



City of Meriden, Connecticut

Purchasing Department

Invitation to Bid

For

Replacement of the Beaver Pond Dam

Meriden, CT

B022-45

Proposals Due: June 15, 2022 @ 11:00 AM

Purchasing Department

142 East Main Street, Room 210

Meriden, CT 06450

(203) 630-4115

LEGAL NOTICE

INVITATION TO BID

The City of Meriden is accepting sealed bids for:

B022-45 – Reconstruction of the Beaver Pond Dam

The City of Meriden seeks the services of a contractor to furnish labor and materials to reconstruct the Beaver Pond dam located in Meriden, CT.

Bids shall be submitted on forms and in the manner specified. Forms and specifications may be obtained from the Purchasing Department, on the City of Meriden website (www.meridenct.gov/business/bids-rfps/), and on the State of Connecticut Department of Administrative Services website (<https://portal.ct.gov/DAS/CTSource>). Bids will be accepted at the Purchasing Department, 142 East Main Street, Room 210, Meriden, Connecticut 06450 until **11:00 A.M. local, eastern standard time on June 15, 2022** at which time they will be publicly opened and read. Any bid received after the time and date specified shall not be considered.

The right is reserved to reject any or all bids, in whole or in part, to award any item, group of items, or total bid, and to waive informality or technical defects, if it is deemed to be in the best interest of the City of Meriden. No bidder may withdraw its bid within sixty (60) days of the date of the bid opening.

There will be a Non-Mandatory Pre-Bid Meeting on May 25, 2022 at 10:00 AM at the City of Meriden Engineering Conference Room, Room 19, 142 East Main Street, Meriden, CT 06450.

Each bid shall be accompanied by a Certified Check or Bid Bond in the amount of Ten (10%) percent of the amount bid.

Labor and Material Payment Bond and a Performance bond for One Hundred Percent (100%) of the contract price, with a corporate surety approved by the City of Meriden, will be required of the lowest responsible bidder.

The attention of bidders is call to the requirement for minimum wage rates to be paid under this contract.

This contract is subject to state set-aside and contract compliance requirements.

The City of Meriden is an Affirmative Action/Equal Opportunity Employer. Disadvantaged, minority, small, and women business enterprises are encouraged to respond.

Adam B. Tulin
Purchasing Officer
City of Meriden, CT 06450-8022
Dated: May 18, 2022

CITY OF MERIDEN, CONNECTICUT

B022-45 – Reconstruction of the Beaver Pond Dam

INFORMATION TO BIDDERS

1. BIDDING PROCEDURES

Sealed Bids shall be submitted on the forms designated by the attached proposal bid forms. Bids will be received by the City of Meriden's Purchasing Department, Room 210, City Hall, 142 East Main Street, Meriden, Connecticut, 06450-8022 until 11:00 a.m. on June 15, 2022 and thereafter immediately read in public (the "bid opening").

2. BIDS

Bids are to be submitted on the attached proposal forms. Please submit two copies of the proposal forms and Bidder's Qualification Statement. One shall be an original and one can be a copy. **Please submit one complete copy of your bid on a flash drive.**

BID WILL BE AUTOMATICALLY REJECTED FOR ANYONE SUBMITTING A SURETY OTHER THAN THOSE SPECIFIED.

- a. Bids must be made out and signed in the corporate, or other, name of Bidder, and must be fully and properly executed by an authorized person.
- b. The sealed envelope must denote the Bidder's name and address in the upper left hand corner and the words "BID DOCUMENT – B022-45 – Replacement of the Beaver Pond Dam to be opened at 11:00 a.m." in the lower left hand corner.
- c. Bids received later than the time and date specified will not be considered.
- d. Amendments to or withdrawal of bids received later than the date and time set forth in the bid opening will not be considered.
- e. All prices must be in ink or typewritten. In the event of a bidder's mathematical error in tabulating any bid prices, ***the written unit prices shall govern.***

3. BIDDER QUALIFICATIONS

Bidders will be required to fill out, and include as part of its bid, any attached Bidder's Qualification Statement.

In determining the qualifications of a bidder, the City of Meriden will consider the bidder's record of performance in any prior contracts for construction work. The City of Meriden expressly reserves the right to reject a bid if the bidder's historical performance, in the sole opinion of the City of Meriden, has been unsatisfactory in any manner or if the bidder has habitually and without just cause neglected the payment of bills or has otherwise disregarded its obligations to subcontractors, suppliers, or employees.

4. EXAMINATION OF BIDDING DOCUMENTS

Bidders are to examine all documents and visit the site in order to make a thorough examination of the conditions so that the bidder may familiarize itself with all of the existing requirements, conditions, and difficulties that will affect the execution of the work in order to determine the amount of work necessary to carry out the true intent of the specifications and work shown on the drawings.

The City of Meriden and its agents do not have any responsibility for the accuracy, completeness, or sufficiency of any bid document obtained from any other source other than from the City of Meriden. Obtaining documents from any other source(s) may result in obtaining incomplete and inaccurate information. Obtaining documents from any other source may also result in failure to receive any addenda, corrections, or other revisions to the documents that may be issued.

No request shall be honored if such request is made less than seven (7) calendar days prior to the date fixed for the opening of bids. Any and all such interpretations, and any supplementary instructions, will be in the form of a written addenda to the specifications which, if issued, will be made available on the City of Meriden website (www.meridenct.gov) unless it is to change the date fixed for the opening of bids, not later than three (3) days prior to the date fixed for the opening of bids. Bidders are encouraged to check the website regularly for addenda. Failure of any bidder to receive any such addenda shall not relieve any bidder from any obligations under its bid as submitted.

Any questions about the bid document must be submitted in writing via email to meridenpurchasing@meridenct.gov. Any other format of question will not be answered.

5. BIDS TO REMAIN OPEN

No bidder may withdraw its bid within sixty (60) days of the date of the bid opening. Should there be reason why the contract cannot be awarded within the specified period, the time may be extended by mutual agreement between the City of Meriden and the successful bidder.

6. AWARD OF CONTRACT

The Purchasing Officer reserves the right to make an award on the bid which, by the Purchasing Officer's judgment and recommendation from the Department of Public Works/Engineering following bid evaluations, best meets the specifications and is deemed to be in the best interest of the City of Meriden.

The contract will not be awarded to any corporation, firm, or individual which/who is in arrears to the City of Meriden by debt or contract, or who is in default as security or otherwise by any obligation to the City of Meriden.

The right is reserved to reject any or all bids, in whole or in part, to award any item, group of items, or total bid, and to waive informality or technical defects, if it is deemed to be in the best interest of the City of Meriden.

7. BID PROTEST PROCEDURE

In the event that any bidder wishes to protest the potential award of a bid, or any procedure of act in the advertising or soliciting of the bids, said bidder must make said protest in writing, which shall state the reason therefore and request a conference with respect thereto. Said protest must be received in the City Purchasing Office within **FIVE (5)** business days after the delivery of bid results or decisions. A conference with respect to said protest shall be scheduled by the Purchasing Officer forthwith and shall be attended by him or his designee and such other persons as the Purchasing Officer and the City Manager shall require to attend. The subject matter of said conference shall be limited to the reasons for the protest specified in the written request for said conference. Said conference shall also include a discussion of all possibilities for a resolution of dispute. The City shall make a decision in writing within three (3) business days after said conference and forward the same to the protesting bidder forthwith. In the event that any protesting bidder wishes to take legal action against the City, they must fully comply with all of these instructions to bidders.

8. CITY OF MERIDEN, LOCAL PREFERENCE

In determining the lowest responsible bidder, the Purchasing Department shall also consider Local Preference.

This section shall not apply in those instances where the bid requested involves a cooperative purchasing arrangement between the City of Meriden and other municipalities or the State of Connecticut.

Bidders are specifically advised that the City of Meriden has adopted Section 3-14 of the Code of the City of Meriden which requires, but is not limited to, a local preference requiring, in part, that a “City-based business” shall mean a business with its principal place of business located within the boundaries of the City of Meriden. A business shall not be considered a “City-based business” unless evidence has been submitted, satisfactory to the Purchasing Department, with each bid (forms included in bidding documents) to establish that the bidder has a bona fide principal place of business, operates out of, or pays property taxes on personal property in the City of Meriden.

Any City-based business bidder which has submitted a bid not more than ten (10) percent higher than the low bid provided such City-based business bidder agrees to accept the award of the bid at the amount of the low bid. The acceptance shall be submitted in writing to the Purchasing Department no later than next business day following the opening of the bid. For example, a bid opened at 11:00 a.m. on a Monday must be accepted by the City-based bidder no later than 11:00 a.m. on Tuesday. If more than one City-based business 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 one of the City-based business bidders which has submitted the lowest bid.

Bidders claiming status under the local preference are hereby required to submit with its bid an additional form, titled "Request for Status as a Meriden Based Business."

9. EXTENSION OF AGREEMENT – N/A

10. TIME

Inasmuch as the contract concerns a public improvement, the provisions of the contract relating to the time of performance and completion of the work are of the essence of the contract. Accordingly, the successful bidder/contractor ("Contractor") shall begin work on the day specified in paragraph 2.04 of the General Conditions and shall perform the work diligently so as to permit full use not later than the first day following the construction period established in the Contract. See paragraph 10 entitled "Liquidated Damages" of the Agreement between City of Meriden, as owner, and the Contractor.

11. SCHEDULE OF WORK

The Contractor shall schedule all work in a manner that will not disrupt City of Meriden operations. Once the work has begun, the Contractor shall work full-time until completion of the Contract.

12. TAXES

The City of Meriden is exempt under Connecticut General Statutes from the payment of the excise taxes imposed by the federal government and the Sales and Use Tax of the State of Connecticut; such taxes should not be included in the bid price. Upon request, exemption certificates will be furnished to the successful bidder.

13. FAIR EMPLOYMENT PRACTICES

The Contractor shall agree that neither it or its subcontractors, except in the case of a bona fide occupational qualification or need, to refuse to hire or employ or to bar or to discharge from employment any individual or to discriminate against such individual in compensation or in terms, conditions or privileges of employment because of the individual's race, color, religious creed, age, sex, gender identity or expression, marital status, national origin, ancestry, present or past history of mental disability, intellectual disability, learning disability, physical disability, including, but not limited to, blindness or status as a veteran. The aforementioned terms are obtained from Connecticut General Statutes Section 46a-60, *et seq.*, entitled "Discriminatory employment practices prohibited," as amended.

14. FORM OF AGREEMENT BETWEEN CITY OF MERIDEN AND CONTRACTOR

The Agreement for the work will be written on the Agreement between City of Meriden and Contractor, wherein the basis of payment is a stipulated sum.

15. LOCAL SUBCONTRACTORS, SUPPLIERS, etc.

Local subcontractors, material suppliers, and labor in the City of Meriden should be considered and sought out insofar as it is practical in the performance of this project.

16. CITY OF MERIDEN CODE OF ETHICS

The City of Meriden has adopted a Code of Ethics located in Chapter 21 of the Code of the City of Meriden, sections 21-1 through 21-15, inclusive, which are expressly incorporated herein by reference. The terms of the Code of Ethics shall constitute a part of any contract or agreement entered into by the City of Meriden as a result of this bid as if those terms were fully set forth in such contract or agreement.

Bidders are specifically advised that the Code of Ethics prohibits public officers and employees, as well as their immediate families and businesses, with which they are associated from participating in any transaction which is incompatible with the proper discharge of official duties or responsibilities. Bidders are also advised that the Code of Ethics contain provisions with respect to paid contractors and former employees and officials.

BIDDERS SHOULD NOTE THAT BIDS, CONTRACTS, AND AGREEMENTS ENTERED INTO OR AWARDED IN VIOLATION OF THE CODE OF ETHICS ARE VOIDABLE BY RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MERIDEN.

Copies of the Code of Ethics may be obtained from the office of the City Clerk or may be found online on the City of Meriden's website.

17. NON-COLLUSION BID STATEMENT

Each bidder submitting a bid to the City of Meriden for any portion of the work contemplated by the documents on which bidding is based shall execute and attach thereto the sworn Non-Collusive Bid Statement, to the effect that the bidder has not colluded with any other person, firm, or corporation in the submission of the bid.

18. SOIL CONDITIONS

The City of Meriden does not guarantee the accuracy of any information which it may have obtained as to the kind or condition of the soil that may be encountered in the performance of the proposed work; neither does the City of Meriden represent that the plans and

specifications drawn are based upon any soil data so obtained. The City of Meriden does not make any representations as to the soil data so obtained. The City of Meriden does not make any representations as to the soil conditions to be encountered or as to foundation materials.

19. AWARD IN CASE OF A TIE

In the event there are two or more responsive bidders, the decision to award will be based by the following criteria and in the following order:

- a. The incumbent will be awarded the bid over that of another bidder.
- b. In the case of a multi-item bid, if one bidder has been awarded other items from the same bid and the other bidder has not, the bidder with the multiple awards will be awarded the bid over that of another bidder.
- c. The bidder located in the State of Connecticut will be awarded the bid over that of another bidder.
- d. The winner of a coin toss will be awarded the bid over that of another bidder.

The above-referenced provisions do not apply to those situations in which more than one City-based business responsible bidder has submitted bids not more than ten (10) percent higher than the lowest bid and has agreed to accept the award of the bid at the amount of the lowest bid. Under such circumstances, the provisions of the Code of the City of Meriden, section 3-14, are controlling, as set forth under Section 8 of this 'Information to Bidders.'

20. ASSIGNMENT OF CONTRACT

No contract may be assigned without the written consent of the Purchasing Officer or designee.

21. PERMITS

The Contractor shall be responsible for obtaining any and all necessary permits required by the City of Meriden prior to the commencement of work. The Contractor may contact the City of Meriden Building Department for permit information at (203) 630-4091. For all other required permits, contact the City of Meriden Engineering Department at (203) 630-4018.

22. BID PRICE AND PAYMENT

The City of Meriden is exempt from the payment of the excise taxes imposed by the Federal government and the Sales and Use Tax of the State of Connecticut under Connecticut General Statutes; accordingly, such taxes shall not be included in the bid price.

The City of Meriden, unless stated otherwise in the bidding documents or Contract, will make payment to the Contractor not less than thirty (30) days following completion of services.

23. QUALITY

All materials, equipment, supplies, and services shall be subject to rigid inspection. If defective material, equipment, supplies, or services are discovered, the Contractor shall remove or make good such material, equipment, or supplies without extra compensation. It is expressly understood and agreed that any inspection by the City of Meriden will in no way lessen the responsibility of the Contractor or release Contractor from the obligation to perform and deliver to the City sound and satisfactory materials, equipment, supplies, or allow the cost to be deducted from any monies due it from the City of Meriden. All services will be performed in a workmanlike manner.

24. INSURANCE

The successful bidder shall be required to provide a Certificate of Insurance denoting general liability, automobile liability, workers compensation liability, and other coverage required by the City's Risk Manager.

25. CITY HALL CLOSING

If Meriden City Hall is closed due to inclement weather, or any other unforeseen event, bids will be due at the same time on the next business day that City Hall is open.

26. CHRO

The contractor who is selected to perform this State project must comply with CONN. GEN. STAT. §§ 4a-60, 4a-60a, 4a-60g, and 46a-68b through 46a-68f, inclusive, as amended by June 2015 Special Session Public Act 15-5. An Affirmative Action Plan must be filed with and approved by the Commission on Human Rights and Opportunities prior to the commencement of construction. State law requires a minimum of twenty-five (25%) percent of the state-funded portion of the contract for award to subcontractors holding current certification from the Connecticut Department of Administrative Services ("DAS") under the provisions of CONN. GEN. STAT. § 4a-60g, as amended. (25% of the work with DAS certified Small and Minority owned businesses and 25% of that work with DAS certified Minority, Women and/or Disabled owned businesses.) The contractor must demonstrate good faith effort to meet the 25% set-aside goals. For municipal public works contracts and quasi-public agency projects, the contractor must file a written or electronic non-discrimination certification with the Commission on Human Rights and Opportunities. Forms can be found at http://www.ct.gov/opm/cwp/view.asp?a=2982&q=390928&opmNav_GID=1806.



**FINANCE DEPARTMENT
PURCHASING DIVISION
ROOM 210 CITY HALL
142 EAST MAIN STREET
MERIDEN, CONNECTICUT 06450-8022**

**ADAM B. TULIN, MPA
PURCHASING OFFICER**

**PHONE 203-630-4115
FAX: 203-630-3852**

B022-45 – Reconstruction of the Beaver Pond Dam

Notice to Contractors

Please Note: The City of Meriden is currently awaiting determinations on funding sources from State of Connecticut grants and Federal Government grants.

Should funding from one or both of the afore mentioned sources be received by the City of Meriden, the Request for Meriden Based Business/Local Preference will not apply to this bid.

An addendum will be released by the Purchasing Department on the City of Meriden website (www.meridenct.gov) and the State of Connecticut Department of Administrative Services website (<https://portal.ct.gov/DAS/CTSource>) when the funding information is acquired by the City.

CITY OF MERIDEN, CONNECTICUT

B022-45 – Reconstruction of the Beaver Pond Dam

NON-COLLUSIVE BID STATEMENT/AFFIDAVIT

The undersigned bidder, having been duly sworn, does hereby depose and says:

1. The bid has been arrived at by the bidder independently and has been submitted without collusion and without any agreement, understanding, or planned common course of action with any other vendor of materials, supplies, equipment, or services described in the Invitation to Bid.
2. The contents of the bid have not been communicated by the bidder or its employees or agents to any person not an employee or agent of the bidder or its surety on any bond furnished with the bid, and will not be communicated to any such person prior to the official opening of the bid.
3. The undersigned bidder is duly authorized to bind the business entity identified below.

The undersigned bidder further certifies, under oath, that this statement is executed for the purposes of inducing the City of Meriden to consider the bid and make an award in accordance therewith.

Signature of Bidder

Print Legal Name of Bidder

Relationship to Business Entity Below

Business Entity Name, Address, Telephone Number, and Email Address

STATE OF CONNECTICUT)
) ss:
COUNTY OF)

Duly sworn and subscribed to before me
this ___ day of _____, 2022.

Notary Public
My Commission Expires:
Commissioner of the Superior Court

CITY OF MERIDEN, CONNECTICUT

B022-45 – Reconstruction of the Beaver Pond Dam

REQUEST FOR STATUS AS A MERIDEN-BASED BUSINESS

Bidders are specifically advised that the City of Meriden has adopted Section 3-14 of the Code of the City of Meriden which requires, but is not limited to, a local preference requiring, in part, that a “City-based business” shall mean a business with its principal place of business located within the boundaries of the City of Meriden. A business shall not be considered a “City-based business” unless evidence satisfactory to the Purchasing Department has been submitted with each bid by said business to establish that it has a bona fide principal place of business in the City of Meriden. Such evidence may include evidence of ownership or a long term lease of the real estate from which the principal place of business is operated, or payment of property taxes on the personal property of the business.

In determining the lowest responsible bidder, the Purchasing Department shall also consider the following:

Any City-based business bidder which has submitted a bid not more than ten (10%) percent higher than the low bid. Such City-based business shall agree to accept the award of the bid at the amount of the low bid. The acceptance shall be submitted in writing to the Purchasing Department no later than the same time of the bid opening on the next business day following the opening of the bid.

If more than one City based business bidder have submitted bids not more than ten (10%) percent higher than the low bid and have agreed to accept the award of the bid at the amount of the low bid, the lowest responsible bidder shall be that one which has submitted the lowest bid.

This section shall not apply in those instances where the bid requested involves a cooperative purchasing arrangement between the City of Meriden and other municipalities or the State of Connecticut.

The bidder may submit any additional information he/she desires that he/she feels establishes the company as a city based business, including but not limited to; evidence of ownership, a long term lease of the real estate from which the principal place of business is operated, or payment of property taxes on the personal property of the business.

1) Name of Bidder: _____

2) Meriden Office Address: _____

3) Minority owned: Yes _____ No _____

- 4) The undersigned hereby authorizes and requests any persons, firms, or corporations to furnish any information requested by the City of Meriden, in verification of the recitals comprising this Request for Status as a City Based Business.

Dated at: _____ this: _____ day of _____, 20 _____

Name of
bidder: _____

By: _____

Title: _____

IF REQUESTING STATUS AS A MERIDEN-BASED BUSINESS, SUBMIT THIS FORM WITH YOUR PROPOSAL.

BIDDER'S QUALIFICATION STATEMENT

This Statement of Bidder's Qualifications is to be submitted by the bidder at the time of the bid opening. All questions must be answered and the data given must be clear and comprehensive. If necessary, questions must be answered on attached sheets. The bidder may submit any additional information they desire. It is understood that when the City has executed an Agreement, to which these General Conditions are a part, it is, in part, done upon the reliance of the answers provided herein by the bidder or the agent of the bidder.

Firm Name

Address

Telephone	Fax
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Officers: _____ President
 _____ Vice President
 _____ Secretary
 _____ Treasurer

Bank References:

Bond surety Company:

If a partnership, give names of partners. If a sole proprietorship, give name and title of a least one responsible employee.

Experience: The Bidder shall be qualified by experience to perform work of this nature and shall list five (5) examples of similar projects completed within the past five (5) years, with the names of responsible parties as references.

[illegible]

1. Minority owned business? _____ yes _____ no
2. Years organized. _____
3. Is your company a corporation _____ yes _____ no
If yes where incorporated? _____
4. How many years have you been engaged in business under your present firm name? _____
5. Former Firm Name (if any) _____
6. List total number of Personnel _____
7. Is any principal of your firm an employee or public official of the City of Meriden, or an immediate family member of an employee or public official of the City of Meriden? (Definition of immediate family includes: an individual's spouse, fiancé or fiancée; the parent, brother or sister of such individual or spouse; and the child of such individual or the spouse of such child.)
_____ yes _____ no
8. List Vehicles and Equipment that you will use to perform this work: (show age of vehicles and equipment, sizes, capacities, etc.)

9. List the work to be performed by Subcontractors and summarize the dollar value of each subcontract.

10. List the name and address of the more important contracts recently completed by you, starting the approximate gross cost for each, and the month and year completed:

11. General character of work performed by you _____

12. Have you ever failed to complete any contract awarded to you? If so, where and why?

13. Have you ever defaulted on a contract? If so where and why?

14. Have you ever filed bankruptcy: _____ Please explain: _____

15. Will you, upon request, furnish any information that may be required by the City of Meriden? _____
16. The undersigned hereby authorizes and request any person, firm or cooperation to furnish any information requested by the City of Meriden, in verification of the recitals comprising this Statement of Bidder's Qualifications.

Dated this _____ day of _____, 20____
day month year

Name of Bidder

Title

State of _____
County of _____

_____ being duly sworn deposes and says that they are
Name
_____ of _____
title name of organization
and that the answers to the forgoing question and all statement therein contained are true and correct

Subscribed and sworn to before me
this _____ day of _____ 20____
day month year

Notary Public signature

My commission expires _____

FORM OF SURETY GUARANTY

(Shall accompany proposal)

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 undersaid 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 _____ certifies and agrees

that if Contract _____

is awarded to - _____
(Name of Bidder)

Corporation will execute 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 or furnishing materials in connection thencewith.

(Surety)

The language of this form shall generally be given on the official form normally provided by the Surety Company complete with the usual proof of Authority of Officers of the Surety Company to execute said official form.

Should a bid be offered with a check as surety without said official form, such bid shall be rejected.

BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned _____,
(Name of Principal)

As Principal, and _____,
(Name of Surety)

Unto the CITY OF MERIDEN, CONNECTICUT hereinafter called the "OWNER", 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 CONDITION OF THIS OBLIGATION IS SUCH THAT, WHEREAS, the said Principal has submitted the Accompanying bid
dated _____, 20 ____

For _____

NOW, THEREFORE, if the Principal shall not withdraw said Bid within the Period specified therein after the opening of
the same, or if no period be specified, within thirty (30) days after the said opening and shall within the period
specified therefore, or if no period be specified, within ten (10) days after the prescribed forms are presented to him
for signature, enter into a written Contract with the Owner 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 Owner the difference between the
amount specified in said Bid and the Amount for which the Owner may procure the required work or supplies or both,
if the latter be in excess of the former, then the above obligation shall be void and of no effect, otherwise to remain in
full force and effect.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, this _____ day of
_____, 20 ____.

(Principal)

(Address) (Affix seal)

By: _____

Witness Signature

(Surety)

(Address) (Affix seal)

By: _____

Witness Signature



**PURCHASING DEPARTMENT
ROOM 210 CITY HALL
142 EAST MAIN STREET
MERIDEN, CONNECTICUT 06450-8022**

**Adam B. Tulin
PURCHASING OFFICER**

**PHONE: 203-630-4115
FAX: 203-630-3852**

PROPOSAL

B022-45 Reconstruction of the Beaver Pond Dam

The undersigned, _____

doing business in the City/Town of _____,

in the State of _____, herewith, after reading thoroughly the Specifications and other Bid documents (including if any addendum or addenda) submit the following proposal to provide all necessary equipment, tools, and other means of construction, and to do all work and furnish all materials specified in the Contract, in the manner and time therein prescribed, and according to the requirements of the Engineer as therein set forth:

Description	Estimated Quantities	Computed Totals
<u>Item 1. For Site Work,</u> the lump sum of:		
_____ Dollars		
(in words)		
and _____ Cents	Lump Sum	\$ _____ (in figures)

Item 2. For Control of Water During Construction,
the lump sum of:

_____ Dollars		
(in words)		
and _____ Cents	Lump Sum	\$ _____ (in figures)

Proposal

B022-45 Reconstruction of the Beaver Pond Dam

Item 3. For Excavation,
the lump sum of:

_____ Dollars
(in words)
and _____ Cents

Lump Sum \$ _____
(in figures)

Item 4. Concrete Work

4A. For Class "A" Concrete,
the unit price per cubic yard of:

_____ Dollars
(in words)
and _____ Cents

\$ _____ per cubic yard 45 CY \$ _____
(in figures) (in figures)

4B. For Class “B” Concrete,
the unit price per cubic yard of:

_____ Dollars
(in words)
and _____ Cents

\$ _____ per cubic yard 80 CY \$ _____
 (in figures) (in figures)

Item 5. Outlet Pipe, Slide Gate and Intake Bar Screen,
the lump sum of:

_____ Dollars
(in words)
and _____ Cents

Lump Sum \$ _____
(in figures)

Item 6. For Compacted Embankments,
the lump sum of:

_____ Dollars
(in words)
and _____ Cents

Lump Sum \$ _____
(in figures)

Proposal
B022-45 Reconstruction of the Beaver Pond Dam

Item 7. Riprap

7A. For Crushed Stone Bedding,
the unit price per cubic yard of:

_____ Dollars
(in words)
and _____ Cents
\$ _____ per cubic yard
(in figures)

120 CY \$ _____
(in figures)

7B. For Intermediate Riprap,
the unit price per square yard of:

_____ Dollars
(in words)
and _____ Cents
\$ _____ per square yard
(in figures)

350 SY \$ _____
(in figures)

7C. For Filter Fabric,
the unit price per square yard of:

_____ Dollars
(in words)
and _____ Cents
\$ _____ per square yard
(in figures)

350 SY \$ _____
(in figures)

Item 8. For Miscellaneous Metal Work,
the lump sum of:

_____ Dollars
(in words)
and _____ Cents

Lump Sum \$ _____
(in figures)

Proposal
B022-45 Reconstruction of the Beaver Pond Dam

Item 9. For Excavation and Disposal of Unsuitable Material,

the unit price per cubic yard of:

_____ Dollars

(in words)

and _____ Cents

\$ _____ per cubic yard
(in figures)

1,500 CY

\$ _____
(in figures)

Item 10. For Chain Link Fence and Gate,

the lump sum of:

_____ Dollars

(in words)

and _____ Cents

Lump Sum

\$ _____
(in figures)

Computed Total \$ _____

NOTES: The Computed Totals are for the convenience of initial comparison of bids and are not an official part of this Proposal.

The Owner reserves the right to eliminate any Item or portion of the work which it deems to be in its best interest.

Proposal **B022-45 Reconstruction of the Beaver Pond Dam**

Receipt of Addenda is Acknowledged:

No: _____ Dated: _____

No: _____ Dated: _____

No: _____ Dated: _____

NAME OF BIDDER: _____

ADDRESS: _____

BY: _____

Print or type name Title

SIGNATURE: _____ Dated: _____

TELEPHONE: _____ E-Mail: _____

PLEASE NOTE: All spaces must be filled in with figures or words or your bid may be automatically rejected.

Include with this form:

- Non Collusive Bid Statement
- Bidder's Qualifications
- Form of Surety (if required)
- Bid Bond (if required)
- Request for Meriden Based Business (if applicable)



THIS IS A PUBLIC WORKS PROJECT

Covered by the

PREVAILING WAGE LAW

CT General Statutes Section 31-53

**If you have QUESTIONS regarding your wages
CALL (860) 263-6790**

Section 31-55 of the CT State Statutes requires every contractor or subcontractor performing work for the state to post in a prominent place the prevailing wages as determined by the Labor Commissioner.

Sec. 31-53b. Construction safety and health course. New miner training program. Proof of completion required for mechanics, laborers and workers on public works projects. Enforcement. Regulations. Exceptions. (a) Each contract for a public works project entered into on or after July 1, 2009, by the state or any of its agents, or by any political subdivision of the state or any of its agents, described in subsection (g) of section 31-53, shall contain a provision requiring that each contractor furnish proof with the weekly certified payroll form for the first week each employee begins work on such project that any person performing the work of a mechanic, laborer or worker pursuant to the classifications of labor under section 31-53 on such public works project, pursuant to such contract, has completed a course of at least ten hours in duration in construction safety and health approved by the federal Occupational Safety and Health Administration or, has completed a new miner training program approved by the Federal Mine Safety and Health Administration in accordance with 30 CFR 48 or, in the case of telecommunications employees, has completed at least ten hours of training in accordance with 29 CFR 1910.268.

(b) Any person required to complete a course or program under subsection (a) of this section who has not completed the course or program shall be subject to removal from the worksite if the person does not provide documentation of having completed such course or program by the fifteenth day after the date the person is found to be in noncompliance. The Labor Commissioner or said commissioner's designee shall enforce this section.

(c) Not later than January 1, 2009, the Labor Commissioner shall adopt regulations, in accordance with the provisions of chapter 54, to implement the provisions of subsections (a) and (b) of this section. Such regulations shall require that the ten-hour construction safety and health courses required under subsection (a) of this section be conducted in accordance with federal Occupational Safety and Health Administration Training Institute standards, or in accordance with Federal Mine Safety and Health Administration Standards or in accordance with 29 CFR 1910.268, as appropriate. The Labor Commissioner shall accept as sufficient proof of compliance with the provisions of subsection (a) or (b) of this section a student course completion card issued by the federal Occupational Safety and Health Administration Training Institute, or such other proof of compliance said commissioner deems appropriate, dated no earlier than five years before the commencement date of such public works project.

(d) This section shall not apply to employees of public service companies, as defined in section 16-1, or drivers of commercial motor vehicles driving the vehicle on the public works project and delivering or picking up cargo from public works projects provided they perform no labor relating to the project other than the loading and unloading of their cargo.

(P.A. 06-175, S. 1; P.A. 08-83, S. 1.)

History: P.A. 08-83 amended Subsec. (a) by making provisions applicable to public works project contracts entered into on or after July 1, 2009, replacing provision re total cost of work with reference to Sec. 31-53(g), requiring proof in certified payroll form that new mechanic, laborer or worker has completed a 10-hour or more construction safety course and adding provision re new miner training program, amended Subsec. (b) by substituting "person" for "employee" and adding "or program", amended Subsec. (c) by adding "or in accordance with Federal Mine Safety and Health Administration Standards" and setting new deadline of January 1, 2009, deleted former Subsec. (d) re "public building", added new Subsec. (d) re exemptions for public service company employees and delivery drivers who perform no labor other than delivery and made conforming and technical changes, effective January 1, 2009.

STATUTE 31-55a

- SPECIAL NOTICE -

To: All State and Political Subdivisions, Their Agents, and Contractors

Connecticut General Statute 31-55a - Annual adjustments to wage rates by contractors doing state work.

Each contractor that is awarded a contract on or after October 1, 2002, for (1) the construction of a state highway or bridge that falls under the provisions of section 31-54 of the general statutes, or (2) the construction, remodeling, refinishing, refurbishing, rehabilitation, alteration or repair of any public works project that falls under the provisions of section 31-53 of the general statutes shall contact the Labor Commissioner on or before July first of each year, for the duration of such contract, to ascertain the prevailing rate of wages on an hourly basis and the amount of payment or contributions paid or payable on behalf of each mechanic, laborer or worker employed upon the work contracted to be done, and shall make any necessary adjustments to such prevailing rate of wages and such payment or contributions paid or payable on behalf of each such employee, effective each July first.

- The prevailing wage rates applicable to any contract or subcontract awarded on or after October 1, 2002 are subject to annual adjustments each July 1st for the duration of any project which was originally advertised for bids on or after October 1, 2002.
- Each contractor affected by the above requirement 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 Web Site. The annual adjustments will be posted on the Department of Labor Web page: www.ctdol.state.ct.us. For those without internet access, please contact the division listed below.
- 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.


Any questions should be directed to the Contract Compliance Unit, Wage and Workplace Standards Division, Connecticut Department of Labor, 200 Folly Brook Blvd., Wethersfield, CT 06109 at (860)263-6790.

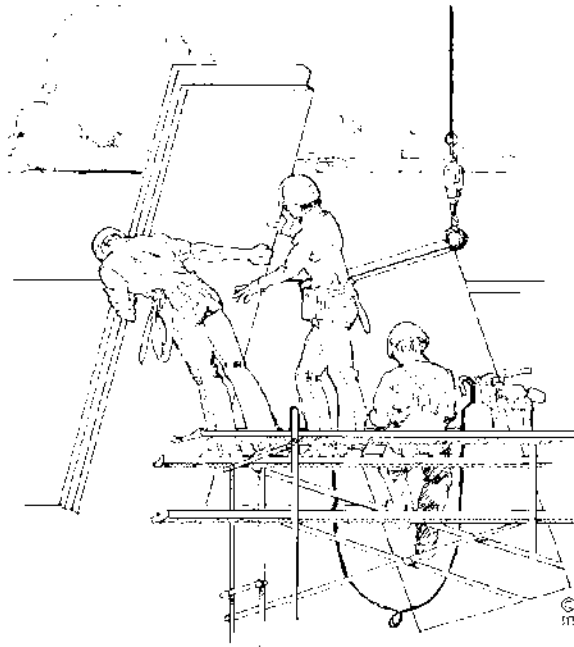
~NOTICE~

TO ALL CONTRACTING AGENCIES

Please be advised that Connecticut General Statutes Section 31-53, requires the contracting agency to certify to the Department of Labor, the total dollar amount of work to be done in connection with such public works project, regardless of whether such project consists of one or more contracts.

Please find the attached “Contracting Agency Certification Form” to be completed and returned to the Department of Labor, Wage and Workplace Standards Division, Public Contract Compliance Unit.

 Inquiries can be directed to (860)263-6543.



CONNECTICUT DEPARTMENT OF LABOR
WAGE AND WORKPLACE STANDARDS DIVISION
CONTRACT COMPLIANCE UNIT

CONTRACTING AGENCY CERTIFICATION FORM

I, _____, acting in my official capacity as _____,
authorized representative title

for _____, located at _____,
contracting agency address

do hereby certify that the total dollar amount of work to be done in connection with

_____, located at _____,
project name and number address

shall be \$_____, which includes all work, regardless of whether such project
consists of one or more contracts.

CONTRACTOR INFORMATION

Name: _____

Address: _____

Authorized Representative: _____

Approximate Starting Date: _____

Approximate Completion Date: _____

Signature

Date

Return To: Connecticut Department of Labor
Wage & Workplace Standards Division
Contract Compliance Unit
200 Folly Brook Blvd.
Wethersfield, CT 06109

Date Issued: _____

CONNECTICUT DEPARTMENT OF LABOR
WAGE AND WORKPLACE STANDARDS DIVISION

CONTRACTORS WAGE CERTIFICATION FORM
Construction Manager at Risk/General Contractor/Prime Contractor

I, _____ of _____
Officer, Owner, Authorized Rep. Company Name

do hereby certify that the _____
Company Name

Street

City

and all of its subcontractors will pay all workers on the

Project Name and Number

Street and City

the wages as listed in the schedule of prevailing rates required for such project (a copy of which is attached hereto).

Signed

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

Notary Public

Return to:

Connecticut Department of Labor
Wage & Workplace Standards Division
200 Folly Brook Blvd.
Wethersfield, CT 06109

Rate Schedule Issued (Date): _____

Informational Bulletin

THE 10-HOUR OSHA CONSTRUCTION SAFETY AND HEALTH COURSE

(applicable to public building contracts entered into *on or after July 1, 2007*, where the total cost of all work to be performed is at least \$100,000)

- (1) This requirement was created by Public Act No. 06-175, which is codified in Section 31-53b of the Connecticut General Statutes (pertaining to the prevailing wage statutes);
- (2) The course is required for public building construction contracts (projects funded in whole or in part by the state or any political subdivision of the state) entered into on or after July 1, 2007;
- (3) It is required of private employees (not state or municipal employees) and apprentices who perform manual labor for a general contractor or subcontractor on a public building project where the total cost of all work to be performed is at least \$100,000;
- (4) The ten-hour construction course pertains to the ten-hour Outreach Course conducted in accordance with federal OSHA Training Institute standards, and, for telecommunications workers, a ten-hour training course conducted in accordance with federal OSHA standard, 29 CFR 1910.268;
- (5) The internet website for the federal OSHA Training Institute is http://www.osha.gov/fso/ote/training/edcenters/fact_sheet.html;
- (6) The statutory language leaves it to the contractor and its employees to determine who pays for the cost of the ten-hour Outreach Course;
- (7) Within 30 days of receiving a contract award, a general contractor must furnish proof to the Labor Commissioner that all employees and apprentices performing manual labor on the project will have completed such a course;
- (8) Proof of completion may be demonstrated through either: (a) the presentation of a *bona fide* student course completion card issued by the federal OSHA Training Institute; *or* (2) the presentation of documentation provided to an employee by a trainer certified by the Institute pending the actual issuance of the completion card;
- (9) Any card with an issuance date more than 5 years prior to the commencement date of the construction project shall not constitute proof of compliance;

- (10) Each employer shall affix a copy of the construction safety course completion card to the certified payroll submitted to the contracting agency in accordance with Conn. Gen. Stat. § 31-53(f) on which such employee's name first appears;
- (11) Any employee found to be in non-compliance shall be subject to removal from the worksite if such employee does not provide satisfactory proof of course completion to the Labor Commissioner by the fifteenth day after the date the employee is determined to be in noncompliance;
- (12) Any such employee who is determined to be in noncompliance may continue to work on a public building construction project for a maximum of fourteen consecutive calendar days while bringing his or her status into compliance;
- (13) The Labor Commissioner may make complaint to the prosecuting authorities regarding any employer or agent of the employer, or officer or agent of the corporation who files a false certified payroll with respect to the status of an employee who is performing manual labor on a public building construction project;
- (14) The statute provides the minimum standards required for the completion of a safety course by manual laborers on public construction contracts; any contractor can exceed these minimum requirements; and
- (15) Regulations clarifying the statute are currently in the regulatory process, and shall be posted on the CTDOL website as soon as they are adopted in final form.
- (16) Any questions regarding this statute may be directed to the Wage and Workplace Standards Division of the Connecticut Labor Department via the internet website of <http://www.ctdol.state.ct.us/wgwkstnd/wgemenu.htm>; or by telephone at (860)263-6790.

THE ABOVE INFORMATION IS PROVIDED EXCLUSIVELY AS AN EDUCATIONAL RESOURCE, AND IS NOT INTENDED AS A SUBSTITUTE FOR LEGAL INTERPRETATIONS WHICH MAY ULTIMATELY ARISE CONCERNING THE CONSTRUCTION OF THE STATUTE OR THE REGULATIONS.

