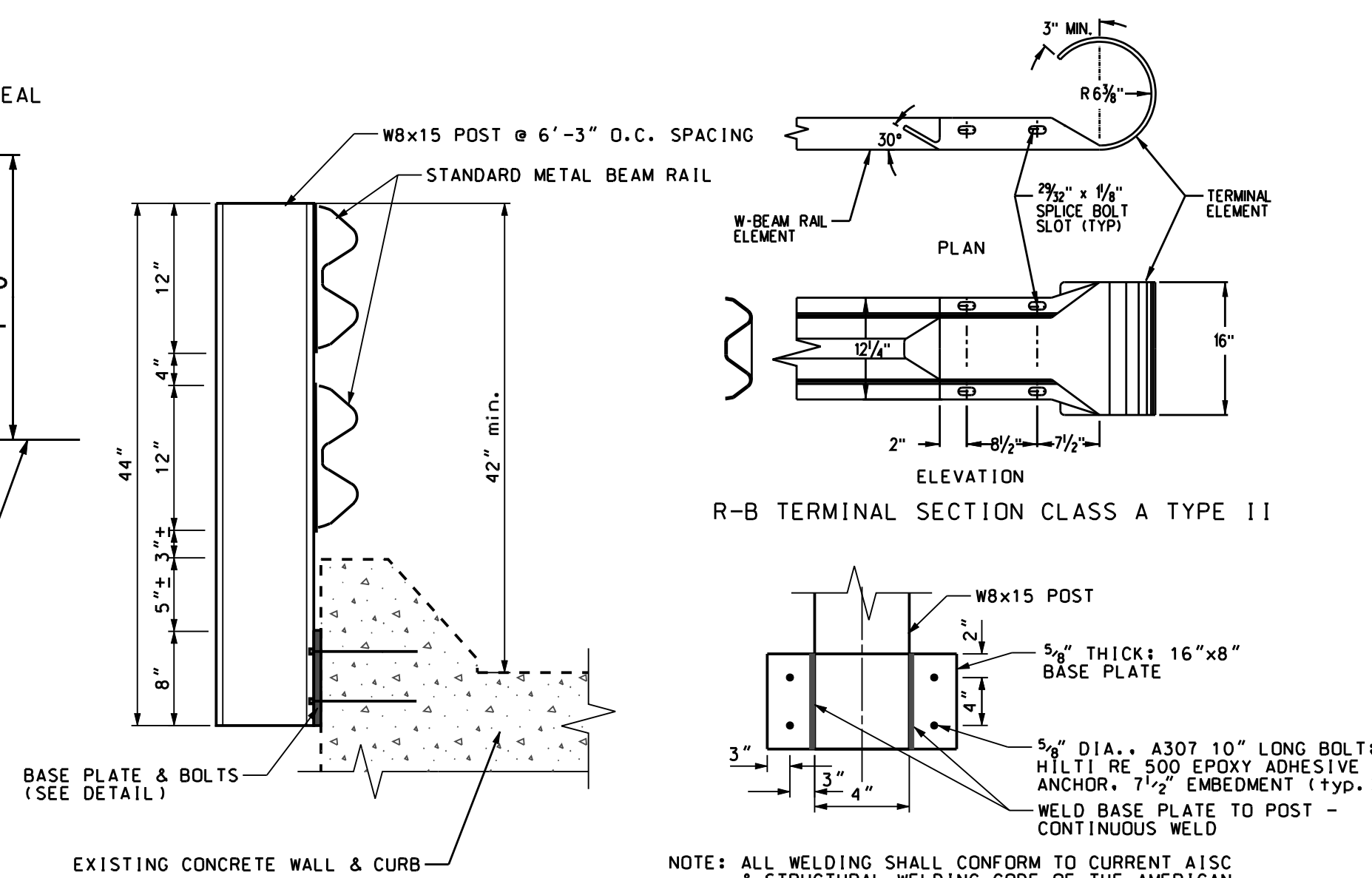


RETAINING WALL SECTION WITH CHAIN LINK FENCE
NOT TO SCALE

- NOTES:**
1. REINFORCING BARS SHALL BE ASTM A-615 (GRADE 60).
 2. ALL REINFORCING BAR SPLICES SHALL BE 30" MINIMUM.
 3. MAXIMUM FOUNDATION DESIGN PRESSURE = 1T5F

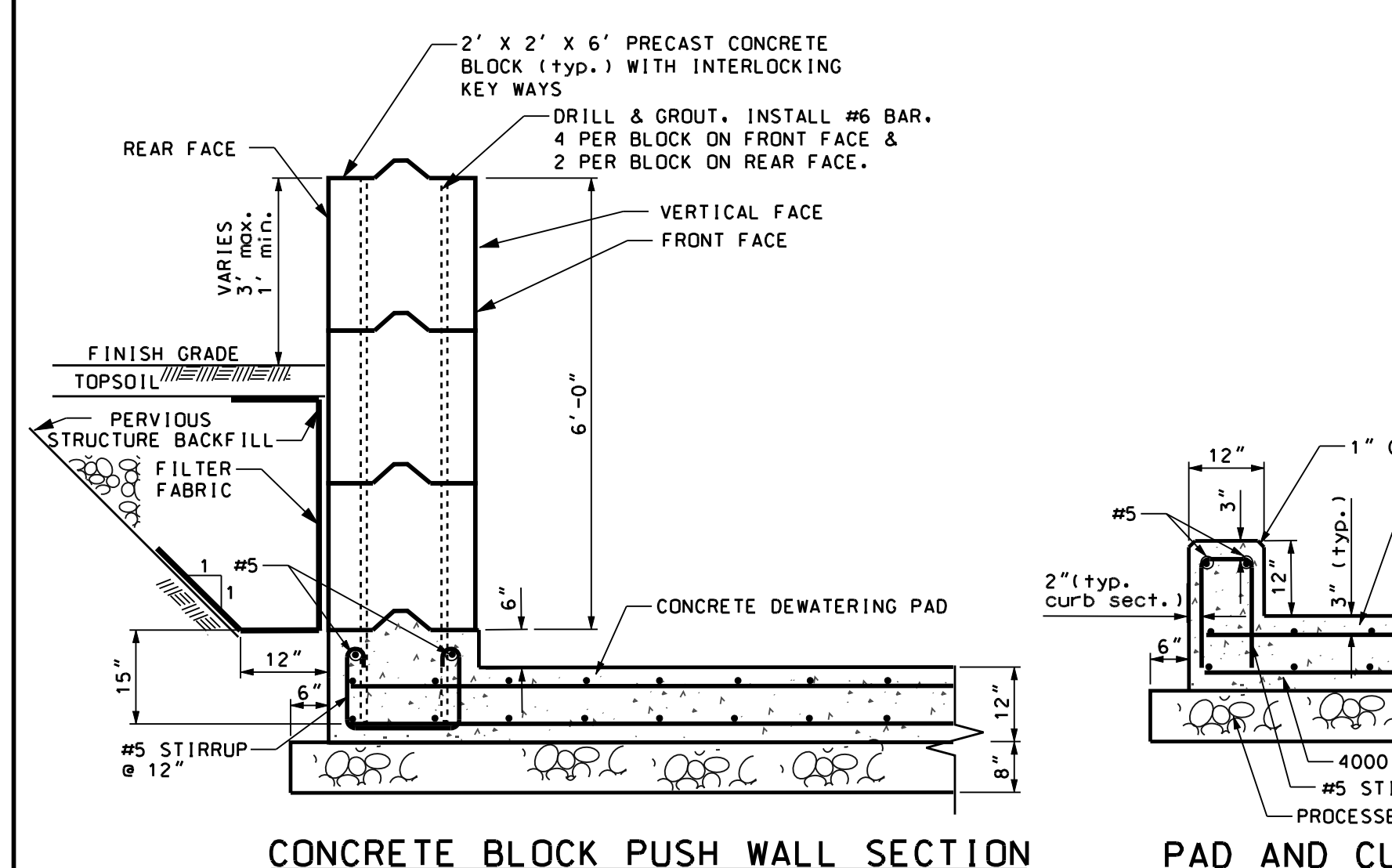
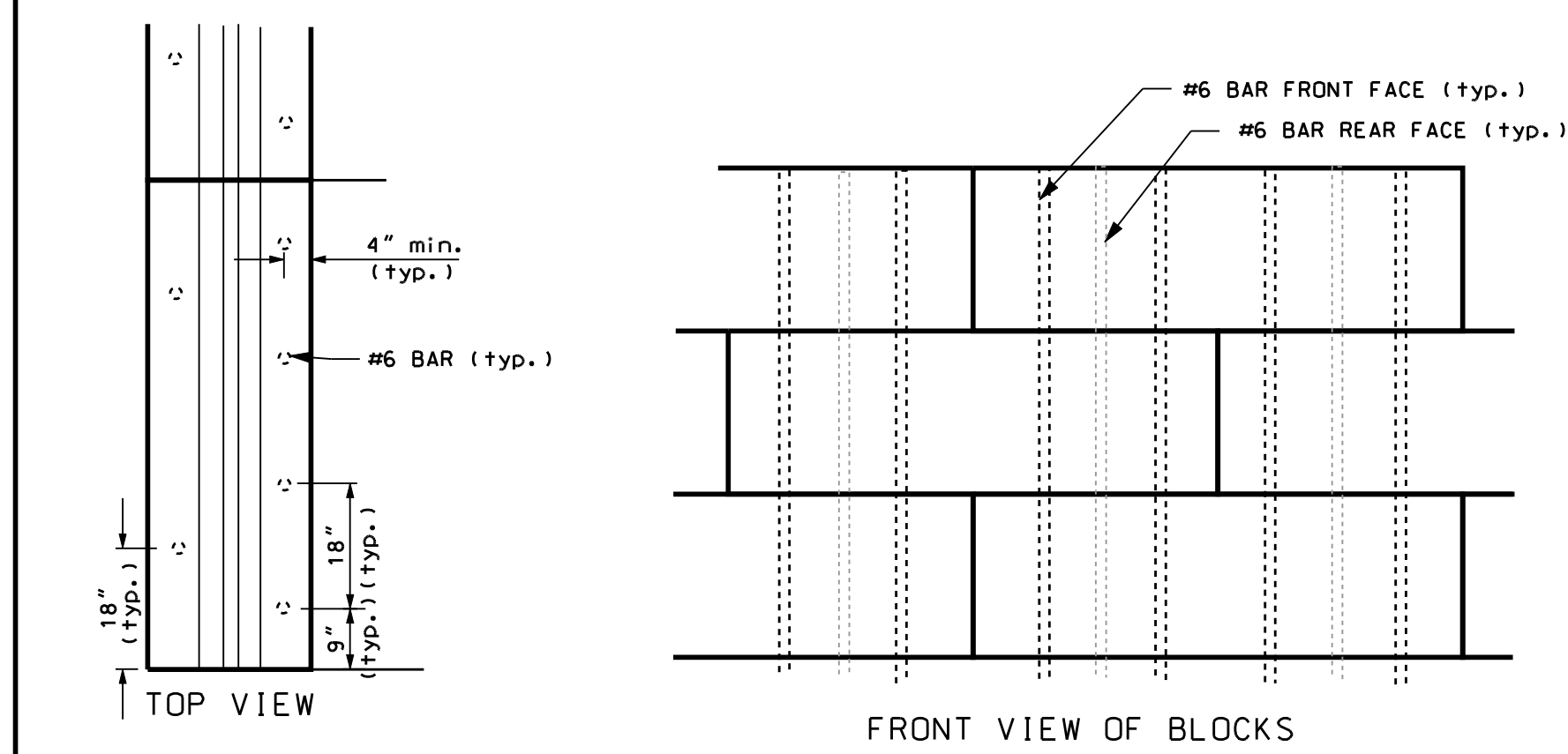


CONTRACTION JOINT
(USE AT 20'-0" INTERVALS)
NOT TO SCALE

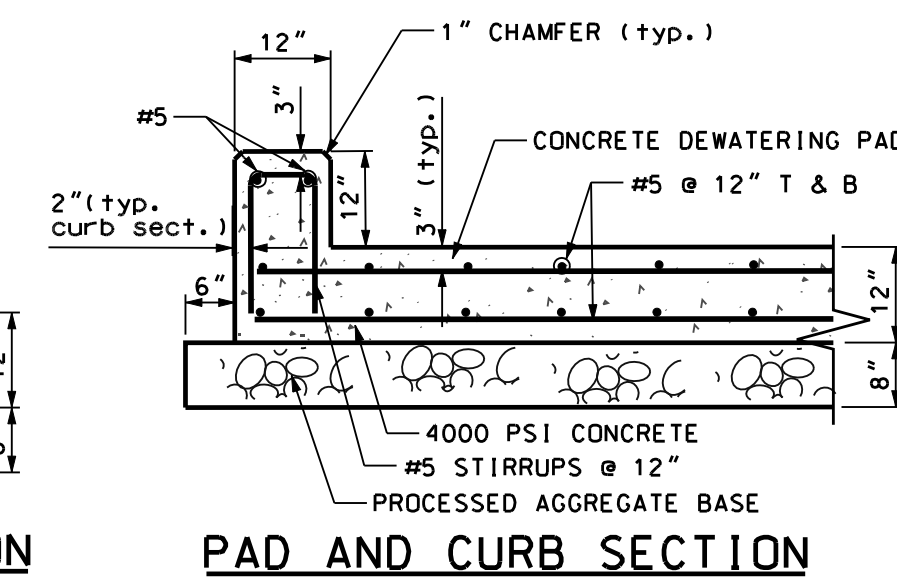


RAIL INSTALLATION AT EXISTING CONCRETE WALL
NOT TO SCALE

NOTE: ALL WELDING SHALL CONFORM TO CURRENT AISC & STRUCTURAL WELDING CODE OF THE AMERICAN WELDING SOCIETY.