November 29, 2006

Notice
To All Mason Contractors and Interested Parties
Regarding Construction Pursuant to Section 31-53 of the
Connecticut General Statutes (Prevailing Wage)

The Connecticut Labor Department Wage and Workplace Standards Division is empowered to enforce the prevailing wage rates on projects covered by the above referenced statute.

Over the past few years the Division has withheld enforcement of the rate in effect for workers who operate a forklift on a prevailing wage rate project due to a potential jurisdictional dispute.

The rate listed in the schedules and in our Occupational Bulletin (see enclosed) has been as follows:

Forklift Operator:

- **Laborers (Group 4) Mason Tenders** - operates forklift solely to assist a mason to a maximum height of nine feet only.
- **Power Equipment Operator (Group 9)** - operates forklift to assist any trade and to assist a mason to a height over nine feet.

The U.S. Labor Department conducted a survey of rates in Connecticut but it has not been published and the rate in effect remains as outlined in the above Occupational Bulletin.

Since this is a classification matter and not one of jurisdiction, effective January 1, 2007 the Connecticut Labor Department will enforce the rate on each schedule in accordance with our statutory authority.

Your cooperation in filing appropriate and accurate certified payrolls is appreciated.

Information Bulletin

Occupational Classifications

The Connecticut Department of Labor has the responsibility to properly determine "job classification" on prevailing wage projects covered under C.G.S. Section 31-53(d).

Note: This information is intended to provide a sample of some occupational classifications for guidance purposes only. It is not an all-inclusive list of each occupation's duties. This list is being provided only to highlight some areas where a contractor may be unclear regarding the proper classification. If unsure, the employer should seek guidelines for CTDOL.

Below are additional clarifications of specific job duties performed for certain classifications:

- **ASBESTOS WORKERS**

Applies all insulating materials, protective coverings, coatings and finishes to all types of mechanical systems.

- **ASBESTOS INSULATOR**

Handle, install apply, fabricate, distribute, prepare, alter, repair, dismantle, heat and frost insulation, including penetration and fire stopping work on all penetration fire stop systems.

- **BOILERMAKERS**

Erects hydro plants, incomplete vessels, steel stacks, storage tanks for water, fuel, etc. Builds incomplete boilers, repairs heat exchanges and steam generators.

- **BRICKLAYERS, CEMENT MASONS, CEMENT FINISHERS, MARBLE MASONS, PLASTERERS, STONE MASONS, PLASTERERS. STONE MASONS, TERRAZZO WORKERS, TILE SETTERS**

Lays building materials such as brick, structural tile and concrete cinder, glass, gypsum, terra cotta block. Cuts, tools and sets marble, sets stone, finishes concrete, applies decorative steel, aluminum and plastic tile, applies cements, sand, pigment and marble chips to floors, stairways, etc.

- **CARPENTERS, MILLWRIGHTS. PILEDRIVERMEN. LATHERS. RESILEINT FLOOR LAYERS, DOCK BUILDERS, DIKERS, DIVER TENDERS**

Constructs, erects, installs and repairs structures and fixtures of wood, plywood and wallboard. Installs, assembles, dismantles, moves industrial machinery. Drives piling into ground to provide foundations for structures such as buildings and bridges, retaining walls for earth embankments, such as cofferdams. Fastens wooden, metal or rockboard lath to walls, ceilings and partitions of buildings, acoustical tile layer, concrete form builder. Applies firestopping materials on fire resistive joint systems only. Installation of curtain/window walls only where attached to wood or metal studs. Installation of insulated material of all types whether blown, nailed or attached in other ways to walls, ceilings and floors of buildings. Assembly and installation of modular furniture/furniture systems. Free-standing furniture is not covered. This includes free standing: student chairs, study top desks, book box desks, computer furniture, dictionary stand, atlas stand, wood shelving, two-position information access station, file cabinets, storage cabinets, tables, etc.

- **LABORER, CLEANING**

- The clean up of any construction debris and the general (heavy/light) cleaning, including sweeping, wash down, mopping, wiping of the construction facility and its furniture, washing, polishing, and dusting.

- **DELIVERY PERSONNEL**

- If delivery of supplies/building materials is to one common point and stockpiled there, prevailing wages are not required. If the delivery personnel are involved in the distribution of the material to multiple locations within the construction site then they would have to be paid prevailing wages for the type of work performed: laborer, equipment operator, electrician, ironworker, plumber, etc.

- An example of this would be where delivery of drywall is made to a building and the delivery personnel distribute the drywall from one "stockpile" location to further sub-locations on each floor. Distribution of material around a construction site is the job of a laborer or tradesman, and not a delivery personnel.

- **ELECTRICIANS**

Install, erect, maintenance, alteration or repair of any wire, cable, conduit, etc., which generates, transforms, transmits or uses electrical energy for light, heat, power or other purposes, including the Installation or maintenance of telecommunication, LAN wiring or computer equipment, and low voltage wiring. ****License required per Connecticut General Statutes: E-1,2 L-5,6 C-5,6 T-1,2 L-1,2 V-1,2,7,8,9.***

- **ELEVATOR CONSTRUCTORS**

Install, erect, maintenance and repair of all types of elevators, escalators, dumb waiters and moving walks. **License required by Connecticut General Statutes: R-1,2,5,6.*

- **FORK LIFT OPERATOR**

Laborers Group 4) Mason Tenders - operates forklift solely to assist a mason to a maximum height of nine (9) feet only.

Power Equipment Operator Group 9 - operates forklift to assist any trade, and to assist a mason to a height over nine (9) feet.

- **GLAZIERS**

Glazing wood and metal sash, doors, partitions, and 2 story aluminum storefronts. Installs glass windows, skylights, store fronts and display cases or surfaces such as building fronts, interior walls, ceilings and table tops and metal store fronts. Installation of aluminum window walls and curtain walls is the "joint" work of glaziers and ironworkers, which require equal composite workforce.

- **IRONWORKERS**

Erection, installation and placement of structural steel, precast concrete, miscellaneous iron, ornamental iron, metal curtain wall, rigging and reinforcing steel. Handling, sorting, and installation of reinforcing steel (rebar). Metal bridge rail (traffic), metal bridge handrail, and decorative security fence installation. Installation of aluminum window walls and curtain walls is the "joint" work of glaziers and ironworkers which require equal composite workforce.

- **INSULATOR**

- Installing fire stopping systems/materials for "Penetration Firestop Systems": transit to cables, electrical conduits, insulated pipes, sprinkler pipe penetrations, ductwork behind radiation, electrical cable trays, fire rated pipe penetrations, natural polypropylene, HVAC ducts, plumbing bare metal, telephone and communication wires, and boiler room ceilings.

- **LABORERS**

Acetylene burners, asphalt rakers, chain saw operators, concrete and power buggy operator, concrete saw operator, fence and guard rail erector (except metal bridge rail (traffic), decorative security fence (non-metal)).

installation.), hand operated concrete vibrator operator, mason tenders, pipelayers (installation of storm drainage or sewage lines on the street only), pneumatic drill operator, pneumatic gas and electric drill operator, powermen and wagon drill operator, air track operator, block paver, curb setters, blasters, concrete spreaders.

- **PAINTERS**

Maintenance, preparation, cleaning, blasting (water and sand, etc.), painting or application of any protective coatings of every description on all bridges and appurtenances of highways, roadways, and railroads. Painting, decorating, hardwood finishing, paper hanging, sign writing, scenic art work and drywall hhg for any and all types of building and residential work.

- **LEAD PAINT REMOVAL**

- Painter's Rate

1. Removal of lead paint from bridges.
2. Removal of lead paint as preparation of any surface to be repainted.
3. Where removal is on a Demolition project prior to reconstruction.

- Laborer's Rate

1. Removal of lead paint from any surface NOT to be repainted.
2. Where removal is on a *TOTAL* Demolition project only.

- **PLUMBERS AND PIPEFITTERS**

Installation, repair, replacement, alteration or maintenance of all plumbing, heating, cooling and piping. ****License required per Connecticut General Statutes: P-1,2,6,7,8,9 J-1,2,3,4 SP-1,2 S-1,2,3,4,5,6,7,8 B-1,2,3,4 D-1,2,3,4.***

- **POWER EQUIPMENT OPERATORS**

Operates several types of power construction equipment such as compressors, pumps, hoists, derricks, cranes, shovels, tractors, scrapers or motor graders, etc. Repairs and maintains equipment. ****License required, crane operators only, per Connecticut General Statutes.***

- **ROOFERS**

Covers roofs with composition shingles or sheets, wood shingles, slate or asphalt and gravel to waterproof roofs, including preparation of surface. (demolition or removal of any type of roofing and or clean-up of any and all areas where a roof is to be relaid.)

- **SHEETMETAL WORKERS**

Fabricate, assemble, install and repair sheetmetal products and equipment in such areas as ventilation, air-conditioning, warm air heating, restaurant equipment, architectural sheet metal work, sheetmetal roofing, and aluminum gutters. Fabrication, handling, assembling, erecting, altering, repairing, etc. of coated metal material panels and composite metal material panels when used on building exteriors and interiors as soffits, fascia, louvers, partitions, canopies, cornice, column covers, awnings, beam covers, cladding, sun shades, lighting troughs, spires, ornamental roofing, metal ceilings, mansards, copings, ornamental and ventilation hoods, vertical and horizontal siding panels, trim, etc. The sheet metal classification also applies to the vast variety of coated metal material panels and composite metal material panels that have evolved over the years as an alternative to conventional ferrous and non-ferrous metals like steel, iron, tin, copper, brass, bronze, aluminum, etc. Fabrication, handling, assembling, erecting, altering, repairing, etc. of architectural metal roof, standing seam roof, composite metal roof, metal and composite bathroom/toilet partitions, aluminum gutters, metal and composite lockers and shelving, kitchen equipment, and walk-in coolers. To include testing and air –balancing ancillary to installation and construction.

- **SPRINKLER FITTERS**

Installation, alteration, maintenance and repair of fire protection sprinkler systems.

****License required per Connecticut General Statutes: F-1,2,3,4.***

- **TILE MARBLE AND TERRAZZO FINISHERS**

Assists and tends the tile setter, marble mason and terrazzo worker in the performance of their duties.

- **TRUCK DRIVERS**

~How to pay truck drivers delivering asphalt is under REVISION~

Truck Drivers are required to be paid prevailing wage for time spent "working" directly on the site. These drivers remain covered by the prevailing wage for any time spent transporting between the actual construction location and facilities (such as fabrication, plants, mobile factories, batch plant, borrow pits, job headquarters, tool yards, etc.) dedicated exclusively, or nearly so, to performance of the contract or project, which are so located in proximity to the actual construction location that it is reasonable to include them. ****License required, drivers only, per Connecticut General Statutes.***

For example:

- Material men and deliverymen are not covered under prevailing wage as long as they are not directly involved in the construction process. If, they unload the material, they would then be covered by prevailing wage for the classification they are performing work in: laborer, equipment operator, etc.
- Hauling material off site is not covered provided they are not dumping it at a location outlined above.
- Driving a truck on site and moving equipment or materials on site would be considered covered work, as this is part of the construction process.

➤ *Any questions regarding the proper classification should be directed to:*
Public Contract Compliance Unit
Wage and Workplace Standards Division
Connecticut Department of Labor
200 Folly Brook Blvd, Wethersfield, CT 06109
(860) 263-6543.

**Connecticut Department of Labor
Wage and Workplace Standards Division
FOOTNOTES**

- ⇒ Please Note: If the “Benefits” listed on the schedule for the following occupations includes a letter(s) (+ a or + a+b for instance), refer to the information below.

Benefits to be paid at the appropriate prevailing wage rate for the listed occupation.

If the “Benefits” section for the occupation lists only a dollar amount, disregard the information below.

Bricklayers, Cement Masons, Cement Finishers, Concrete Finishers, Stone Masons
(Building Construction) and
(Residential- Hartford, Middlesex, New Haven, New London and Tolland Counties)

- a. Paid Holiday: Employees shall receive 4 hours for Christmas Eve holiday provided the employee works the regularly scheduled day before and after the holiday. Employers may schedule work on Christmas Eve and employees shall receive pay for actual hours worked in addition to holiday pay.

Elevator Constructors: Mechanics

- a. Paid Holidays: New Year’s Day, Memorial Day, Independence Day, Labor Day, Veterans’ Day, Thanksgiving Day, Christmas Day, plus the Friday after Thanksgiving.
- b. Vacation: Employer contributes 8% of basic hourly rate for 5 years or more of service or 6% of basic hourly rate for 6 months to 5 years of service as vacation pay credit.

Glaziers

- a. Paid Holidays: Labor Day and Christmas Day.

Power Equipment Operators
(Heavy and Highway Construction & Building Construction)

- a. Paid Holidays: New Year’s Day, Good Friday, Memorial day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day, provided the employee works 3 days during the week in which the holiday falls, if scheduled, and if scheduled, the working day before and the working day after the holiday. Holidays falling on Saturday may be observed on Saturday, or if the employer so elects, on the preceding Friday.

Ironworkers

- a. Paid Holiday: Labor Day provided employee has been on the payroll for the 5 consecutive work days prior to Labor Day.

Laborers (Tunnel Construction)

- a. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day. No employee shall be eligible for holiday pay when he fails, without cause, to work the regular work day preceding the holiday or the regular work day following the holiday.

Roofers

- a. Paid Holidays: July 4th, Labor Day, and Christmas Day provided the employee is employed 15 days prior to the holiday.

Sprinkler Fitters

- a. Paid Holidays: Memorial Day, July 4th, Labor Day, Thanksgiving Day and Christmas Day, provided the employee has been in the employment of a contractor 20 working days prior to any such paid holiday.

Truck Drivers

(Heavy and Highway Construction & Building Construction)

- a. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Christmas day, and Good Friday, provided the employee has at least 31 calendar days of service and works the last scheduled day before and the first scheduled day after the holiday, unless excused.

Minimum Rates and Classifications for
Heavy/Highway Construction

ID#: 22-34802

Connecticut Department of Labor
Wage and Workplace Standards Division

By virtue of the authority vested in the Labor Commissioner under provisions of Section 31-53 of the General Statutes of Connecticut, as amended, the following are declared to be the prevailing rates and welfare payments and will apply only where the contract is advertised for bid within 20 days of the date on which the rates are established. Any contractor or subcontractor not obligated by agreement to pay to the welfare and pension fund shall pay this amount to each employee as part of his/her hourly wages.

Project Number: B022-45

Project Town: Meriden

State#:

FAP#:

Project: Replacement of the Beaver Pond Dam

CLASSIFICATION	Hourly Rate	Benefits
1) Boilermaker	33.79	34% + 8.96
1a) Bricklayer, Cement Masons, Cement Finishers, Plasterers, Stone Masons	38.27	34.47
2) Carpenters, Piledrivermen	36.07	26.15
2a) Diver Tenders	36.07	26.15
3) Divers	44.53	26.15
03a) Millwrights	36.32	26.81
4) Painters: (Bridge Construction) Brush, Roller, Blasting (Sand, Water, etc.), Spray	54.0	22.90
4a) Painters: Brush and Roller	36.42	22.90
4b) Painters: Spray Only	39.42	22.90
4c) Painters: Steel Only	38.42	22.90

4d) Painters: Blast and Spray	39.42	22.90
4e) Painters: Tanks, Tower and Swing	38.42	22.90
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)	39.6	31.21+3% of gross wage
6) Ironworkers: Ornamental, Reinforcing, Structural, and Precast Concrete Erection	38.17	38.02 + 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)	45.83	33.50
----LABORERS----		
8) Group 1: Laborer (Unskilled), Common or General, acetylene burner, concrete specialist	32.0	24.40
9) Group 2: Chain saw operators, fence and guard rail erectors, pneumatic tool operators, powdermen	32.25	24.40
10) Group 3: Pipelayers	32.5	24.40
11) Group 4: Jackhammer/Pavement breaker (handheld); mason tenders (cement/concrete), catch basin builders, asphalt rakers, air track operators, block paver, curb setter and forklift operators	32.5	24.40
12) Group 5: Toxic waste removal (non-mechanical systems)	34.0	24.40
13) Group 6: Blasters	33.75	24.40
Group 7: Asbestos/lead removal, non-mechanical systems (does not include leaded joint pipe)	33.0	24.40

Group 8: Traffic control signalmen	18.0	24.40
Group 9: Hydraulic Drills	32.75	24.40
----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	34.23	24.40 + a
13b) Brakemen, Trackmen, Miners' Helpers and all other men	33.26	24.40 + a
----CLEANING, CONCRETE AND CAULKING TUNNEL----		
14) Concrete Workers, Form Movers, and Strippers	33.26	24.40 + a
15) Form Erectors	33.59	24.40 + a
----ROCK SHAFT LINING, CONCRETE, LINING OF SAME AND TUNNEL IN FREE AIR:----		
16) Brakemen, Trackmen, Tunnel Laborers, Shaft Laborers, Miners Helpers	33.26	24.40 + a
17) Laborers Topside, Cage Tenders, Bellman	33.15	24.40 + a
18) Miners	34.23	24.40 + a
----TUNNELS, CAISSON AND CYLINDER WORK IN COMPRESSED AIR: ----		
18a) Blaster	40.72	24.40 + a

19) Brakemen, Trackmen, Groutman, Laborers, Outside Lock Tender, Gauge Tenders	40.52	24.40 + a
20) Change House Attendants, Powder Watchmen, Top on Iron Bolts	38.54	24.40 + a
21) Mucking Machine Operator, Grout Boss, Track Boss	41.31	24.40 + a
----TRUCK DRIVERS----(*see note below)		
Two Axle Trucks, Helpers	31.16	28.78 + a
Three Axle Trucks; Two Axle Ready Mix	31.27	28.78 + a
Three Axle Ready Mix	31.33	28.78 + a
Four Axle Trucks	31.39	28.78 + a
Four Axle Ready-Mix	31.44	28.78 + a
Heavy Duty Trailer (40 tons and over)	33.66	28.78 + a
Specialized earth moving equipment other than conventional type on-the road trucks and semi-trailer (including Euclids)	31.44	28.78 + a
Heavy Duty Trailer (up to 40 tons)	32.39	28.78 + a
Snorkle Truck	31.54	28.78 + a
----POWER EQUIPMENT OPERATORS----		
Group 1: Crane Handling or Erecting Structural Steel or Stone, Hoisting Engineer (2 drums or over). (Trade License Required)	50.27	26.80 + a

Group 1a: Front End Loader (7 cubic yards or over); Work Boat 26 ft. and over.	46.07	26.80 + a
Group 2: Cranes (100 ton rate capacity and over); Bauer Drill/Caisson. (Trade License Required)	49.91	26.80 + a
Group 2a: Cranes (under 100 ton rated capacity).	49.06	26.80 + a
Group 2b: Excavator over 2 cubic yards; Pile Driver (\$3.00 premium when operator controls hammer).	45.71	26.80 + a
Group 3: Excavator; Gradall; Master Mechanic; Hoisting Engineer (all types of equipment where a drum and cable are used to hoist or drag material regardless of motive power of operation), Rubber Tire Excavator (Drott-1085 or similar); Grader Operator; Bulldozer Fine Grade (slopes, shaping, laser or GPS, etc.). (Trade License Required)	44.86	26.80 + a
Group 4: Trenching Machines; Lighter Derrick; CMI Machine or Similar; Koehring Loader (Skooper).	44.42	26.80 + a
Group 5: Specialty Railroad Equipment; Asphalt Paver; Asphalt Spreader; Asphalt Reclaiming Machine; Line Grinder; Concrete Pumps; Drills with Self Contained Power Units; Boring Machine; Post Hole Digger; Auger; Pounder; Well Digger; Milling Machine (over 24" mandrel)	43.73	26.80 + a
Group 5 continued: Side Boom; Combination Hoe and Loader; Directional Driller.	43.73	26.80 + a
Group 6: Front End Loader (3 up to 7 cubic yards); Bulldozer (rough grade dozer).	43.38	26.80 + a
Group 7: Asphalt Roller; Concrete Saws and Cutters (ride on types); Vermeer Concrete Cutter; Stump Grinder; Scraper; Snooper; Skidder; Milling Machine (24" and under Mandrel)	42.99	26.80 + a
Group 8: Mechanic, Grease Truck Operator, Hydroblaster, Barrier Mover, Power Stone Spreader; Welder; Work Boat under 26 ft.; Transfer Machine.	42.54	26.80 + 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), Vacuum Excavation Truck	42.04	26.80 + a

and Hydrovac Excavation Truck (27 HG pressure or greater).

Group 10: Vibratory Hammer, Ice Machine, Diesel and Air Hammer, etc.	39.7	26.80 + a
Group 11: Conveyor, Earth Roller; Power Pavement Breaker (whiphammer), Robot Demolition Equipment.	39.7	26.80 + a
Group 12: Wellpoint Operator.	39.63	26.80 + a
Group 13: Compressor Battery Operator.	38.97	26.80 + a
Group 14: Elevator Operator; Tow Motor Operator (Solid Tire No Rough Terrain).	37.66	26.80 + a
Group 15: Generator Operator; Compressor Operator; Pump Operator; Welding Machine Operator; Heater Operator.	37.2	26.80 + a
Group 16: Maintenance Engineer.	36.46	26.80 + a
Group 17: Portable Asphalt Plant Operator; Portable Crusher Plant Operator; Portable Concrete Plant Operator., Portable Grout Plant Operator, Portable Water Filtration Plant Operator.	41.39	26.80 + a
Group 18: Power Safety Boat; Vacuum Truck; Zim Mixer; Sweeper; (minimum for any job requiring CDL license).	38.61	26.80 + a

****NOTE: SEE BELOW**

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

20) Lineman, Cable Splicer, Technician	48.19	6.5% + 22.00
21) Heavy Equipment Operator	42.26	6.5% + 19.88

22) Equipment Operator, Tractor Trailer Driver, Material Men	40.96	6.5% + 19.21
23) Driver Groundmen	26.5	6.5% + 9.00
23a) Truck Driver	40.96	6.5% + 17.76
----LINE CONSTRUCTION----		
24) Driver Groundmen	30.92	6.5% + 9.70
25) Groundmen	22.67	6.5% + 6.20
26) Heavy Equipment Operators	37.1	6.5% + 10.70
27) Linemen, Cable Splicers, Dynamite Men	41.22	6.5% + 12.20
28) Material Men, Tractor Trailer Drivers, Equipment Operators	35.04	6.5% + 10.45

Welders: Rate for craft to which welding is incidental.

**Note: Hazardous waste removal work receives additional \$1.25 per hour for truck drivers.*

***Note: Hazardous waste premium \$3.00 per hour over classified rate*

Crane with 150 ft. boom (including jib) - \$1.50 extra

Crane with 200 ft. boom (including jib) - \$2.50 extra

Crane with 250 ft. boom (including jib) - \$5.00 extra

Crane with 300 ft. boom (including jib) - \$7.00 extra

Crane with 400 ft. boom (including jib) - \$10.00 extra

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

Apprentices duly registered under the Commissioner of Labor's regulations on "Work Training Standards for Apprenticeship and Training Programs" Section 31-51-d-1 to 12, are allowed to be paid the appropriate percentage of the prevailing journeymen hourly base and the full fringe benefit rate, providing the work site ratio shall not be less than one full-time 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. For those without internet access, please contact the division listed below.

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

All subsequent annual adjustments will be posted on our Web Site for contractor access.

Contracting Agencies are under no obligation pursuant to State labor law to pay any increase due to the annual adjustment provision.

Effective October 1, 2005 - Public Act 05-50: any person performing the work of any mechanic, laborer, or worker shall be paid prevailing wage

All Person who perform work ON SITE must be paid prevailing wage for the appropriate mechanic, laborer, or worker classification.

All certified payrolls must list the hours worked and wages paid to All Persons who perform work ON SITE regardless of their ownership i.e.: (Owners, Corporate Officers, LLC Members, Independent Contractors, et. al)

Reporting and payment of wages is required regardless of any contractual relationship alleged to exist between the contractor and such person.

~~Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clause (29 CFR 5.5 (a) (1) (ii)).

Please direct any questions which you may have pertaining to classification of work and payment of prevailing wages to the Wage and Workplace Standards Division, telephone (860)263-6790.

As of: May 13, 2022

STANDARD FORM OF AGREEMENT
BETWEEN OWNER AND CONTRACTOR
ON THE BASIS OF A STIPULATED PRICE
B022-45 – RECONSTRUCTION OF THE BEAVER POND DAM

THIS AGREEMENT is dated as of the _____ day of _____, 2022 by and between the City of Meriden, 142 East Main Street Meriden, CT 06450 hereinafter called OWNER and _____ hereinafter called CONTRACTOR.

OWNER and CONTRACTOR, in consideration of the mutual covenants hereinafter set forth, agree as follows:

Article 1. WORK.

CONTRACTOR shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows: furnish labor and materials to replace the Beaver Pond Dam.

The Project for which the Work under the Contract Documents may be the whole or only a part is generally described as follows: furnish labor and materials to replace the Beaver Pond Dam.

Article 2. ENGINEER.

The Project has been designed by Tata and Howard, 37 Brookside Road, Waterbury, CT 06708 who is hereinafter called ENGINEER and who is to act as Owner's representative, assume all duties and responsibilities and has the rights and authority assigned to ENGINEER in the Contract Documents in connection with completion of the Work in accordance with the contract documents.

Article 3. CONTRACT TIMES.

3.1 The Work will be substantially completed by _____, after the date when the Contract Times commence to run as provided in paragraph 2.03 of the General Conditions, and completed and ready for final payment in accordance with paragraph 14.07B of the General Conditions by _____ after the date when the Contract Times commence to run.

3.2 Liquidated Damages. OWNER and CONTRACTOR recognize that time is of the essence of this Agreement and that OWNER will suffer financial loss if the Work is not completed within the times specified in paragraph 3.1 above, plus any extensions thereof allowed in accordance with Article 12 of the General Conditions. They also recognize the delays, expense and difficulties involved in proving the actual loss suffered by OWNER if the Work is not completed on time. Accordingly, instead of requiring any such proof, OWNER and CONTRACTOR agree that as liquidated damages for delay (but not as a penalty) CONTRACTOR shall pay OWNER One Thousand Dollars (**\$1,000.00**) for each day that expires after the time specified in paragraph 3.1 for Substantial Completion until the Work is substantially complete. After Substantial Completion, if CONTRACTOR shall neglect, refuse or fail to complete the remaining Work within the time specified in paragraph 3.1 for completion and readiness for final payment or any proper extension thereof granted by OWNER, CONTRACTOR shall pay OWNER One Thousand Dollars (**\$1,000.00**) for each day that expires after the time specified in paragraph 3.1 for completion and readiness for final payment.

Article 4. CONTRACT PRICE.

OWNER shall pay CONTRACTOR for completion of the Work in accordance with the Contract Documents an amount in current funds equal to the sum of the amounts determined pursuant to paragraphs 4.1 and 4.2 below:

4.1. For all Work, other than Unit Price Work, a Lump Sum of:

Figures:

Written:

All specific cash allowances are included in the above price and have been computed in accordance with 11.02 of the General Conditions;

Plus

4.2. For all Unit Price Work, an amount equal to the sum of the established unit price for each separately identified item of Unit Price Work times the estimated quantity of that item as indicated in this paragraph 4.2:

UNIT PRICE WORK

NO.	ITEM	UNIT	ESTIMATED QUANTITY	UNIT PRICE	TOTAL ESTIMATED
-----	------	------	-----------------------	---------------	--------------------

TOTAL OF ALL UNIT PRICES:

_____	\$ _____
Written	Figures

As provided in paragraph 11.03 of the General Conditions estimated quantities are not guaranteed, and determinations of actual quantities and classification are to be made by ENGINEER as provided in paragraph 9.07 of the General Conditions. Unit prices have been computed as provided in paragraph 11.03C of the General Conditions.

(The Bid may be attached. Any attachments and/or exhibits attached should be listed in Article 8).

If adjustment prices for variations from stipulated Base Bid quantities have been agreed to, insert appropriate provisions.

Article 5. PROGRESS PAYMENTS.

5.1 Based upon applications for Payment submitted to the Engineer by the Contractor and Certificates for Payment issued by the Engineer, the Owner shall make progress payments on account to the Contractor as provided below and elsewhere in the Contract Documents.

5.2 The period covered by each Application for Payment shall be one calendar month ending on the last day of the month.

- 5.3 Each Application for Payment shall be based upon the Schedule of Values submitted by the Contractor in accordance with the Contract Documents. The Schedule of Values shall allocate the entire Contract Sum among the various portions of the Work and be prepared in such form and supported by such data to substantiate its accuracy as the Engineer may require. This Schedule, unless objected to by the Engineer, shall be used as a basis for reviewing the Contractor's Applications for Payment.
- 5.4 Applications for Payment shall indicate the percentage of completion of each portion of the Work as of the end of the period covered by the Application for Payment.
- 5.5 Subject to the provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

5.6.1 Take that portion of the Contract sum properly allocable to completed work as determined by multiplying the percentage completion of each portion of the Work by the share of the total Contract Sum allocated to that portion of the work in the Schedule of Values, less retainage of five percent (5 percent). Pending final determination of cost to the Owner of changes in the Work, amounts not in dispute may be included as provided in appropriate sections of the General Conditions even though the Contract Sum has not yet been adjusted by Change Order.

5.6.2 Add that portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction (or, if approved in advance by the Owner, suitably stored off the site at a location agreed upon in writing) less retainage of five percent (5 percent).

5.6.3 Subtract the aggregate of previous payments made by the Owner; and

5.6.4 Subtract amounts, if any, for which the Engineer has withheld or nullified a Certificate for Payment as provided in Paragraph 14.02.B.5 of the General Conditions.

5.7 The progress payment amount determined in accordance with Paragraph 5.6 shall be further modified under the following circumstances;

(Not applicable)

5.7.1 Add, upon Substantial Completion of the Work, a sum sufficient to increase the total payments to ninety-five percent (95) of the Contract Sum, less such amounts as the Engineer shall determine for incomplete Work and unsettled claims; and

5.7.2 Add, if final completion of the Work is thereafter materially delayed, through no fault of the Contractor, additional amounts payable in accordance with Paragraph 14.08 of the General Conditions.

5.8 Reduction or limitation of retainage, if any shall be as follows:

(Not applicable)

Article 6. INTEREST.

No interest shall be due or paid on any monies not paid when due.

Article 7. CONTRACTOR'S REPRESENTATIONS.

In order to induce OWNER to enter into this Agreement CONTRACTOR makes the following representations:

7.1. CONTRACTOR has examined and carefully studied the Contract Documents including the Addenda listed in paragraph 8 and the other related data identified in the Bidding Documents including "technical data."

7.2. CONTRACTOR has visited the site and become familiar with and is satisfied as to the general, local and site conditions that may affect cost, progress, performance or furnishing of the Work.

7.3. CONTRACTOR is familiar with and is satisfied as to all federal, state and local Laws and Regulations that may affect cost, progress, performance and furnishing of the Work.

7.4. CONTRACTOR has carefully studied all reports of explorations and tests of subsurface conditions at or contiguous to the site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the site (except Underground Facilities) which have been identified in the Supplementary Conditions as provided in paragraph 4.02 of the General Conditions. CONTRACTOR accepts the determination of the extent of the "technical data" contained in such reports and drawings upon which CONTRACTOR is entitled to rely. CONTRACTOR acknowledges that such reports and drawings are not Contract Documents and may not be complete for Contractor's purposes. CONTRACTOR acknowledges that OWNER and ENGINEER do not assume responsibility for the accuracy or completeness of information and data shown or indicated in the Contract Documents with respect to Underground Facilities at or contiguous to the site. CONTRACTOR has obtained and carefully studied assumes responsibility for having done so) all such additional supplementary examinations, investigations, explorations, tests, studies and data concerning conditions (surface, subsurface and Underground Facilities) at or contiguous to the site or otherwise which may affect cost, progress, performance or furnishing of the Work or which relate to any aspect of the means, methods, techniques, sequences and procedures of construction to be employed by CONTRACTOR and safety precautions and programs incident thereto. CONTRACTOR does not consider that any additional examinations, investigations, explorations, tests, studies or data are necessary for the performance and furnishing of the Work at the Contract Price, within the Contract Times and in accordance with the other terms and conditions of the contract Documents.

7.5. CONTRACTOR is aware of the general nature of work to be performed by OWNER and others at the site that relates to the Work as indicated in the Contract Documents.

7.6. CONTRACTOR has correlated the information known to CONTRACTOR, information and observation obtained from visits to the site, reports and drawings identified in the Contract Documents and all additional examinations, investigations, explorations, tests, studies and data with the Contract Documents.

7.7. CONTRACTOR has given ENGINEER written notice of all conflicts, errors, ambiguities or discrepancies that CONTRACTOR has discovered in the Contract Documents and the written resolution thereof by ENGINEER is acceptable to CONTRACTOR, and the Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

Article 8. CONTRACT DOCUMENTS.

The Contract Documents, which comprise the entire agreement between OWNER and CONTRACTOR concerning the Work, consist of the following:

8.1. This Agreement.

8.2. General Conditions and Supplemental General Conditions.

8.3. Notice of Award – **Attachment A**

8.4. Performance, Payment, and other Bonds – **Attachment B.**

8.5. Insurance certificate – **Attachment C**

8.6. Contractor's Bid Proposal, Non-Collusive Bid Statement, Bidder's Qualification Statement, St of CT Forms that are applicable - **Attachment D**

8.7. Connecticut Department of Labor – Wage and Workplace Standards Division.

8.8. **"By Reference"**: The complete Specifications as included in the bidding documents bearing the title.

8.9. **"By Reference"**: List of Drawings: Sheet No's. ____ through ____ included in the bidding documents.

The above documents are on file in the City of Meriden's Purchasing Department.

8.10. Addenda numbers ____.

(Those addenda which pertain exclusively to the bidding process need not be listed.)

8.11. The following which may be delivered or issued after the Effective Date of the Agreement and are not attached hereto: All-Written Amendments and other documents amending, modifying or supplementing the Contract Documents pursuant to paragraphs 3.04 and 3.05 of the General Conditions.

There are no Contract Documents other than those listed above. The Contract Documents may only be amended, modified or supplemented as provided in paragraphs 3.04 and 3.05 of the General Conditions.

Article 9. MISCELLANEOUS.

9.1. Terms used in this Agreement which are defined in Article I of the General Conditions will have the meanings indicated in the General Conditions.

9.2. No assignment by a party hereto of any rights under or interests in the Contract Documents will be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, moneys that may become due and moneys that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

9.3. OWNER and CONTRACTOR each binds itself, its partners, successors, assigns and legal representatives to the other party hereto, its partners, successors, assigns and legal representatives in respect to all covenants, agreements and obligations contained in the Contract Documents.

9.4. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon OWNER and CONTRACTOR, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

9.5 OTHER PROVISIONS.

Non-Discrimination and Affirmative Action Provisions

(A)(1) The Contractor agrees and warrants that in the performance of the Contract such Contractor will not discriminate or permit discrimination against any person or group of persons on the grounds of race, color, religious creed, age, marital status, national origin, ancestry, sex, gender identity or expression, sexual orientation, intellectual disability, mental disability or physical disability, including, but not limited to, blindness, unless it is shown by such Contractor that such disability prevents performance of the work involved, in any manner prohibited by the laws of the United States or of the state of Connecticut. The Contractor further agrees to take affirmative action to insure that applicants with job-related qualifications are employed and that employees are treated when employed without regard to of race, color, religious creed, age, marital status, national origin, ancestry, sex, gender identity or expression, intellectual disability, mental disability or physical disability, including, but not limited to, blindness, unless it is shown by such Contractor that such disability prevents performance of the work involved; (2) the Contractor agrees, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, to state that it is an "affirmative action-equal opportunity employer" in accordance with regulations adopted by the commission; (3) the Contractor agrees to provide each labor union or representative of workers with which such Contractor has a collective bargaining agreement or other contract or understanding and each vendor with which such Contractor has a contract or understanding, a notice to be provided by the commission advising the labor union or workers' representative of the Contractor's commitments under this section, and to post copies of the notice in conspicuous places available to employees and applicants for employment; (4) the Contractor agrees to comply with each provision of this section and sections 46a-68e and 46a-68f and with each regulation or relevant order issued by said commission pursuant to sections 46a-56, 46a-68e, 46a-68f and 46a-86; (5) the Contractor agrees to provide the Commission on Human Rights and Opportunities with such information requested by the commission, and permit access to

pertinent books, records and accounts, concerning the employment practices and procedures of the Contractor as relate to the provisions of this section and section 46a-56.

- (B) Any Contractor who is a party to a municipal public works contract or quasi-public agency project, where any such contract is valued at less than \$50,000 for each year of the contract, shall provide the Commission on Human Rights and Opportunities with a written or electronic representation that complies with the nondiscrimination agreement and warranty under subsection (A)(1) above, provided if there is any change in such representation, the Contractor shall provide the updated representation to the Commission not later than 30 days after such change. Any Contractor who is a party to a municipal public works contract or a quasi-public agency project, where any such contract is valued at \$50,000 or more for any year of the contract, shall provide the Commission with any one of the following: (1) Documentation in the form of a company or corporate policy adopted by resolution of the board of directors, shareholder, managers, members or other governing body of such Contractor that complies with the nondiscrimination agreement and warranty under subsection (A)(1) of this section; (2) Documentation in the form of a company or corporate policy adopted by a prior resolution of the board of directors, shareholders, managers, members or other governing body of such contractor if (a) the prior resolution is certified by a duly authorized corporate officer of such contractor to be in effect on the date the documentation is submitted, and the executive director of the Commission on Human Rights and Opportunities or designee certifies that the prior resolution complies with the nondiscrimination agreement and warranty under subdivision (A)(1) of this section; or (3) Documentation in the form of an affidavit signed under penalty of false statement by a chief executive officer, president, chairperson or other corporate officer duly authorized to adopt company or corporate policy that certifies that the company or corporate policy of the contractor complies with the nondiscrimination agreement and warranty under subdivision (A)(1) of this section and is in effect on the date the affidavit is signed..
- (C) If the Contract is a municipal public works contract or a quasi-public agency project, the Contractor agrees and warrants that s/he will make good faith efforts to employ minority business enterprises as subcontractors and suppliers of materials on such public works project. The Contractor shall include the provisions of subdivision (A)(1) of this section in every subcontract or purchase order entered into to fulfill any obligation of a municipal public works contract or contract for a quasi-public agency project, and such provisions shall be binding on a subcontractor, vendor or manufacturer, unless exempted by regulations or orders of the Commission on Human Rights and Opportunities. The Contractor shall take such action with respect to any such subcontract or purchase order as the Commission may direct as a means of enforcing such provisions, including sanctions for noncompliance in accordance with section 46a-56; provided, if such Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the Commission regarding a state contract, the contractor may request the state of Connecticut to enter into any such litigation or negotiation prior thereto to protect the interests of the state and the state may so enter.
- (D) "Minority business enterprise" means any small contractor or supplier of materials fifty-one per cent or more of the capital stock, if any, or assets of which is owned by a person or persons: (1) Who are active in the daily affairs of the enterprise, (2) who have the power to direct the management and policies of the enterprise and (3) who are members of a minority, as such term is defined in subsection (a) of section 32-9n; and "good faith" means that degree of diligence which a reasonable person would exercise in the performance of legal duties and obligations.

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"Good faith efforts" shall include, but not be limited to, those reasonable initial efforts necessary to comply with statutory or regulatory requirements and additional or substituted

efforts when it is determined that such initial efforts will not be sufficient to comply with such requirements. Determination of the Contractor's good faith efforts shall include, but shall not be eliminated to, the following factors: The contractor's employment and subcontracting policies, patterns and practices; affirmative advertising recruitment and training; technical assistance activities and such other reasonable activities or efforts as the Commission on Human Rights and Opportunities may prescribe that are designed to ensure the participation of minority business enterprises in municipal public works contracts or quasi-public agency projects. "Municipal public works project" means that portion of an agreement entered into on or after October 1, 2015, between any individual, form or corporation and a municipality for the construction, rehabilitation, conversion, extension, demolition or repair of a public building, highway or other changes or improvements in real property, which is financed in whole or in part by the state, including, but not limited to, matching expenditures, grants, loans, insurance or guarantees but excluding any project of an alliance district, as defined in section 10-262u, finance by the state funding in an amount equal to fifty thousand dollars or less. "Quasi-public agency project" means the construction, rehabilitation, conversion, extension, demolition or repair of a building or other changes or improvements in real property pursuant to a contract entered into on or after October 1, 2015, which is financed in whole or in part by a quasi-public agency using state funds, including, but not limited to, matching expenditures, grants, loans, insurance or guarantees.