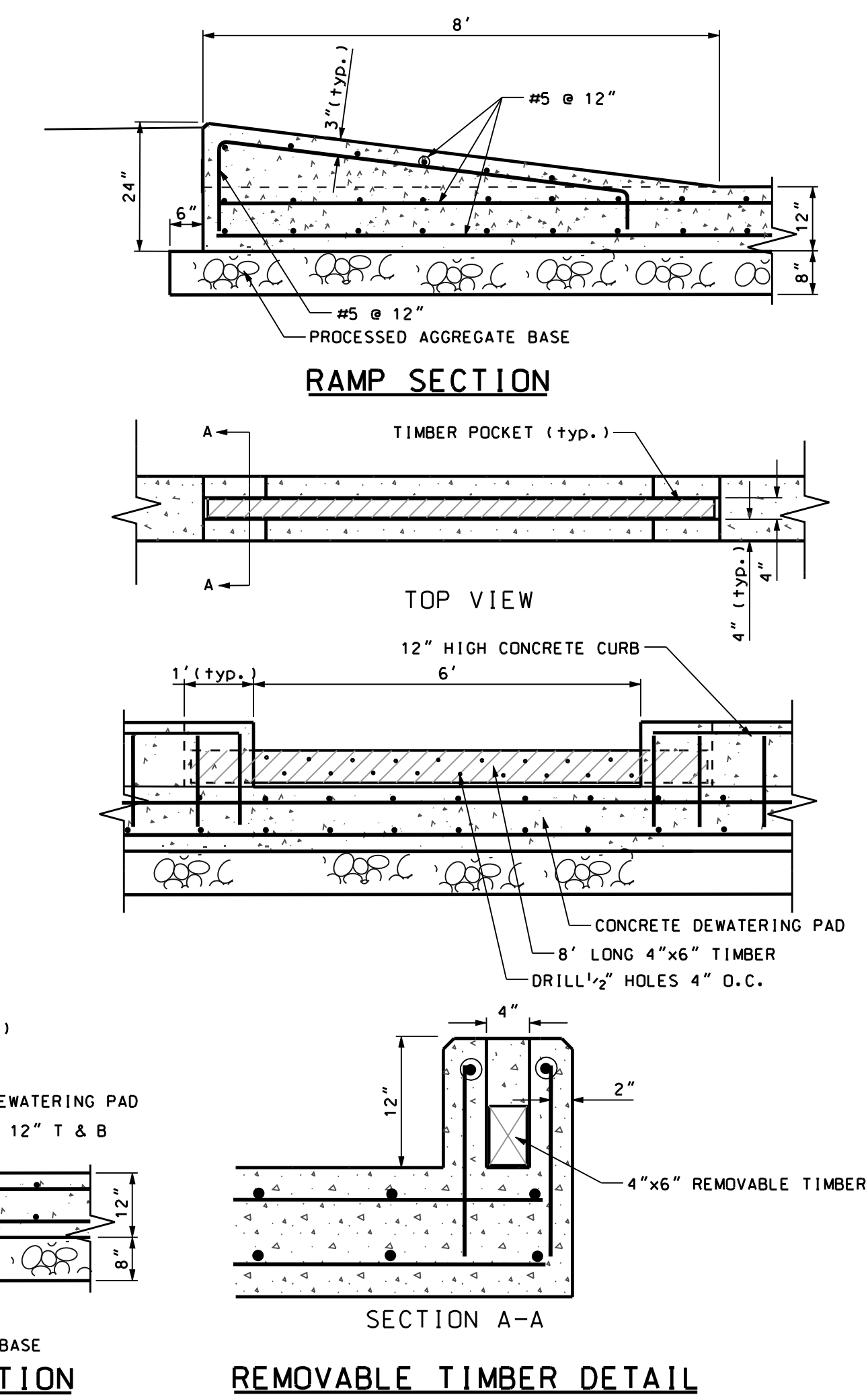
CONCRETE BLOCK PUSH WALL SECTION



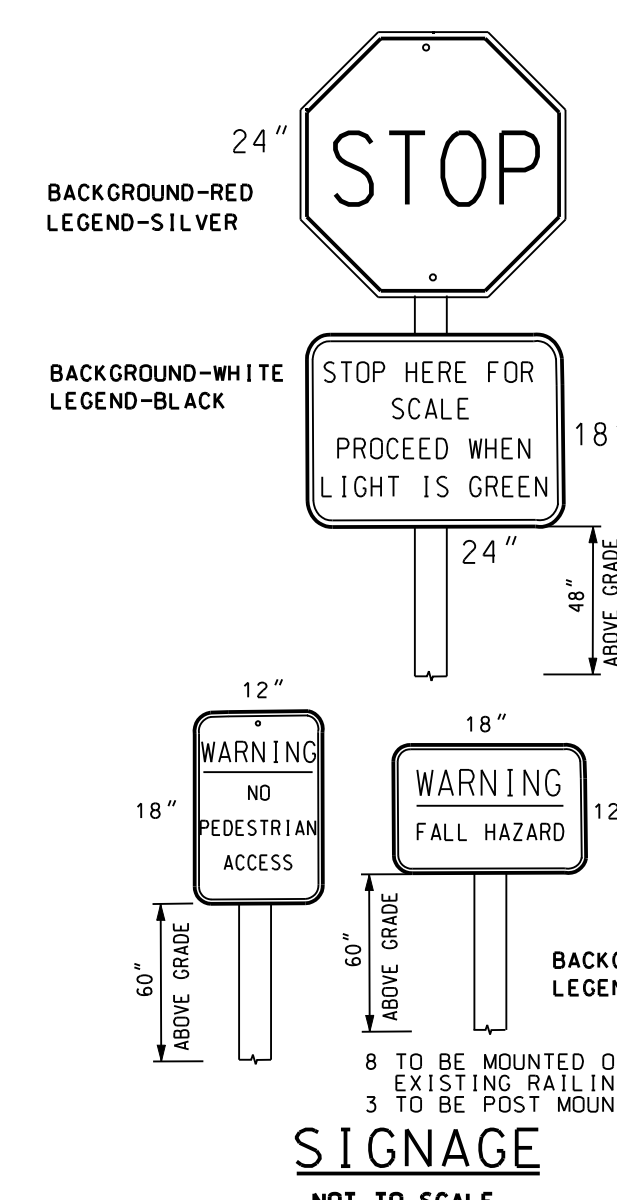
PAD AND CURB SECTION

CONCRETE DEWATERING PAD DETAILS

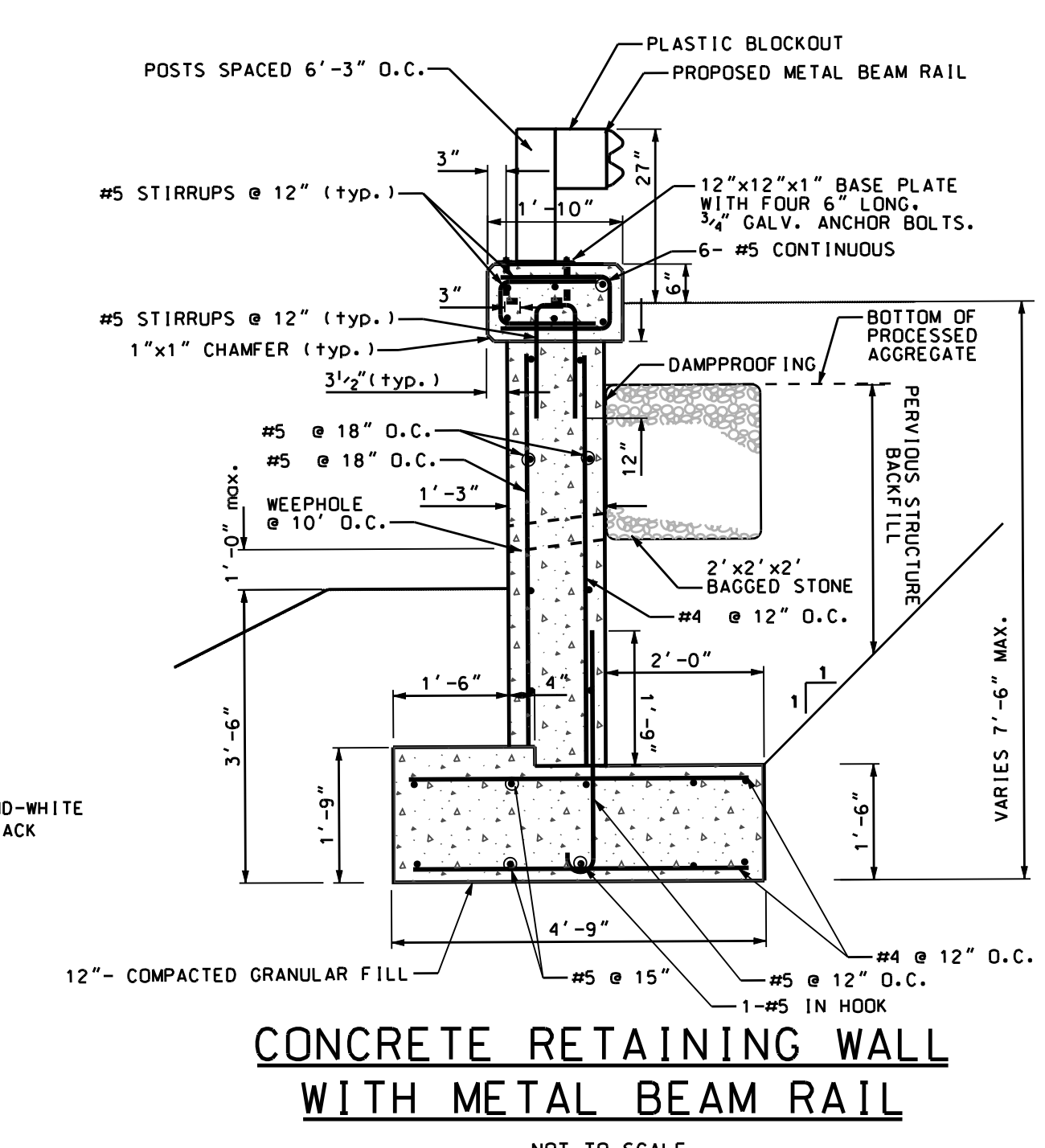
NOT TO SCALE



REMOVABLE TIMBER DETAIL



SIGNAGE
NOT TO SCALE



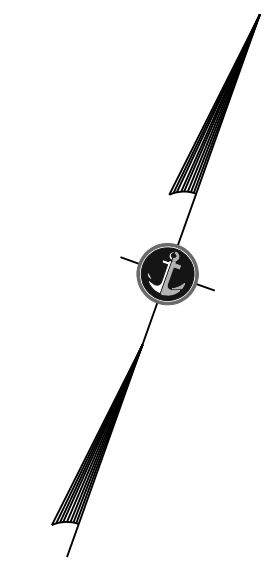
CONCRETE RETAINING WALL WITH METAL BEAM RAIL
NOT TO SCALE

CITY PROJECT #07-161-05

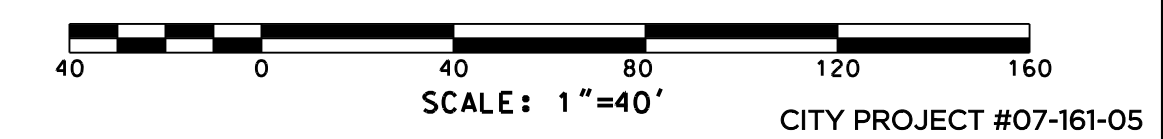
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Phone: (860) 633-8770
Fax: (860) 633-5971
www.anchorengr.com

Civil Engineering	Environmental Consulting	Land Surveying	Construction Management
PROJ. ENGINEER	DPL	TRANSFER STATION IMPROVEMENTS PREPARED FOR CITY OF NEW HAVEN DETAILS	
PROJ. MANAGER	MMZ		
OFFICE REVIEW	MMZ		
REVISIONS		290 MIDDLETOWN AVENUE NEW HAVEN, CT	
SCALE: NOT TO SCALE	PROJECT: 119-07	DATE: 08/30/07	SHEET NO. 2 OF 4



- NOTES:**
- 1) REFERENCE IS MADE TO THE FOLLOWING MAP:
 "TOPOGRAPHIC SURVEY LAND OF CITY OF NEW HAVEN DEPARTMENT PUBLIC WORKS MIDDLETOWN AVENUE TRANSFER STATION 250 MIDDLETOWN AVENUE NEW HAVEN, CONNECTICUT SHEET NO. EX-1 SCALE 1"=40' DATE NOVEMBER 6, 2006" BY THE LRC GROUP.
 - 2) THE TOPOGRAPHY SHOWN IS REFERENCED FROM MAP REFERENCE ONE. ANCHOR ENGINEERING SERVICES CONDUCTED LIMITED SPOT CHECKS IN THE VICINITY OF ANTICIPATED WORK AND FOUND NO SUBSTANTIAL VARIATION FROM THE TOPOGRAPHY SHOWN ON THE MAP REFERENCED.
 - 3) APPROXIMATE PROPERTY LINES WERE TAKEN FROM A PLAN ENTITLED "CITY OF NEW HAVEN DEPARTMENT OF PUBLIC WORKS NEW HAVEN, CONNECTICUT MIDDLETOWN AVENUE TRANSFER STATION EXISTING SITE PLAN SCALE: 1"=30' DATE AUGUST 2001 SHEET 1 OF 8 BY MALCOLM PIRNIE, INC."



THIS SURVEY AND MAP HAS BEEN PREPARED IN ACCORDANCE WITH SECTIONS 20-300b-1 THRU 20-300b-20 OF THE REGULATIONS OF CONNECTICUT STATE AGENCIES - "MINIMUM STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ENDORSED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS INC. IT IS A TOPOGRAPHIC SURVEY CONFORMING TO VERTICAL ACCURACY CLASS T-D. SEE NOTE # 2.

TO THE BEST OF MY KNOWLEDGE AND BELIEF THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

WILLIAM E. WERTZ, CT. L.S. #70067

ANY ORIGINAL OR DUPLICATE OF THIS MAP IS NOT VALID UNLESS IT BEARS THE EMBOSSED SEAL OF THE SURVEYOR WHOSE REGISTRATION NUMBER APPEARS ABOVE. NO OTHER CERTIFICATION OR WARRANTY IS EXPRESSED OR IMPLIED.

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		<p>REVISIONS</p>	
<p>PROJ. ENGINEER</p> <p>PROJ. MANAGER</p> <p>OFFICE REVIEW</p>		<p>TRANSFER STATION IMPROVEMENTS</p> <p>PREPARED FOR</p> <p>CITY OF NEW HAVEN</p> <p>EXISTING CONDITIONS</p> <p>290 MIDDLETOWN AVENUE NEW HAVEN, CT</p>	
<p>PROJECT</p> <p>119-07</p>	<p>DATE</p> <p>08/30/07</p>	<p>SHEET NO.</p> <p>4</p>	<p>OF</p> <p>4</p>
<p>SCALE: 1"= 40'</p>		<p>CITY PROJECT #07-161-05</p>	



CITY OF NEW HAVEN
BUREAU OF PURCHASES



JOHN DeSTEFANO, JR.
Mayor

Michael V. Fumiatti
Purchasing Agent

200 ORANGE STREET
 ROOM 401
 NEW HAVEN, CONNECTICUT 06510
 Tel. (203) 946-8201 - Fax. (203) 946-8206

DATE:	September 14, 2007	
PROJECT NAME:	NEW HAVEN TRANSFER STATION IMPROVEMENTS	
PROJECT #	20755	
OPENING DATE:	October 10, 2007	
ADDENDUM NUMBER	One	

Prospective bidders, and all those concerned, are hereby informed that the following is made a part of the bid documents, which should be amended to read as follows:

- **Wage Rates- Please see the attached wage rates for this project.**

Respectfully submitted,

Michael V. Fumiatti
 Purchasing Agent

Please acknowledge receipt of addendum on form locate within your bid submittal.