WITNESS WHEREOF, the parties hereto have affixed their names and seals.

THE CITY OF MERIDEN

CONTRACTOR:

Timothy P. Coon, City Manager
Duly Authorized

Duly Authorized

Date: _____

Date: _____

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared by

ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

and

Issued and Published Jointly by



AMERICAN COUNCIL OF ENGINEERING COMPANIES

ASSOCIATED GENERAL CONTRACTORS OF AMERICA

AMERICAN SOCIETY OF CIVIL ENGINEERS

PROFESSIONAL ENGINEERS IN PRIVATE PRACTICE
A Practice Division of the
NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

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ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

- A. Wherever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.
1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.
 2. *Agreement*—The written instrument which is evidence of the agreement between Owner and Contractor covering the Work.
 3. *Application for Payment*—The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
 4. *Asbestos*—Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.
 5. *Bid*—The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
 6. *Bidder*—The individual or entity who submits a Bid directly to Owner.
 7. *Bidding Documents*—The Bidding Requirements and the proposed Contract Documents (including all Addenda).
 8. *Bidding Requirements*—The advertisement or invitation to bid, Instructions to Bidders, Bid security of acceptable form, if any, and the Bid Form with any supplements.
 9. *Change Order*—A document recommended by Engineer which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement.
 10. *Claim*—A demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.
 11. *Contract*—The entire and integrated written agreement between the Owner and Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.

12. *Contract Documents*—Those items so designated in the Agreement. Only printed or hard copies of the items listed in the Agreement are Contract Documents. Approved Shop Drawings, other Contractor submittals, and the reports and drawings of subsurface and physical conditions are not Contract Documents.
13. *Contract Price*—The moneys payable by Owner to Contractor for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of Paragraph 11.03 in the case of Unit Price Work).
14. *Contract Times*—The number of days or the dates stated in the Agreement to: (i) achieve Milestones, if any; (ii) achieve Substantial Completion; and (iii) complete the Work so that it is ready for final payment as evidenced by Engineer's written recommendation of final payment.
15. *Contractor*—The individual or entity with whom Owner has entered into the Agreement.
16. *Cost of the Work*—See Paragraph 11.01 for definition.
17. *Drawings*—That part of the Contract Documents prepared or approved by Engineer which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings and other Contractor submittals are not Drawings as so defined.
18. *Effective Date of the Agreement*—The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.
19. *Engineer*—The individual or entity named as such in the Agreement.
20. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.
21. *General Requirements*—Sections of Division 1 of the Specifications.
22. *Hazardous Environmental Condition*—The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto.
23. *Hazardous Waste*—The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.
24. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
25. *Liens*—Charges, security interests, or encumbrances upon Project funds, real property, or personal property.
26. *Milestone*—A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.

27. *Notice of Award*—The written notice by Owner to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, Owner will sign and deliver the Agreement.
28. *Notice to Proceed*—A written notice given by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work under the Contract Documents.
29. *Owner*—The individual or entity with whom Contractor has entered into the Agreement and for whom the Work is to be performed.
30. *PCBs*—Polychlorinated biphenyls.
31. *Petroleum*—Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.
32. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.
33. *Project*—The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.
34. *Project Manual*—The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.
35. *Radioactive Material*—Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.
36. *Resident Project Representative*—The authorized representative of Engineer who may be assigned to the Site or any part thereof.
37. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.
38. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to support scheduled performance of related construction activities.
39. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

40. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.
41. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by Owner which are designated for the use of Contractor.
42. *Specifications*—That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable thereto.
43. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work at the Site.
44. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms “substantially complete” and “substantially completed” as applied to all or part of the Work refer to Substantial Completion thereof.
45. *Successful Bidder*—The Bidder submitting a responsive Bid to whom Owner makes an award.
46. *Supplementary Conditions*—That part of the Contract Documents which amends or supplements these General Conditions.
47. *Supplier*—A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or Subcontractor.
48. *Underground Facilities*—All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.
49. *Unit Price Work*—Work to be paid for on the basis of unit prices.
50. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.
51. *Work Change Directive*—A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner and recommended by Engineer ordering an

addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

1.02 Terminology

A. The words and terms discussed in Paragraph 1.02.B through F are not defined but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.

B. *Intent of Certain Terms or Adjectives:*

1. The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Paragraph 9.09 or any other provision of the Contract Documents.

C. *Day:*

1. The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.

D. *Defective:*

1. The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
 - a. does not conform to the Contract Documents; or
 - b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
 - c. has been damaged prior to Engineer’s recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 14.04 or 14.05).

E. *Furnish, Install, Perform, Provide:*

1. The word “furnish,” when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
 2. The word “install,” when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.
 3. The words “perform” or “provide,” when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.
 4. When “furnish,” “install,” “perform,” or “provide” is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Contractor, “provide” is implied.
- F. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 – PRELIMINARY MATTERS

2.01 *Delivery of Bonds and Evidence of Insurance*

- A. When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.
- B. *Evidence of Insurance:* Before any Work at the Site is started, Contractor and Owner shall each deliver to the other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which Contractor and Owner respectively are required to purchase and maintain in accordance with Article 5.

2.02 *Copies of Documents*

- A. Owner shall furnish to Contractor up to ten printed or hard copies of the Drawings and Project Manual. Additional copies will be furnished upon request at the cost of reproduction.

2.03 *Commencement of Contract Times; Notice to Proceed*

- A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Agreement or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Agreement. In no event will the Contract Times commence to run later than the sixtieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Agreement, whichever date is earlier.

2.04 *Starting the Work*

- A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work shall be done at the Site prior to the date on which the Contract Times commence to run.

2.05 *Before Starting Construction*

- A. *Preliminary Schedules:* Within 10 days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), Contractor shall submit to Engineer for timely review:
 - 1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract Documents;
 - 2. a preliminary Schedule of Submittals; and
 - 3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.06 *Preconstruction Conference; Designation of Authorized Representatives*

- A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.05.A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.
- B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit instructions, receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.07 *Initial Acceptance of Schedules*

- A. At least 10 days before submission of the first Application for Payment a conference attended by Contractor, Engineer, and others as appropriate will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.05.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.
 - 1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on

Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.

2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.
3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to component parts of the Work.

ARTICLE 3 – CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.01 *Intent*

- A. The Contract Documents are complementary; what is required by one is as binding as if required by all.
- B. It is the intent of the Contract Documents to describe a functionally complete project (or part thereof) to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or equipment that reasonably may be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the indicated result will be provided whether or not specifically called for, at no additional cost to Owner.
- C. Clarifications and interpretations of the Contract Documents shall be issued by Engineer as provided in Article 9.

3.02 *Reference Standards*

- A. Standards, Specifications, Codes, Laws, and Regulations
 1. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.
 2. No provision of any such standard, specification, manual, or code, or any instruction of a Supplier, shall be effective to change the duties or responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees, from those set forth in the Contract Documents. No such provision or instruction shall be effective to assign to Owner, Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies:*

1. *Contractor's Review of Contract Documents Before Starting Work:* Before undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy which Contractor discovers, or has actual knowledge of, and shall obtain a written interpretation or clarification from Engineer before proceeding with any Work affected thereby.
2. *Contractor's Review of Contract Documents During Performance of Work:* If, during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) any standard, specification, manual, or code, or (c) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in Paragraph 3.04.
3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

B. *Resolving Discrepancies:*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:
 - a. the provisions of any standard, specification, manual, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference in the Contract Documents); or
 - b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Amending and Supplementing Contract Documents*

- A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof by either a Change Order or a Work Change Directive.
- B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways:

1. A Field Order;
2. Engineer's approval of a Shop Drawing or Sample (subject to the provisions of Paragraph 6.17.D.3); or
3. Engineer's written interpretation or clarification.

3.05 *Reuse of Documents*

A. Contractor and any Subcontractor or Supplier shall not:

1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media editions; or
2. reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer.

B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

3.06 *Electronic Data*

- A. Unless otherwise stated in the Supplementary Conditions, the data furnished by Owner or Engineer to Contractor, or by Contractor to Owner or Engineer, that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.
- B. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the transferring party.
- C. When transferring documents in electronic media format, the transferring party makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the data's creator.

ARTICLE 4 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS

4.01 *Availability of Lands*

- A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work. Owner will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If Contractor and Owner are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in Owner's furnishing the Site or a part thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.
- B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which the Work is to be performed and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.
- C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

4.02 *Subsurface and Physical Conditions*

- A. *Reports and Drawings:* The Supplementary Conditions identify:
 - 1. those reports known to Owner of explorations and tests of subsurface conditions at or contiguous to the Site; and
 - 2. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities).
- B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:
 - 1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or
 - 2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
 - 3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions, or information.

4.03 *Differing Subsurface or Physical Conditions*

A. *Notice:* If Contractor believes that any subsurface or physical condition that is uncovered or revealed either:

1. is of such a nature as to establish that any “technical data” on which Contractor is entitled to rely as provided in Paragraph 4.02 is materially inaccurate; or
2. is of such a nature as to require a change in the Contract Documents; or
3. differs materially from that shown or indicated in the Contract Documents; or
4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so.

B. *Engineer’s Review:* After receipt of written notice as required by Paragraph 4.03.A, Engineer will promptly review the pertinent condition, determine the necessity of Owner’s obtaining additional exploration or tests with respect thereto, and advise Owner in writing (with a copy to Contractor) of Engineer’s findings and conclusions.

C. *Possible Price and Times Adjustments:*

1. The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in Contractor’s cost of, or time required for, performance of the Work; subject, however, to the following:
 - a. such condition must meet any one or more of the categories described in Paragraph 4.03.A; and
 - b. with respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraphs 9.07 and 11.03.
2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times if:
 - a. Contractor knew of the existence of such conditions at the time Contractor made a final commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract; or
 - b. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and

contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such final commitment; or

c. Contractor failed to give the written notice as required by Paragraph 4.03.A.

3. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in Paragraph 10.05. However, neither Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors shall be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

4.04 *Underground Facilities*

A. *Shown or Indicated:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:

1. Owner and Engineer shall not be responsible for the accuracy or completeness of any such information or data provided by others; and
2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:
 - a. reviewing and checking all such information and data;
 - b. locating all Underground Facilities shown or indicated in the Contract Documents;
 - c. coordination of the Work with the owners of such Underground Facilities, including Owner, during construction; and
 - d. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

B. *Not Shown or Indicated:*

1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer. Engineer will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the

consequences of the existence or location of the Underground Facility. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

2. If Engineer concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents and that Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Times, Owner or Contractor may make a Claim therefor as provided in Paragraph 10.05.

4.05 *Reference Points*

- A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.06 *Hazardous Environmental Condition at Site*

- A. *Reports and Drawings:* The Supplementary Conditions identify those reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at the Site.
- B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:
 1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or
 2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or
 3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions or information.

- C. Contractor shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. Contractor shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible.
- D. If Contractor encounters a Hazardous Environmental Condition or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 6.16.A); and (iii) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 4.06.E.
- E. Contractor shall not be required to resume Work in connection with such condition or in any affected area until after Owner has obtained any required permits related thereto and delivered written notice to Contractor: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, either party may make a Claim therefor as provided in Paragraph 10.05.
- F. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in Paragraph 10.05. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 7.
- G. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.G shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

- H. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.H shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- I. The provisions of Paragraphs 4.02, 4.03, and 4.04 do not apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 5 – BONDS AND INSURANCE

5.01 *Performance, Payment, and Other Bonds*

- A. Contractor shall furnish performance and payment bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all of Contractor's obligations under the Contract Documents. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 13.07, whichever is later, except as provided otherwise by Laws or Regulations or by the Contract Documents. Contractor shall also furnish such other bonds as are required by the Contract Documents.
- B. All bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All bonds signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority shall show that it is effective on the date the agent or attorney-in-fact signed each bond.
- C. If the surety on any bond furnished by Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of Paragraph 5.01.B, Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the requirements of Paragraphs 5.01.B and 5.02.

5.02 *Licensed Sureties and Insurers*

- A. All bonds and insurance required by the Contract Documents to be purchased and maintained by Owner or Contractor shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also

meet such additional requirements and qualifications as may be provided in the Supplementary Conditions.

5.03 *Certificates of Insurance*

- A. Contractor shall deliver to Owner, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Owner or any other additional insured) which Contractor is required to purchase and maintain.
- B. Owner shall deliver to Contractor, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Contractor or any other additional insured) which Owner is required to purchase and maintain.
- C. Failure of Owner to demand such certificates or other evidence of Contractor's full compliance with these insurance requirements or failure of Owner to identify a deficiency in compliance from the evidence provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.
- D. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor.
- E. The insurance and insurance limits required herein shall not be deemed as a limitation on Contractor's liability under the indemnities granted to Owner in the Contract Documents.

5.04 *Contractor's Insurance*

- A. Contractor shall purchase and maintain such insurance as is appropriate for the Work being performed and as will provide protection from claims set forth below which may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable:
 - 1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;
 - 2. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;
 - 3. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;
 - 4. claims for damages insured by reasonably available personal injury liability coverage which are sustained;

- a. by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or
 - b. by any other person for any other reason;
 5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom; and
 6. claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.
- B. The policies of insurance required by this Paragraph 5.04 shall:
1. with respect to insurance required by Paragraphs 5.04.A.3 through 5.04.A.6 inclusive, be written on an occurrence basis, include as additional insureds (subject to any customary exclusion regarding professional liability) Owner and Engineer, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;
 2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;
 3. include contractual liability insurance covering Contractor's indemnity obligations under Paragraphs 6.11 and 6.20;
 4. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the Contractor pursuant to Paragraph 5.03 will so provide);
 5. remain in effect at least until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work in accordance with Paragraph 13.07; and
 6. include completed operations coverage:
 - a. Such insurance shall remain in effect for two years after final payment.
 - b. Contractor shall furnish Owner and each other additional insured identified in the Supplementary Conditions, to whom a certificate of insurance has been issued, evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment and one year thereafter.

5.05 *Owner's Liability Insurance*

- A. In addition to the insurance required to be provided by Contractor under Paragraph 5.04, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.

5.06 *Property Insurance*

- A. Unless otherwise provided in the Supplementary Conditions, Owner shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:
1. include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee;
 2. be written on a Builder's Risk "all-risk" policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage (other than that caused by flood), and such other perils or causes of loss as may be specifically required by the Supplementary Conditions.
 3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);
 4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;
 5. allow for partial utilization of the Work by Owner;
 6. include testing and startup; and
 7. be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days written notice to each other loss payee to whom a certificate of insurance has been issued.
- B. Owner shall purchase and maintain such equipment breakdown insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors,

members, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee.

- C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with this Paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other loss payee to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with Paragraph 5.07.
- D. Owner shall not be responsible for purchasing and maintaining any property insurance specified in this Paragraph 5.06 to protect the interests of Contractor, Subcontractors, or others in the Work to the extent of any deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such identified deductible amount will be borne by Contractor, Subcontractors, or others suffering any such loss, and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.
- E. If Contractor requests in writing that other special insurance be included in the property insurance policies provided under this Paragraph 5.06, Owner shall, if possible, include such insurance, and the cost thereof will be charged to Contractor by appropriate Change Order. Prior to commencement of the Work at the Site, Owner shall in writing advise Contractor whether or not such other insurance has been procured by Owner.

5.07 *Waiver of Rights*

- A. Owner and Contractor intend that all policies purchased in accordance with Paragraph 5.06 will protect Owner, Contractor, Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or loss payees thereunder. Owner and Contractor waive all rights against each other and their respective officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them for all losses and damages caused by, arising out of or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner as trustee or otherwise payable under any policy so issued.
- B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them for:

1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and
 2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial utilization pursuant to Paragraph 14.05, after Substantial Completion pursuant to Paragraph 14.04, or after final payment pursuant to Paragraph 14.07.
- C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them.

5.08 *Receipt and Application of Insurance Proceeds*

- A. Any insured loss under the policies of insurance required by Paragraph 5.06 will be adjusted with Owner and made payable to Owner as fiduciary for the loss payees, as their interests may appear, subject to the requirements of any applicable mortgage clause and of Paragraph 5.08.B. Owner shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Change Order.
- B. Owner as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to Owner's exercise of this power. If such objection be made, Owner as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, Owner as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, Owner as fiduciary shall give bond for the proper performance of such duties.

5.09 *Acceptance of Bonds and Insurance; Option to Replace*

- A. If either Owner or Contractor has any objection to the coverage afforded by or other provisions of the bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of non-conformance with the Contract Documents, the objecting party shall so notify the other party in writing within 10 days after receipt of the certificates (or other evidence requested) required by Paragraph 2.01.B. Owner and Contractor shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the bonds and insurance required of such party by the Contract Documents, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent bonds or insurance to protect such other party's

interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.

5.10 *Partial Utilization, Acknowledgment of Property Insurer*

- A. If Owner finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 14.05, no such use or occupancy shall commence before the insurers providing the property insurance pursuant to Paragraph 5.06 have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy.

ARTICLE 6 – CONTRACTOR’S RESPONSIBILITIES

6.01 *Supervision and Superintendence*

- A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. Contractor shall not be responsible for the negligence of Owner or Engineer in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents.
- B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

6.02 *Labor; Working Hours*

- A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site.
- B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours. Contractor will not permit the performance of Work on a Saturday, Sunday, or any legal holiday without Owner’s written consent (which will not be unreasonably withheld) given after prior written notice to Engineer.

6.03 *Services, Materials, and Equipment*

- A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start-up, and completion of the Work.

- B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications shall expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.
- C. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

6.04 *Progress Schedule*

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.07 as it may be adjusted from time to time as provided below.
 - 1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.07) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times. Such adjustments will comply with any provisions of the General Requirements applicable thereto.
 - 2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 12. Adjustments in Contract Times may only be made by a Change Order.

6.05 *Substitutes and "Or-Equals"*

- A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or-equal" item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to Engineer for review under the circumstances described below.
 - 1. *"Or-Equal" Items:* If in Engineer's sole discretion an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by Engineer as an "or-equal" item, in which case review and approval of the proposed item may, in Engineer's sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this Paragraph 6.05.A.1, a proposed item of material or equipment will be considered functionally equal to an item so named if:
 - a. in the exercise of reasonable judgment Engineer determines that:
 - 1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

- 2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole; and
 - 3) it has a proven record of performance and availability of responsive service.
- b. Contractor certifies that, if approved and incorporated into the Work:
- 1) there will be no increase in cost to the Owner or increase in Contract Times; and
 - 2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.

2. *Substitute Items:*

- a. If in Engineer's sole discretion an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item under Paragraph 6.05.A.1, it will be considered a proposed substitute item.
- b. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of material or equipment will not be accepted by Engineer from anyone other than Contractor.
- c. The requirements for review by Engineer will be as set forth in Paragraph 6.05.A.2.d, as supplemented by the General Requirements, and as Engineer may decide is appropriate under the circumstances.
- d. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:
 - 1) shall certify that the proposed substitute item will:
 - a) perform adequately the functions and achieve the results called for by the general design,
 - b) be similar in substance to that specified, and
 - c) be suited to the same use as that specified;
 - 2) will state:
 - a) the extent, if any, to which the use of the proposed substitute item will prejudice Contractor's achievement of Substantial Completion on time,
 - b) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item, and

- c) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty;
 - 3) will identify:
 - a) all variations of the proposed substitute item from that specified, and
 - b) available engineering, sales, maintenance, repair, and replacement services; and
 - 4) shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change.
- B. *Substitute Construction Methods or Procedures:* If a specific means, method, technique, sequence, or procedure of construction is expressly required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by Engineer. Contractor shall submit sufficient information to allow Engineer, in Engineer's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The requirements for review by Engineer will be similar to those provided in Paragraph 6.05.A.2.
- C. *Engineer's Evaluation:* Engineer will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to Paragraphs 6.05.A and 6.05.B. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No "or equal" or substitute will be ordered, installed or utilized until Engineer's review is complete, which will be evidenced by a Change Order in the case of a substitute and an approved Shop Drawing for an "or equal." Engineer will advise Contractor in writing of any negative determination.
- D. *Special Guarantee:* Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- E. *Engineer's Cost Reimbursement:* Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor pursuant to Paragraphs 6.05.A.2 and 6.05.B. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.
- F. *Contractor's Expense:* Contractor shall provide all data in support of any proposed substitute or "or-equal" at Contractor's expense.

6.06 *Concerning Subcontractors, Suppliers, and Others*

- A. Contractor shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to Owner as indicated in Paragraph 6.06.B), whether initially or as a replacement, against whom Owner may have reasonable objection. Contractor shall not be

required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom Contractor has reasonable objection.

- B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to Owner in advance for acceptance by Owner by a specified date prior to the Effective Date of the Agreement, and if Contractor has submitted a list thereof in accordance with the Supplementary Conditions, Owner's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of any right of Owner or Engineer to reject defective Work.
- C. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents:
 - 1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier or other individual or entity; nor
 - 2. shall create any obligation on the part of Owner or Engineer to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.
- D. Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with Contractor.
- E. Contractor shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with Engineer through Contractor.
- F. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.
- G. All Work performed for Contractor by a Subcontractor or Supplier will be pursuant to an appropriate agreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer. Whenever any such agreement is with a Subcontractor or Supplier who is listed as a loss payee on the property insurance provided in Paragraph 5.06, the agreement between the Contractor and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against Owner,

Contractor, Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, Contractor will obtain the same.

6.07 *Patent Fees and Royalties*

- A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.
- B. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, and its officers, directors, members, partners, employees, agents, consultants, and subcontractors from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.
- C. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

6.08 *Permits*

- A. Unless otherwise provided in the Supplementary Conditions, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

6.09 *Laws and Regulations*

- A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work. However, it shall not be Contractor's responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.
- C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work shall be the subject of an adjustment in Contract Price or Contract Times. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

6.10 *Taxes*

- A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

6.11 *Use of Site and Other Areas*

A. *Limitation on Use of Site and Other Areas:*

- 1. Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.
- 2. Should any claim be made by any such owner or occupant because of the performance of the Work, Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.
- 3. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought

by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused by or based upon Contractor's performance of the Work.

- B. *Removal of Debris During Performance of the Work:* During the progress of the Work Contractor shall keep the Site and other areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.
- C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.
- D. *Loading Structures:* Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

6.12 *Record Documents*

- A. Contractor shall maintain in a safe place at the Site one record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, and written interpretations and clarifications in good order and annotated to show changes made during construction. These record documents together with all approved Samples and a counterpart of all approved Shop Drawings will be available to Engineer for reference. Upon completion of the Work, these record documents, Samples, and Shop Drawings will be delivered to Engineer for Owner.

6.13 *Safety and Protection*

- A. Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:
 - 1. all persons on the Site or who may be affected by the Work;
 - 2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
 - 3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and

shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.

- C. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. The Supplementary Conditions identify any Owner's safety programs that are applicable to the Work.
- D. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.
- E. All damage, injury, or loss to any property referred to in Paragraph 6.13.A.2 or 6.13.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).
- F. Contractor's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

6.14 *Safety Representative*

- A. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

6.15 *Hazard Communication Programs*

- A. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

6.16 *Emergencies*

- A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent threatened damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is

required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

6.17 *Shop Drawings and Samples*

A. Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals (as required by Paragraph 2.07). Each submittal will be identified as Engineer may require.

1. *Shop Drawings:*

- a. Submit number of copies specified in the General Requirements.
- b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide and to enable Engineer to review the information for the limited purposes required by Paragraph 6.17.D.

2. *Samples:*

- a. Submit number of Samples specified in the Specifications.
- b. Clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 6.17.D.

B. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. *Submittal Procedures:*

1. Before submitting each Shop Drawing or Sample, Contractor shall have:

- a. reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
- b. determined and verified all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;
- c. determined and verified the suitability of all materials offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
- d. determined and verified all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.

2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review and approval of that submittal.
3. With each submittal, Contractor shall give Engineer specific written notice of any variations that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be both a written communication separate from the Shop Drawings or Sample submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to Engineer for review and approval of each such variation.

D. Engineer's Review:

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
3. Engineer's review and approval shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 6.17.C.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer's review and approval shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 6.17.C.1.

E. Resubmittal Procedures:

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.

6.18 *Continuing the Work*

- A. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by Paragraph 15.04 or as Owner and Contractor may otherwise agree in writing.

6.19 *Contractor's General Warranty and Guarantee*

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its officers, directors, members, partners, employees, agents, consultants, and subcontractors shall be entitled to rely on representation of Contractor's warranty and guarantee.
- B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
 - 1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
 - 2. normal wear and tear under normal usage.
- C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:
 - 1. observations by Engineer;
 - 2. recommendation by Engineer or payment by Owner of any progress or final payment;
 - 3. the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
 - 4. use or occupancy of the Work or any part thereof by Owner;
 - 5. any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice of acceptability by Engineer;
 - 6. any inspection, test, or approval by others; or
 - 7. any correction of defective Work by Owner.

6.20 *Indemnification*

- A. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable .

- B. In any and all claims against Owner or Engineer or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 6.20.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.
- C. The indemnification obligations of Contractor under Paragraph 6.20.A shall not extend to the liability of Engineer and Engineer's officers, directors, members, partners, employees, agents, consultants and subcontractors arising out of:
 - 1. the preparation or approval of, or the failure to prepare or approve maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
 - 2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

6.21 *Delegation of Professional Design Services*

- A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable law.
- B. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.
- C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.
- D. Pursuant to this Paragraph 6.21, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 6.17.D.1.

- E. Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

ARTICLE 7 – OTHER WORK AT THE SITE

7.01 *Related Work at Site*

- A. Owner may perform other work related to the Project at the Site with Owner's employees, or through other direct contracts therefor, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:
1. written notice thereof will be given to Contractor prior to starting any such other work; and
 2. if Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in Paragraph 10.05.
- B. Contractor shall afford each other contractor who is a party to such a direct contract, each utility owner, and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and properly coordinate the Work with theirs. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected. The duties and responsibilities of Contractor under this Paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of Contractor in said direct contracts between Owner and such utility owners and other contractors.
- C. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 7, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

7.02 *Coordination*

- A. If Owner intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:
1. the individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;
 2. the specific matters to be covered by such authority and responsibility will be itemized; and
 3. the extent of such authority and responsibilities will be provided.

- B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

7.03 *Legal Relationships*

- A. Paragraphs 7.01.A and 7.02 are not applicable for utilities not under the control of Owner.
- B. Each other direct contract of Owner under Paragraph 7.01.A shall provide that the other contractor is liable to Owner and Contractor for the reasonable direct delay and disruption costs incurred by Contractor as a result of the other contractor's wrongful actions or inactions.
- C. Contractor shall be liable to Owner and any other contractor under direct contract to Owner for the reasonable direct delay and disruption costs incurred by such other contractor as a result of Contractor's wrongful action or inactions.

ARTICLE 8 – OWNER'S RESPONSIBILITIES

8.01 *Communications to Contractor*

- A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

8.02 *Replacement of Engineer*

- A. In case of termination of the employment of Engineer, Owner shall appoint an engineer to whom Contractor makes no reasonable objection, whose status under the Contract Documents shall be that of the former Engineer.

8.03 *Furnish Data*

- A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

8.04 *Pay When Due*

- A. Owner shall make payments to Contractor when they are due as provided in Paragraphs 14.02.C and 14.07.C.

8.05 *Lands and Easements; Reports and Tests*

- A. Owner's duties with respect to providing lands and easements and providing engineering surveys to establish reference points are set forth in Paragraphs 4.01 and 4.05. Paragraph 4.02 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of subsurface conditions and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

8.06 *Insurance*

- A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 5.

8.07 *Change Orders*

- A. Owner is obligated to execute Change Orders as indicated in Paragraph 10.03.

8.08 *Inspections, Tests, and Approvals*

- A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 13.03.B.

8.09 *Limitations on Owner's Responsibilities*

- A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

8.10 *Undisclosed Hazardous Environmental Condition*

- A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 4.06.

8.11 *Evidence of Financial Arrangements*

- A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents.

8.12 *Compliance with Safety Program*

- A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed pursuant to Paragraph 6.13.D.

ARTICLE 9 – ENGINEER'S STATUS DURING CONSTRUCTION

9.01 *Owner's Representative*

- A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract Documents.

9.02 *Visits to Site*

- A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or

continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.

- B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 9.09. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

9.03 *Project Representative*

- A. If Owner and Engineer agree, Engineer will furnish a Resident Project Representative to assist Engineer in providing more extensive observation of the Work. The authority and responsibilities of any such Resident Project Representative and assistants will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 9.09. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

9.04 *Authorized Variations in Work*

- A. Engineer may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. These may be accomplished by a Field Order and will be binding on Owner and also on Contractor, who shall perform the Work involved promptly. If Owner or Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, and the parties are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

9.05 *Rejecting Defective Work*

- A. Engineer will have authority to reject Work which Engineer believes to be defective, or that Engineer believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Engineer will also have authority to require special inspection or testing of the Work as provided in Paragraph 13.04, whether or not the Work is fabricated, installed, or completed.

9.06 *Shop Drawings, Change Orders and Payments*

- A. In connection with Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, see Paragraph 6.17.
- B. In connection with Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, see Paragraph 6.21.
- C. In connection with Engineer's authority as to Change Orders, see Articles 10, 11, and 12.
- D. In connection with Engineer's authority as to Applications for Payment, see Article 14.

9.07 *Determinations for Unit Price Work*

- A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, subject to the provisions of Paragraph 10.05.

9.08 *Decisions on Requirements of Contract Documents and Acceptability of Work*

- A. Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. All matters in question and other matters between Owner and Contractor arising prior to the date final payment is due relating to the acceptability of the Work, and the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Engineer in writing within 30 days of the event giving rise to the question.
- B. Engineer will, with reasonable promptness, render a written decision on the issue referred. If Owner or Contractor believes that any such decision entitles them to an adjustment in the Contract Price or Contract Times or both, a Claim may be made under Paragraph 10.05. The date of Engineer's decision shall be the date of the event giving rise to the issues referenced for the purposes of Paragraph 10.05.B.
- C. Engineer's written decision on the issue referred will be final and binding on Owner and Contractor, subject to the provisions of Paragraph 10.05.
- D. When functioning as interpreter and judge under this Paragraph 9.08, Engineer will not show partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

9.09 *Limitations on Engineer's Authority and Responsibilities*

- A. Neither Engineer's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by Engineer in good faith either to exercise or not

exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

- B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.
- C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.
- D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 14.07.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals that the results certified indicate compliance with, the Contract Documents.
- E. The limitations upon authority and responsibility set forth in this Paragraph 9.09 shall also apply to the Resident Project Representative, if any, and assistants, if any.

9.10 *Compliance with Safety Program*

- A. While at the Site, Engineer's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Engineer has been informed pursuant to Paragraph 6.13.D.

ARTICLE 10 – CHANGES IN THE WORK; CLAIMS

10.01 *Authorized Changes in the Work*

- A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work by a Change Order, or a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).
- B. If Owner and Contractor are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in Paragraph 10.05.

10.02 *Unauthorized Changes in the Work*

- A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents as amended, modified, or supplemented as provided in Paragraph 3.04, except in the case of an emergency as provided in Paragraph 6.16 or in the case of uncovering Work as provided in Paragraph 13.04.D.

10.03 *Execution of Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders recommended by Engineer covering:
 - 1. changes in the Work which are: (i) ordered by Owner pursuant to Paragraph 10.01.A, (ii) required because of acceptance of defective Work under Paragraph 13.08.A or Owner's correction of defective Work under Paragraph 13.09, or (iii) agreed to by the parties;
 - 2. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive; and
 - 3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by Engineer pursuant to Paragraph 10.05; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, Contractor shall carry on the Work and adhere to the Progress Schedule as provided in Paragraph 6.18.A.

10.04 *Notification to Surety*

- A. If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

10.05 *Claims*

- A. *Engineer's Decision Required:* All Claims, except those waived pursuant to Paragraph 14.09, shall be referred to the Engineer for decision. A decision by Engineer shall be required as a condition precedent to any exercise by Owner or Contractor of any rights or remedies either may otherwise have under the Contract Documents or by Laws and Regulations in respect of such Claims.
- B. *Notice:* Written notice stating the general nature of each Claim shall be delivered by the claimant to Engineer and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. The responsibility to substantiate a Claim shall rest with the party making the Claim. Notice of the amount or extent of the Claim, with supporting data

shall be delivered to the Engineer and the other party to the Contract within 60 days after the start of such event (unless Engineer allows additional time for claimant to submit additional or more accurate data in support of such Claim). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of Paragraph 12.01.B. A Claim for an adjustment in Contract Times shall be prepared in accordance with the provisions of Paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to Engineer and the claimant within 30 days after receipt of the claimant's last submittal (unless Engineer allows additional time).

- C. *Engineer's Action:* Engineer will review each Claim and, within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any, take one of the following actions in writing:
1. deny the Claim in whole or in part;
 2. approve the Claim; or
 3. notify the parties that the Engineer is unable to resolve the Claim if, in the Engineer's sole discretion, it would be inappropriate for the Engineer to do so. For purposes of further resolution of the Claim, such notice shall be deemed a denial.
- D. In the event that Engineer does not take action on a Claim within said 30 days, the Claim shall be deemed denied.
- E. Engineer's written action under Paragraph 10.05.C or denial pursuant to Paragraphs 10.05.C.3 or 10.05.D will be final and binding upon Owner and Contractor, unless Owner or Contractor invoke the dispute resolution procedure set forth in Article 16 within 30 days of such action or denial.
- F. No Claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with this Paragraph 10.05.

ARTICLE 11 – COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

11.01 *Cost of the Work*

- A. *Costs Included:* The term Cost of the Work means the sum of all costs, except those excluded in Paragraph 11.01.B, necessarily incurred and paid by Contractor in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to Contractor will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall not include any of the costs itemized in Paragraph 11.01.B, and shall include only the following items:

1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.
2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.
3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 11.01.
4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.
5. Supplemental costs including the following:
 - a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
 - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.
 - c. Rentals of all construction equipment and machinery, and the parts thereof whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of

said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.

- d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.
- e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
- f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 5.06.D), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.
- g. The cost of utilities, fuel, and sanitary facilities at the Site.
- h. Minor expenses such as telegrams, long distance telephone calls, telephone service at the Site, express and courier services, and similar petty cash items in connection with the Work.
- i. The costs of premiums for all bonds and insurance Contractor is required by the Contract Documents to purchase and maintain.

B. *Costs Excluded:* The term Cost of the Work shall not include any of the following items:

- 1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 11.01.A.1 or specifically covered by Paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the Contractor's fee.
- 2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
- 3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
- 4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not

limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.

5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraphs 11.01.A.
- C. *Contractor's Fee:* When all the Work is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 12.01.C.
- D. *Documentation:* Whenever the Cost of the Work for any purpose is to be determined pursuant to Paragraphs 11.01.A and 11.01.B, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

11.02 Allowances

- A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.
- B. *Cash Allowances:*
 1. Contractor agrees that:
 - a. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and
 - b. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.
- C. *Contingency Allowance:*
 1. Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.
- D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

11.03 Unit Price Work

- A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to

the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.

- B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Engineer subject to the provisions of Paragraph 9.07.
- C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.
- D. Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Paragraph 10.05 if:
 - 1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and
 - 2. there is no corresponding adjustment with respect to any other item of Work; and
 - 3. Contractor believes that Contractor is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

ARTICLE 12 – CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

12.01 *Change of Contract Price*

- A. The Contract Price may only be changed by a Change Order. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.
- B. The value of any Work covered by a Change Order or of any Claim for an adjustment in the Contract Price will be determined as follows:
 - 1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 11.03); or
 - 2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 12.01.C.2); or
 - 3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under Paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in Paragraph 11.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 12.01.C).

C. *Contractor's Fee:* The Contractor's fee for overhead and profit shall be determined as follows:

1. a mutually acceptable fixed fee; or
2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - a. for costs incurred under Paragraphs 11.01.A.1 and 11.01.A.2, the Contractor's fee shall be 15 percent;
 - b. for costs incurred under Paragraph 11.01.A.3, the Contractor's fee shall be five percent;
 - c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 12.01.C.2.a and 12.01.C.2.b is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under Paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and Contractor will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;
 - d. no fee shall be payable on the basis of costs itemized under Paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;
 - e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and
 - f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

12.02 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Claim for an adjustment in the Contract Times shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.
- B. Any adjustment of the Contract Times covered by a Change Order or any Claim for an adjustment in the Contract Times will be determined in accordance with the provisions of this Article 12.

12.03 *Delays*

- A. Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in Paragraph 12.02.A. Delays beyond the control of Contractor shall include, but not be limited to, acts or

neglect by Owner, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.

- B. If Owner, Engineer, or other contractors or utility owners performing other work for Owner as contemplated by Article 7, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
- C. If Contractor is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions, acts of God, acts or failures to act of utility owners not under the control of Owner, or other causes not the fault of and beyond control of Owner and Contractor, then Contractor shall be entitled to an equitable adjustment in Contract Times, if such adjustment is essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays described in this Paragraph 12.03.C.
- D. Owner, Engineer, and their officers, directors, members, partners, employees, agents, consultants, or subcontractors shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.
- E. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.

ARTICLE 13 – TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

13.01 *Notice of Defects*

- A. Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor. Defective Work may be rejected, corrected, or accepted as provided in this Article 13.

13.02 *Access to Work*

- A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and governmental agencies with jurisdictional interests will have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply therewith as applicable.

13.03 *Tests and Inspections*

- A. Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.
- B. Owner shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:
 - 1. for inspections, tests, or approvals covered by Paragraphs 13.03.C and 13.03.D below;
 - 2. that costs incurred in connection with tests or inspections conducted pursuant to Paragraph 13.04.B shall be paid as provided in Paragraph 13.04.C; and
 - 3. as otherwise specifically provided in the Contract Documents.
- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.
- D. Contractor shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to Owner and Engineer.
- E. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation.
- F. Uncovering Work as provided in Paragraph 13.03.E shall be at Contractor's expense unless Contractor has given Engineer timely notice of Contractor's intention to cover the same and Engineer has not acted with reasonable promptness in response to such notice.

13.04 *Uncovering Work*

- A. If any Work is covered contrary to the written request of Engineer, it must, if requested by Engineer, be uncovered for Engineer's observation and replaced at Contractor's expense.
- B. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment.

- C. If it is found that the uncovered Work is defective, Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05.
- D. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

13.05 *Owner May Stop the Work*

- A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

13.06 *Correction or Removal of Defective Work*

- A. Promptly after receipt of written notice, Contractor shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Engineer, remove it from the Project and replace it with Work that is not defective. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or removal (including but not limited to all costs of repair or replacement of work of others).
- B. When correcting defective Work under the terms of this Paragraph 13.06 or Paragraph 13.07, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

13.07 *Correction Period*

- A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents) or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for Contractor's use by Owner or permitted by Laws and Regulations as contemplated in Paragraph 6.11.A is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:

1. repair such defective land or areas; or
 2. correct such defective Work; or
 3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and
 4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom.
- B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by Contractor.
- C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.
- D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this Paragraph 13.07, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.
- E. Contractor's obligations under this Paragraph 13.07 are in addition to any other obligation or warranty. The provisions of this Paragraph 13.07 shall not be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

13.08 *Acceptance of Defective Work*

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner (and, prior to Engineer's recommendation of final payment, Engineer) prefers to accept it, Owner may do so. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness) and for the diminished value of the Work to the extent not otherwise paid by Contractor pursuant to this sentence. If any such acceptance occurs prior to Engineer's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and Owner shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount will be paid by Contractor to Owner.