Project Improvements To The Transfer Station

4) Painters: Brush, Roller, Blasting (Sand, Water, etc.), Spray	\$36.40	13.30
5) Electrician (Trade License required: E-1,2 L-5,6 C-5,6 T-1,2 L-1,2 V-1,2,7,8,9)	\$33.55	17.16
6) Ironworkers: (Ornamental, Reinforcing, Structural, and Precast Concrete Erection	\$31.05	21.18 + a
7) Plumbers (Trade License required: (P-1,2,6,7,8,9 J-1,2,3,4 SP-1,2) and Pipefitters (Including HVAC Work) (Trade License required: S-1,2,3,4,5,6,7,8 B-1,2,3,4 D-1,2,3,4 G-1, G-2, G-8, G-9)	\$33.57	18.96
----LABORERS----		
8) Group 1: Laborer (Unskilled)	\$23.00	13.40
9) Group 2: Chain saw operators, fence and guard rail erectors, pneumatic tool operators, powdermen.	\$23.25	13.40
10) Group 3: Pipelayers	\$23.35	13.40
11) Group 4: Jackhammer/Pavement breaker (handheld), mason tenders/catch basin builders, asphalt rakers, air track operators, block pavers and curb setters.	\$23.50	13.40
12) Group 5: Toxic waste workers (non-mechanical systems).	\$25.00	13.40

As of: 9/13/2007

Project Improvements To The Transfer Station

13) Group 6: Blasters \$24.75 13.40

Group 7: Asbestos Removal, non-mechanical systems (does not include leaded joint pipe). \$24.00 13.40

Group 8: Traffic control signalmen. \$15.00 13.40

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

13a) Miners, Motormen, Mucking Machine Operators, Nozzle Men, Grout Men, Shaft & Tunnel Steel & Rodmen, Shield & Erector, Arm Operator, Cable Tenders \$27.25 13.40 + a

13b) Brakemen, Trackmen \$26.45 13.40 + a

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

14) Concrete Workers, Form Movers, and Strippers \$26.45 13.40 + a

15) Form Erectors \$26.73 13.40 + a

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

As of: 9/13/2007

Project Improvements To The Transfer Station

16) Brakemen, Trackmen, Tunnel Laborers, Shaft Laborers	\$26.45	13.40 + a
17) Laborers Topside, Cage Tenders, Bellman	\$26.35	13.40 + a
18) Miners	\$27.25	13.40 + a

----TUNNELS, CAISSON AND CYLINDER WORK IN COMPRESSED AIR: ----

19) Brakemen, Trackmen, Groutman, Laborers, Outside Lock Tender, Gauge Tenders	\$32.53	13.40 + a
20) Change House Attendants, Powder Watchmen, Top on Iron Bolts	\$30.87	13.40 + a
21) Mucking Machine Operator	\$33.20	13.40 + a

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

Two axle trucks	\$25.43	11.5225
Three axle trucks; two axle ready mix	\$25.53	11.5225

As of: 9/13/2007

Project Improvements To The Transfer Station

Three axle ready mix	\$25.58	11.5225
Four axle trucks, heavy duty trailer (up to 40 tons)	\$25.63	11.5225
Four axle ready-mix	\$25.68	11.5225
Heavy duty trailer (40 tons and over)	\$25.88	11.5225
Specialized earth moving equipment other than conventional type on-the road trucks and semi-trailer (including Euclids)	\$25.68	11.5225

----POWER EQUIPMENT OPERATORS----

Group 1: Crane handling or erecting structural steel or stone, hoisting engineer (2 drums or over), front end loader (7 cubic yards or over), Work Boat 26 ft. & Over.	\$32.05	16.05 + a
Group 2: Cranes (100 ton rate capacity and over); Backhoe over 2 cubic yards; Piledriver (\$3.00 premium when operator controls hammer)	\$31.73	16.05 + a
Group 3: Backhoe; Cranes (under 100 ton rated capacity), Gradall; Master Mechanic; Hoisting Engineer (all types of equipment where a drum and cable are used to hoist or drag material regardless of motive power of operation), Rubber tire backhoe.	\$30.99	16.05 + a
Group 4: Trenching machines; Lighter Derrick; CMI Machine or Similar; Koehring Loader (Skooper)	\$30.60	16.05 + a

As of: 9/13/2007

Project Improvements To The Transfer Station

Group 5: Specialty Railroad Equipment; Asphalt Spreader; Asphalt Reclaiming Machine; Line Grinder; Concrete Pumps; Drills with Self Contained Power Units; Boring Machine; Post Hole Digger; Auger; Pounder; Well Digger; Milling Machine (over 24" Mandrell)	\$30.01	16.05 + a
Group 5 continued: Side; Combination Hoe and Loader; Directional Driller	\$30.01	16.05 + a
Group 6: Front end loader (3 up to 7 cubic yards), Grader; Bulldozer.	\$29.70	16.05 + a
Group 7: Asphalt roller, concrete saws and cutters (ride on type), Vermeer Concrete Cutter, Scraper; Snooper; Skidder; Milling Maching (24" and Under Mandrel).	\$29.36	16.05 + a
Group 8: Mechanic, grease truck operator, hydroblaster, barrier mover, power stone spreader; welder; work boat under 26 ft.; transfer machine.	\$28.96	16.05 + a
Group 9: Front end loader (under 3 cubic yards), skid steer loader (regardless of attachments), (Bobcat or similar); fork lift, power chipper; landscape equipment (including hydroseeder).	\$28.53	16.05 + a
Group 10: Vibratory hammer, Ice machine, Diesel and Air Hammer, etc..	\$27.96	16.05 + a
Group 11: Conveyor, Earth Roller; Power Pavement Breaker (whiphammer), robot demolition equipment.	\$26.49	16.05 + a
Group 12: Wellpoint operator.	\$26.43	16.05 + a
Group 13: Compressor Batter Operator.	\$25.85	16.05 + a

As of: 9/13/2007

Project Improvements To The Transfer Station

Group 14: Elevator Operator; Tow Motor Operator (Solid Tire No Rough Terrain). \$24.71 16.05 + a

Group 15: Generator Operator; Compressor Operator; Pump Operator; Welding Machine Operator. \$24.30 16.05 + a

Group 16: Maintenance Engineer. \$23.65 16.05 + a

Group 17: Portable asphalt plant operator; portable crusher plant operator; portable concrete plant operator \$25.98 16.05 + a

Group 18: Power safety boat; vaccum truck; zim mixer; sweeper \$25.54 16.05 + a

**NOTE: SEE BELOW

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

20) Lineman, Cable Splicer, Dynamite Man \$35.65 10.70 + 6.25%

21) Heavy Equipment Operator \$22.09 10.70 + 6.25%

22) Equipment Operator, Tractor Trailer Driver, Material Men \$30.30 10.70 + 6.25%

As of: 9/13/2007

Project Improvements To The Transfer Station

23) Driver Groundmen	\$26.74	10.70 + 6.25%
----------------------	---------	---------------

----LINE CONSTRUCTION----

24) Driver Groundmen	\$25.99	10.70 + 6.25%
----------------------	---------	---------------

25) Groundmen	\$19.06	10.70 + 6.25%
---------------	---------	---------------

26) Heavy Equipment Operators	\$31.19	10.70 + 6.25%
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27) Linemen, Cable Splicers, Dynamite Men	\$34.65	10.70 + 6.25%
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28) Material Men, Tractor Trailer Drivers, Equipment Operators	\$29.45	10.70 + 6.25%
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As of: 9/13/2007

Project Improvements To The Transfer Station

Welders: Rate for craft to which welding is incidental.