13.09 *Owner May Correct Defective Work*

- A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace rejected Work as required by Engineer in accordance with Paragraph 13.06.A, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, Owner may, after seven days written notice to Contractor, correct, or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 13.09, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, take possession of Contractor's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this Paragraph.
- C. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 13.09 will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, Owner may make a Claim therefor as provided in Paragraph 10.05. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.
- D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 13.09.

ARTICLE 14 – PAYMENTS TO CONTRACTOR AND COMPLETION

14.01 *Schedule of Values*

- A. The Schedule of Values established as provided in Paragraph 2.07.A will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed.

14.02 *Progress Payments*

A. Applications for Payments:

- 1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an

Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.
3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

B. *Review of Applications:*

1. Engineer will, within 10 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to Owner or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.
2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:
 - a. the Work has progressed to the point indicated;
 - b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 9.07, and any other qualifications stated in the recommendation); and
 - c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.
3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
 - a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or

- involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract Documents; or
- b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.
4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:
 - a. to supervise, direct, or control the Work, or
 - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or
 - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or
 - d. to make any examination to ascertain how or for what purposes Contractor has used the moneys paid on account of the Contract Price, or
 - e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
 5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 14.02.B.2. Engineer may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in Engineer's opinion to protect Owner from loss because:
 - a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;
 - b. the Contract Price has been reduced by Change Orders;
 - c. Owner has been required to correct defective Work or complete Work in accordance with Paragraph 13.09; or
 - d. Engineer has actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.02.A.

C. Payment Becomes Due:

1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended will (subject to the provisions of Paragraph 14.02.D) become due, and when due will be paid by Owner to Contractor.

D. *Reduction in Payment:*

1. Owner may refuse to make payment of the full amount recommended by Engineer because:
 - a. claims have been made against Owner on account of Contractor's performance or furnishing of the Work;
 - b. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;
 - c. there are other items entitling Owner to a set-off against the amount recommended; or
 - d. Owner has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.02.B.5.a through 14.02.B.5.c or Paragraph 15.02.A.
2. If Owner refuses to make payment of the full amount recommended by Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, when Contractor remedies the reasons for such action.
3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 14.02.C.1 and subject to interest as provided in the Agreement.

14.03 *Contractor's Warranty of Title*

- A. Contractor warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to Owner no later than the time of payment free and clear of all Liens.

14.04 *Substantial Completion*

- A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete (except for items specifically listed by Contractor as incomplete) and request that Engineer issue a certificate of Substantial Completion.
- B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.
- C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before

final payment. Owner shall have seven days after receipt of the tentative certificate during which to make written objection to Engineer as to any provisions of the certificate or attached list. If, after considering such objections, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the tentative certificate to Owner, notify Contractor in writing, stating the reasons therefor. If, after consideration of Owner's objections, Engineer considers the Work substantially complete, Engineer will, within said 14 days, execute and deliver to Owner and Contractor a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as Engineer believes justified after consideration of any objections from Owner.

- D. At the time of delivery of the tentative certificate of Substantial Completion, Engineer will deliver to Owner and Contractor a written recommendation as to division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless Owner and Contractor agree otherwise in writing and so inform Engineer in writing prior to Engineer's issuing the definitive certificate of Substantial Completion, Engineer's aforesaid recommendation will be binding on Owner and Contractor until final payment.
- E. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the tentative list.

14.05 *Partial Utilization*

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:
 - 1. Owner at any time may request Contractor in writing to permit Owner to use or occupy any such part of the Work which Owner believes to be ready for its intended use and substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 14.04.A through D for that part of the Work.
 - 2. Contractor at any time may notify Owner and Engineer in writing that Contractor considers any such part of the Work ready for its intended use and substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
 - 3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 14.04 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 5.10 regarding property insurance.

14.06 *Final Inspection*

- A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

14.07 *Final Payment*

A. *Application for Payment:*

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, marked-up record documents (as provided in Paragraph 6.12), and other documents, Contractor may make application for final payment following the procedure for progress payments.
2. The final Application for Payment shall be accompanied (except as previously delivered) by:
 - a. all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by Paragraph 5.04.B.6;
 - b. consent of the surety, if any, to final payment;
 - c. a list of all Claims against Owner that Contractor believes are unsettled; and
 - d. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work.
3. In lieu of the releases or waivers of Liens specified in Paragraph 14.07.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien.

B. *Engineer's Review of Application and Acceptance:*

1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying

documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract Documents have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of payment and present the Application for Payment to Owner for payment. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable subject to the provisions of Paragraph 14.09. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

C. Payment Becomes Due:

1. Thirty days after the presentation to Owner of the Application for Payment and accompanying documentation, the amount recommended by Engineer, less any sum Owner is entitled to set off against Engineer's recommendation, including but not limited to liquidated damages, will become due and will be paid by Owner to Contractor.

14.08 *Final Completion Delayed*

- A. If, through no fault of Contractor, final completion of the Work is significantly delayed, and if Engineer so confirms, Owner shall, upon receipt of Contractor's final Application for Payment (for Work fully completed and accepted) and recommendation of Engineer, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by Owner for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if bonds have been furnished as required in Paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Contractor to Engineer with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

14.09 *Waiver of Claims*

- A. The making and acceptance of final payment will constitute:
 1. a waiver of all Claims by Owner against Contractor, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from Contractor's continuing obligations under the Contract Documents; and
 2. a waiver of all Claims by Contractor against Owner other than those previously made in accordance with the requirements herein and expressly acknowledged by Owner in writing as still unsettled.

ARTICLE 15 – SUSPENSION OF WORK AND TERMINATION

15.01 *Owner May Suspend Work*

- A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by notice in writing to Contractor and Engineer which will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be granted an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if Contractor makes a Claim therefor as provided in Paragraph 10.05.

15.02 *Owner May Terminate for Cause*

- A. The occurrence of any one or more of the following events will justify termination for cause:
1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04);
 2. Contractor's disregard of Laws or Regulations of any public body having jurisdiction;
 3. Contractor's repeated disregard of the authority of Engineer; or
 4. Contractor's violation in any substantial way of any provisions of the Contract Documents.
- B. If one or more of the events identified in Paragraph 15.02.A occur, Owner may, after giving Contractor (and surety) seven days written notice of its intent to terminate the services of Contractor:
1. exclude Contractor from the Site, and take possession of the Work and of all Contractor's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion);
 2. incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere; and
 3. complete the Work as Owner may deem expedient.
- C. If Owner proceeds as provided in Paragraph 15.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Owner arising out of or relating to completing the Work, such excess will be paid to Contractor. If such claims, costs, losses, and damages exceed such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when

so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this Paragraph, Owner shall not be required to obtain the lowest price for the Work performed.

- D. Notwithstanding Paragraphs 15.02.B and 15.02.C, Contractor's services will not be terminated if Contractor begins within seven days of receipt of notice of intent to terminate to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of said notice.
- E. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue. Any retention or payment of moneys due Contractor by Owner will not release Contractor from liability.
- F. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 5.01.A, the termination procedures of that bond shall supersede the provisions of Paragraphs 15.02.B and 15.02.C.

15.03 *Owner May Terminate For Convenience*

- A. Upon seven days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):
 - 1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
 - 2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;
 - 3. all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and
 - 4. reasonable expenses directly attributable to termination.
- B. Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

15.04 *Contractor May Stop Work or Terminate*

- A. If, through no act or fault of Contractor, (i) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (ii) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (iii) Owner fails for 30 days

to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the Contract and recover from Owner payment on the same terms as provided in Paragraph 15.03.

- B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this Paragraph 15.04 are not intended to preclude Contractor from making a Claim under Paragraph 10.05 for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this Paragraph.

ARTICLE 16 – DISPUTE RESOLUTION

16.01 *Methods and Procedures*

- A. Either Owner or Contractor may request mediation of any Claim submitted to Engineer for a decision under Paragraph 10.05 before such decision becomes final and binding. The mediation will be governed by the Construction Industry Mediation Rules of the American Arbitration Association in effect as of the Effective Date of the Agreement. The request for mediation shall be submitted in writing to the American Arbitration Association and the other party to the Contract. Timely submission of the request shall stay the effect of Paragraph 10.05.E.
- B. Owner and Contractor shall participate in the mediation process in good faith. The process shall be concluded within 60 days of filing of the request. The date of termination of the mediation shall be determined by application of the mediation rules referenced above.
- C. If the Claim is not resolved by mediation, Engineer's action under Paragraph 10.05.C or a denial pursuant to Paragraphs 10.05.C.3 or 10.05.D shall become final and binding 30 days after termination of the mediation unless, within that time period, Owner or Contractor:
 - 1. elects in writing to invoke any dispute resolution process provided for in the Supplementary Conditions; or
 - 2. agrees with the other party to submit the Claim to another dispute resolution process; or
 - 3. gives written notice to the other party of the intent to submit the Claim to a court of competent jurisdiction.

ARTICLE 17 – MISCELLANEOUS

17.01 *Giving Notice*

- A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:

1. delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended; or
2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

17.02 *Computation of Times*

- A. When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

17.03 *Cumulative Remedies*

- A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract Documents. The provisions of this Paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

17.04 *Survival of Obligations*

- A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion, and acceptance of the Work or termination or completion of the Contract or termination of the services of Contractor.

17.05 *Controlling Law*

- A. This Contract is to be governed by the law of the state in which the Project is located.

17.06 *Headings*

- A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

SUPPLEMENTAL GENERAL CONDITIONS

GENERAL CONDITIONS

The General Conditions of the Contract for Construction, EJCDC Document C-700, 2007 Edition, as bound herewith, shall be the General conditions of the Contract, except as amended by these Supplemental General Conditions

CHANGES AND ADDITIONS TO VARIOUS ARTICLES OF THE GENERAL CONDITIONS

Article 1 Definitions

Article 1 is hereby modified as follows:

Delete the definition "Notice to Proceed"

Article 2 Preliminary Matters

Article 2.02 is modified as follows:

DELETE Article 2.02 in its entirety

Article 2.03 is modified as follows:

30th day is changed to 10th day, and delete "A Notice to Proceed...earlier"

Article 3 Reporting and Resolving Discrepancies

Article 3.03A.# - change "unless" to "that" and add knowledge thereof, or should have had knowledge of....

Article 4 Availability of lands

Article 4.01B – delete "as necessary for giving notice of or filing a mechanics or construction lien against such lands in accordance with applicable Laws & Regulations."

Article 4.06G – Hazardous Environmental Conditions at Site - Delete in its entirety

Article 5 Bonds and Insurance

Delete Article 5 in its entirety and substitute the following:

PERFORMANCE BOND AND LABOR AND MATERIAL PAYMENT BOND

The Contractor shall, within ten (10) days from the date of the Notice of Award, furnish the City of Meriden with a PERFORMANCE BOND and a LABOR AND MATERIAL PAYMENT BOND, both in the amount of 100% of the amount bid, conditioned upon the performance of the Contractor on all undertaking, covenants, terms, and conditions and agreements of the contract. The bond shall be in the form of the specimen bonds annexed hereto, such bonds shall be executed by the contractor and a corporate bonding company licensed, authorized, and admitted to transact such business in the State of Connecticut and named on the current list of "Surety Companies acceptable on Federal Bonds", as published in the "Treasury Department" listed for an amount equal to the amount of the reinsurance. Written evidence of how any excess suretyship has been placed by the surety signing the bonds shall accompany the bonds. The expense of the bonds shall be borne by the Contractor. If at anytime a surety on any such bond is declared bankrupt or loses its right to do business in the State of Connecticut, or is removed from the list of Surety Companies acceptable on Federal Bonds, or for any other justifiable cause, the Contractor shall, within ten (10) days after notice from the City of Meriden to do so. substitute an acceptable bond(s) in such form and sum and signed by such other surety or sureties as may be

paid by the Contractor. No payments shall be deemed due nor shall be made until the new surety or sureties have furnished an acceptable bond to the City.

If the Contractor is a partnership, the bonds shall be signed by each of the individuals who are partners; if a corporation, the bonds shall be signed in the correct corporation name by a duly authorized office, agent, or attorney-in-fact. There should be executed an appropriate number of counterparts of the bond corresponding to the number of counterparts of the contract. Each executed bond shall be accompanied by 1) appropriate acknowledgements of the respective parties; 2) appropriate duly certified copy of Power of Attorney or other certificate of authority where bond is executed by agent, officer, or other representative of Contractor or surety; 3) a duly certified extract from by-laws or resolutions or surety under which Power of Attorney or other certificates of authority of its agent, officer, or representative was issued.

The Contractor hereby agrees and understands that a Notice of Award is expressly conditional upon the receipt of these bonds and a Certificate of Insurance naming the City of Meriden (and others as appropriate) as ADDITIONAL INSURED. If said documents are not received by the City of Meriden within ten (10) days from the date of Notice of Award, the City of Meriden reserves the right to withdraw its conditional acceptance of the bid and cancel the Notice of Award.

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS, that

(here insert full name and address or legal title of Contractor)

as Principal hereinafter called contractor and

(here insert full name and address or legal title of Surety)

As Surety, hereinafter called Surety, are held and firmly bound unto

(here insert full name and address or legal title of Owner)

As Obligee, hereinafter called Owner, in the amount of

Dollars \$ _____

for the payment whereof Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS,

Contractor has by written agreement dated

(here insert full name, address and description of project)

20 , entered into a contract with Owner for

In accordance with Drawings and Specifications prepared by (here insert full name and address or legal title of Engineer/Architect)

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

PERFORMANCE BOND

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if Contractor, shall promptly and faithfully perform said Contract, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

The Surety hereby waives, notice of any alteration or extension of time made by the Owner.

Whenever Contractor shall be, and declared by Owner to be in default under the Contract, the Owner having performed Owner's obligations thereunder, the surety may promptly remedy the default, or shall promptly

1) Complete the Contract in accordance with its terms and conditions, or

2) Obtain a bid or bids for completing the Contract in accordance with its terms and conditions, and upon determination by Surety of the lowest responsible bidder, or, if the Owner elects, upon determination by the Owner and the Surety jointly of the lowest responsible bidder, arrange for a contract between such bidder and Owner, and make available as Work progresses (even though there should be a default of a succession of

defaults, under the contract or contracts of completion arranged under this paragraph sufficient funds to pay the cost of completion less the balance of the contract price; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term "balance of the contract price," as used in this paragraph, shall mean the total amount payable by Owner to Contractor under the Contract and any amendments thereto, less the amount properly paid by Owner to Contractor.

Any suit under this bond must be instituted before the expiration of two (2) years from the date on which final payment under the Contract falls due.

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

Signed and sealed this

day of

20

(Witness)

(Principal)

(Title)

(Surety)

(Witness)

(Title)

LABOR AND MATERIAL PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS, that

(here insert full name and address or legal title of Contractor)

as Principal, hereinafter called Principal, and

(here insert full name and address or legal title of Surety)

As Surety, hereinafter called Surety, are held and firmly bound unto

(here insert full name and address or legal title of Owner)

As Oblige, hereinafter called Owner, for the use and benefit of claimants as hereinbelow defined, in the amount of _____ **Dollars \$**_____

For the payment whereof Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS,

Principal has by written agreement dated _____

(here insert full name, address and description of project)

20_____, entered into a contract with Owner for

In accordance with Drawings and Specifications prepared by

(here insert full name and address or legal title of Engineer/Architect)

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

LABOR AND MATERIAL PAYMENT BOND

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if Principal shall promptly make payment to all claimants as hereinafter defined, for all labor and material used or reasonably required for use in the performance of the Contract, then this obligation shall be void; otherwise it shall remain in full force and effect, subject, however, to the following conditions:

1. A claimant is defined as one having a direct contract with the Principal or with a Subcontractor of the Principal for labor, material, or both, used or reasonably required for use in the performance of the Contract, labor and material being construed to include that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental of equipment directly applicable to the Contract.

2. The above named Principal and Surety hereby jointly and severally agree with the Owner that every claimant as herein defined, who has not been paid in full before the expiration of a period of ninety (90) days after the date on which the last of such claimant's work or labor was done or performed or materials were furnished by such claimant, may sue on this bond for the use of such claimant, prosecute the suit to final judgment for such sum or sums as may be justly due claimant, and have execution thereon. The Owner shall not be liable for the payment of any costs or expenses of any such suit.

3. No suit or action shall be commenced hereunder by any claimant:

a) Unless claimant, other than one having a direct contact with the Principal, shall have given written notice to any two of the following: the Principal, the Owner, or the Surety above named, within ninety (90) days after such claimant did or performed the last of the work or labor, or furnished the last of the materials for which said claim is made, stating with substantial

accuracy the amount claimed and the name of the party to whom the materials were furnished, or for whom the work or labor was done or performed. Such notice shall be served by mailing the same by registered mail or certified mail, postage prepaid, in an envelop addressed to the Principal Owner or Surety, at any place where an office is regularly maintained for the transaction of business, or served in any manner in which legal process may be served in the state in which the aforesaid project is located, save that such service need not be made by a public officer.

b) After the expiration of one (1) year following the date on which Principal ceased Work on said Contract, it being understood, however, that if any limitation embodied in this bond is prohibited by any law controlling the construction hereof such limitation shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such law.

c) Other than in a state court of competent jurisdiction in and for the county or other political subdivision of the state in which the Project or any part thereof, is situated, or in the United States District Court for the district in which the Project, or any part thereof is situated, and not elsewhere.

4. The amount of this bond shall be reduced by and to the extent of any payment or payments made in good faith hereunder, inclusive of the payment by Surety of mechanics' liens which may be filed of record against said improvement, whether or not claim for the amount of such lien be presented under and against this bond.

Signed and sealed this

day of

20

(Witness)

(Witness)

(Principal)

(Title)

(Surety)

(Title)

INSURANCE REQUIREMENTS

*

All insurance coverage shall be provided by the Contractor and by or for any of their Subcontractors at no additional expense to the City. The scope and limits of insurance coverages specified are the minimum requirements and shall in no way limit or exclude the City from requesting additional limits and coverage provided under the Contractor's policies and/or their Subcontractors' policies. The Contractor shall either require each of their Subcontractors to produce identical insurance coverage requirements as detailed hereinafter or the Contractor shall secure the coverage for all Subcontractors under the Contractor's own policies.

The Contractor and/or Subcontractors shall be responsible for maintaining the stated insurance coverage in force for the life of the Contract with insurance carriers licensed and authorized to underwrite such insurance in the State of Connecticut. (Insurance carriers shall be rated A or higher by AM Best Co.)

The type and limits of insurance coverage shall not be less than the type and limits designated herein, and the Contractor and/or Subcontractors agree that the coverage or the acceptance by the City of Certificates of Insurance indicating the type and limits of insurance shall in no way limit the liability of the Contractor and/or subcontractor to any such type and limits of insurance coverage.

The insurance coverage hereinafter afforded by the Contractor and/or subcontractor shall be primary insurance, except when stated to apply in excess of or contingent upon the absence of other insurance. The amount and type of insurance shall not be reduced by the existence of other insurance's held by the City.

The Contractor and/or Subcontractor shall provide coverage's that are not impaired or the aggregate is not to be impaired by any other risk, past or present, and the limits required, shall be fully available to the City of Meriden or restored if depleted below the required levels during the course of the contract and/or any extensions thereto.

The Contractor and/or Subcontractor shall not commence work under the terms of this contract until they have obtained the liability insurance coverage required by this article and has filed Certificates of Insurance on same with the City, and the City has approved the Certificates of Insurance and the represented coverage.

Each Certificate of Insurance shall include the following pertinent information:

- Name of Insurance Carrier writing policy
- Name Insured
- Address of Named Insured
- Description of coverage (Workers' Compensation certificates should evidence the state(s) of operation including Connecticut)
- Policy Periods (effective and expiration dates)
- Limits of liability and terms
- Brief description of operations performed and property covered
- Name and address of certificate holder
- Authorized agent's name and address
- Date and signature of the issuing agent (original only)
- All additional named insured endorsement
- All cross liability endorsements
- All indemnification and hold harmless agreements (must be supported by Contractual Liability Insurance)

Each insurance policy (with the exception of OCP shall contain an endorsement naming the City of Meriden and Tata & Howard, Inc. as Additional Insured, evidence of a Cross Liability endorsement so that each insureds interests are considered and treated separately in the case of claims between the insureds. The Contractor shall provide 60 Day advance Notification** to the City in the event of any material change, modification, cancellation, or non-renewal of insurance coverage.**

**Amended 01/13/14

The Contractor and/or Subcontractors shall include a waiver of subrogation rights, on all insurance policies, so that the City of Meriden cannot be sued by the Contractor's insurer to recover any payments made on behalf of the Contractor and/or Subcontractor.

All insurance policies provided by the Contractor and/or Subcontractors shall include an endorsement indicating that any breach of warranty, by the named insured, will not be imputed to another insured.

During the course of execution of the work, whenever there is a lapse in the insurance requirements as stated herein, through cancellation, expiration, failure to renew, or any other cause, the City shall order the cessation of all activities** until such time as the insurance requirements are complied with. The Contractor shall have no claim or claims whatever against the City, or other parties to the contract. **Amended 01/13/14

The Contractor and their Subcontractors shall indemnify and save harmless the City of Meriden, and all additional named insured and all appointed or elected officers, officials, directors, committee members, employees, volunteer workers, commissioners, and any affiliated, associated, or allied entities and/or bodies of, or as may be participated in by the City of Meriden, or as may now or hereinafter be constituted or established from and against all claims, damages, and losses and expenses including attorney's fees arising out of or resulting from the performance of the work under this contract, provided that any such claims, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to, or destruction of tangible property, including the loss of use resulting therefrom; and is caused in whole or in part by any negligent or willful act or omission of the Contractor, and their Subcontractors, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable.

The Contractor and their Subcontractors shall, during the execution of the work, take necessary precautions and place proper guards for the prevention of accidents; shall set up all night suitable and sufficient lights and barricades; shall fully comply with the latest revisions of the Occupational Safety and Health Act of 1970 and all other Federal, State and Local Regulations, including any all amendments, revisions, and additions thereto, and shall indemnify and save harmless the City of Meriden and their additional named insured and their employees, officers, agents from any and all claims, suits, actions, fines, fees, damages, and costs to which they may incur by reason of death or injury to all persons and/or for all property damage of another resulting from non-compliance, unskillfulness, willfulness, negligence, or carelessness in the execution of the work, or in guarding or protecting the same, or from any improper methods, materials, implements or appliances used in execution of the work, or by or on account of any direct or indirect act or omission of the Contractor or their Subcontractors or their employees or agents.

The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the execution of the contract.

The Contractor shall take all reasonable precautions for the safety of, and shall provide all reasonable protection to prevent damage, injury, or loss to; 1) all employees on the work and all other persons who may be affected thereby; 2) all the work and all the materials and equipment to be incorporated therein, whether in storage in or on the site, under the care, custody, or control of the Contractor or any of their Subcontractors; and 3) other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designed for removal, relocation, or replacement in the course of construction.

The Contractor shall erect and maintain, as required by existing conditions and progress of the work, all reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards promulgating safety regulations and notifying owners and users of adjacent utilities.

The Contractor and/or subcontractor shall give all notices and comply with all applicable laws, ordinances, rules, regulations, and lawful orders for any public authority bearing on the safety of persons or property or their protection from damage, injury, or loss.

When the use or storage of explosives or other hazardous materials or equipment is necessary for the execution of work, the Contractor and/or their Subcontractors shall exercise the utmost care and shall carry on such activities under the supervision of properly qualified personnel.

The contractor shall designate a responsible member of their organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the City.

In any emergency affecting the safety of persons or property, the Contractor shall act to prevent threatened damage, injury, or loss.

The Contractor, Subcontractor, and their insurer(s) shall waive governmental immunity as a defense and shall not use the defense of governmental immunity in the adjustment of claims or in the defense of any suit, action or claim brought against the City. Nothing shall limit the City of Meriden from utilizing the defense of governmental immunity.

Contractor shall agree to maintain in force at all times during the contract the following minimum coverages and shall name the City of Meriden and Tata & Howard, Inc. as Additional Insured on a primary and non-contributory basis to all policies except Workers Compensation. All policies should also include a Waiver of Subrogation. Umbrella/Excess shall state that it follows form over General Liability, Auto Liability and Workers Compensation. Insurance shall be written with Carriers approved in the State of Connecticut and with a minimum AM Best's Rating of "A-" VIII. In addition, all Carriers are subject to approval by the City of Meriden.

(Minimum Limits)		
General Liability	Each Occurrence General Aggregate Products/Completed Operations Aggregate	\$1,000,000.00. \$2,000,000.00. \$2,000,000.00.
Auto Liability (Includes All owned, non-owned and hired autos)	Combined Single Limit Each Accident	\$1,000,000.00.
Pollution Liability	Each Claim or Each Occurrence Aggregate	\$1,000,000.00. \$1,000,000.00.
Professional Liability	Each Claim or Each Occurrence Aggregate	\$1,000,000.00. \$1,000,000.00.
Umbrella (Excess Liability)	Each Occurrence Aggregate	\$1,000,000.00. \$1,000,000.00.
Workers' Compensation and Employers' Liability	WC Statutory Limits EL Each Accident EL Disease Each Employee EL Disease Policy Limit	 \$1,000,000.00. \$1,000,000.00. \$1,000,000.00.

Original, completed Certificates of Insurance must be presented to the City of Meriden prior to contract issuance. Contractor agrees to provide replacement/renewal certificates at least 60 days prior to the expiration date of the policies.

Article 6 Substitutes and "or equals"

Article 6.05.2.A – After Contractor add "or Owner"

Article 6.05.2.2E – Substitute Items - Add the words "If, in the owner's opinion, the number of substitutions is excessive" after "reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitutes".

Add the following paragraph 6.09D:

The requirements of subparagraph 6.09 do not waive the Contractor's responsibility of complying with the requirement of the Contract Documents when such regulations and requirements exceed those of any laws, ordinances, rules, regulations and orders of any public authority bearing the work.

Delete Article 6.10 in its entirety and substitute the following:

Under the terms of Regulation 16, referring to Contractors and Subcontractors issued by the State Tax Commission in administration of the State Sales and Use Tax, the Contractor may purchase materials or supplies to be consumed in the performance of this Contract without payment of Tax and shall not include in his Bid nor charge any Sales or Use Tax on any materials or labor provided.

Amend Article 6.12 to read:

“Contractor shall maintain in a safe place at the Site two (2) record copies...”

Add the following to article 6.13:

6.13.A.4 Protection in general shall consist of the following:

6.13.A.5 The Contractor shall furnish approved hard hats, other personal, protective equipment as required, approved first aid supplies, name of first aid attendant, and a posted list of emergency facilities.

6.13.A.6 The Contractor shall take prompt action to correct any hazardous conditions reported.

6.13.A.7 The Contractor shall be responsible for the adequate strength and safety of all scaffolding, staging and hoisting equipment, and for temporary shoring, bracing and tying.

The Contractor shall comply with the requirements of the Occupational Safety and Health Act of 1970 and the Construction Safety Act of 1969, including all Standards and Regulations which have been promulgated by the Governmental Authorities which administer such acts; and said Requirements, Standards and Regulations are incorporated herein by reference.

The Contractor shall be directly responsible for compliance therewith on the part of its agents employees, material men and Subcontractors, and shall directly receive and be responsible for all citations, assessments, fines or penalties which may be incurred by reason of its agents, employees, material men or Subcontractors, to so comply.

The Contractor shall indemnify the Owner and the Engineer and save them harmless from any and all losses, costs and expenses, including fines and reasonable attorney’s fees incurred by the Owner and the Engineer by reason of the real or alleged violation of such laws, ordinances, regulations and directives, Federal, State and local, which are currently in effect or which become effective in the future, by the Contractor, his Subcontractors or material men.

6.16 Emergencies

Add 6.16.B – The Contractor shall provide the Owner with at least two (2) phone numbers in case of emergency.

Article 8 – Replacement of Engineer

Delete 8.02 in its entirety

8.06 – Insurance

8.06A – Delete Article 5, Add Supplemental General Conditions

Article 9 - Engineer's Status During Construction

Revise 9.03.B to read:

In addition to the Engineer, The Owner may employ a Clerk-of- the Works shall be authorized to observe all material, workmanship and equipment for compliance with the Contract Documents' requirements of tests and safety provisions, and report any variance to the Engineer. He shall have no authority to interpret, vary or suspend the requirements of the Contract.

The Clerk-of-the-Works will keep records of material deliveries, weather conditions and manpower; he will monitor compliance with the approved Construction Schedule and the Equal Employment Provisions.

The Contractor shall cooperate with the Clerk-of-the-Works in the performance of his duties, and shall provide access to all portions of the work and information required for his records. Any requests for modification of the Contract provisions or working procedures shall be reviewed with the project representative prior to making submittal(s) to the Engineer.

Cost of Work, Allowances; Unit Price Work

Article 11 is hereby modified as follows:

Add the following Articles:

11.03D Delete the entire paragraph and substitute the following:

It is understood and agreed that the prices bid for the various units of construction shall control in any Contract awarded hereafter. The City of Meriden reserves the right to revise the estimated quantities with no fixed limits set nor extra compensation allowed other than the above stated unit prices.

Article 12 – Change of Contract Price and Change of Contract Time

Add the following:

12.01.B.4 - The Contractor, when performing work under article 11.3.3 shall, upon request, promptly furnish in a form satisfactory to the Owner, itemized statements of the cost of the work so ordered, including, but not limited to, certified payrolls, and copies of accounts, bills and vouchers to substantiate the above estimates.

Add 12.04.1 -The Contractor guarantees that he can and will complete the work within the time specified or within the time as extended as provided elsewhere in the Contract Documents. Inasmuch as the damage and loss to the City of Meriden which will result from the failure of the Contractor to complete the work within the stipulated time will be most difficult or impossible of accurate assessment, the damages to the City for such delay and failure on the part of the Contractor shall be liquidated in the sum of \$1,000.00 each calendar day (Sundays and Holidays included) by which the Contractor shall fail to complete the work or any part thereof in accordance with the provisions hereof and such liquidated damages shall not be considered as a penalty. The City will deduct and retain out of any money due to become due hereunder, the amount of 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.

Article 13 - Warranty and Guarantee; Tests and Inspections; Correction, Removal or Acceptance of Defective Work

Article 13.02 is modified to include the following:

The Contractor shall make every effort to minimize damage to all access routes, and he shall acquire all necessary permits for working in, on or from public streets or rights of way and for securing access rights of their own.

All costs of the removal and restoration to original condition of walls, fences and structures, utility lines, poles, guy wires or anchors, and other improvements required for passage of the Contractor's equipment shall be borne by the Contractor. The Contractor shall notify the proper authorities of the City and all utilities of any intended modifications or disruption to their property prior to the start of construction, and shall cooperate with them in the scheduling and performance of this operation.

Article 14 Payments to Contractor and Completion

Modify 14.02.D.4 to read:

Payments may be withheld to Contractors who are in default through debt or contract to the City.

14.07C – Change “thirty days” to “forty five (45) days”

Delete 14.09A in its entirety.

Article 15 Suspension of work and termination

Delete 15.03.3 in its entirety.

15.04B – Change 30 to 45 and change “30 days to pay” to 60.

CITY OF MERIDEN, CONNECTICUT

RECONSTRUCTION
OF
BEAVER POND DAM
Meriden, Connecticut

GENERAL REQUIREMENTS

1. Scope of Work

The Contractor shall provide all labor, superintendence, materials (except materials to be furnished by the Owner), plant, tools, and equipment necessary for properly constructing within the time stipulated, the Reconstruction of Beaver Pond Dam and all other work necessary for the proper completion of the project as shown on the Contract Drawings and specified herein.

2. Standards

Wherever reference is made in this Contract to the Standard of any technical society or other recognized organization, these shall be construed to mean the latest standard adopted and published at the date of advertisement for bids.

Abbreviations are defined as follows:

ASTM	- American Society for Testing and Materials
ANSI	- American National Standards Institute
ASA	- American Standards Association
ACI	- American Concrete Institute
AASHTO	- American Association of State Highway and Transportation Officials
ASME	- American Society of Mechanical Engineers
IEEE	- Institute of Electrical and Electronics Engineers
AWWA	- American Water Works Association
ACPA	- American Concrete Pipe Association
NEMA	- National Electrical Manufacturers Association

3. Lines and Grades

The Engineer will establish a benchmark at the dam and the centerline of the dam, and will make surveys and measurements necessary for determining pay quantities. The Contractor shall provide such assistance as the Engineer may require for the principal layout work and measurements for determining pay quantities.

All intermediate lines, grades, measurements, etc., required for the construction shall be established by the Contractor, but will be checked by the Engineer whenever decided necessary, and the Contractor shall provide such facilities as may be necessary for checking.

After the required lines and grades have been established, they shall be properly protected to prevent movement or displacement.

The Contractor shall be solely responsible for all locations, dimensions and levels, and no data other than the information contained in the drawings and specifications, or written orders of the Engineer, shall justify departure from the dimensions and levels required by the Drawings.

The Contractor shall keep a transit and leveling instrument on or near the site at all times and a skilled instrument man employed or obtained whenever necessary for layout of intermediate work.

The Contractor is hereby informed that he is to do no excavation or embankment work until the Engineer has completed all necessary cross sectioning. No payment will be made for work done prior to the Engineer's cross sectioning.

4. Contract Drawings and Working Drawings

The work is shown on the Title Sheet and Sheets 1 through 7 of the accompanying Contract Drawings. Such additional working drawings, as required because of changes or to provide greater detail, will be provided by the Engineer.

5. Alterations

The Engineer may make alterations to the line, grade, plan, form, dimensions, or materials of the work, or any part thereof, either before or after the commencement of the work. If such alterations increase the quantity of work, such increase will be paid for according to the quantity of such extra work actually done and at the prices stipulated for such work under unit price items of the Contract. In case no unit price is applicable, the alterations will be paid for as extra work defined in Article 11 of the General Conditions.

6. Computer Generated Computations

The use of computer generated computations shall be considered satisfactory for estimating quantities where manual geometric and analytic methods would be comparatively laborious.

7. Contractor's Schedule of Operations

The Contractor shall submit, within ten (10) days after execution of the Contract, a preliminary schedule of operations for the project to the Engineer for approval. The approved preliminary schedule shall be used to prepare a detailed schedule of the principal construction events including all proposed purchase and delivery dates for items with critical delivery times. A supplemental bar graph shall also be prepared based on this construction schedule. The detailed schedule and bar graph shall be submitted for approval prior to the first estimate for payment.

The status of the project shall be evaluated monthly by the Contractor and shall be compared to the original schedule that shall be revised, if necessary, and reissued.

8. Coordination with Other Contractors and Utilities

During the progress of the work, other contractors and/or utilities may be engaged in performing work in the area. The Contractor shall coordinate the work to be done under this Contract with the work of others, in such a manner as the Engineer shall approve or direct.

9. Cost Breakdown

Prior to the first estimate for payment to the Contractor, the Contractor shall submit to the Engineer for approval a detailed cost breakdown of the various amounts to be paid for within each Lump Sum Item and/or Subdivision of Item of the Proposal. It shall also include, but not necessarily be limited to, proportional amounts for bonds, insurance, and miscellaneous works which are to be paid for throughout the life of the Contract, and which are not specifically included for payment under other Items and/or Divisions of the Proposal.

10. Estimated Quantities

To aid the Engineer in determining quantities to be paid for, the Contractor shall, whenever requested, give the Engineer access to the proper invoices, bills of lading, or other pertinent documents and shall provide methods and assistance necessary for weighing or measuring materials.

11. Payment for Miscellaneous Work

No direct payment will be made to the Contractor for furnishing and providing miscellaneous temporary works, plant, and services, including Contractor's office, Resident Engineer's office, sanitary requirements, water supply, power, tools, equipment, lighting, telephone systems, store houses, store yards, safety devices, permits, insurances, bonds, watchmen, clean up, and the like, or other items specified under these General Requirements, unless payment therefor has been specifically provided. Compensation for the same is understood to be included in the scheduled prices hereinbefore given for the various kinds of work contemplated.

12. Drawings and Information to be Furnished by the Contractor

For materials and equipment not supplied by the Owner, the Contractor shall promptly furnish to the Engineer, for his information, a clearly legible PDF file of drawings in detail of the materials, equipment, piping, and structural details for any part of the work for which Drawings are not to be issued by the Engineer. Before placing orders for any manufactured item or part of structure, he shall also clearly legible PDF files, for approval, of detailed lists and descriptions of the various materials, fixtures, fittings, and supplies which he proposes to use in the work, and also the names of individuals or companies who propose to furnish or manufacture the same. Copies of results of all tests of materials and equipment shall be furnished by the Contractor immediately following the performance of required tests.

Prior to the submittal of shop drawings, the Contractor shall check, approve, initial, and date the drawings and shall also indicate by reference the Specification and/or Plan which covers the item. Submittals will be returned to the Contractor if they have not been properly processed by him.

Due to the anticipated extended time required for fabrication and the possible conflicts or interferences with other items of equipment to be furnished and installed under this Contract, the Contractor shall submit all shop drawings for the slide gate and appurtenances, and access hatch to the Engineer for approval within thirty (30) days after the award of Contract.

Approval by the Engineer of shop drawings for any material, apparatus, device, and layout shall not relieve the Contractor from the responsibility of furnishing same of proper dimension, size, quality, quantity, and all performance characteristics to efficiently perform the requirements and intent of the Contract Documents. Approval shall not relieve the Contractor from the responsibility for errors of any sort on the shop drawings. If the shop drawings deviate from the Contract Documents, the Contractor shall advise the Engineer of the deviations in writing, including the reasons for the deviation.

12. Drawings and Information to be Furnished by the Contractor (continued)

In the event the Contractor obtains the Engineer's approval for material, manufactured items, or equipment, other than that which is shown on the Plans or specified herein, the Contractor shall, at his own expense, make any changes as required in the structures, buildings, piping, or any other portion of the work necessary to accommodate the approved material, manufactured item, or equipment.

13. Substitution Clause

Wherever in the Plans and Specifications any item of equipment or material is designated by reference to a particular brand, manufacturer, or trade name, it is understood that an approved equal product, acceptable to the Engineer, may be substituted by the Contractor.

14. Contract Limits

The Contractor shall confine his activities to within street lines, easements, and rights-of-way.

The Contractor shall take particular care to protect trees and shrubs. He shall make good any damage to the satisfaction of the Engineer.

The Contractor shall not enter upon or make use of any private property along the line of work, outside the limits of the rights-of-way or easements, except when written permission is secured from the owner of said property and a copy delivered to the Engineer. The Contractor shall be held responsible for all damage or injury, done by himself or those in his employ, to any private or public property of any character during the prosecution of the work. The Contractor shall restore or repair at his own expense, in a manner satisfactory to the Engineer, such property as may be damaged by his operations during the prosecution of the work.

In case of failure on the part of the Contractor to restore or repair such property in a manner satisfactory to the Owner, the Owner may, upon 48 hours notice to the Contractor, proceed with such restoration or repair. The expense of such restoration or repair shall be deducted from any moneys, which are due or may become due the Contractor under this Contract.

The Owner will obtain photographs of the site prior to the start of work under this Contract and Agreement. These photographs will be used to judge the conditions of the site during the course of the work and the adequacy of restoration of the site after completion of the work.

15. Work in Easements

The Owner will obtain easements for construction work through private property. The Contractor shall confine his activities to the limits of the City Property and easements and shall take particular care to prevent damage to structures, trees, grass, shrubs, hedges, and all other private property outside of the Contract Limits. He shall make good all such damage to the satisfaction of the Engineer.

16. Cleaning Up Site

During the progress of the work, the Contractor shall keep the construction areas in a neat condition, free from accumulations of waste material and rubbish. Lunch papers, bottles, lumber cutoffs, drinking cups, and like rubbish shall be removed from the site daily. No alcoholic beverages or controlled substances will be permitted at the construction site(s).

On or before completion of the work and before acceptance and final payment shall be made, the Contractor shall clean and remove, from the site and adjacent property, all surplus and discarded materials, rubbish, and temporary structures and restore, in an acceptable manner, all property and leave the whole in a neat and presentable condition.

17. Storage of Materials

Materials shall be stored so as to insure the preservation of their quality and fitness for the work. When considered necessary, they shall be placed on wooden platforms and covered and stored in a suitable building, as directed by the Engineer. Stored materials shall be located so as to facilitate prompt inspections.

Materials and equipment supplied by the Owner shall be jointly inspected by the Owner and the Contractor and shall, upon acceptance by the Contractor, become the Contractor's responsibility to make good any damage to the materials and equipment until they have been incorporated and accepted in the work.

18. Removal of Condemned Materials

The Contractor shall remove from the site of the work, without delay, all rejected and condemned materials of any kind brought to or incorporated in the work. No such rejected or condemned materials shall again be offered for use by the Contractor.

19. Hauling Materials

Before starting any work, the Contractor shall arrange, with the Municipal or State officials having jurisdiction, for the use of routes of travel for hauling materials, including surplus earth and rock, that will result in minimum inconvenience to the traveling public. Routes of travel so scheduled shall be adhered to throughout the course of the work, unless otherwise approved.

20. Temporary Roads

The Contractor shall be responsible for providing and maintaining such temporary access roads, as is necessary for transportation of materials and equipment. Where such roads are on private property, he shall obtain permission for their construction and use and pay all costs pertaining thereto.

21. Dust Control

The Contractor shall take all necessary precautions to prevent and abate nuisance caused by dust arising from his operations by application of water spray.

22. Working Conditions

In prosecuting the work of this Contract, the Contractor shall provide working conditions on each operation that shall be as safe and healthful as the nature of the operation permits. He shall comply with all safety and sanitary rules, laws, and regulations.

23. Work in Inclement Weather

During freezing, stormy, or inclement weather, no work shall be performed except such as can be done satisfactorily and in such manner as to secure first-class construction throughout.

24. Working Hours and Overtime Work

(a) Working Hours: The Contractor's working schedule shall be confined to a five (5) day week, Monday through Friday, and an 8-hour working day confined between the hours of 7:00 a.m. and 4:30 p.m. current local time. If the Contractor desires to work more than 8 hours per day, the City's permission is required in advance. If work is permitted for more than an 8-hour day, the charge to the Contractor shall be One Hundred Dollars (\$100.00) per hour per working crew.

24. Working Hours and Overtime Work (continued)

Unless otherwise especially permitted, no work shall be done between the hours of 4:30 p.m. and 7:00 a.m. except as necessary for the proper care and protection of the work already performed. If it shall become absolutely necessary to perform work between 4:30 p.m. and 7:00 a.m. the Engineer shall be informed, at least 24 hours in advance, of the beginning of the performance of such work. Only such work shall be done at night as can be done satisfactorily and in a first-class manner. Good lighting and all other necessary facilities for carrying out and inspecting the work shall be provided and maintained at all points where such work is being done. If work is permitted between the hours of 4:30 p.m. and 7:00 a.m., the charge to the Contractor shall be One Hundred Dollars (\$100) per hour per working crew.

(b) Saturdays, Sundays, or Holidays: If the Contractor elects to perform work on Saturdays, Sundays, or holidays, he shall pay the Owner a charge of One Hundred Dollars (\$100) per hour for Saturday or Sunday or holiday per crew working. The Contractor may work on Saturday, Sunday or holidays only with the express permission of the Engineer.

25. Emergency Work

The Contractor shall file, with the Meriden Police and Fire Departments, and the Engineering Department, the name and telephone number of at least three persons authorized by him who may be contacted regarding emergency work at the job site that may be required during non-working hours for reasons of public safety. The contact information shall include office telephone numbers, home telephone numbers, mobile telephone numbers, and email addresses, as applicable. The list of emergency contacts shall be numbered to identify who to contact first, second and third.

The Contractor shall have staff readily available 24 hours a day, seven days a week during the duration of the contract and have full authority to deal with any emergency that may occur.

26. Sedimentation Control

All watercourses shall be protected from sedimentation, both during and after construction. This provision applies particularly to dewatering activities, storage of excavated or stockpiled material, trench or ditch excavation, and placement of compacted embankments. The Contractor shall control erosion and sedimentation in accordance with the publication entitled "2002 Guidelines for Soil Erosion and Sediment Control", by the Connecticut Council on Soil and Water Conservation, latest revision, and as approved by the Engineer. Provisions shall be made so that water which flows downstream does not contain sediments. Provisions shall include, but not be limited to, hay bale check dams across the outlet channel and at the toe of all embankments under construction, pump discharges to filter bags, and temporary culverts at all stream

26. Sedimentation Control (continued)

crossings. The Contractor shall submit details of his sedimentation control plan to the Engineer for approval.

27. Work in Brook(s), Stream(s), and Pond(s)

The Contractor's attention is directed to that portion of the work of this Contract which is in and along water bodies. The Contractor shall operate all equipment and perform all construction operations so as to minimize pollution.

Care shall be taken to prevent, or reduce to a minimum, any damage to any water body from pollution by debris, sedimentation, or other material, or from manipulation of equipment and/or materials in or near such water bodies and on abutting property. Particular care shall be taken to prevent gasoline, diesel fuel, and other oils from entering any water body.

In all cases involving work in a water body, every effort should be made to return the water body to the highest possible standard for aesthetic value, water quality, and fish habitat. Sufficient flow of water shall be maintained at all times to sustain aquatic life downstream.

28. Work Within Areas Designated as Inland Wetlands

Portions of this project are to be constructed in wooded areas and areas classified as inland wetlands. The Contractor shall limit disturbance of these areas, to what is absolutely necessary for construction, and restore these areas, as closely as possible, to their original natural state.

The Contractor shall familiarize himself with permits and maps held by the City of Meriden indicating the wetlands. The Contractor shall be required to strictly adhere to all requirements and restrictions imposed by said permits.

The Contractor shall carefully strip all topsoil, loam, or organic material prior to excavation and shall store them separately from all other materials during excavation. In areas designated inland wetlands, the upper strata to a depth of 2 feet shall be stripped and stored separately. During backfilling, these materials shall be replaced and finished, as they existed before construction began.

The Contractor shall not introduce any substantial quantities of fill materials into any areas designated as inland wetlands.

The Contractor shall maintain all backfilled excavations in proper condition until expiration of the guarantee period as provided in the Contract.

29. Soil and Groundwater Conditions

The Owner assumes no responsibility whatsoever with respect to ascertaining for the Contractor such facts concerning physical characteristics at the site of the project. The Contractor agrees that he will make no claim for and has no right to additional payment or extension of time for completion of the work, or any other concession because of any interpretations or misunderstanding on his part of this Contract, or because of any failure on his part to fully acquaint himself with all conditions relating to the work.

30. General Sanitary Requirements

Suitably enclosed chemical or self-contained toilets shall be provided for the use of the men employed on the work. They shall be located near the work site and secluded from observation insofar as possible. Said sanitary facilities shall be serviced at regular intervals, kept clean and supplied throughout the course of the work.

The Contractor shall maintain a safe drinking water supply readily available to all workers.

31. Water Supply and Electrical Energy

The Contractor shall make his own arrangements for obtaining the electrical energy and water supply necessary for construction purposes at no additional cost to the Owner.

32. Contractor's Office

The Contractor shall maintain an office convenient to the site during the period of construction, within a reasonable distance from the site easily accessible to the Contractor, Owner and Engineer. Copies of the Contract and working drawings and of the Specifications shall be kept on file at this office for reference at any time.

33. Resident Engineer's Office

It will not be necessary for the Contractor to construct or maintain an office for the use of the Engineer.

34. Explosives and Blasting

The use of explosives is prohibited.

35. Sheeting, Shoring, Bracing or Trench Boxes

Where necessary, the sides of trenches and excavations shall be supported by adequate sheeting, shoring, bracing or trench box. The Contractor shall be held accountable and responsible for the sufficiency of all sheeting, shoring, bracing or trench boxes used and for all damage to persons or property resulting from the improper quality, strength, placing, maintaining, or removing of the same. Where sheeting is removed, care shall be taken not to disturb the new work or existing utilities and structures.

No sheeting is to be left in place unless expressly permitted by the Engineer. No direct payment will be made for sheeting, shoring, and bracing, and compensation for such work and all expenses incidental thereto shall be considered as included in the unit prices bid for the various Items of this Contract.

All excavations into which workers may be caused to enter shall be protected according to OSHA 29 CFR Part 1926, Subpart P-Excavations.

36. Existing Structures

All known surface and underground structures, on or immediately adjacent to the work, are shown on the Plans. This information is shown for the convenience of the Contractor in accordance with the best information available but is not guaranteed to be correct or complete.

Guard rails, posts, guard cables, signs, poles, markers, mailboxes, fences, walls and stone walls, etc., which are temporarily removed to facilitate installation of the metal beam guardrail shall be replaced and restored in their original condition to the satisfaction of the Owner or Engineer.

The Contractor's attention is called to State of Connecticut Public Act 77-350 and 81-146 which states "No person, public agency or public utility shall engage in excavation without having first ascertained...the location of all underground facilities of public utilities in the area. (The Contractor)...shall notify the central clearinghouse of such proposed excavation, at least 2 full days, excluding Saturdays, Sundays and holidays...before commencing...(the work)." The Call Before You Dig telephone number is 1-800-922-4455.

The Contractor shall, at his own expense, retain the services of a licensed surveyor to replace property markers, on or adjacent to privately owned property, which have been disturbed during the course of construction.

37. Operation of Valves

Unless otherwise permitted, existing valves shall not be operated by the Contractor. Whenever the operation of a valve is necessary, the Contractor shall make arrangements, at least 24 hours in advance of the need, to have the Owner's forces perform the required operations.

38. Testing Laboratories

The Contractor shall provide, at no additional cost to the Owner, the services of approved testing laboratories to take samples of materials and perform tests as required under this Contract. Payment for these services shall be included under the applicable Items of the Contract.

39. Marking New Underground Plant

All new underground plant shall be marked with warning tape in accordance with State of Connecticut Public Act 16-345 and DPUC Regulations.

Tape shall be installed 12" to 18" below the ground or road surface above all underground plant in accordance with DPUC Regulations. Color-coding of tape for the various underground plants shall be as follows:

Green	-	Sanitary Sewers
Yellow	-	Gas, oil, petroleum products, compressed gasses and all other hazardous liquid
Red	-	Electric power lines or conduits
Purple	-	Radioactive materials
Orange	-	Communication lines or cables, including telephone, telegraph, cable television
Blue	-	Water

Warning tape shall be Terra Tape Extra Stretch or approved equal consisting of 6 ply of high-grade copolymer film bonded together without adhesives, specifically formulated for prolonged use underground. Tape shall be highly resistant to alkalis, acids, and other destructive agents found in the soil. Tape shall have a minimum tensile strength of 80 lbs. per 3" wide strip and shall bear a continuous printed message every 16" to 36" warning of the installation buried below.

40. Safety

Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the work, and shall comply with all applicable laws, ordinances, rules, regulations and orders of any public body having jurisdiction for the safety of persons or property.

It is not the function of the Engineer to supervise or direct the manner in which the work to be done under this Contract is carried on or conducted. The Engineer is not responsible for construction means, methods, techniques, sequences, or procedures, or for safety precautions and programs in connection with the work, and he will not be responsible for the Contractor's failure to carry out the work in accordance with the Contract Documents.

CITY OF MERIDEN, CONNECTICUT

RECONSTRUCTION
OF
BEAVER POND DAM
Meriden, Connecticut

DETAILED SPECIFICATIONS

Site Work

Item 1

1.1 Work Included

Under this Item the Contractor shall supply all labor, tools, materials, and equipment necessary to do all clearing, grubbing, stripping, removal of existing structures, topsoiling and seeding, construction of a gravel access road, and to provide all sediment and erosion controls required for the Reconstruction of Beaver Pond Dam.

Clearing limits shall be 25 feet from embankments, and grubbing, and stripping limits shall be 10 feet from any change in grading, unless otherwise directed by the Engineer. The Contractor shall take all necessary precautions to protect trees located outside of the clearing and grubbing limits.

The compacted embankments are specified and paid for under Item 6.

1.2 Clearing

Clearing shall include the cutting and/or removal, by approved means, of all vegetation above the surface of the ground, including trees, brush, and logs.

All vegetation, stumps, and trees shall be cut as close to the ground as practicable. The Contractor may salvage logs that can be used. The remaining material shall be chipped or removed and disposed off the site in an approved location and manner.

1.3 Grubbing

Grubbing shall include the removal of all stumps, roots larger than 2-inches in diameter, and other vegetation and organic debris to a depth of at least 12" below original ground surface, unless otherwise permitted. Grubbed materials shall be removed and disposed of off the site in an approved location and manner. The Contractor shall fill and compact the holes and excavations that result from the grubbing activities.

1.4 Stripping

Stripping shall include the removal and stockpiling of the topsoil, as determined by the Engineer, from within the clearing, grubbing, and stripping limits. The minimum depth of stripping shall be 12" or as shown on the Contract Drawings. The topsoil shall be stockpiled and used in the final topsoiling of the dam. Material unsuitable for use in the final topsoiling or grading of the site shall be disposed off-site.

1.5 Removal of Existing Structures

The Contractor shall remove the following existing structures: stone masonry outlet structure and inlet and outlet pipes and concrete spillway culvert, as shown on Contract Drawings.

1.6 Topsoiling and Seeding

The Contractor shall use the previously stockpiled topsoil and additional topsoil from outside sources. On all graded and disturbed areas, the Contractor shall grow an approved stand of grass. The Contractor shall be responsible for the satisfactory growth of grass throughout the one-year maintenance period.

Prior to placing topsoil, objectionable material such as sod, roots, and stones larger than 2" shall be removed. Unsuitable material removed from the topsoil shall be disposed off-site.

Surfaces that are to be topsoiled shall be properly graded and prepared prior to placement of the topsoil. Topsoil shall be placed to a compacted thickness of 12" on all disturbed surfaces. The topsoil shall be lightly compacted by roller, and shall be raked to provide an even, smooth surface at the required slopes and grades immediately before seeding.

1.6 Topsoiling and Seeding (continued)

Samples of the topsoil shall be taken by the Contractor and tested by a laboratory approved by the Engineer to determine fertilizing and liming requirements. Results shall be provided to the Engineer. The Contractor shall apply lime and fertilizer as recommended by the testing laboratory. Lime and fertilizer are to be delivered to the job site in clean, unopened containers showing the weight, analysis, and name of manufacturer.

All seeded areas shall be mulched. Erosion control blankets shall be used on all seeded embankment slopes and shall be Curlex as manufactured by American Excelsior Company or approved equal.

Grass seed shall be of the previous year's crop. It shall meet current standards of the Association of Official Seed Analysts. The seed mix shall contain the following:

<u>Kind of Seed</u>	<u>Percent by Weight</u>
Chewing Fescue	35
Hard Fescue	30
Colonial Bentgrass	5
Birdsfoot Trefoil	10
Perennial Ryegrass	20

Seed shall be delivered to the site in unopened containers with manufacturer's label attached.

The work shall include the preparation of the topsoil, application of seed, fertilizer, lime, mulching, watering, and all other operations necessary to provide a satisfactory growth of grass at the end of the one-year maintenance period. The first cutting of grass shall be done by the Contractor. All subsequent cuttings will be done by the Owner.

Maintenance of grassed areas shall begin immediately following seeding. Seeded areas shall be protected by watering, fertilizing, replanting, and application of weed, insect, and disease control measures as necessary to obtain an acceptable sod composed of the grasses specified, throughout the one (1) year maintenance period. Areas without acceptable sod at the end of the one (1) year period shall be replanted until satisfactory growth is obtained. The Engineer will be the sole judge of acceptance. The Contractor may use water from the pond for watering the grass.

1.7 Gravel Access Road

The gravel access road shall be constructed to provide access to the to the east side of the dam. After completion of the compacted embankment, a 12" gravel surface shall be placed and compacted on the dam crest, as shown on the Contract Drawings. The gravel shall meet the requirements of Grading A of M.02.06 of Form 817, except the top 3" shall meet Grading C.

1.8 Sediment and Erosion Controls

The Contractor shall furnish, install, maintain, and remove sediment and erosion controls as shown on the Contract Drawings and any additional controls that may be required to meet field conditions. Sediment and erosion controls shall be in accordance with the Publication entitled "2002 Connecticut Guidelines for Soil Erosion and Sediment Control" by the Connecticut Council on Soil and Water Conservation, and specified in Appendix B. The Contractor shall be responsible for the removal of any sediment or material tracked onto Research Parkway by sweeping or other approved means at the end of each working day. All watercourses shall be protected from sedimentation, both during and after construction. Provisions shall be made so that water that flows downstream does not contain sediments. Provisions shall include, but not be limited to, silt fences around stockpiled material, sediment barriers at the toe of all embankments under construction, and erosion control blankets on all topsoiled embankment slopes. All sedimentation and erosion controls shall be maintained until permanent vegetation or erosion controls are established; at which time they shall be removed by approved methods.

1.9 Payment

The lump sum bid under this Item shall include payment in full for all labor, tools, materials, and equipment necessary for clearing, grubbing, stripping, removal of existing structures, and topsoiling and seeding, including stockpiling suitable material, constructing a gravel access road, and providing sediment and erosion controls, complete as shown and herein specified.

Control of Water During Construction

Item 2

2.1 Work Included

Under this Item the Contractor shall furnish all labor, tools, materials, and equipment to do all work necessary to build, maintain, and remove, if required, all temporary cofferdams, fills, drains, or other structures, and shall do all pumping or otherwise control water during modifications to the dam. He shall keep all portions of the work free from ground or surface water during construction. All permanent work as shown and specified will be paid for under other Items.

2.2 Control of Water

The watershed area tributary to Beaver Pond is approximately 0.57 square miles, and the water surface area is 30 acres.

The Contractor shall be responsible for diverting or piping the brook flow through the site during construction. The Contractor shall construct a temporary cofferdam to maintain the water level of the pond at about elevation 152.3 for the duration of the construction (about 4.0 feet below spillway). An intake and bypass pipe shall be installed through the embankment with the discharge downstream of the work area. The existing outlet pipe should be used for the bypass discharge. The area downstream of the cofferdam shall be dewatered. The cofferdam can be Jersey barriers, concrete blocks, Aquadam or other approved non-erodible material. Plastic sheeting and/or sandbags may be required to reduce the leakage through the cofferdam.

After the new outlet pipe and the gate chamber are completed, the bypass pipe shall be relocated to discharge to the new outlet pipe. Then the existing outlet pipe shall be removed. When the dam embankments are completed and the riprap installed, the outlet gate shall be closed and the water level in the pond allowed to rise. The temporary outlet pipe and cofferdam shall then be removed, and the area restored. A minimum flow of 0.25 cfs shall be maintained downstream of the dam during refilling of the pond.

The Contractor shall submit a water control plan for approval prior to commencing work. The plan shall include provisions for controlling water during construction of the spillway structure and installation of the new outlet pipe. The plan shall include the construction of cofferdams, bypass piping and/or pumping, keeping intakes clear of debris, and all other maintenance of the system.

2.2 Control of Water (continued)

The Contractor is fully responsible for control of water during construction and shall repair at his own expense any damage caused by flooding. The Contractor is responsible for installing and maintaining intakes clear of debris, which could otherwise reduce its capacity.

The Contractor shall be fully responsible for the adequacy, construction, and removal of temporary dikes, embankments, cofferdams, plugs, or conduits.

2.3 Pumping and Draining

All permanent construction as shown, specified, ordered, or directed shall be carried on in areas free from water. In addition to the requirements previously described, the Contractor shall do all ditching, draining, sheeting, bracing, and diking required to keep the work free from water.

The Contractor shall provide all necessary pumps, drains, well point systems, and other means for removing water. Before structures are built, the excavations shall be free from water and, if necessary, suitable drainage facilities shall be provided and maintained. Any drainage system used by the Contractor shall be subject to approval by the Engineer.

Subgrade damaged by failure to properly dewater shall be repaired at the Contractor's expense.

Water from the excavation shall be discharged to filter bags or pump settling basins in such a manner that it will cause no injury to public health, to public or private property, or to the work completed or in progress.

2.4 Payment

The Contractor shall receive the lump sum bid under this Item as full compensation for furnishing all labor, equipment, materials, and for meeting all other costs required to control the water as shown, specified, or required. Payment for pumping, sheeting, draining and ditching, and the construction and removal of all temporary cofferdams, and other structures necessary to keep the work free of water during construction are included under this Item. Monthly payments for work under this Item shall be in proportion to payment for work done on other Items. Permanent work, including embankment, pipe, concrete work, and slide gate are included under other Items.

Excavation

Item 3

3.1 Work Included

Under this Item, the Contractor shall furnish all labor, tools, materials, and equipment necessary to do all excavations required to construct the dam modifications, and appurtenant structures complete as shown and specified.

3.2 General

Excavations shall be made of every description and of whatever substances encountered, as required for the construction of the new concrete spillway training walls, inlet and outlet pipes, outlet chamber, and downstream toe drain.

All structures shall be placed on firm, undisturbed ground, accurately trimmed by hand to final grade, except where the excavation is in unsuitable foundation material. In the opinion of the Engineer, if such material is encountered, it shall be removed and replaced with concrete to secure a satisfactory footing. Concrete ordered by the Engineer is specified and paid for under Item 4B.

All excavations shall be made in such manner and to such widths as will give ample room for properly installing and inspecting the pipe or structures that they are to contain, and for such sheeting and bracing, pumping, and draining as may be necessary. The Contractor shall use methods and equipment such that excavations shall be made accurately to the required width and depth, and not result in over-excavation. When excavations for structures are made below the required grade, they shall be brought to the correct grade, as directed, with concrete fill at the expense of the Contractor. The sides of excavations for the concrete spillway wall and outlet structure shall be sloped back as shown on the Contract Drawings to permit proper compaction of backfill and provide a safe work area.

Excavation and dewatering, if required, shall be accomplished by methods which preserve the undisturbed state of subgrade soils. Subgrade soils which become soft, loose, "quick", or otherwise unsatisfactory for support of structures as a result of inadequate excavation, dewatering, or other construction methods shall be removed and replaced with suitable material, or shall be stabilized as required by the Engineer, at the Contractor's expense.

Suitable material from excavations shall be stored on the site for use in the compacted embankment and final grading of the site. Material from excavations that, in the opinion of the Engineer, are unsuitable for use in the compacted

3.2 General (continued)

embankments or final grading shall be removed from the site and disposed of by the Contractor.

3.3 Unauthorized Excavation

All excavations carried outside of the lines and grades shown, unless specifically directed by the Engineer, shall be at the Contractor's expense and shall be filled by the Contractor at his own expense with suitable material as directed by the Engineer.

3.4 Storage and Disposal of Excavated Materials

Suitable material from excavations shall be stored on the site for use in backfilling. Material removed from excavations shall be stored in such a manner that it shall not interfere unduly with the work in progress.

Any excess material from excavations and material that, in the opinion of the Engineer, is unsuitable for use in backfilling, shall be disposed of off the site by the Contractor.

3.5 Sheeting and Bracing

The Contractor shall furnish, place, maintain, and remove such sheeting as may be required to support the sides of the excavations or to protect structures from possible damage.

All excavations into which workers may be caused to enter shall be protected according to OSHA 29 CFR Part 1926, Subpart P-Excavations.

The Contractor shall be responsible for the adequacy of all sheeting and bracing used, for failure to use sheeting where it is necessary, and for all damage to persons or property resulting from its failure or from its installation.

All sheeting and bracing systems shall be designed to resist, without failure, all loads that are intended or could reasonably be expected to be applied or transmitted to the system. Such system shall be designed by a licensed Professional Engineer in the State of Connecticut unless other approved OSHA options are used.

Where the material to be excavated is of such character or other conditions are such as to render it necessary, the sheeting shall be closely driven to such depth below the bottom of the structure as may be required.

3.5 Sheeting and Bracing (continued)

All sheeting and bracing shall be removed upon completion of the work, unless required to be left in place by the Engineer. Any sheeting or bracing left in place shall be cut off at least 2' below the finished ground surface elevation.

The cost of furnishing, placing, maintaining, and removing temporary sheeting and bracing, or cutting off sheeting and bracing left in place shall be included under this Item.

3.6 Payment

The lump sum bid for Item 3 shall be full payment for all labor, tools, equipment, materials, sheeting and shoring, and for other expenses necessary for all excavation, stockpiling of suitable materials, and disposal of unsuitable materials, complete as shown and specified herein.

The removal and disposal of existing outlet pipe and concrete spillway culvert and outlet structure is paid for under Item 1.

Concrete Work

Item 4

4.1 Work Included

Under this Item the Contractor shall furnish all labor, materials, tools, and equipment necessary to do all concrete work, complete as shown and specified herein. Included under this Item are all expansion joints, waterstops, sealant, construction joints, reinforcing steel and dampproofing.

This Item is divided for payment as follows:

Item 4A - Class "A" Concrete

Item 4B - Class "B" Concrete

4.2 Classification

Class "A" Concrete includes all reinforced concrete and that requiring considerable formwork. Included under Class "A" concrete is concrete for the spillway structure and outlet pipe endwall.

Class "B" Concrete includes the outlet pipe cradle and encasement, the outlet pipe endwall footing, fill concrete, and concrete that requires simple formwork.

4.3 Cement

Portland cement shall conform to the Standard Specifications of ASTM Designation C150, latest revision, Type I or Type II cement. It shall be made by a well-known, acceptable manufacturer and the product of not more than one plant shall be used on the work. Cement shall be stored and handled in such a manner as to prevent deterioration or the intrusion of foreign matter. Any material which has deteriorated or which has been damaged shall not be used in the work. Fly ash or similar materials will not be allowed as a substitute for cement.

4.4 Aggregates

Aggregates shall conform to ASTM Designation C33, latest revision. Coarse aggregate for Class "A" concrete shall be size No. 67, nominal 3/4" to No. 4; coarse aggregate for Class "B" concrete shall be either size No. 67 or size No. 467,

4.4 Aggregates (continued)

nominal 1-1/2" to No. 4, unless permitted otherwise by the Engineer. The Contractor shall obtain the services of an approved commercial testing laboratory to sample and test the aggregates to insure compliance with the above specification and shall submit the test results to the Engineer for approval before beginning work. Acceptance of samples shall not be considered as a guarantee of acceptance of all materials from the source and it shall be understood that any aggregates which do not meet with requirements of these specifications may be rejected at any time.

4.5 Admixtures

Admixtures other than an air entraining admixture shall not be used without the written approval of the Engineer. Air entraining admixtures shall be used and shall be Sika AER, or approved equal, conforming to ASTM Designation C260. The air content of the concrete with 3/4" maximum size aggregate shall be 6%, plus or minus 1% by volume. The air content for concrete with a 1-1/2" maximum size aggregate shall be 5%, plus or minus 1% by volume.

4.6 Water

Water used in mixing concrete shall in general be of drinking water quality and shall be clean and free from injurious amounts of oils, acids, alkalis, organic materials, salts, or other substances that may be deleterious to concrete or steel.

4.7 Storing and Handling Aggregates

All materials used for concrete must be kept clean and free from all foreign matter during transportation and handling and kept separate until measured and placed in the mixer. Bins or platforms having hard, clean surfaces shall be provided for storage. Suitable means shall be taken during hauling, piling, and handling to prevent segregation of the coarse and fine particles of the aggregate to such a degree as to disturb the gradation.

4.8 Measuring Materials

The proportions of cement and fine and coarse aggregate for each batch of concrete shall be determined by weight. Equipment for measurement of the amount of water used in each mix shall be readily adjustable and capable of measuring water in variable amounts within a tolerance of 1%.

4.8 Measuring Materials (continued)

All equipment for measuring and accurately controlling the quantities of materials shall be of approved design and shall be tested and calibrated before they are used. Tests shall be made of moisture content of aggregates and allowance shall be made for the variations in moisture content as required.

4.9 Proportions

Proportions of materials in the concrete and strength of concrete shall be approved by the Engineer and shall be subject to the following limitations:

<u>Class</u>	<u>Minimum 28-Day Compressive Strength psi</u>	<u>Maximum Net Water Content (Gals. Per Sack Cement)</u>	<u>Minimum Cement Content (Sacks Per Cubic Yard)</u>
A	4,000	5-1/2	7.0
B	3,000	7	5.5

Prior to the beginning of the concrete work, the Contractor shall submit a design mix consisting of a statement of the proportions of cement, fine aggregate, coarse aggregate, and water, and the gradations of the fine and coarse aggregates he proposes to use, for approval. He shall have standard test cylinders made and tested by an approved testing laboratory. Laboratory test reports shall show sources of materials, proportions of each material, including water used in the test mix, consistency, and the results of 7-day and 28-day compressive strength tests. Tests shall be made as described under Sections 4.11 and 4.12.

The exact proportions of materials used in the work shall be subject to the approval of the Engineer and shall not be changed without his approval. Slump tests shall be made from time to time during the progress of the work as specified under Section 4.11.

4.10 Slump Control

Class "A" and Class "B" concrete shall be furnished and placed at a slump of 2" to 4".

4.11 Slump Tests, Air Content Tests and Test Cylinders

The Contractor shall obtain the services of an approved testing laboratory for making slump tests, air content tests, and standard compression test cylinders as the work progresses, all at the direction of the Engineer, who shall be the sole judge of the number of tests and cylinders required.

4.11 Slump Tests, Air Content Tests and Test Cylinders (continued)

The Contractor shall furnish all necessary materials for the tests, including standard slump cones and molds for concrete test cylinders in conformance with ASTM Standard C470, latest revision. The Contractor shall provide proper storage for the cylinders.

Standard 6" x 12" test cylinders shall be made, stored, and cured in accordance with "Standard Method of Making and Curing Concrete Compression and Flexure Test Specimens in the Field", ASTM Designation C31, latest revision. A standard sample shall consist of 6 test cylinders, 2 of which normally shall be broken at 7 days and 2 of which shall be broken at 28 days, and 2 spares.

Not less than 1 standard sample shall be made for each 50 cubic yards, or fraction thereof, of concrete placed in any 1 day. The Contractor shall provide the services of an approved testing laboratory to test the cylinders. Tests shall be made as described under Section 4.12.

Slump tests shall be made in accordance with ASTM Designation C43, latest revision. The tests for air content shall conform to the requirements of "Test for Air Content of Freshly Mixed Concrete by the Pressure Method," ASTM Designation C231.

If tests do not show satisfactory results, the mix shall be adjusted as required. Concrete which does not meet the strength or air content requirements is subject to rejection and removal from the work or to such other corrective measures as approved by the Engineer to make the work acceptable, all at the expense of the Contractor.

4.12 Tests by Approved Laboratory

All testing shall be performed by a testing laboratory which conforms to the requirements of the "Standard Recommended Practice for Inspection and Testing Agencies for Concrete, Steel, and Bituminous Materials as used in Construction," ASTM designation E329 and is approved by the Connecticut Department of Transportation. The testing services shall be under the direction of a full-time registered professional engineer.

Compression strength tests of cylinders shall conform to "Test for Compressive Strength of Molded Concrete Cylinders", ASTM Designation C39, latest revision.

4.12 Tests by Approved Laboratory (continued)

The cost of all testing work shall be borne by the Contractor. The testing laboratory shall submit certified copies of the test results, sealed and signed by a registered professional engineer, in duplicate, directly to the Engineer and the Contractor within 24 hours after tests are made.

4.13 Mixing

Concrete shall be mixed by an approved rotating type batch machine, except where hand mixing of very small quantities may be permitted. The arrangements shall provide for the correct weight of each ingredient before placing in the mixer and the ingredients to be used in each batch shall be governed by the size of the concrete mixer and shall not exceed the rated capacity specified for the mixer by the manufacturer. Unless otherwise permitted, the quantities shall be such as to require a whole number of bags of cement.

Mixing shall be thorough and all materials for each batch shall be mixed together at least 2 minutes while the drum revolves at the proper speed.

4.14 Transporting Concrete

The concrete shall be transported and placed in the work not more than one hour after the water is added to the dry ingredients. Care shall be taken to avoid spilling and separation of the mixture. No concrete in which ingredients have become separated shall be placed in the work. Retempering of partially set concrete will not be permitted. Suitable and approved equipment for transporting concrete from mixer to forms shall be used.

4.15 Transit Mixed Concrete

The Contractor shall submit full information as to the physical capability of the mixing plant and trucking facilities which are available and the estimated average amount which can be produced and delivered to the job site during a normal 8 hour day, excluding the output to other customers, for approval. The number of cubic yards of concrete placed daily will depend on the ability of the plant to deliver concrete to the site and is subject to the approval of the Engineer. The concrete shall be in accordance with the "Specification for Ready Mix Concrete", ASTM Designation C94, as amended, and all applicable requirements of this Item.

The Engineer shall have access to the mixing plant at all times. The concrete shall be mixed in revolving drum-type mixers which are in good condition and which produce thoroughly mixed concrete of the specified consistency and strength. Loads shall not exceed the proper capacity of the mixer.

4.15 Transit Mixed Concrete (continued)

Concrete shall be mixed for a minimum of 1-1/2 minutes after it arrives at the job site, or as recommended by the mixer manufacturer. The drum shall not mix while in transit. Mixing shall be continuous at proper speed until the concrete is discharged. Concrete shall be discharged from the mixer within 1 hour after water is added to the mix and shall have a slump of 2" to 4".

Adequate facilities shall be available for continuous delivery of concrete at the required rates. Concrete which does not meet the requirements of this specification will be rejected. Copies of the delivery slips shall be provided to the Engineer. Delivery slips shall be properly filled out indicating design mix requirements, water content, cement content and compressive strength, and the time the truck left the plant.

4.16 Forms

Forms shall be in accordance with the "Recommended Practice for Concrete Formwork" (ACI 347, latest revision), and shall be set and maintained so as to insure that completed work is within the suggested tolerances of that Standard.

Forms shall be of plywood, plywood faced, or metal; shall conform to the shape, lines, and dimensions of the concrete as shown on the Contract Drawings; and shall be substantial and sufficiently tight to prevent leakage of mortar. The Contractor shall be responsible for the design and engineering of the formwork as well as its construction. The inside of forms shall be coated with a nontoxic, non-staining mineral oil or other approved material to prevent adhesion of concrete to the forms.

All edges and corners in the finished work shall be straight and true. External corners shall have a 3/4" chamfer unless otherwise shown. For all faces which are exposed in the finished work, forms shall be smooth and so built and treated that when removed; the concrete will be left with smooth, presentable surfaces, free from offsets, ridges, discoloration, or other unsightly defects. Deformed or otherwise defective forms shall be removed from the work. The methods and materials used for tying forms in place shall be subject to approval and no wires shall be used for tying the forms on faces exposed in the finished work. Form ties shall be of bolts and rods of such design that the end of the internal member will be recessed by a removable cone at least 1" from the face of the finished concrete. Holes shall be closed in a workmanlike manner as specified under Section 4.22. Patches on exposed surfaces shall match the color of the surrounding concrete. Form tie systems which leave a void in the structure will not be permitted.

4.16 Forms (continued)

Concrete shall not be placed until all forms, bracing, and reinforcement are in final secure position. Formwork shall be completed and inspected prior to the placing of concrete. All pipes, sleeves, and other embedded items as shown on the Contract Drawings shall be in place before the concrete placing commences. Temporary openings shall be provided at the base of wall forms and at other points where necessary to facilitate cleaning and inspection.

4.17 Placing Concrete

Immediately before placing concrete, the forms shall be thoroughly cleaned and wet, and the space to be occupied by concrete shall be free from all dirt, chips, and foreign material. The concrete shall be carried up level along the whole length of the section under construction and shall be placed so as to avoid rehandling within the forms. Concrete shall be compacted by means of approved internal vibrators to produce dense, homogenous concrete without pockets or voids. Vibrators shall not be used to move the concrete along the form. Where spaces under pipes or other spaces are to be filled, concrete shall be forced under from one side until visible from the other side to prevent voids.

Chutes may be used for distributing concrete only when approved in writing by the Engineer. Requests for such approval shall be accompanied by sketches showing methods by which chutes will be employed. Chutes, if permitted, shall be designed with proper slopes and supports to permit efficient handling of the concrete without increasing the water-cement ratio.

Concrete shall not be permitted to free-fall within the form a distance exceeding 4'. "Elephant trunks" shall be used to prevent free fall and excessive splashing on forms and reinforcement.

When fresh and previously placed concrete are jointed, immediately before placing fresh concrete, the contact surface of the previously placed concrete shall be thoroughly cleaned using a stiff brush or other tools and a stream of water under pressure. The surface shall be clean and wet but free from pools of water at the moment the fresh concrete is placed. Any laitance, waste mortar, or other substance which will prevent complete adhesion shall be removed. A 1" thick coat of mortar of similar proportions to the mortar in the concrete shall be placed over the contact surface of the previously placed concrete and the fresh concrete shall be placed before the mortar has attained its initial set. No concrete shall be placed when the Engineer is not present.

The new concrete wall shall be poured in sections with joints at the locations shown on the Contract Drawings. Adjacent sections shall not be poured until the previous section has cured 7 days.

4.18 Weather Conditions and at Night

Concrete placement during cold or hot weather or at night shall conform to the following requirements:

Cold Weather: All methods and materials used for winter concreting shall be in accordance with the requirements of "Cold Weather Concreting", ACI 306, latest revision, and shall be subject to the approval of the Engineer. Plans to protect fresh concrete from freezing and to maintain temperatures not less than the permissible minimum during the first 7 days after placing shall be made before the first frosts are to occur. The temperature of the concrete placed shall not be less than 55°F, nor greater than 85°F and a temperature of between 50°F and 70°F shall be maintained for at least 7 days after placing. Means shall be provided, if necessary, to insure that the ambient temperature shall not fall more than 30°F in the 24 hours following the 7 day period. Admixtures, except those approved by the Engineer, shall not be used. The cost of all materials furnished or required to protect against freezing shall be at the sole expense of the Contractor without extra charge therefor.

Hot Weather: All methods and materials used for hot weather concreting shall be in accordance with the requirements of "Hot Weather Concreting", ACI 305, latest revision, and shall be subject to the approval of the Engineer. Concrete deposited in hot weather shall have a placing temperature which will not cause difficulty from loss of slump, flash set, or cold joints.

At Night: No concrete shall be placed at night without permission of the Engineer, and the Contractor shall give at least 12 hours notice to the Engineer if he wishes to place concrete at night.

4.19 Quality of Concrete Work

Concrete shall be placed solidly against the forms and elsewhere so as to leave no voids. Every precaution shall be taken to make all masonry solid, compact, watertight, and smooth and to prevent the formation of laitance and to avoid cold joints. If for any reason the surfaces have voids or are unduly rough, or are in any way defective, such masonry shall be cut out to the extent ordered or permitted and shall be repaired to the satisfaction of the Engineer. The cost of all repairs shall be borne by the Contractor. No thin patches or plastering will be accepted.

Any concrete that is defective which, in the opinion of the Engineer, cannot be properly repaired as described above, shall be removed and replaced at the expense of the Contractor.

4.20 Care and Curing of the Concrete

All exposed surfaces of finished and unfinished concrete shall be kept constantly moist by sprinkling with water at short intervals, by covering with moist burlap, or by such other means as may be approved, for a period of not less than 7 days.

No exposed concrete shall be placed during rainstorms and freshly placed concrete shall be protected during storms to prevent erosion. Sufficient covering shall be provided and kept ready at hand for this purpose. All fresh work shall be carefully protected from injury.

4.21 Removal of Forms

Forms shall be removed in such manner as to ensure the complete safety of the structure. Reshoring will not be permitted. In no case shall the supporting forms or shoring be removed until the members have acquired sufficient strength to support safely their weight and the load thereon. The results of suitable control tests may be used as evidence that the concrete has attained such sufficient strength. The minimum time for removal of forms will be subject to the Engineer's approval.