**Note: Hazardous waste removal work receives additional \$1.50 per hour for power equipment operators and \$1.00 per hour for truck drivers.*

***Note: Hazardous waste premium \$1.50 per hour over classified rate*

Crane with 150 ft. boom (including jib) - \$.75 extra
Crane with 200 ft. boom (including jib) - \$1.20 extra
Crane with 250 ft. boom (including jib) - \$2.50 extra
Crane with 300 ft. boom (including jib) - \$3.50 extra
Crane with 400 ft. boom (including jib) - \$4.00 extra
Crane with 500 ft. boom (including jib) - \$5.00 extra

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

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

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

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

Each contractor shall pay the annual adjusted prevailing wage rate that is in effect each July 1st, as posted by the Department of Labor.

It is the contractor's responsibility to obtain the annual adjusted prevailing wage rate increases directly from the Department of Labor's website.

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

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

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

As of: 9/13/2007

Project Improvements To The Transfer Station

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

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

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

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

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



CITY OF NEW HAVEN
BUREAU OF PURCHASES



JOHN DeSTEFANO, JR.
Mayor

Michael V. Fumiatti
Purchasing Agent

200 ORANGE STREET
 ROOM 401
 NEW HAVEN, CONNECTICUT 06510
 Tel. (203) 946-8201 - Fax. (203) 946-8206

DATE:	September 25, 2007	
PROJECT NAME:	NEW HAVEN TRANSFER STATION IMPROVEMENTS	
PROJECT #	20755	
OPENING DATE:	October 10, 2007	
ADDENDUM NUMBER	Two	

Prospective bidders, and all those concerned, are hereby informed that the following is made a part of the bid documents, which should be amended to read as follows:

- **Please the preceding attached pages for responses to questions asked during the bidder's conference meeting held on September 25, 2007 and the list of attendees at the meeting.**

Respectfully submitted,

Michael V. Fumiatti
 Purchasing Agent

Please acknowledge receipt of addendum on form locate within your bid submittal.

City Contract No.20755

City Project No. 07-161-05

Transfer Station Improvements

Pre-Bid Meeting Minutes
September 25th, 2007

The City advised all contractors present to visit the transfer station between the hours of 8.00am and 10.00am so they can see operations in progress, and plan their work accordingly. They should tell the gate attendant the purpose of their visit. If they are not given access, they should contact Jeff Pescosolido at the nearby Public Works Garage at 34 Middletown Avenue. (Tel 203 946 6135)

The City stated that any questions after this meeting should be submitted to the Purchasing Department in writing. The answers would then be published on the City's web site as contract addenda. It was the contractor's responsibility to visit the web site to obtain updated information.

The following is a series of questions from the prospective bidders, followed by the City's answers.

Q1. Is the transfer station fully active the whole time, or will the contractor be given sole possession of the site to undertake work ?

A1. The transfer station is in operation from 5.00am to 3.30pm on Mondays to Saturdays. The contractor will need to undertake construction work around continuing operations. The contractor may consider working on Sundays, or at nights.

Q2. What is the situation with the scales. Can they both be removed at the same time ?

A2. Removal and replacement of the two scales must be done sequentially, such that one of them is operational at all times.

Continued

- Q3. Are test borings available ?
- A3. None that are representative of the areas in which the work is to be done
- Q4. How is the contractor to know that the ground conditions will support the proposed construction ?
- A4. Anchor Engineering responded that they considered the ground conditions to be acceptable for the work indicated in the contract. The city stated that if this was an issue for the Contractors, they were at liberty to undertake additional test pits or borehole at their expense after the award of contract, but before proceeding with construction.
- Q5. If unfavorable ground conditions were encountered during construction, would the City give immediate instructions on how to deal with them ?
- A5. The City cannot speculate as to what might or might not occur during construction.
- Q6. Is the project exempt of City permits and fees ?
- A6. No. The Contractor shall obtain all necessary permits, and pay all necessary fees.
- Q7. Where can information on permits be obtained ?
- A7. At the Permits section of the Building Department on the 5th Floor at 200 Orange Street.
- Q8. When will work begin ?
- A8. The City expects to issue a Notice to proceed in late October or early November of 2007.
- Q9. What is the completion date, and is there a winter close down.
- A9. See Special Condition 305. The Contractor has 240 days to complete all work from the date of the 'Notice to Proceed'. If the Contractor wishes to shut down their operations for the winter, then that is acceptable to the City. However, if they do this they will not get an extension of time to complete the works. The 240 days to complete requirement is absolute.

Q10. What access does the contractor have to the site during construction ?

A10. See Clause 329 of the Special Provisions. The Contractor will need to co-ordinate its activities with the Department of Public Works and the Site Operator.

Q11. What are the city's hiring requirements for this project ?

A11. These are included in the General Provisions as published on the City's Purchasing Department web site. If there are specific questions they should be directed in writing to the Purchasing Department.

Q12. What is the City's budget for the project.

A12. The City is not prepared to disclose this information.

MEETING SIGN-IN SHEET

Project: Improvement –Transfer Station

Meeting Date: September 25, 2007

Facilitator: Ian Juden

Place/Room: Engineering Conference Rm 501
200 Orange ST

Name	Title	Company	Phone	Fax	E-Mail
Michael Kuen		SDS & SWC	203-380-8300	203-380-8944	
Howard Bishop		Meritt Contractors Inc	203-367-6220	203-334-7095	
Vincent Federico		CJ Fucci Inc	203-469-7487	203-397-8030	vfederico@cjfucci.com
John Lyden		Diversified Specialty Service	203-397-8806-	203-397-8030	jlyden.dssle@earthlink.net
Shawn Garris		Bureau of Purchases City of New Haven	203-946-8202-		purchasing@newhavencity.net
Liv Giordano		Giordano Construction	203-483-4358	203-488-3896	vsiii@giordanomail.com
Chris Dickman		Cisco LLC	203-752-2558	203-772-1089	ldickman@snet.net
Denise Lord		Anchor Engineering	860-633-8770	860-633-5971	dlord@anchoreng.com
Mark Zessn		Anchor Engineering	860-633-8770	860-633-5971	mzessin@anchoreng.com
Mattehen Brandimarte		AI Engineers, Inc	860-635-7740	860-635-7312	mbrandimarte@aiengineers.com
Rich Zawisa		All Phase construction	203-334-5145	203-334-6165	
Earl Tucker		Empire Paving	203-752-0002		
Keith Sullivan		Guerrera Construction	203-888-5069	203-888-7191	
Roel Lesgpi		All Phase Construction	203-334-5145x210	203-334-6165	rlegaspi@allphaseconstruction.org
Ian Juden		Engineering Dept City of New Haven	203-946-8094		



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200 ORANGE STREET
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 NEW HAVEN, CONNECTICUT 06510
 Tel. (203) 946-8201 - Fax. (203) 946-8206

DATE:	October 5, 2007	
PROJECT NAME:	NEW HAVEN TRANSFER STATION IMPROVEMENTS	
PROJECT #	20755	
OPENING DATE:	October 10, 2007	
ADDENDUM NUMBER	Three	

Prospective bidders, and all those concerned, are hereby informed that the following is made a part of the bid documents, which should be amended to read as follows:

- **Attached are responses to questions asked for clarification on the above mention project.**

Respectfully submitted,

Michael V. Fumiatti
 Purchasing Agent

Please acknowledge receipt of addendum on form locate within your bid submittal.

ADDENDUM NO. 3
Contract Documents
for
TRANSFER STATION IMPROVEMENTS
NEW HAVEN, CONNECTICUT

Anchor Engineering Services, Inc.
October 5, 2007

TO ALL BIDDERS:

All instructions and clarifications contained in this addendum shall be reflected in the Bid and will be made a part of the Contract Documents if and when the Contract is awarded.