4.22 Finish

Immediately after the concrete forms are removed, all extrusions shall be chipped off and all tie rod holes patched with 1:2 cement: sand mortar. Exposed vertical surfaces shall have a rubbed finish and shall be rubbed with carborundum stones no later than the day following form removal. During the rubbing, water shall be constantly applied to the concrete. Rubbing shall continue until the surface is brought to a smooth, even texture.

All horizontal surfaces shall be struck to the proper grade by moving a straight edged template back and forth across the placed surface in a saw motion until the required grade is reached. Shortly after the striking operation, while the surface is still plastic, it shall be floated with wood. The process shall bring the surface to the true required grade. After the surface has reached the partial hardness stage, it may have to be refloated to secure a proper finish.

The various finishes required for the surfaces are as follows:

Rubbed: Exposed vertical surfaces.

Chipped of Extrusions and Tie Holes Patched: All surfaces below grade.

Wood Float: All horizontal surfaces including the top of the spillway structure and outlet pipe endwall.

4.23 Protection from Injury

Finished concrete surfaces shall be protected from injury and defacement until the work under the Contract is accepted.

4.24 Construction and Expansion Joints

Joints in concrete shall only be made where shown on the Contract Drawings or permitted by the Engineer. In either case they shall be made in accordance with the details shown on the Contract Drawings.

Expansion joint material shall be premolded concrete gray, open cell sponge rubber as manufactured by Williams Products, Inc., Troy, Michigan, or approved equal.

Horizontal waterstops shall be 6" x 1/4" steel plates.

4.25 Sealant

Sealant shall be a 1 component polyurethane based compound such as Sikaflex 1A, or approved equal. It shall be placed in accordance with the manufacturer's instructions. The depth of the joint shall be one-half the width.

4.26 Steel Reinforcement

Bars or rods shall be deformed bars of an approved type and shall be free from defects and kinks and from bends which cannot be readily and fully straightened in the field. They shall conform to ASTM Designation A615, Grade 60, latest revision. The Contractor shall furnish satisfactory test certificates. All bars shall be stored in clean, dry places until incorporated in the work.

4.27 Detailing, Fabrication, and Placing Reinforcement

All reinforcement at the time concrete is placed shall be free from loose rust, scale, or other coatings that will destroy or reduce the bond. All detailing and fabrication of reinforcement, unless otherwise noted, shall conform to "Details and Detailing of Concrete Reinforcement" ACI 315, latest revision, and "Manual of Engineering and Placing Drawings for Reinforced Concrete Structures" ACI 315R, latest edition. Metal supports, touching formed or exposed concrete surfaces, shall not be used. Reinforcement shall not be secured to forms by means of wire, nails, or other ferrous material. Metal chairs with plastic feet shall not be used to support reinforcement unless approved by the Engineer.

4.27 Detailing, Fabrication, and Placing Reinforcement (continued)

Wood spacers, concrete block spacers, nails with tie wires, or metal chairs with plastic feet shall not be used as side form spacers. Bent reinforcement bars shall be used as spacers between mats of reinforcement steel. Suitable means shall be provided to maintain the required space between reinforcement steel and side forms, such as attaching reinforcement steel to form ties. The Contractor shall submit his proposed means to the Engineer for approval.

During construction, protection devices such as "Bar Guard", as manufactured by American Allsafe Co., Buffalo, NY, shall be placed over exposed ends of reinforcing rods.

4.28 ACI Code

Except as otherwise shown on the Contract Drawings or as specified herein, "Building Code Requirements for Reinforced Concrete", ACI 318, latest revision, shall apply.

4.29 Dampproofing

The Contractor shall apply dampproofing to the outside of the spillway structure and the back face of the endwall, starting 6" below finished grade. Materials for this work shall conform to the requirements of Article M12.05 of Form 817 for Asphalt for Primer and Seal Coat or Tar for Primer and Seal Coat. All surfaces on which dampproofing is to be applied shall be cleaned of all loose and foreign material. The surface shall be dry before the primer is applied. One coat of primer shall be applied at the rate of 1/8 gallon per square yard, followed by the application of a seal coat at a rate of 1/10 gallon per square yard.

4.31 Measurement and Payment

The quantity to be paid for under Items 4A and 4B, Class "A" Concrete and Class "B" Concrete shall be measured for payment as the volume of concrete actually placed within the limits shown or directed, with no deductions made for openings less than 1 square foot in cross-section. Class "B" concrete used as fill concrete in areas of excess excavation shall be at the Contractor's expense.

The unit price per cubic yard bid under Item 4A, Class "A" Concrete, shall be payment in full for all labor, tools, materials, and equipment necessary to furnish and install the Class "A" Concrete, complete as shown and specified, including expansion joints, waterstops, sealant, reinforcing steel and dampproofing.

4.31 Measurement and Payment (continued)

The unit price per cubic yard bid under Item 4B, Class "B" Concrete, shall be payment in full for all labor, tools, materials, and equipment necessary to furnish and install the Class "B" Concrete, complete as shown and specified, including waterstops, expansion joints and sealant.

Outlet Pipe, Slide Gate, and Intake Bar Screen

Item 5

5.1 Work Included

Under this Item the Contractor shall supply all labor, tools, materials, and equipment necessary to furnish and install the 16-inch ductile iron inlet pipe, 48-inch ductile iron outlet pipe, stainless slide gate assembly, intake bar screen and appurtenances complete as shown and specified herein.

The concrete for the outlet pipe encasement and cradle is specified and paid for under Item 4B.

5.2 Ductile Iron Pipe

5.2.1 Pipe, Fittings, and Specials

Pipe for the new outlet shall be of ductile iron thickness Class 52. Ductile iron pipe shall conform in all respects, except for ends, to AWWA C151, latest editions. Pipe shall be either push-on joint or mechanical joint as shown on the Contract Drawings.

Pipe ends and fittings shall conform to AWWA C111, latest edition. Fittings shall be ductile iron and shall conform to AWWA C110 latest edition.

Affidavit and drawings shall be furnished as specified in Section 11.6 of AWWA C111.

The manufacturer's certifications specified in Sections 51.4, 51.7, 51.9, and 51.14 of Specification ANSI A21.51 (AWWA C151) shall be furnished for ductile iron pipe. A statement shall also be furnished stating that the coating and lining have been installed in accordance with ANSI A21.4 (AWWA C104).

All pipe and fittings shall be furnished with a bituminous sealcoat, double thickness cement mortar lining in accordance with ANSI A21.4 (AWWA C104), latest revision, and an exterior bituminous coating. Coating that is damaged during shipment or placement shall be touched up in the field with two (2) coats of an asphaltic coating fully resistant to water and chemicals.

All bolts, nuts, glands, gaskets, tie down straps and other jointing materials are included under this Item.

5.2 Ductile Iron Pipe (continued)

Each piece of pipe shall be plainly marked at the foundry with class number and weight.

5.2.2 Laying Ductile Iron Pipe

All pipe installation shall conform to AWWA Standard C600, latest revision, unless otherwise modified by these specifications.

Pipe shall be installed on a concrete cradle and encased in concrete as shown on the Contract Drawings. The Contractor shall cast-in-place a concrete support at the location of the bell end of each pipe. The pipes shall be set on the concrete support and brought to grade by the use of steel shims. The pipes shall be tied to the supports or leveling course to prevent shifting or flotation during the pouring of the concrete cradles. The Contractor may submit, for the Engineer's approval, an alternate method of installation.

All pipe and fittings shall be lowered carefully into place by means of mechanical equipment in such a manner as to prevent them from being damaged. The insides of all bells and outsides of spigots shall be wire brushed and wiped clean and dry and shall be free from oil or grease. During the laying of the pipe, extra care shall be taken to see that no dirt, debris, tools, clothing, or other illicit materials are allowed to be left in the pipeline.

After the pipe is laid, the spigot end shall be centered in the bell and forced home. The Contractor shall install and joint the pipe in accordance with the manufacturer's instructions.

The grooves in the bells of push-on joint pipe shall be carefully cleaned of all dirt and debris before inserting the gaskets. After applying a thin film of lubricant to the gasket, the spigot end of the pipe is pushed into the bell of the pipe. The joint shall be kept straight while pushing and any deflection made after the joint is home. When the pipe is cut in the field the spigot end shall be beveled with a heavy file or an air driven grinder to remove all sharp edges.

When necessary to cut pipe in the field, the cutting shall be done such that neither the pipe nor the lining shall be damaged and such that a smooth, right angle to axis cut is made. A machine designed for this purpose shall be used for the cutting. Field cutting will only be allowed on pipe which has been calibrated and identified as pipe suitable for cutting.

5.2 Ductile Iron Pipe (continued)

5.2.3 Handling and Distribution

Pipe shall be handled with care during delivery and distribution to avoid damage. The interior shall be kept free from dirt and foreign matter.

All pipe will be carefully inspected as it is installed, but will not be subject to a hydrostatic test.

5.3 Stainless Steel Slide Gate Assembly

5.3.1 Slide Gate

The self-contained stainless steel slide gate assembly shall be furnished complete with non-rising stainless steel stem, and a flange for mounting to the concrete wall. The slide gate, extension stem, wall mounted stem guide and appurtenances shall be Series A-111 as manufactured by Rodney Hunt, SS-250 as manufactured by Waterman Industries, Hydro Gate or approved equal. The gate shall be fabricated of A304 stainless steel, conforming to AWWA Specification C561, latest revision. The 16-inch slide gate shall be designed for an unseating head of at least 20 feet of water and the leakage shall be less than allowable under AWWAA C561. Connection between the gate and the concrete wall shall be made with stainless steel anchor bolts and nuts, as shown on the Contract Drawings.

5.3.2 Extension Stem, Coupling, and Cast Iron Floor Box

Extension stem shall be either a solid stainless steel stem or stainless steel torque tube and shall be of adequate size to open the slide gate with a maximum angular twist of 6 degrees. Couplings shall be of stainless steel, drilled and pinned. The top of the extension stem shall have a 2" operating nut. The cast in place floor box shall be furnished with a bronze bushing ¼-inches larger in diameter than the extension stem and a 2-1/2 inch extension nipple. The floor box shall be as manufactured by Trumbull Industries or approved equal.

5.3.3 Installation and Inspection of Slide Gate, Extension Stem and Appurtenances

The slide gate, extension stem, and coupling, and stem guide shall be installed in accordance with the manufacturer's recommendations and instructions. If the Contractor is not, in the opinion of the Engineer, experienced in the installation of this type of equipment, he shall obtain and pay for the services of a qualified factory representative, who shall instruct the Contractor as to the proper procedures for installing the equipment.

At the completion of the installation, the Contractor shall arrange and pay for an inspection of the installation by a qualified factory representative prior to operating the gate. The Contractor shall be present during the inspection and shall provide assistance for making adjustments if required. The installation shall also be inspected with the pond full, and adjustments made as required.

5.3.4 Appurtenances

All anchor bolts, studs, nuts, set screws, and similar items shall be stainless steel.

5.4 Intake Bar Screen

5.4.1 Intake Bar Screen

The intake screen for the 16-inch diameter inlet pipe shall consist of sixteen 3/4-inch stainless steel rods, 64 stainless steel nuts, 32 oversized stainless steel washers, 16-3/4-inch Schedule 40 PVC pipe spacers, and a 3/8" thick stainless steel end plate. The stainless steel rods shall be threaded 6 inches at each end. The intake screen shall be installed as shown on the Contract Drawings.

5.4.2 Outlet Bar Screen

The outlet bar screen shall be fabricated from 1-inch diameter stainless steel rods and 4" x 6" x 3/8" stainless steel angles, as shown on the Contract Drawings. All joints shall be welded in accordance with the applicable specifications of the American Welding Society. After fabrication, the bar screen shall be stress relieved to prevent heat related corrosion.

Expansion bolts shall be 3/4" HILTI-Stainless Steel Kwik-Bolts as manufactured by HILTI, Inc., Stamford, Connecticut, or approved equal.

The outlet bar screen shall be installed on the outlet pipe endwall at the outlet pipe. The bar screen shall be firmly attached to the outlet pipe endwall with the stainless steel expansion bolts.

5.5 Payment

The lump sum bid for Item 5, Outlet Pipe, Slide Gate, and Intake and Outlet Bar Screens, shall include payment in full for all tools, labor, materials, and equipment necessary to furnish and install the intake and outlet pipes, self-contained stainless steel slide gate assembly, intake and outlet bar screens and appurtenances as shown on the Contract Drawings and specified herein.

Compacted Embankments

Item 6

6.1 Work Included

Under this Item the Contractor shall furnish all labor, tools, materials, and equipment necessary to do all backfill and compacted embankment work, complete as shown and specified. Included under this Item are the backfilling of the spillway training walls, outlet pipe, and outlet structure; and the construction of all embankments, including furnishing, transporting, placing, and compacting the materials; and constructing, maintaining, and removing temporary roadways for transporting embankment materials.

6.2 Embankment Materials

The earth for compacted embankments shall be furnished by the Contractor from approved outside sources or from excavations. Embankment material shall consist of clean earth, which does not contain vegetation or masses of roots, and shall be substantially free from loam or other organic matter. Material shall be readily compactable by mechanical means and shall upon compaction form a solid, stable, embankment. The embankment material shall not contain rocks larger than 6" in size. The embankment material shall be hardpan or glacial till such that 20-30% of the material passing a No. 4 sieve shall pass a No. 200 sieve. Samples of the proposed material, a sieve analysis and Standard Proctor test shall be submitted to the Engineer for approval. A 5 gallon sample of the approved material shall be kept on site.

6.3 Preparation of Surfaces Under Embankments

Prior to placing the embankment, all mud, water, loose dirt and rock, and foreign material shall be removed, and depressions shall be thoroughly filled to the surface with suitable materials which shall be compacted in place in a satisfactory manner. Immediately prior to placing embankment materials, the foundations shall be thoroughly plowed and broken to a depth of at least 8" and worked by harrowing or other approved means, with the addition of water, if required. The surface shall be rolled, as specified for the embankment. No material shall be placed in any section of the dam embankment until the foundation for that section has been dewatered and suitably prepared and has been approved by the Engineer.

6.4 Construction of Embankments

Materials for the construction of embankments shall be transported in approved conveying units of such size and having such bearing tread areas that the completed fill shall not be unduly rutted by their passage. Equipment shall not be used if it is heavy enough to cause non-uniform consolidation of the embankment. All embankment surfaces that are too smooth to bind properly with succeeding layers shall be loosened by disking or harrowing or other approved means before the succeeding layer is placed thereon. The embankment material shall be evenly and uniformly spread in horizontal layers for the entire length of the dam as nearly as practicable to 7" in thickness. The embankment shall be sloped to allow for drainage during construction.

Any stones greater than 6-inches in diameter and all roots and other perishable materials shall be removed prior to rolling. A rock rake or other approved means may be required to remove stones from the embankment material prior to compaction. All excavation, transportation, and placing operations shall be such as will produce a satisfactory mixture and gradation of material after it has been spread and compacted. No frozen material shall at any time be used in the construction of rolled embankment and no materials shall be placed on the embankment that is frozen or loosened by freezing. The spreading equipment shall be lightweight and no other equipment, except sprinklers or harrows as necessary, shall pass over any layer which is being prepared for rolling before rolling is complete. Dumping, spreading, sprinkling, and compacting shall be carried out systematically so as not to interfere with each other. Portions of embankment which are too near concrete structures or the outlet pipe, or for other reasons cannot be properly compacted with rolling equipment shall be thoroughly compacted in 3" layers by mechanical tampers.

Embankment shall be compacted to 95% of Standard Proctor maximum dry density at a moisture content close to the optimum moisture content determined by the standard procedure of ASTM D 698, latest revision. The Engineer's specific requirements as to selection of materials, water content, and degree of compaction necessary will be varied as necessary to obtain an impervious embankment of the required dry weight and stability.

6.5 Moisture Control

The moisture content of materials in the embankment shall be controlled to meet the above requirements. When necessary, moisture shall be added by use of approved sprinkling equipment. Water shall be added uniformly and each layer shall be thoroughly disked or harrowed to provide proper mixing. Any layer found too wet for proper compaction shall be allowed to dry before rolling. Placing or rolling of material on earth fills will not be permitted during or immediately after rainfalls that increase the moisture content beyond the limit of satisfactory compaction. The earth

6.5 Moisture Control (continued)

fill shall be brought up uniformly and its top shall be kept graded and sloped so that a minimum of rainwater will be retained thereon. Compacted earth fill damaged by washing shall be acceptably replaced by the Contractor.

6.6 Compaction

Approved vibratory pad foot rollers or other suitable tamping rollers shall be used for compacting all parts of the embankments that they can effectively reach. The Contractor shall demonstrate the effectiveness of the roller by actual soil compaction results of the soil to be used in the embankment with laboratory work performed by an approved soil testing laboratory. Smooth drum vibratory rollers will not be acceptable.

Adjacent roller trips shall overlap to insure proper coverage. All parts of the embankment shall be compacted to the extent ordered by the Engineer in accordance with the results and requirements described and specified hereinabove. In the early part of the work, various numbers of roller trips will be tried in order to determine the proper compaction method. The Contractor shall vary the number of roller trips as directed and shall cooperate with the Engineer in obtaining a solid, tight embankment, uniformly compacted to not less than 95% of Standard Proctor maximum dry density.

To verify that the specified degree of compaction is obtained, the Contractor shall obtain the services of an approved testing laboratory to perform field in-place density tests and develop moisture density curves of the embankment materials used. A minimum four (4) in-place density tests shall be taken for every 1' vertical increment (two lifts) of embankment placed. Tests shall conform to the requirements of ASTM D 6938 density of soil in place by the nuclear density method. Corrections for over size particles shall conform to the requirements of ASTM D 4718. Moisture density curves shall be developed in accordance with ASTM D 4959. One sample shall be taken for every 1 foot vertical increment of the embankment placed for use in developing the moisture density curves. The Engineer shall select the location of the tests along the dam embankment.

The cost of all testing shall be borne by the Contractor. The testing laboratory shall submit certified copies of the test results, signed and sealed by a registered Professional Engineer, in duplicate directly to the Engineer and the Contractor with 24 hours after tests are made.

6.7 Finishing Embankments

The embankments shall be constructed to the elevations, lines, grades, and cross sections as shown on the Contract Drawings. The embankments shall be maintained in a manner satisfactory to the Engineer and surfaces shall be compacted and accurately graded before topsoil or gravel is placed on them. The Contractor shall check the embankment slopes to insure that they conform to the slopes given on the Contract Drawings and are uniform for the entire length of the slope.

6.8 Roadways

The Contractor shall either use existing Town roads or construct temporary haul roads as required to transport embankment materials to the dam. The Contractor shall be responsible for maintaining and repairing the haul roads during the course of the project. The Contractor shall make repairs as required and leave the existing roads in as good or better condition than they were prior to construction. Town roads used as haul roads will be videotaped prior to the start of construction. These tapes will be used to establish the existing condition of the roads and the condition to which the Contractor must restore them. The Contractor shall control dust as directed by the Engineer for the duration of the project. Temporary haul roads shall be removed, and the areas restored to the satisfaction of the Engineer.

The costs for constructing, maintaining, and removing temporary haul roads and for maintaining and repairing existing Town roads shall be included in the lump sum price bid under this Item.

6.9 Payment

The lump sum bid under this Item shall include payment in full for all labor, tools, materials, and equipment necessary to do all backfill and embankment work, complete as shown and specified. Included under this Item are compaction testing and the maintenance of existing roads, and construction, maintenance, and removal of temporary haul roads.

Riprap

Item 7

7.1 Subdivisions of Item 7

This Item is subdivided for payment as follows:

Item 7A - Crushed Stone Bedding

Item 7B - Intermediate Riprap

Item 7C - Filter Fabric

7.2 Work Included

Under this Item the Contractor shall supply all labor, tools, materials, and equipment required to furnish and place bedding, filter fabric, and riprap at the various locations shown on the Contract Drawings or ordered by the Engineer. The riprap shall be placed to the thickness shown and shall be brought up evenly to the required grade with surface voids filled by hand placing. Bedding and filter fabric shall be placed on the upstream slope of the dam, where shown or required by the Engineer.

Included under Item 7A is the furnishing and placing of bedding material for the riprap.

Included under Item 7B is the furnishing and placing of riprap on the upstream face of the dam, downstream of the spillway, at the intake and outlet, and other locations, as shown on the Contract Drawings.

Included under Item 7C is the furnishing and placing of filter fabric for the riprap placed on the upstream slope of the dam.

7.3 Materials

Gravel bedding material shall be clean crushed stone graded from 1/2" to 2-1/2" in size, suitable for providing a base without excess voids, or bankrun gravel conforming to the following gradation:

7.3 Materials (continued)

<u>Square Mesh Sieve Size</u>	<u>% Passing by Dry Weight</u>
3-1/2"	100
1-1/2"	55 - 100
1/4"	25 - 60
#10	15 - 45
#40	5 - 25
#100	0 - 10
#200	0 - 5

Filter fabric shall be a non-woven polyester fabric with a minimum weight of 6 ounces per square yard and shall be Geotex Model # 801 as manufactured by Synthetic Industries, Amoco Model # 4551 as manufactured by Amoco Fabrics and Fiber Company, or approved equal.

Materials for riprap shall be stone obtained on site or from an approved source. Rock fragments for riprap shall be angular, dense, and sound rock, resistant to abrasion and able to resist long exposure to weathering. Rock fragments shall also be free from cracks, seams, and other defects that would tend to increase unduly their destruction by water and frost action.

Riprap shall be of the proper size to form a compact, solid blanket to protect the embankment and spillway channel and prevent erosion. Additional smaller rock may be required to fill the voids in the riprap.

Intermediate Riprap: shall meet the following gradation:

<u>Stone Size</u>	<u>Percentage of the Mass</u>
18" or over	0
10" - 18"	30 - 50
6" - 10"	30 - 50
4" - 6"	20 - 30
2" - 4"	10 - 20
Less than 2"	0 - 10

7.4 Placing Filter Fabric and Bedding

Subgrade shall be fine graded to the required lines and grades prior to placement of filter fabric and bedding material. Filter fabric shall be placed with seams lapped a minimum of 2 feet.

7.4 Placing Filter Fabric and Bedding (continued)

The bedding material shall be spread and compacted to the required lines and grades. Final compacted thickness shall be 12". Bedding is not required where riprap is placed on concrete.

7.5 Placing Riprap

Riprap shall be placed to a minimum thickness of 18" and to the finished grades shown or directed. Care shall be taken in placing riprap to obtain a good gradation of materials so that the riprap will be firm and solid. Surfaces shall be leveled to the required alignment and slope by hand placing so as to fill large voids and to make the surface even.

7.6 Measurement

The quantity to be paid for under Item 7A, Crushed Stone Bedding, shall be the actual number of cubic yards of bedding furnished and installed, measured in-place within the limits shown or ordered.

The quantity to be paid for under Items 7B and 7C shall be the actual number of square yards of intermediate riprap and filter fabric, measured in-place within the limits shown or ordered.

7.7 Payment

The unit price bid per cubic yard under Item 7A Crushed Stone Bedding shall be full payment for all labor, tools, materials and equipment used to furnish and place crushed stone bedding, as specified and shown or directed.

The unit price bid per square yard under Item 7B Intermediate Riprap shall be full payment for all labor, tools, materials, and equipment used to furnish and install intermediate riprap, as shown in the Contract Drawings and specified herein.

The unit price bid per square yard under Item 7C Filter Fabric shall be payment in full for all labor, tools, materials, and equipment used to furnish and install filter fabric, as shown and herein specified.

Miscellaneous Metal Work

Item 8

8.1 Work Included

Under this Item the Contractor shall supply all labor, tools, materials and equipment necessary to furnish and install miscellaneous metal work as shown on the Contract Drawings and specified herein, including, but not limited to: expansion bolts; access hatch door and frame; ladder; access road gate; padlocks; water level gage, bar screens, and appurtenances, as shown on the Contract Drawings.

8.2 Expansion Bolts

Expansion bolts shall be HILTI-Stainless Steel Kwik-Bolts as supplied by HILTI, Inc., Stamford, Connecticut, or approved equal.

8.3 Aluminum Access Hatch

The aluminum access hatch door shall be 3'-0" x 3'-0". The door and frame shall be aluminum. The hatch shall be equipped with channel frame and drain; the drain shall be connected to the inside of the spillway structure. The hatch door shall be watertight and be equipped with automatic hold open arm, cover release, lifting mechanism, and handgrips. Door shall be provided with a recessed padlock hasp covered by a hinged lid flush with the surface of the door. The aluminum access door shall be Bilco Type Model #JAL or approved equal.

Access door shall be designed to withstand a live load of 300 pounds per square foot.

8.4 Stainless Steel Ladder

The ladder shall be fabricated from Type 304 stainless steel and installed in the gate chamber in accordance with details shown on the Contract Drawings. Rungs shall be of slip resistant ribbed or corrugated design, spaced at a maximum of 12 inches vertically on center. Rungs shall be inserted into holes drilled into the rails and welded all around. The ladders shall be fabricated to meet all OSHA or other local and federal requirements. The Contractor shall submit shop drawings for approval prior to fabrication. All hardware for mounting the ladders on the walls shall be furnished and installed by the Contractor. Expansion bolts shall be as specified under Section 8.2. After fabrication, the ladder shall be stress relieved to prevent heat related corrosion.

All welding shall conform to the requirements of the American Welding Society.

The Contractor shall furnish and install on the ladder below the access door a stainless steel Ladder Up safety post as manufactured by The Bilco Company or approved equal. The device shall be manufactured of high strength stainless steel with telescoping tubular section that locks automatically when full extended. Upward and downward movement shall be controlled by a stainless steel spring balancing mechanism. Unit shall be completely assembled with stainless steel fasteners for securing to the ladder rungs in accordance with the manufacturer's instructions.

8.5 Access Road Gate

A gate shall be furnished and installed at the gravel road on the dam crest at the location shown on the Contract drawings. The gate shall be fabricated from A36 structural steel sections to the dimensions shown on the Contract Drawings. Gate and gate posts shall be painted after fabrication. Posts shall be set in concrete footings at least 3 feet deep. Gate posts shall be filled with concrete. The concrete footings are included for payment under this Item 8.

Gate and posts shall be shop primed with Series 27 Primer. Painting shall consist of two coats of Series N69 H-Build Epoxoline II for a dry film thickness of 4.0 mils each for a total of 8 mils. The paint and primer shall be manufactured by Tnemec Corporation or approved equal. Color to be selected by the Owner.

8.6 Padlocks

The Contractor shall furnish and install 2 temporary padlocks for the locking devices for the spillway access hatch and access road gate. The diameter of the shackle and the height of the shackle opening shall be of adequate size to accommodate the locking devices.

The access gate shall be double locked with a Contractor-supplied padlock and an Owner-supplied padlock during the duration of the contract. Upon final acceptance, the Contractor shall remove his padlocks from the access hatch and the access road gate.

8.7 Water Level Gage

The Contractor shall furnish and install a fiberglass water level gage mounted on the spillway structure as shown on the Contract Drawings. The gage shall be a stream gage as supplied by Ben Meadows Company 800-241-6401. The gage shall be 4" wide graduated to hundredths of a foot and marked at every foot and every

tenth of a foot. One section shall be provided to read from 0 to 6.0 feet for the gage with zero set at elevation 156.30.

8.9 Spillway Bar Screens

The spillway bar screens shall be fabricated from 2-inch nominal inside diameter Schedule 40 stainless steel pipe and stainless steel angles, as shown on the Contract Drawings. All joints shall be welded in accordance with the applicable specifications of the American Welding Society. The spillway bar screens shall be installed at the concrete spillway weir. The bar screens shall be stress relieved to prevent heat related corrosion. All bar screens shall be firmly attached with stainless steel expansion bolts as specified under Item 8.2.

8.10 Outlet Pipe Bar Screen

The outlet bar screen shall be fabricated from 1-inch diameter stainless steel rods and 4" x 6" x 3/8" stainless steel angles, as shown on the Contract Drawings. All joints shall be welded in accordance with the applicable specifications of the American Welding Society. After fabrication, the bar screen shall be stress relieved to prevent heat related corrosion. The outlet bar screen shall be installed on the outlet pipe endwall at the outlet pipe. The bar screen shall be firmly attached to the outlet pipe endwall with the stainless steel expansion bolts as specified under Item 8.2.

8.11 Payment

The lump sum price bid for Item 8, Miscellaneous Metal Work, shall include payment in full for all equipment, materials, tools and labor necessary, to furnish and install the miscellaneous metal work as shown and specified.

Excavation and Disposal of Unsuitable Material

Item 9

9.1 Work Included

Under this Item, the Contractor shall excavate and dispose of organic material or other unsuitable material found in foundations for concrete structures and the compacted embankment, as determined by the Engineer.

Furnishing and placing concrete refill under concrete structures is paid for under Item 4B.

9.2 Unsuitable Material

Material from excavations that contain organic material, or other material deemed unsuitable by the Engineer, shall be disposed of offsite in an approved location and manner.

9.3 Measurement and Payment

The unit price bid per cubic yard for Excavation and Disposal of Unsuitable Material shall be measured in place as the actual number of cubic yards of material deemed unsuitable by the Engineer, removed and disposed of offsite.

The unit price bid per cubic yard for Item 9 shall include all labor, tools, materials, and equipment to excavate, load, haul, and dispose of unsuitable material.

Chain Link Fence

Item 10

10.1 Work Included

Under this Item, the Contractor shall supply all labor, tools, materials, and equipment necessary to furnish and install chain link fence and gate at the spillway training walls and the outlet structure, complete as shown and specified.

10.2 Chain Link Fence

Shop drawings shall be submitted to the Engineer, for approval, showing layout and details of construction and erection of fence, and accessories. The chain link fence shall be installed at the locations shown on the Contract Drawings.

The fence fabric shall be "Fused Bonded Fabric" PVC coated steel meeting the requirements of ASTM F668 Class 2B. Overall height shall be 4 feet. Core wire shall be No. 9 gage steel wire, hot dipped galvanized, with a coating thickness of 0.007 inches. Fabric shall be woven in a 2-inch mesh. Both selvages shall be knuckled. Color shall be black.

All tension bars; bands and ties shall be vinyl-coated in accordance to U.S. Specification RR-F-191/3C. Color shall match that of the fence fabric.

The chain link fabric shall be securely fastened to all terminal posts using 1/4" x 3/4" tension bars and heavy No. 16 gage steel tension bands. There shall be one band for each foot in the height of fence. The fabric shall be fastened to all intermediate posts, and top and bottom rails with No. 9 gage coated (O.D.) tie wires, spacing not to exceed 10 inches.

The fabric shall be stretched to proper tension between terminal posts and securely fastened to the framework members. The bottom of the fabric shall be held as uniformly as is practicable to the finished grade.

All posts and other appurtenances used in the construction of this fence shall be PVC coated schedule 40 steel pipe in accordance with RR-F-191/3C, Grade A.

10.2 Chain Link Fence (continued)

Weights and dimensions of fence posts and rails shall be as per the following schedule:

Description	Nominal Outside Diameter	Weight (lbs/ft)
Gate Posts	4' High	4' High
	3"	5.79
End and Corner Posts	2-1/2"	3.65
Intermediate Posts	2"	2.72
Top and Bottom Fence Rails	1-5/8"	2.27

Fence posts on concrete structures shall be welded to 6" x 6" x 3/8" steel anchor plates as shown on the Contract Drawings. A 1/4" drain hole shall be drilled into each railing post as shown on the Contract Drawings. Fence posts and base plates shall be hot dipped galvanized after fabrication. The base plates shall be attached to the top of the concrete with stainless steel nuts and threaded rods grouted into the concrete with epoxy mortar such as Hilti HIT-HY 200 or approved equal.

Posts shall be furnished with pressed steel or malleable iron tops secured by screws.

The top rail shall be provided with couplings approximately every 20 feet. Couplings are to be outside sleeve type at least 6 inches long. The top rail is to pass through the line posts tops and form a continuous brace from end to end of each stretch of fence. The top and bottom rails shall be securely fastened to the terminal posts by heavy pressed steel brace bands and malleable rail end connections.

Installation shall be made in a workmanlike manner by skilled mechanics experienced in erection of this type of fence. The fence shall be erected on line and to grade with all posts plumb.

Vinyl-clad chain link fabric, posts, framework, and accessories shall be as manufactured by Boundary Fence and Railing Systems, Inc., Richmond Hill, New York or approved equal.

The Contractor shall field measure to verify all dimensions prior to fabrication.

10.4 Payment

The lump sum bid for this Item 10, Chain Link Fence, shall include all labor, tools, materials, and equipment required to furnish and install the chain link fence, complete as shown and specified.

APPENDIX A

BORING LOGS

The subsurface information and data furnished herein are not intended as representations or warranties, but are furnished for information only and are not a part of this Contract. It is expressly understood that the Owner and the Engineer will not be responsible for the accuracy thereof or for any deduction, interpretation, or conclusion drawn therefrom by the Contractor. The information is made available in order that the Contractor may have ready access to the same information available to the Owner and the Engineer.

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: <u>Tata & Howard</u>			SHEET <u>1</u> OF <u>1</u>	
	PROJECT NO. <u>G86-1529-20</u>			HOLE NO. <u>B-1</u>	
	PROJECT NAME <u>Beaver Dam Repairs</u>			BORING LOCATIONS as directed	
FOREMAN - DRILLER <u>JK/ao</u>	LOCATION <u>Meriden</u> <u>CT</u>				
INSPECTOR	TYPE	CASING	SAMPLER	CORE BAR	OFFSET
		HSA	SS		
GROUND WATER OBSERVATIONS	SIZE I.D.	3 3/4"	1 3/8"		DATE START <u>5/22/20</u>
AT <u>11</u> FT AFTER <u>0</u> HOURS	HAMMER WT.		140#	BIT	DATE FINISH <u>5/22/20</u>
AT <u> </u> FT AFTER <u> </u> HOURS	HAMMER FALL		30"		SURFACE ELEV.
					GROUND WATER ELEV.

DEPTH	CASING BLOWS PER FOOT	SAMPLE					BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6 6 - 12 12 - 18			CORE TIME PER FT (MIN)	DENSITY OR CONSIST	STRATA CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		NO	Type	PEN	REC.	DEPTH @ BOT							
5		1	ss	24"	10"	2'0"	9	9			dry compact		3" Topsoil; LtBrn FMC SAND, sm F gravel
							12	8					
10		2	ss	1"	1"	5'1"	50/1				dry v loose		LtBrn FM SAND, sm F gravel, cobbles
15		3	ss	24"	8"	12'0"	8	3			dry loose		RedBrn FM SAND, sm F gravel, tr silt
							5	6					
20		4	ss	24"	10"	17'0"	5	6			wet compact		RedBrn FMC SAND & F GRAVEL
							9	15					
25		5	ss	24"	12"	22'0"	11	9			wet compact		RedBrn GRAVEL, lit FM sand
							21	25					
30		6	ss	24"	23"	27'0"	3	3			wet compact		RedBrn F SAND
							5	8					
35		7	ss	24"	24"	32'0"	5	8			wet loose	32'0"	RedBrn F SAND
							10	14					
40													E.O.B 32'0"

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____ FT.	USED _____ CASING	THEN _____ CASING TO _____ FT.	HOLE NO. <u>B-1</u>
A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND = 35 - 50%			
		C = COARSE M = MEDIUM F = FINE	

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: <u>Tata & Howard</u>		SHEET <u>1</u> OF <u>1</u>	
	PROJECT NO. <u>G86-1529-20</u>		HOLE NO. <u>B-2</u>	
	PROJECT NAME <u>Beaver Dam Repairs</u>		BORING LOCATIONS as directed	
FOREMAN - DRILLER <u>JK/ao</u>	LOCATION <u>Meriden</u> <u>CT</u>			
INSPECTOR	TYPE	CASING <u>HSA</u>	SAMPLER <u>SS</u>	CORE BAR
GROUND WATER OBSERVATIONS AT <u>11'</u> FT AFTER <u>0</u> HOURS	SIZE I.D.	<u>3 3/4"</u>	<u>1 3/8"</u>	
AT <u> </u> FT AFTER <u> </u> HOURS	HAMMER WT.		<u>140#</u>	BIT
	HAMMER FALL		<u>30"</u>	
				OFFSET
				DATE START <u>5/22/20</u>
				DATE FINISH <u>5/22/20</u>
				SURFACE ELEV.
				GROUND WATER ELEV.

DEPTH FEET	CASING BLOWS PER FOOT	SAMPLE					BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6 6 - 12 12- 18			CORE TIME PER FT (MIN)	DENSITY OR CONSIST	STRATA CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		NO	Type	PEN	REC	DEPTH @ BOT					MOIST	ELEV	
5		1	ss	24"	16"	2'0"	2	7			dry compact		4" Topsoil; RedBrn FMC SAND, lit F gravel, tr silt
							7	8					
10		2	ss	24"	18"	7'0"	5	2			moist stiff	5'0"	LIbrn FM SAND, sm F gravel
							3	4					
15		3	ss	24"	8"	12'0"	1	2			wet soft		RedBrn SILT, lit FM sand, tr F gravel
							1	1					
20		4	ss	24"	24"	17'0"	4	5			wet stiff		RedBrn SILT & FMC SAND, sm F gravel
							5	6					
25		5	ss	24"	12"	22'0"	2	3			wet loose	20'0"	RedBrn FMC SAND, sm F gravel, tr silt
							6	6					
30		6	ss	24"	10"	27'0"	5	6			wet compact		SAME; lit C gravel, cobbles
							16	21					
35		7	ss	24"	16"	32'0"	2	4			wet compact	32'0"	RedBrn F SAND
							8	9					
40													E.O.B 32'0"

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO <u> </u> FT.	USED <u> </u> CASING	THEN <u> </u> CASING TO <u> </u> FT.	HOLE NO. <u>B-2</u>
A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND = 35 - 50%			
		C = COARSE M = MEDIUM F = FINE	

APPENDIX B
EROSION AND SEDIMENT CONTROL PLAN
FLOOD CONTINGENCY PLAN

CITY OF MERIDEN, CONNECTICUT

RECONSTRUCTION
OF
BEAVER POND DAM
Meriden, Connecticut

EROSION AND SEDIMENT CONTROL PLAN

A. The Project

Reconstruction of Beaver Pond Dam will consist of replacing the concrete culvert spillway and low level outlet pipe, raising the compacted earthen embankment and flattening the downstream slope, installing riprap on the upstream slope and a gravel road on the crest. A new drop inlet spillway structure will be constructed with a new 16-inch low level inlet pipe and a 48-inch outlet pipe, and appurtenances. The spillway length will be increased to 16 feet, and the spillway crest will remain unchanged at El. 153.6. The tributary watershed is 0.57 square miles.

The top of the dam will be at El. 166.2 and will provide 0.4 feet of freeboard during a $\frac{1}{2}$ PMF. The upstream slope will be protected with riprap. The spillway structure will be built using reinforced concrete and an eel pass will be provided. The inlet pipe will be controlled by a stainless steel slide gate.

The purpose of the reconstruction and modifications are to enable the dam to maintain its storage capacity and increase the spillway capacity to pass the $\frac{1}{2}$ PMF.

B. Design Criteria for Soil Erosion and Sediment Control Measures

Criteria set forth in the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control will be used as a guide for construction.

C. Operations and Maintenance Program

Implementation of the Soil Erosion and Sediment Control Plan during construction shall be the responsibility of the Construction Contractor. Tata and Howard, Inc. will oversee the implementation of the Plan.

Maintenance of the permanent erosion and sediment control measures will be part of the regular dam maintenance program of the City of Meriden, Connecticut. Normal dam maintenance includes periodic mowing of the dam embankments, keeping the spillway and outlet structure clear of debris and sediment, clearing brush and weeds and maintaining the riprap, and repairing erosion damage.