Regarding Technical Specification 70.22A Truck Scale Weigh System:

1. There are two truck scale manufacturers listed in the contract documents that are acceptable. Contact information for these companies is:

Fairbanks Scales: Pete Dayotas, phone: (800) 232-0252, cell: (508) 561-7496

Mettler Toledo, Inc.: Harry Markarian, phone: (617) 471-7692, cell: (413) 478-5852

The technical specification also allows for an equivalent manufacturer meeting the specification.

2. The minimum requirements for the concrete foundation and approach slabs are include in the technical specification. It is anticipated that the truck scale manufacturer will provide the required design shop drawings of the foundation and approach slabs for the truck scale. Attached is a foundation sketch for *information only* that provides an example for the scale foundation and approach slabs. Submission of design shop drawings meeting applicable codes sealed by a licensed engineer in the State of Connecticut are required per the technical specification.
3. The 3" concrete mud mat that is proposed under the scale is not a structural component and is not designed to carry any loads. This is only to provide a "clean" surface under the scale and to inhibit the growth of weeds or habitat for vermin. The attached sketch shows this as a washout slab.
4. Regarding electrical appurtenances:
 - The existing building electrical service panel is located at the lower level (garage) in the southwest corner of the 2 story block building shown on the Existing Conditions Plan Sheet 4 of 4 dated 8/30/07.

- The scale operator's room is located at the upper level in the northeast corner of the 2 story block building shown on the Existing Conditions Plan Sheet 4 of 4 dated 8/30/07.
- All power, control, and communication wiring for both scales and appurtenant traffic signals shall be terminated in the scale operator's room. The Contractor shall include all necessary labor, material, equipment, and incidentals in the unit price for "Truck Scale Weigh System". The required material and installation specifications shall be determined by the scale manufacturer and shall also be in accordance with all applicable codes. The necessary conduit runs are likely to entail a combination of underground and aboveground building exterior mounted installations and building penetrations. The Contractor shall submit his proposed conduit/wire layout to the Engineer for approval prior to commencement of work.
- A separate electrical power circuit shall be installed from the existing building service panel to the scale operator's room to support both new scale installations. The Contractor shall include all necessary labor, material, equipment, and incidentals in the unit price for "Truck Scale Weigh System". The required material and installation specifications shall be determined by the scale manufacturer and shall also be in accordance with all applicable codes. The necessary conduit runs are likely to entail a combination of interior and exterior building mounted installations and penetrations. The Contractor shall submit his proposed conduit/wire layout to the Engineer for approval prior to commencement of work.
- The existing radon detector presently located at the upper level scale shall be relocated. The required relocated position shall be determined in the field by the Engineer during scale construction. The Contractor shall include all necessary labor, material, equipment, and incidentals in the unit price for "Truck Scale Weigh System". The required material and installation specifications shall match the existing installation.
- The existing TV camera presently located at the lower level scale shall be relocated. The required relocated position shall be determined in the field by the Engineer during scale construction. The Contractor shall include all necessary labor, material, equipment, and incidentals in the unit price for "Truck Scale Weigh System". The required material and installation specifications shall match the existing installation.
- The location of the metal conduit and wiring from the scale will be provided by the truck scale manufacturer for connection to the power source.

The electrical conduit for traffic lights and traffic light controls shall be PVC and shall conform to the requirements of the latest UL and ANSI standards. The cable shall be in accordance with the local electric companies and shall also be in accordance with all applicable codes and as directed by the Manufacturer. This work shall be coordinated with the truck scale manufacturer and the Engineer.

Include in **Technical Specification 70.23A Tarping Station:**

Please note that the Tarping Stations shall be in accordance with all local codes and shall include a toe rail.

Include in **Technical Specification 70.24A Precast Concrete Walls:**

Please note that the work for Drilling and Grouting dowels in precast concrete block walls is included in the general cost of the item. There will not be any separate measurement or payment for Drilling and Grouting Dowels.

END OF ADDENDUM NO. 3

REINFORCING STEEL SCHEDULE (A.S.T.M. A-618 GRADE 60)

SYM	QTY	SIZE	LOCATION, DIRECTION	A	B	WGT
ST1	28	#6	FOOTERS, LATERAL	11'-0"		463
ST2	4	#5	ENDS, LATERAL	11'-0"		46
ST3	24	#5	APPROACHES, LATERAL	9'-6"		229
ST4	24	#5	APPROACHES, LONG.		9'-6"	228
LI	24	#5	APPROACH TO END TIES	2'-3"	2'-3"	113

LI IS GIVEN WITHOUT RISER BASEPLATES DIMENSION "B" WILL VARY WITH THE ACTUAL HEIGHT OF RISERS USED, AS FOLLOWS:
 NO RISERS 2'-3" 113
 1" RISERS 2'-6" 119
 2" RISERS 2'-9" 125
 3" RISERS 3'-0" 131
 4" RISERS 3'-3" 137

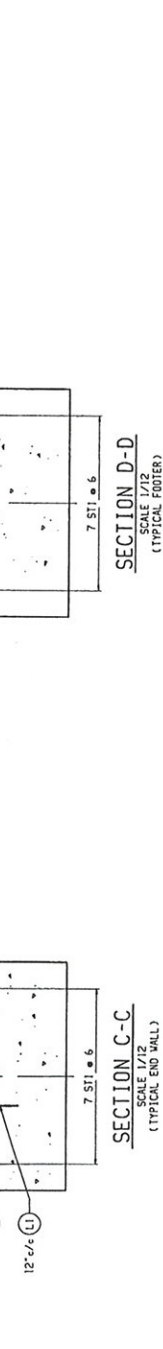
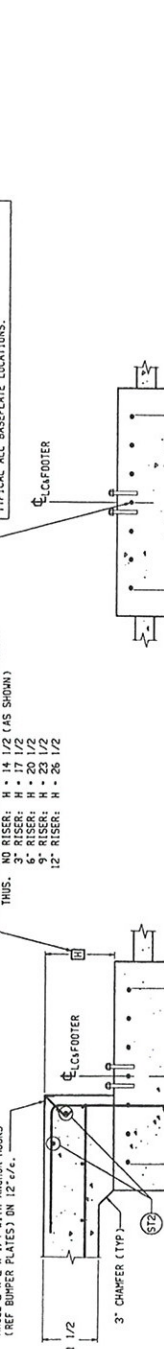
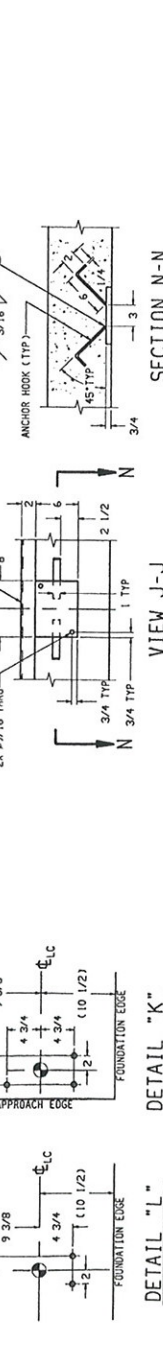
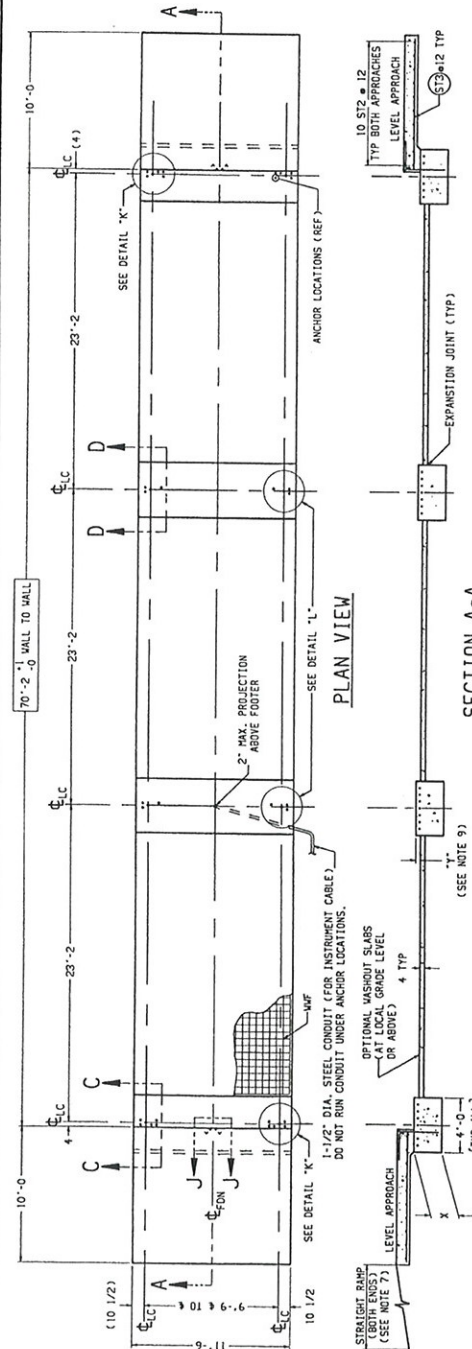
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 1" RISERS 2'-6" 119
 2" RISERS 2'-9" 125
 3" RISERS 3'-0" 131
 4" RISERS 3'-3" 137