D. Sequence of Activities

1. Lower the water level in the pond about 5.0 feet to elevation 151.3 using siphons, pumps, diversion pipes or by restoring the existing outlet.
2. Install upstream cofferdam, temporary bypass piping and drop inlet to maintain water level at elevation 15.3. The existing outlet pipe may be used for the discharge. Cofferdam is to be constructed with concrete Jersey barriers, concrete blocks, inflatable "Aqua-Dam" or approved equal. Plastic sheeting and sandbags may be required to reduce leakage.
3. Install the temporary precast concrete drop inlet with trash rack at upstream end of bypass piping, as shown on the Contract Drawings.
4. Clear and grub areas to be disturbed. Materials from clearing and grubbing shall be disposed of off-site in an approved location and manner.
5. Stockpile suitable material from excavations for use in the embankments. Soil shall be stockpiled so that natural drainage is not obstructed and no off-site sediment damage results. Side slopes of stockpiles shall be maintained no steeper than 2 horizontal to 1 vertical. Install hay bales or silt fence around stockpiles.

6. Excavate for spillway training wall and outlet gate structure footings. Dewater excavations using pumps or other approved method discharging to hay bale sediment traps or filter fabric bags, where shown on Contract Drawings.
7. Remove existing concrete structure and outlet piping.
8. Construct new drop inlet spillway structure, and new inlet and outlet pipes. Provide sediment controls at inlet end. Divert stream flow through new outlet pipe.
9. Construct compacted embankment. Install riprap, gravel access road and toe drains as shown on the Contract Drawings.
10. When final grades are established, topsoil (TO), seed (PV), and place erosion control blankets (ECB) on the dam embankments and all areas disturbed by construction. Place topsoil, seed and mulch as required to restore area.
11. Prior to refilling the pond, remove all silt fences and stone dikes below the normal water level (spillway elevation 156.3) and dispose of the accumulated sediments off-site in an approved location and manner.
12. Maintain a discharge of 0.0414 cfs during refilling.

E. Sequence for Final Stabilization of the Project Sites

1. Reseed and remulch any grass areas that have not taken root.
2. After turf is established, remove all remaining temporary sediment and erosion control measures. Dispose of accumulated sediment and material at an approved disposal area.

FLOOD CONTINGENCY PLAN

The following Flood Contingency Plan has been prepared to guide the Contractor on safety measures to be taken in the event that a major storm is forecast with potential for significant flooding. The following steps are to be taken:

1. The Contractor shall monitor the weather forecasts and plan construction accordingly.
2. If the weather forecasts are for a major storm system within 24 to 48 hours, the Contractor shall plan for the possibility of high water levels at the site. Also, the Contractor shall notify the Engineer and Owner of the proposed storm and his proposed preparations.
3. If a significant rainfall occurs, in excess of three (3) inches within 24-hours, the Contractor shall maintain surveillance of the site, and maintain all sediment and erosion control measures.
4. If the water levels along the project site rise to potentially unsafe levels, the Contractor shall remove all equipment, construction materials (i.e., fuels, solvents, hydraulic fluids, floatable objects, etc.) and stockpiles from the potential inundation area.
5. The spillway shall be kept clear of obstructions and in operational condition.
6. The Contractor shall maintain sufficient equipment and manpower at the sites in order to react to a flooding emergency.
7. Sedimentation and erosion control measures shall be inspected weekly and after each rainfall. Repairs and maintenance shall be performed as required.
8. The Contractor shall submit his Flood Contingency Plan before any work commences, detailing actions to be taken during a flood emergency. The Contractor shall certify that personnel are familiar with all provisions of his plan and able to execute the same. The Contractor may use the above plan or prepare a plan of his own. In either case, **the Contractor shall submit a Flood Contingency Plan for approval within 15 days of the contract signing.**
9. The Contractor shall submit the names and 24-hour telephone numbers of responsible personnel, to be contacted in the event of an emergency. These personnel are to respond to the site if notified of an emergency.

APPENDIX C
PERMITS

CITY OF MERIDEN, CONNECTICUT



RECONSTRUCTION OF BEAVER POND DAM

MERIDEN, CONNECTICUT

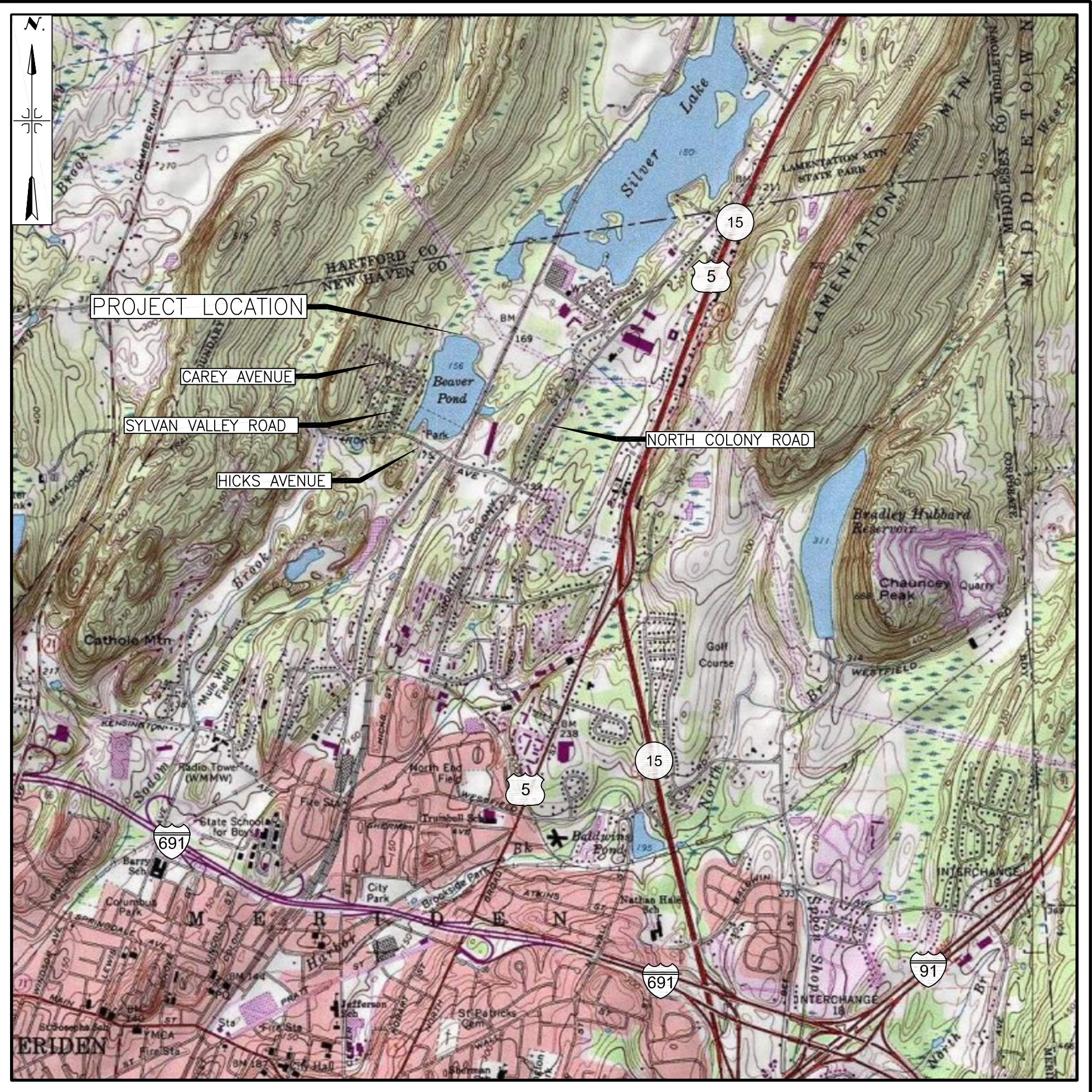
CITY OF MERIDEN

KEVIN SCARPATI
MAYOR

TIMOTHY COON
CITY MANAGER

HOWARD WEISSBERG
DIRECTOR OF PUBLIC WORKS

BRIAN ENNIS, P.E.
CITY ENGINEER



LOCATION PLAN

SCALE: 1" = 2,000'
0 2000 4000

LIST OF DRAWINGS

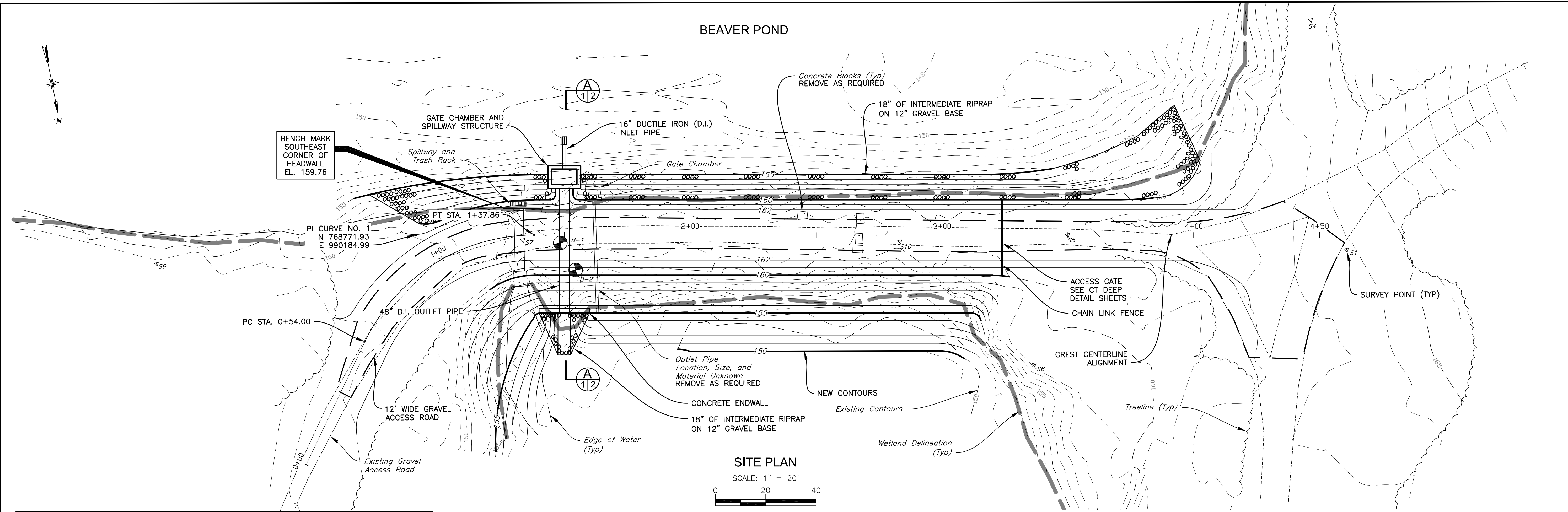
SHEET NO.	TITLE
1.	SITE PLAN, SECTION, AND PROFILE
2.	OUTLET PIPE PROFILE AND DETAILS
3.	GATE CHAMBER, SPILLWAY AND BAR SCREEN SECTION AND DETAILS
4.	DAM EMBANKMENT SECTIONS
5.	EROSION AND SEDIMENT CONTROL
	CT DEEP ACCESS GATE DETAILS 1 & 2



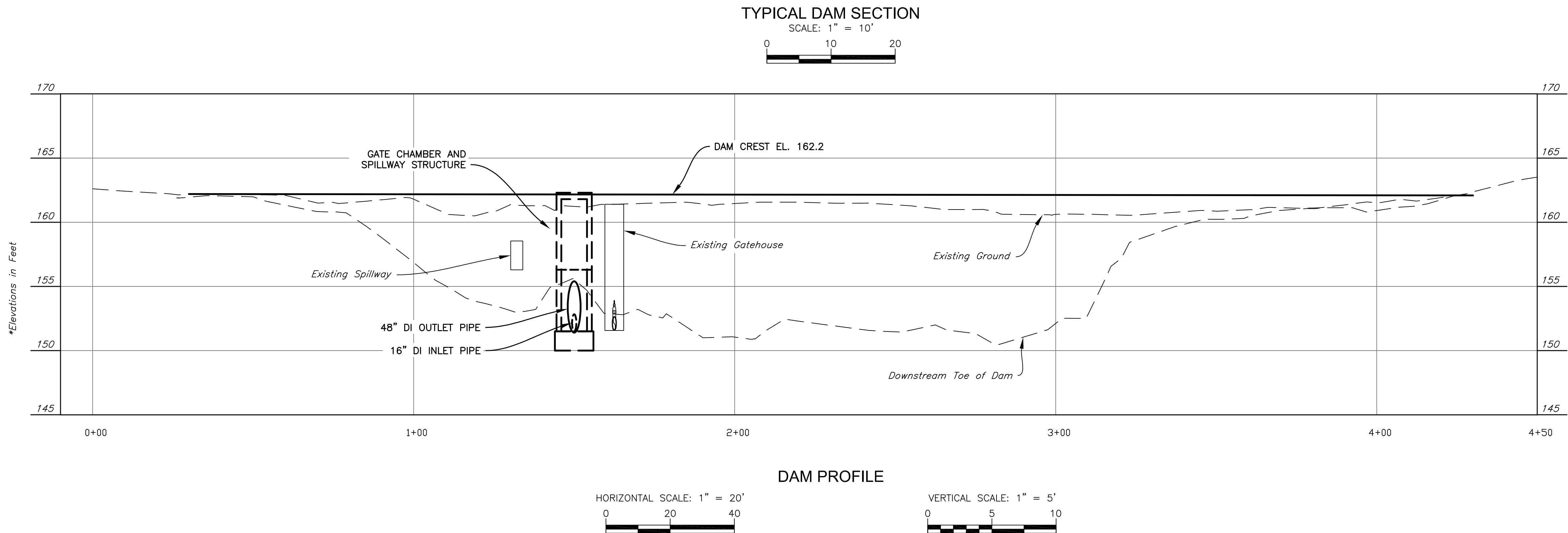
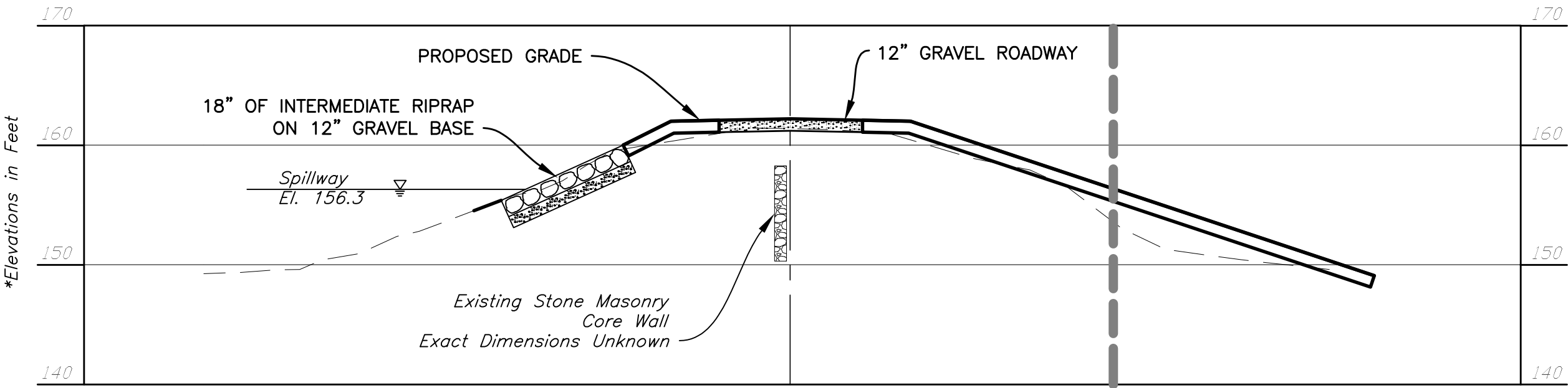
TATA & HOWARD, INC.

CONSULTING ENGINEERS

WATERBURY, CONNECTICUT



CURVE DATA				
CURVE	RADIUS	LENGTH	TANGENT	DELTA
1	74.49'	83.86	47.00'	064° 30' 11"



*CT and Federal inland wetlands boundary delineated by Davison Environmental, LLC.

CITY OF MERIDEN, CONNECTIUT

RECONSTRUCTION OF
BEAVER POND DAM

Approved By: WSA

Drawn By: KTM/CAC

Checked By: WSA

SITE PLAN, SECTION, AND PROFILE

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Description

Date

Rev.

TATA & HOWARD

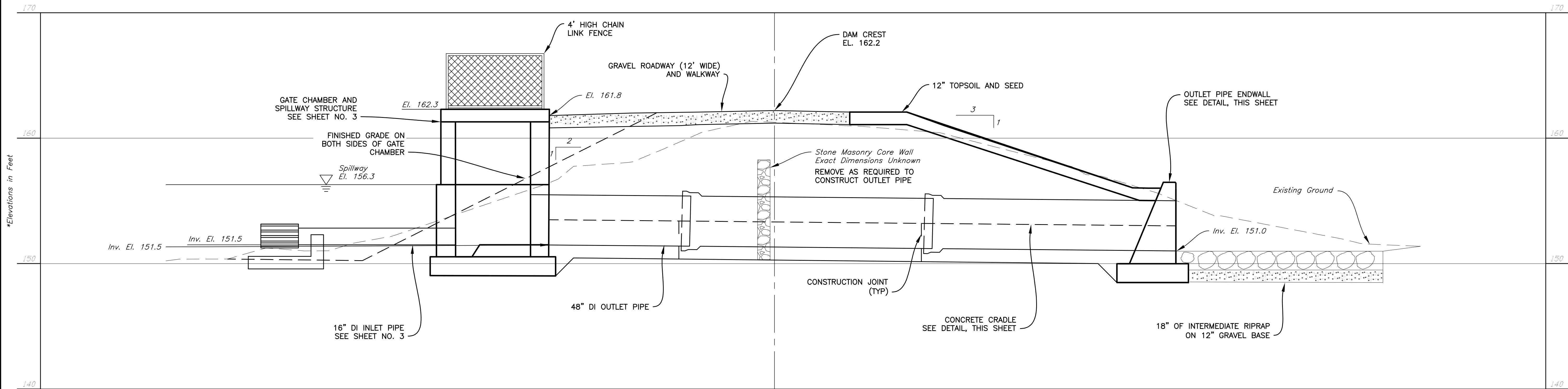
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DATE: AUGUST 2020

SCALE: AS NOTED

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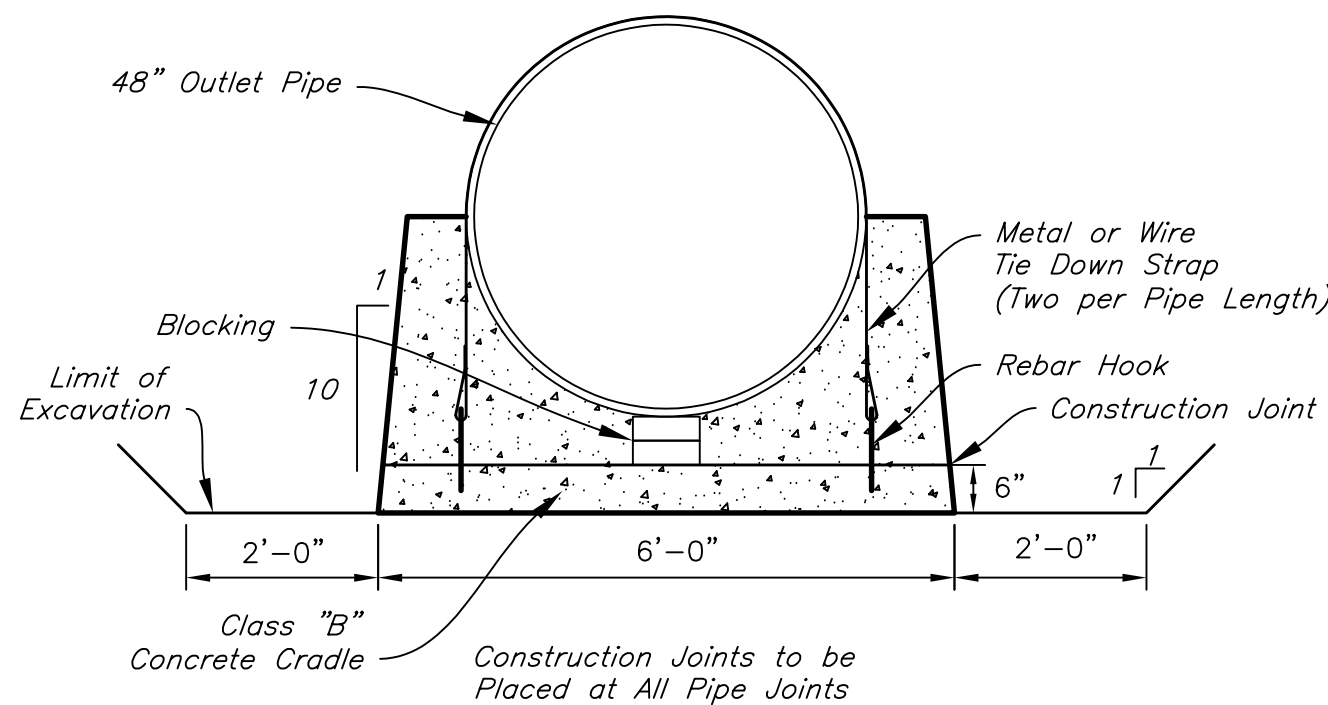
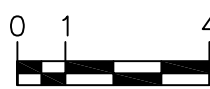
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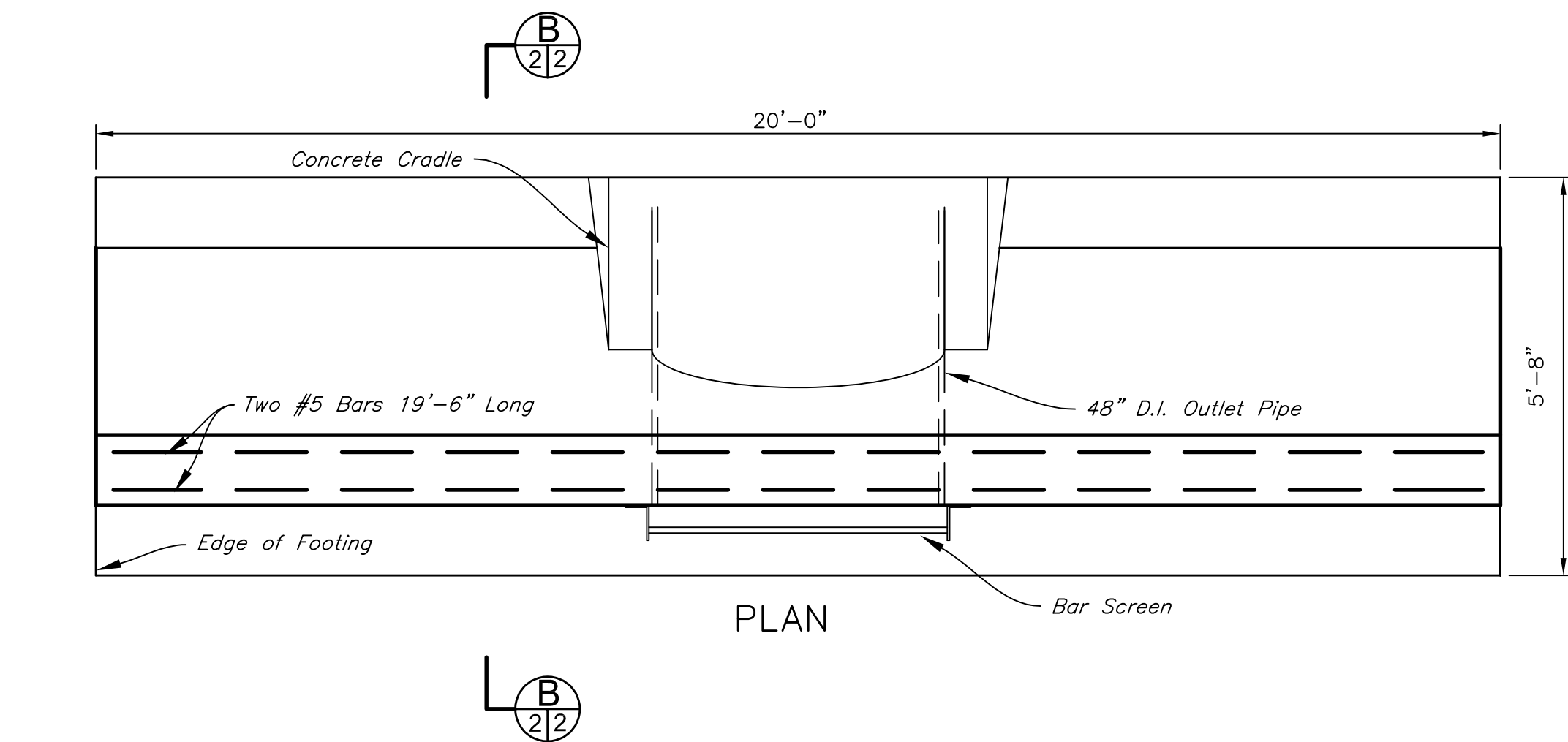
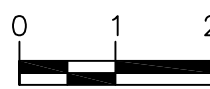
OUTLET PIPE PROFILE - DAM & STA. 1+50

SCALE: 1/4" = 1'-0"

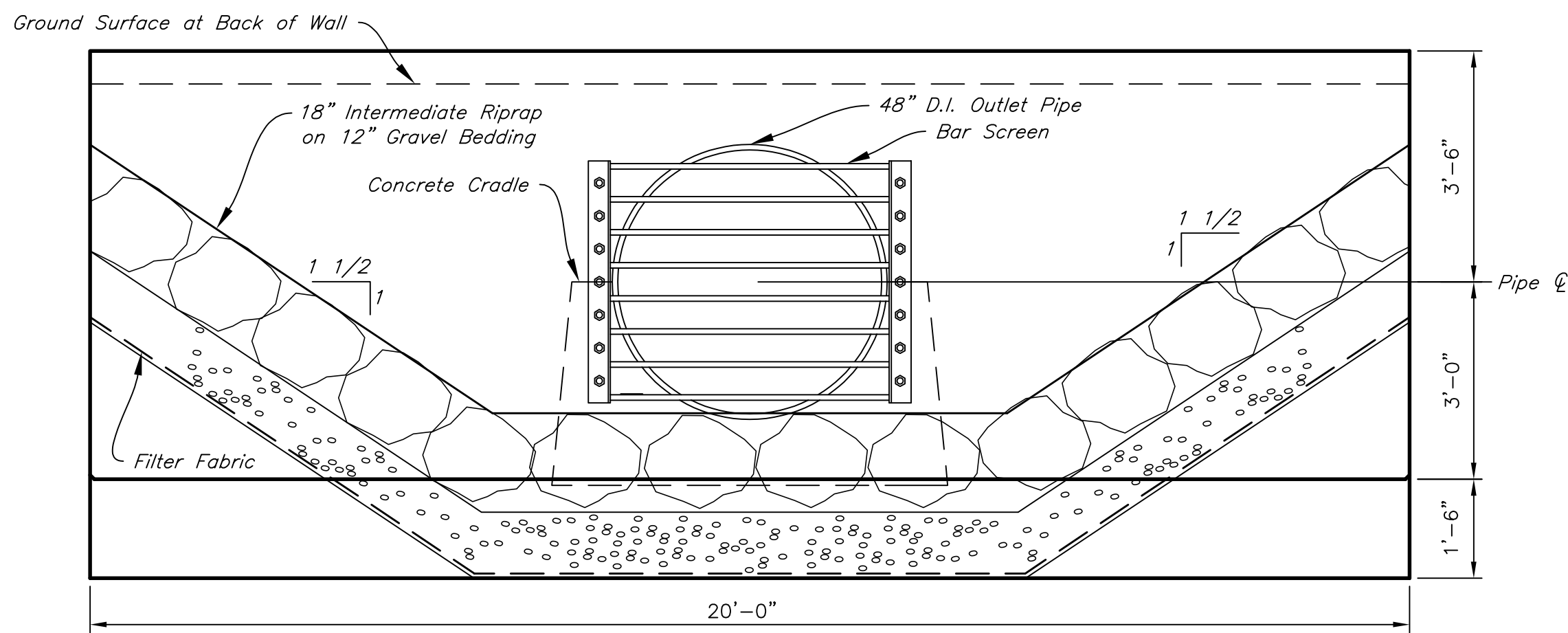


CONCRETE CRADLE DETAIL

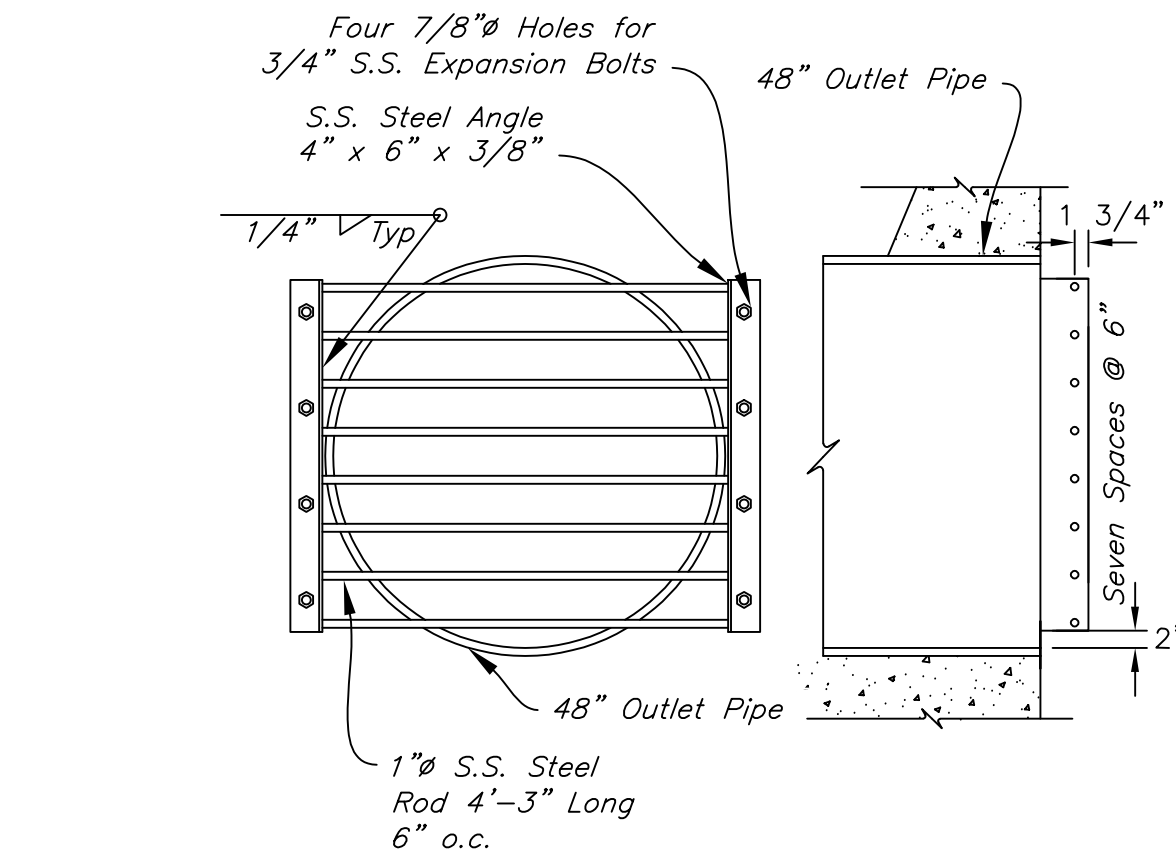
SCALE: 1/2" = 1'-0"



PLAN

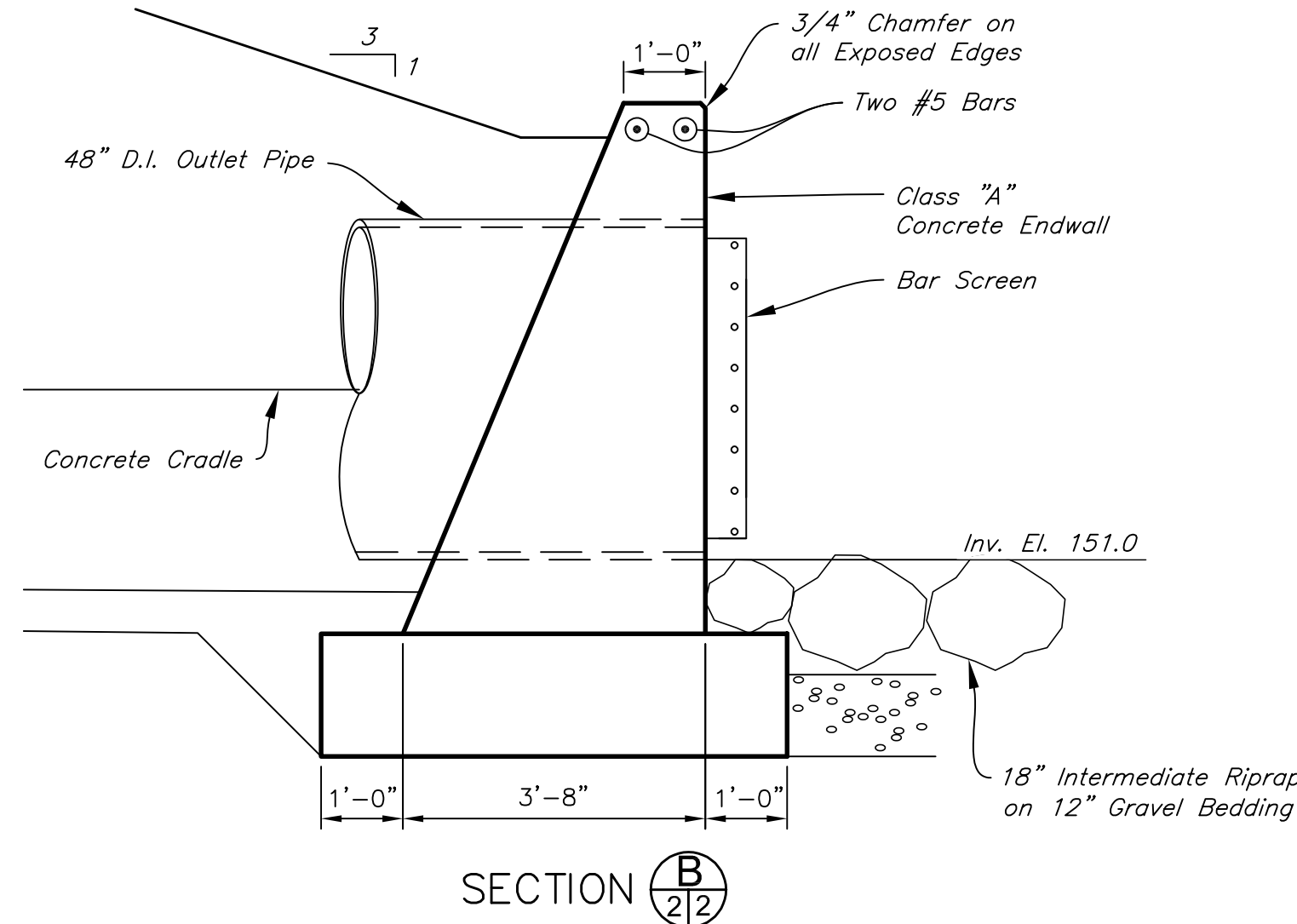
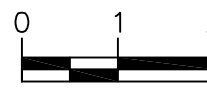


ELEVATION



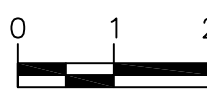
OUTLET BAR SCREEN

SCALE: 1/2" = 1'-0"



OUTLET PIPE ENDWALL DETAIL

SCALE: 1/2" = 1'-0"



CITY OF MERIDEN, CONNECTIUT

RECONSTRUCTION OF
BEAVER POND DAM

Designed By: WSA
Checked By: SAC
Approved By: WSA

OUTLET PIPE PROFILE AND DETAILS

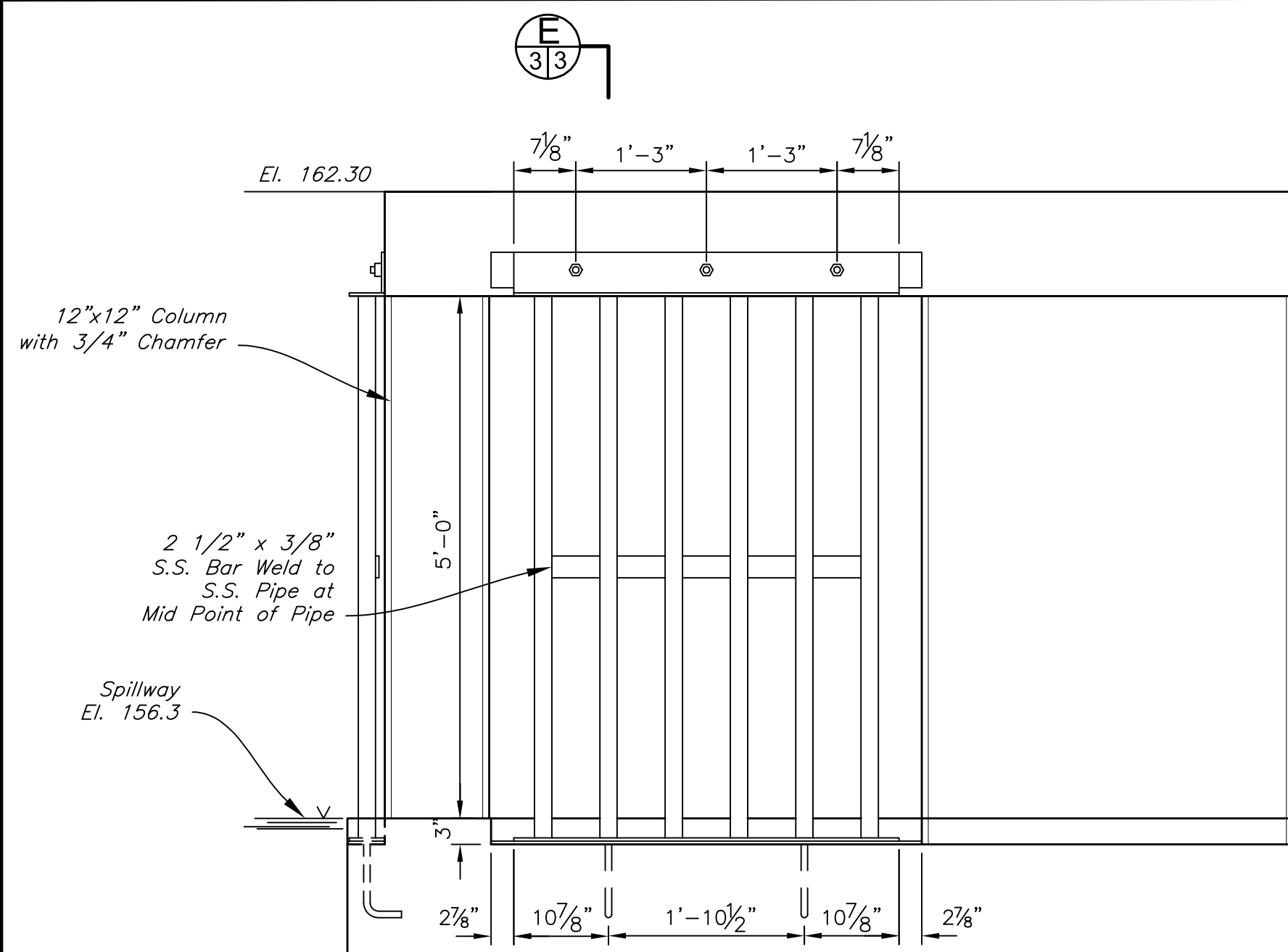
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Description
Date
Rev.