MATERIAL SUMMARY *
 (EXCEPT AS NOTED OTHERWISE)
 (EXCEPT AS NOTED OTHERWISE)

FOOTER DEPTH, "X" INCHES (24 INCH MINIMUM)	24	36	48	60	72
CONCRETE (CU. YDS.)	22.5	29.5	36	43	50

REINFORCING STEEL (LBS) 1089

* IF OPTIONAL WASHOUT SLABS ARE USED, ADD:
 660 SQ. FT. OF WAF: 6.6-MI. 4-MI. 4
 8 CU. YD. OF CONCRETE



- NOTES:
- 1) USE MINIMUM 3000 PSI STRENGTH CONCRETE AT 28 DAYS WITH 5-7% AIR ENTRAINMENT.
 - 2) USE MINIMUM 60KSI YIELD DEFORMED REINFORCING STEEL. REBAR MINIMUM DEPTH OF COVER SHOULD BE IN ACCORDANCE WITH THE LATEST ACT BUILDING CODE REQUIREMENTS FOR SUCH CONDITIONS. REINFORCING STEEL SHALL BE SUPPLIED BY METTLER TOLEDO.
 - 3) FOUNDATION REQUIREMENTS 2000 PSF BASED SOIL FOR HIGHWAY PURPOSES AS SPECIFIED.
 - 4) TOP OF CONCRETE AT BASELATE LOCATIONS TO BE LEVEL AND IN ONE PLANE 1/2".
 - 5) DIAGONAL MEASUREMENTS EQUAL TO ENDWALL MUST BE EQUAL WITHIN 1/2".
 - 6) TEMPLATES TO LOCATE EXPANSION JOINTS TO BE PROVIDED AND USED AS BASEPLATES AS SHOWN.
 - 7) RAMP LENGTH: -PER LOCAL REGULATIONS.
 - 8) BOTTOM OF FOOTING TO BE USED FOR LOCAL PROSTLINE.
 - 9) FOOTER HEIGHT "X" CAN BE USED TO DETERMINE CLEARANCE REQUIREMENTS.
 - 10) STANDARD 3" CLEARANCE BETWEEN BOTTOM OF NEIGHBORING SLABS. PROVIDES.
 - 11) CONTRACTOR SUPPLIED.
 - EXCAVATION
 - REINFORCING STEEL
 - CURB ANGLE ASSEMBLIES
 - BUMPER PLATE ASSEMBLIES (SEE C-C)

DRAWING IS TO SCALE ONLY WHEN BORDER MEASURES 22'-7/8" X 35" (FULL SIZE)

REV	DATE	BY	SCALE
A	03/24/03	DM	1/2" = 1'-0"
B	04/02/04	DM	1/2" = 1'-0"

CORRECTED MATERIAL SUMMARY QUANTITIES
 ADD TO RIZER BASEPLATE OPTION NOTES

SCALE 1/2" = 1'-0"

SECTION D-D
 SCALE 1/2" = 1'-0"
 (TYPICAL FOOTER)
 SINGLE BASEPLATE

SECTION C-C
 SCALE 1/2" = 1'-0"
 (TYPICAL END WALL)

SECTION K-K
 ANCHOR LOCATIONS
 (OTHER SIDE IS OPPOSITE)

SECTION L-L
 ANCHOR LOCATIONS
 (OTHER SIDE IS OPPOSITE)

SECTION M-M
 ANCHOR LOCATIONS
 (OTHER SIDE IS OPPOSITE)

SECTION N-N
 ANCHOR HOOK (TYP)
 MATERIAL: M.A. STEEL (BY OTHERS).

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 (OTHER SIDE IS OPPOSITE)

SECTION AA
 ANCHOR LOCATIONS
 (OTHER SIDE IS OPPOSITE)

SECTION BB
 ANCHOR LOCATIONS
 (OTHER SIDE IS OPPOSITE)

SECTION CC
 ANCHOR LOCATIONS
 (OTHER SIDE IS OPPOSITE)

SECTION DD
 ANCHOR LOCATIONS
 (OTHER SIDE IS OPPOSITE)

SECTION EE
 ANCHOR LOCATIONS
 (OTHER SIDE IS OPPOSITE)

SECTION FF
 ANCHOR LOCATIONS
 (OTHER SIDE IS OPPOSITE)

SECTION GG
 ANCHOR LOCATIONS
 (OTHER SIDE IS OPPOSITE)

SECTION HH
 ANCHOR LOCATIONS
 (OTHER SIDE IS OPPOSITE)

SECTION II
 ANCHOR LOCATIONS
 (OTHER SIDE IS OPPOSITE)

SECTION JJ
 ANCHOR LOCATIONS
 (OTHER SIDE IS OPPOSITE)

SECTION KK
 ANCHOR LOCATIONS
 (OTHER SIDE IS OPPOSITE)

SECTION LL
 ANCHOR LOCATIONS
 (OTHER SIDE IS OPPOSITE)

SECTION MM
 ANCHOR LOCATIONS
 (OTHER SIDE IS OPPOSITE)

SECTION NN
 ANCHOR LOCATIONS
 (OTHER SIDE IS OPPOSITE)

SECTION OO
 ANCHOR LOCATIONS
 (OTHER SIDE IS OPPOSITE)

SECTION PP
 ANCHOR LOCATIONS
 (OTHER SIDE IS OPPOSITE)

SECTION QQ
 ANCHOR LOCATIONS
 (OTHER SIDE IS OPPOSITE)

SECTION RR
 ANCHOR LOCATIONS
 (OTHER SIDE IS OPPOSITE)

SECTION SS
 ANCHOR LOCATIONS
 (OTHER SIDE IS OPPOSITE)

SECTION TT
 ANCHOR LOCATIONS
 (OTHER SIDE IS OPPOSITE)

SECTION UU
 ANCHOR LOCATIONS
 (OTHER SIDE IS OPPOSITE)

SECTION VV
 ANCHOR LOCATIONS
 (OTHER SIDE IS OPPOSITE)

SECTION WW
 ANCHOR LOCATIONS
 (OTHER SIDE IS OPPOSITE)

SECTION XX
 ANCHOR LOCATIONS
 (OTHER SIDE IS OPPOSITE)

SECTION YY
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