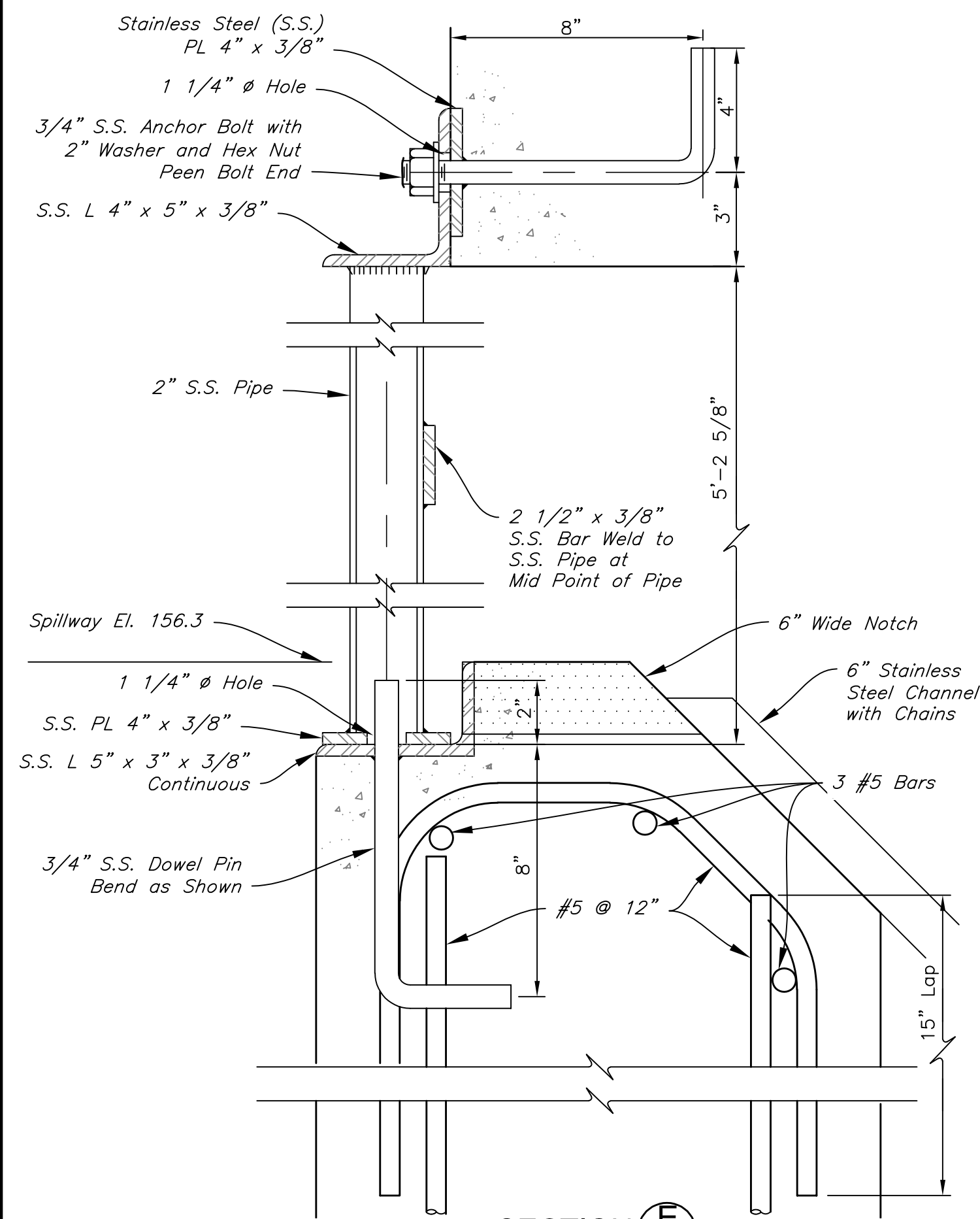


T&H NO.: 5977
DATE: AUGUST 2020
SCALE: AS NOTED

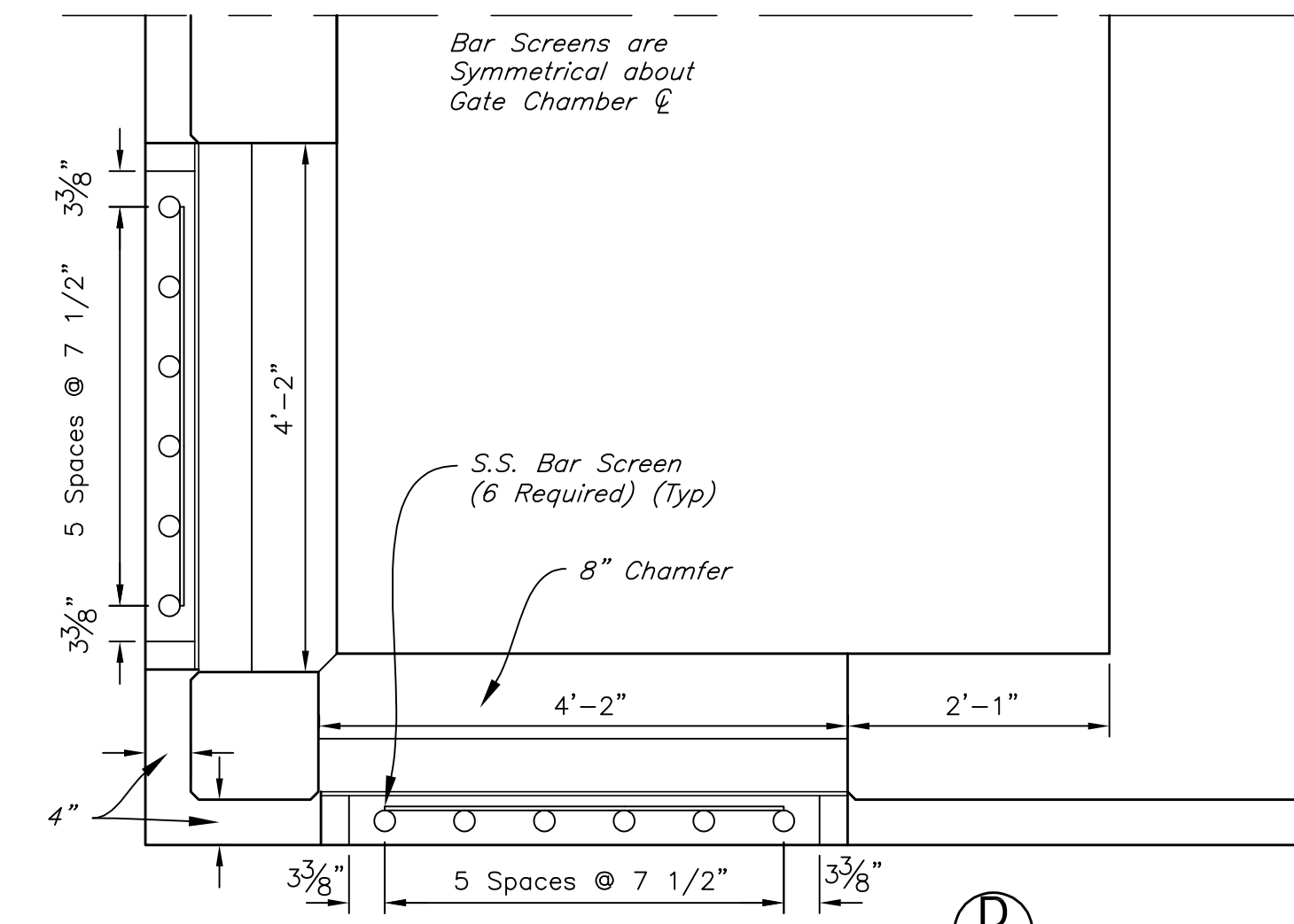
P:\Meriden, CT\19-0397 Beaver Pond Dam Repair\A001\Proposed Silt Sheet.dwg KTD/ASS 1/11/2021 3:59 PM



SIDE ELEVATION
SCALE: 3" = 1'-0"



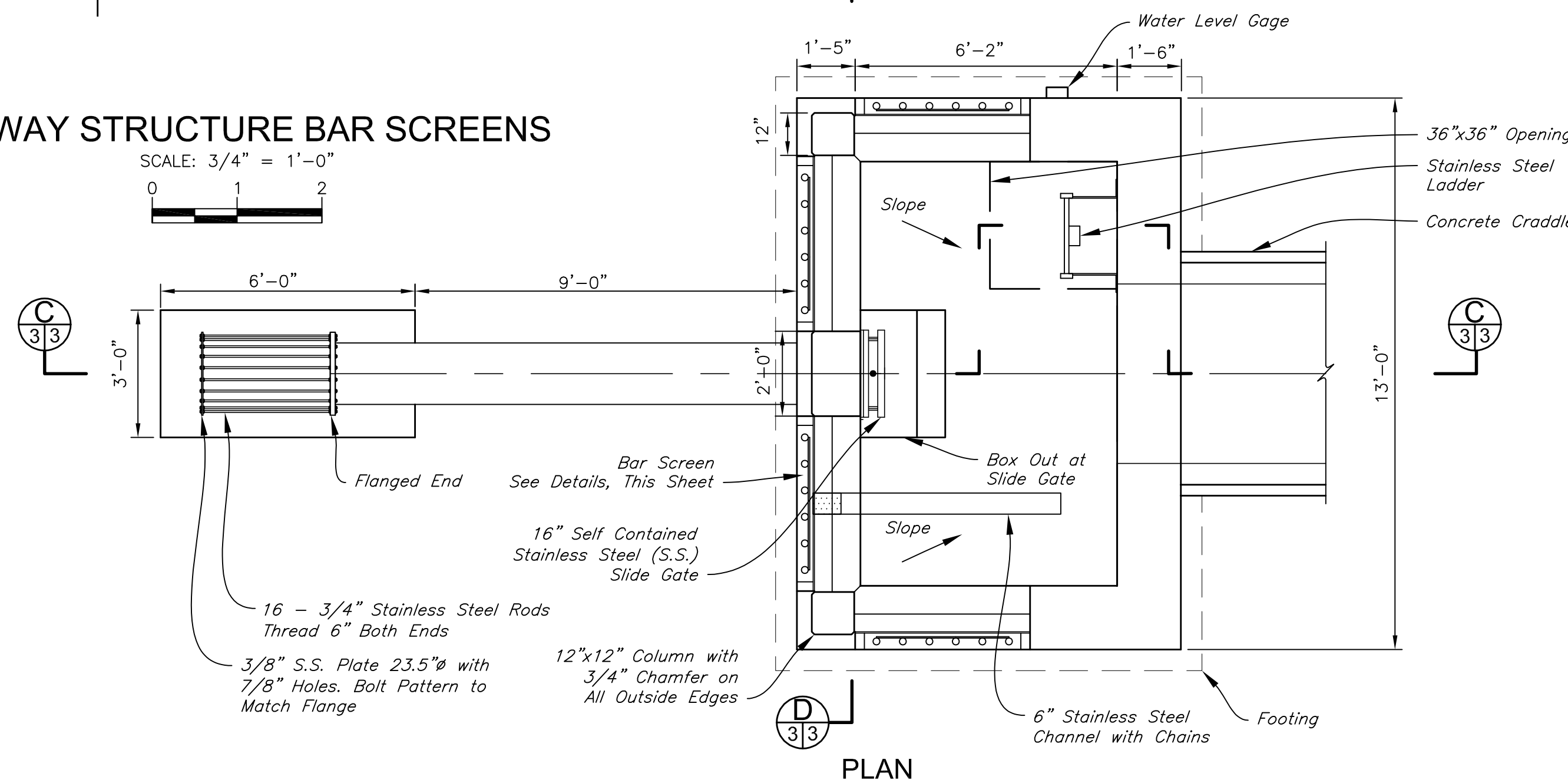
SECTION E
SCALE: 3" = 1'-0"



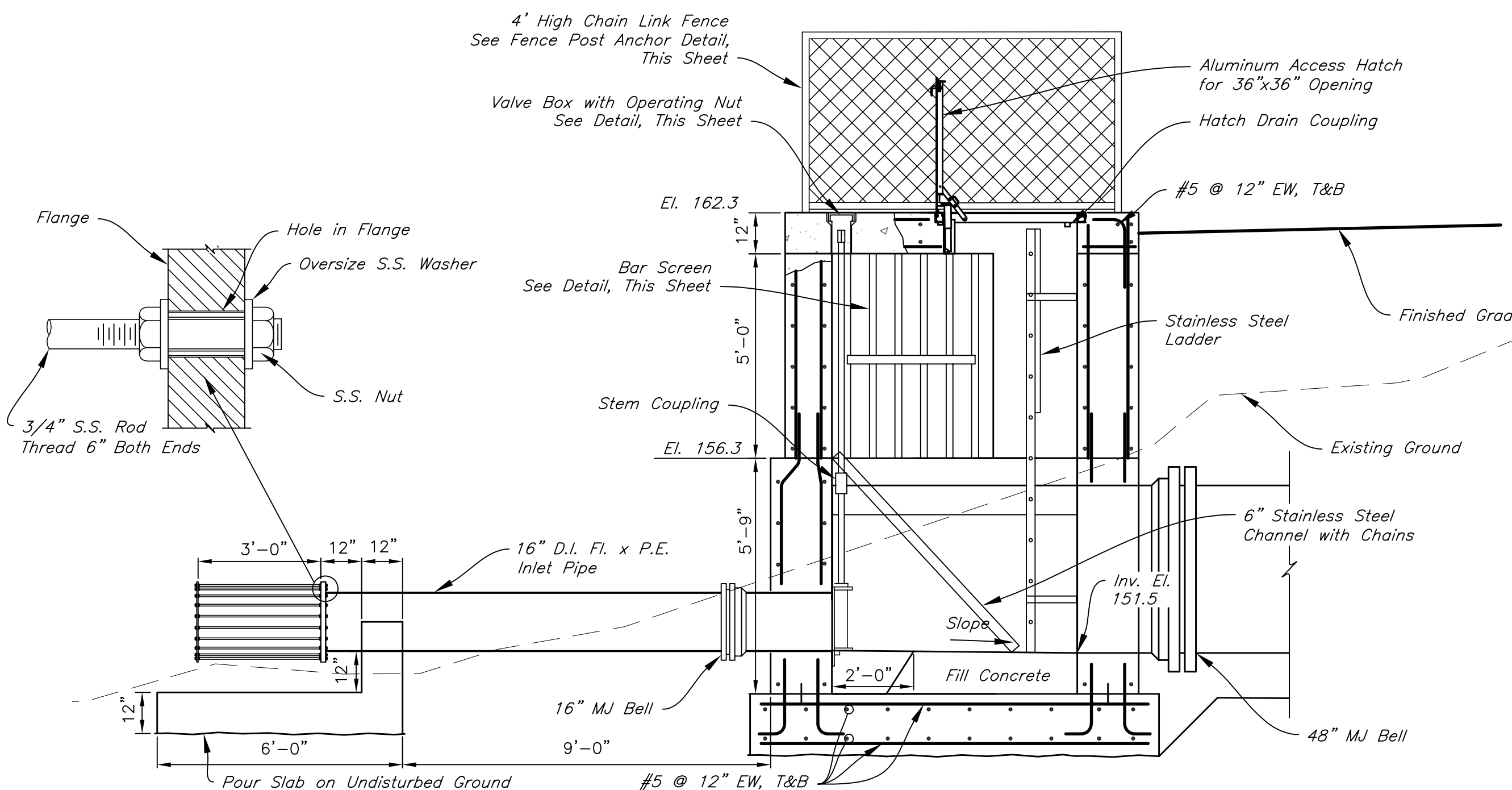
PLAN

SPILLWAY STRUCTURE BAR SCREENS

SCALE: 3/4" = 1'-0"



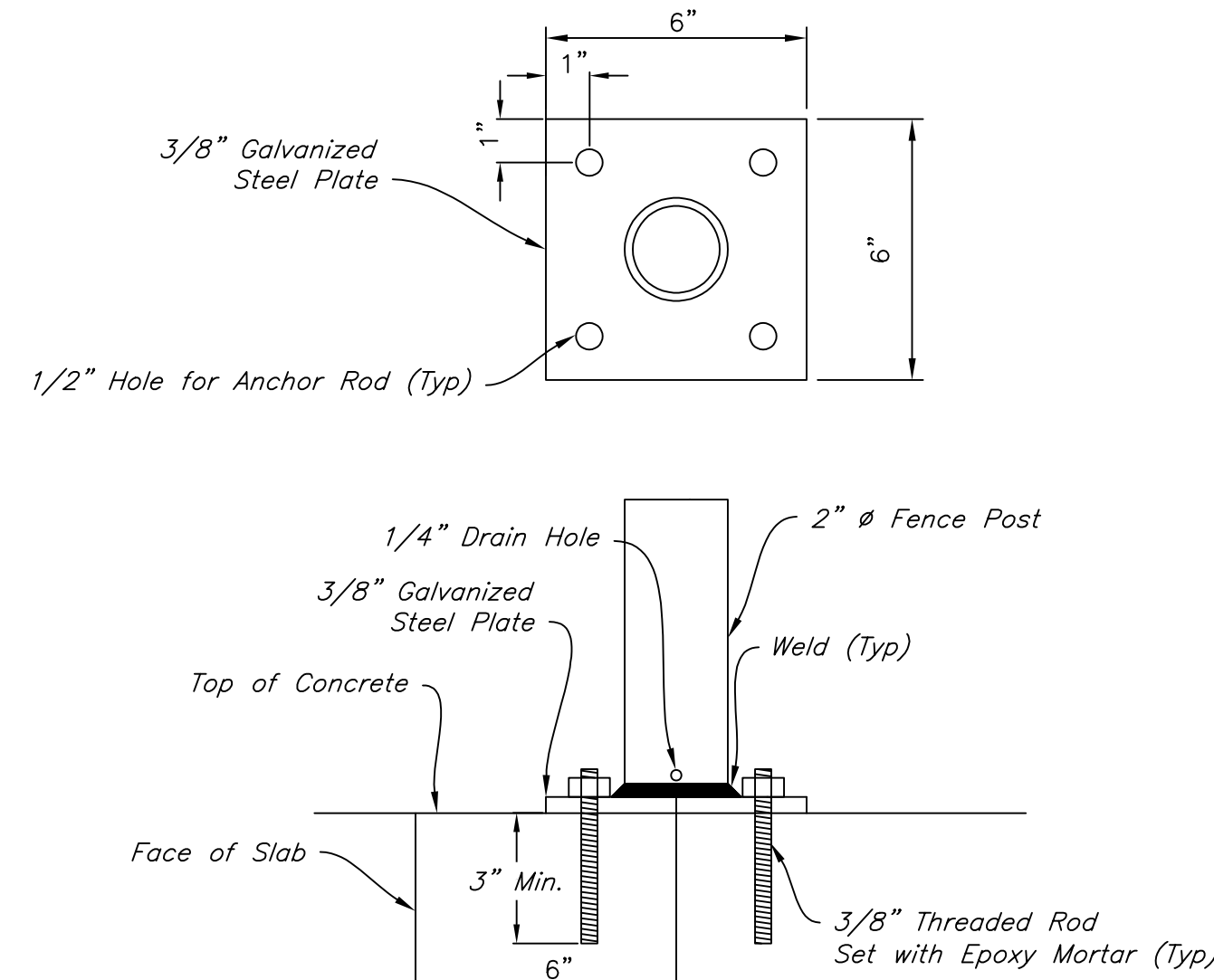
PLAN



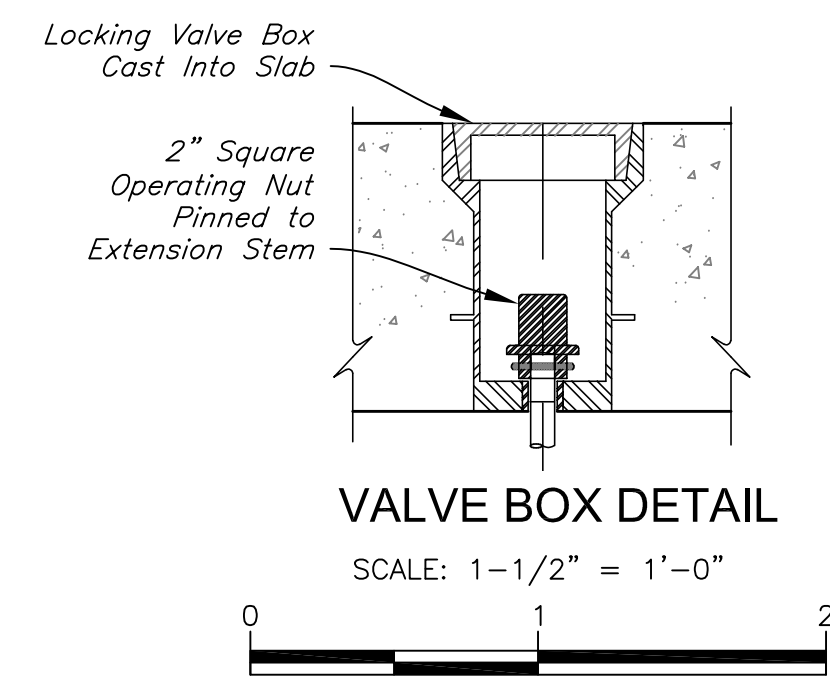
SECTION C

GATE CHAMBER AND SPILLWAY

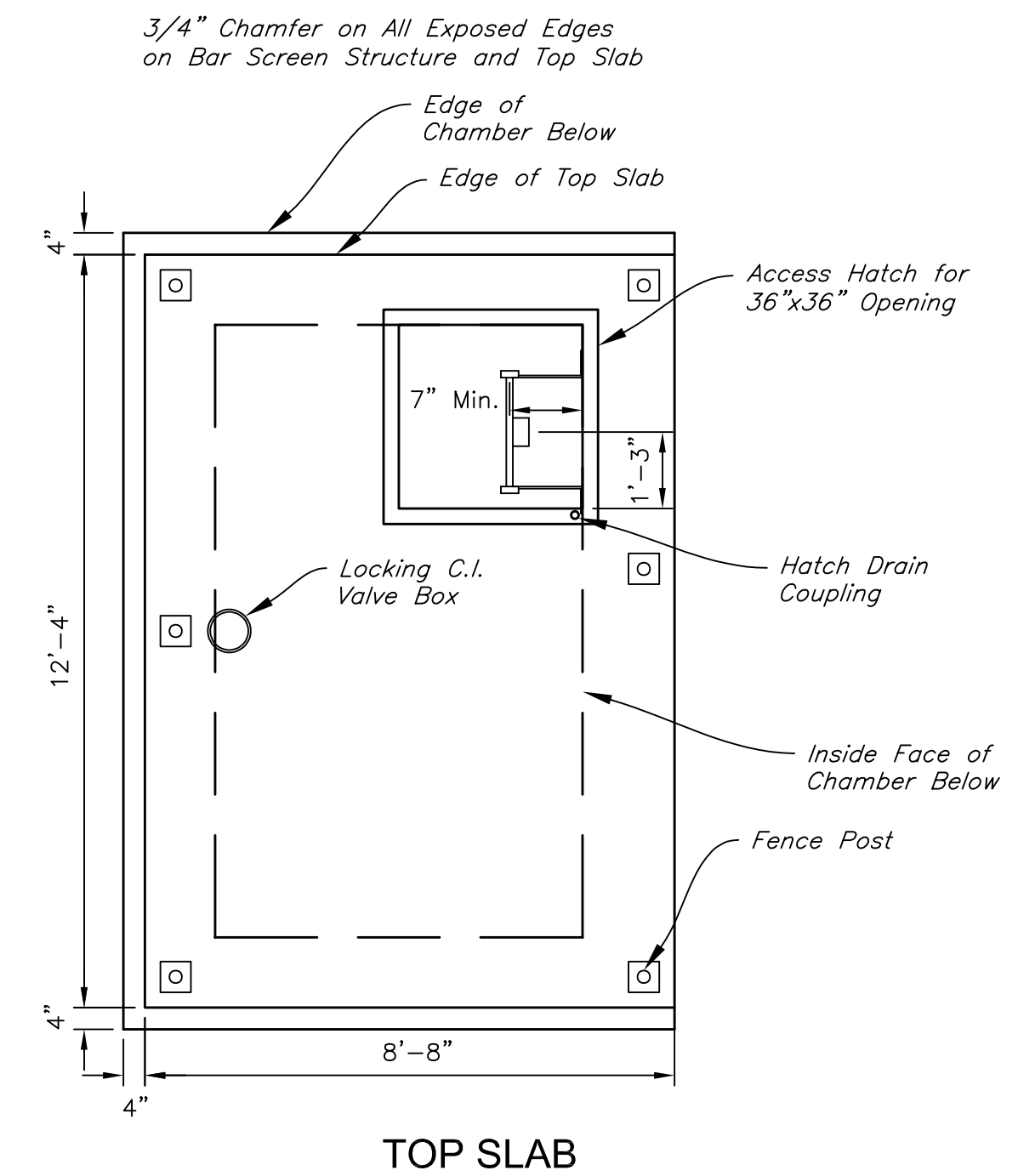
SCALE: 3/8" = 1'-0"



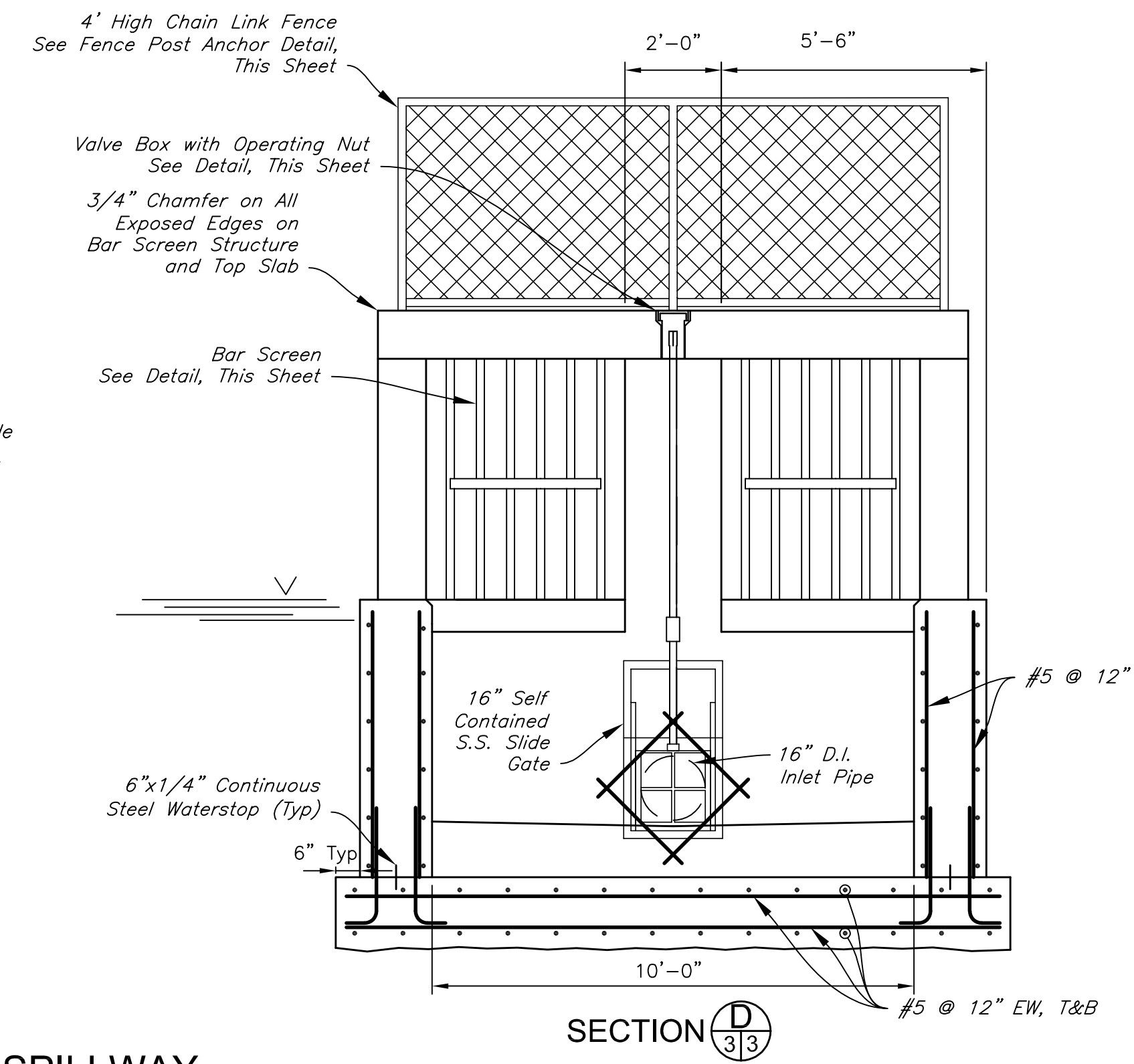
FENCE POST ANCHOR DETAIL
NOT TO SCALE



VALVE BOX DETAIL
SCALE: 1-1/2" = 1'-0"



TOP SLAB



SECTION D

CITY OF MERIDEN, CONNECTIUT

RECONSTRUCTION OF
BEAVER POND DAM

Drawn By: KTD/SSC
Designed By: WSA
Checked By: SAC
Approved By: WSA

GATE CHAMBER, SPILLWAY AND
BAR SCREEN SECTION AND DETAILS

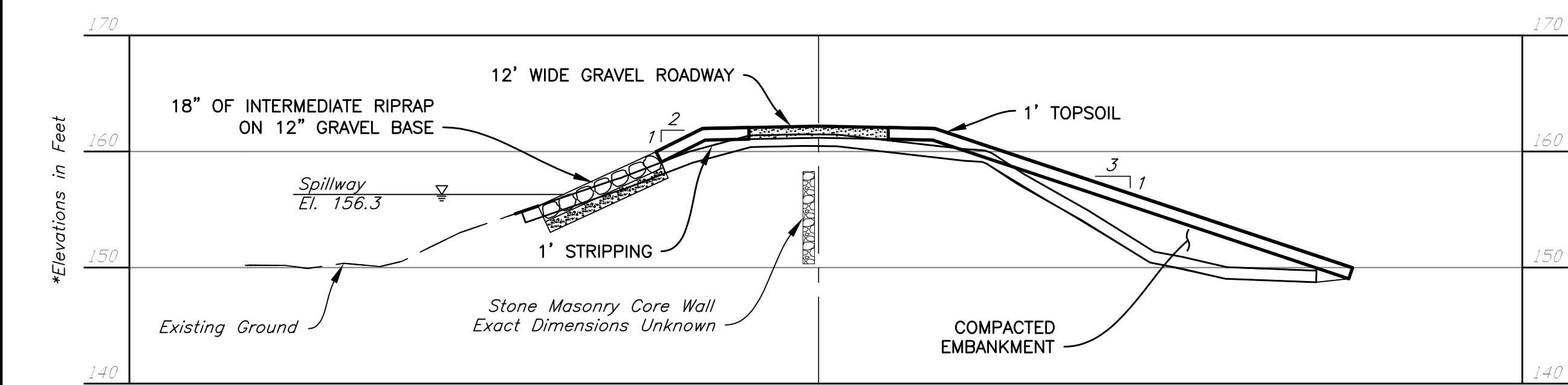
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Date
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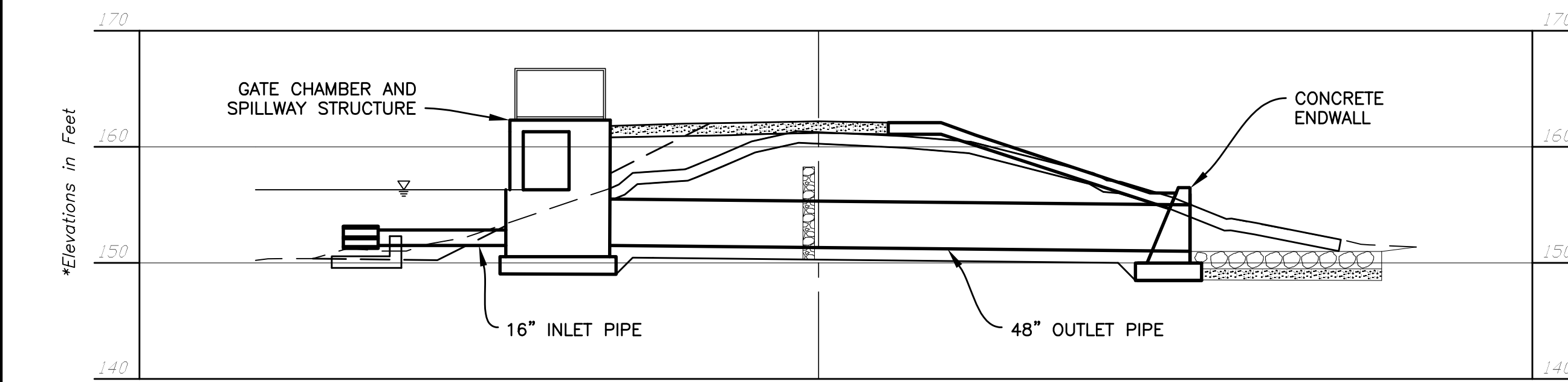


TATA & HOWARD
11003
No. 11003
Professional Engineer
State of Connecticut
T&H No.: 5977
DATE: AUGUST 2020
SCALE: AS NOTED

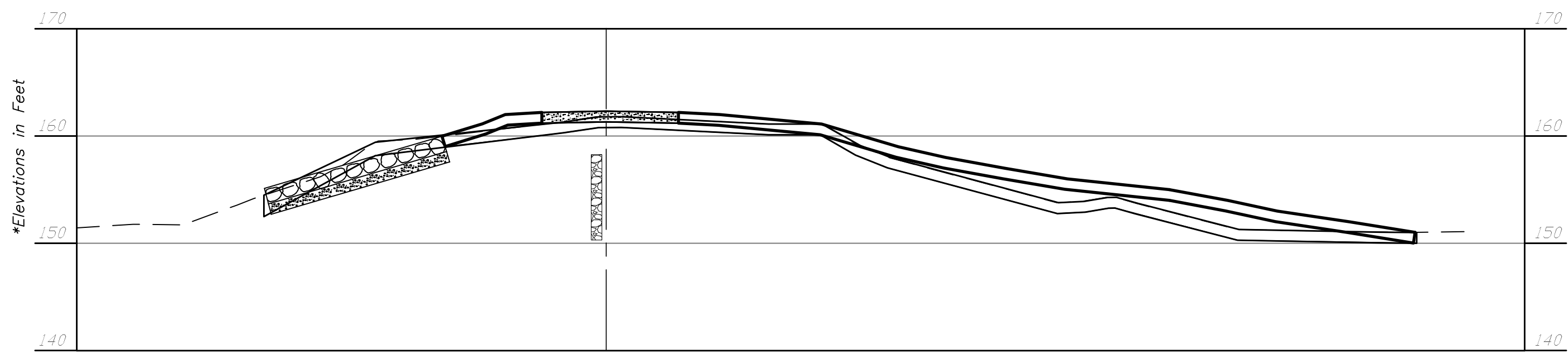
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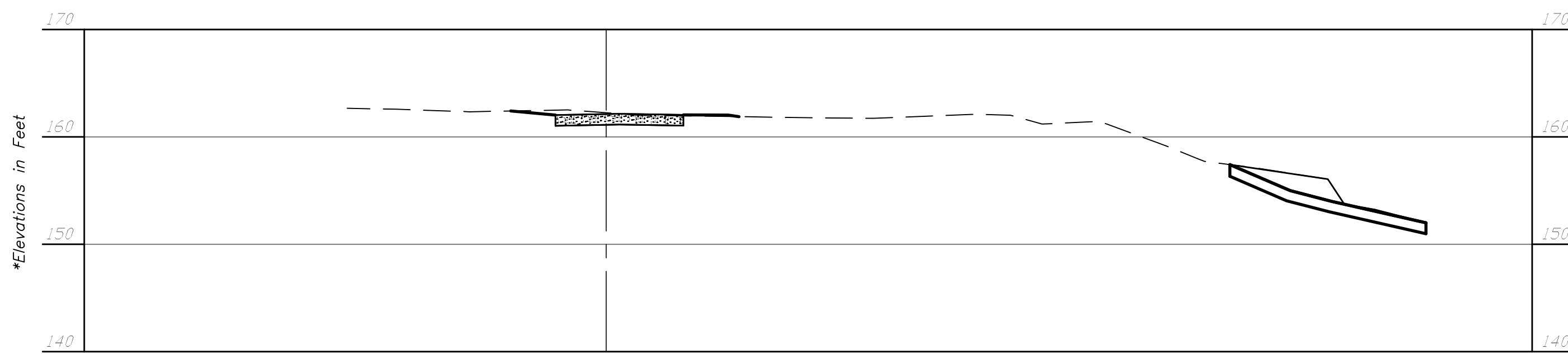
STA. 2+00



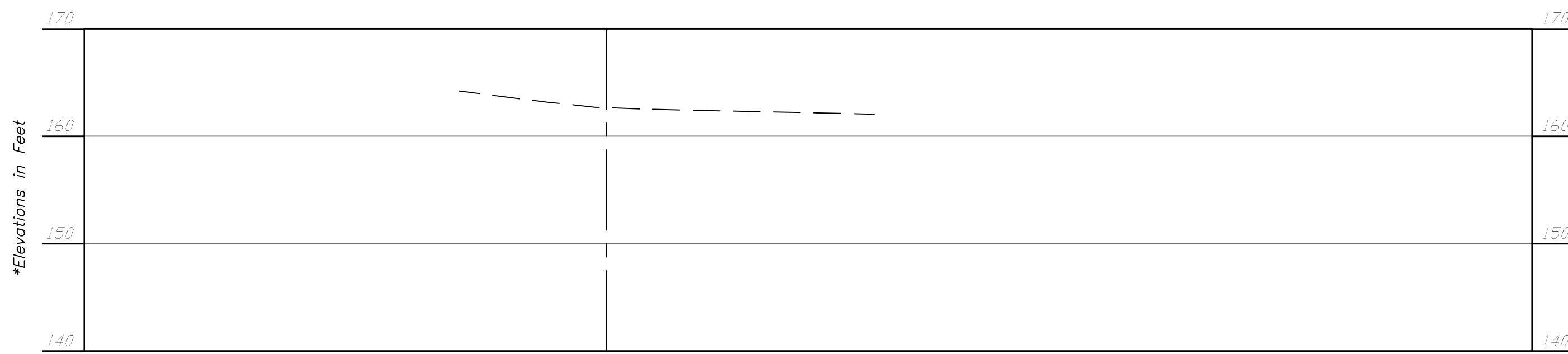
STA. 1+50



STA. 1+00

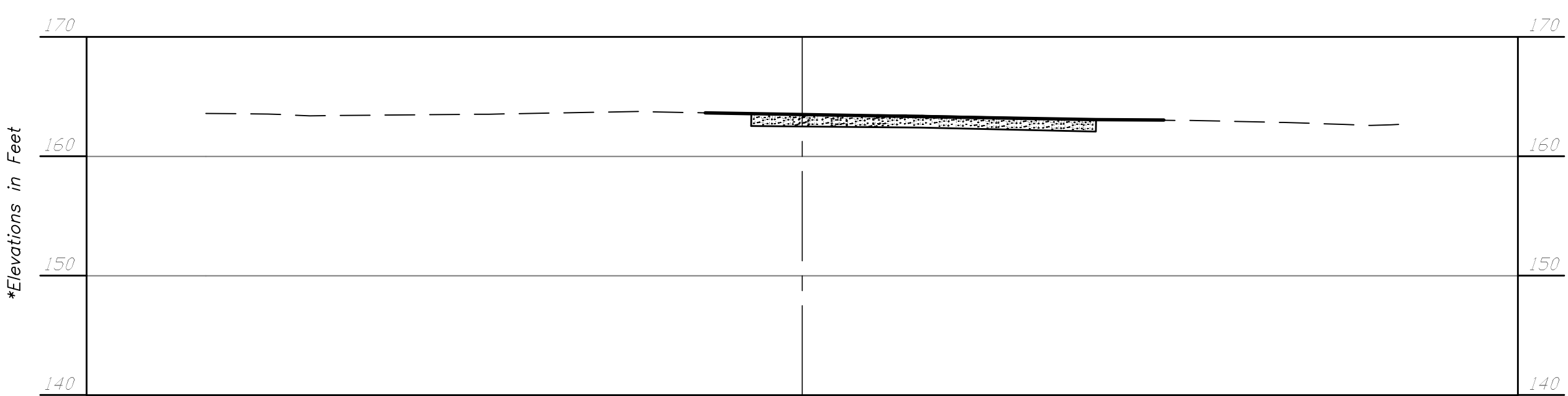


STA. 0+50

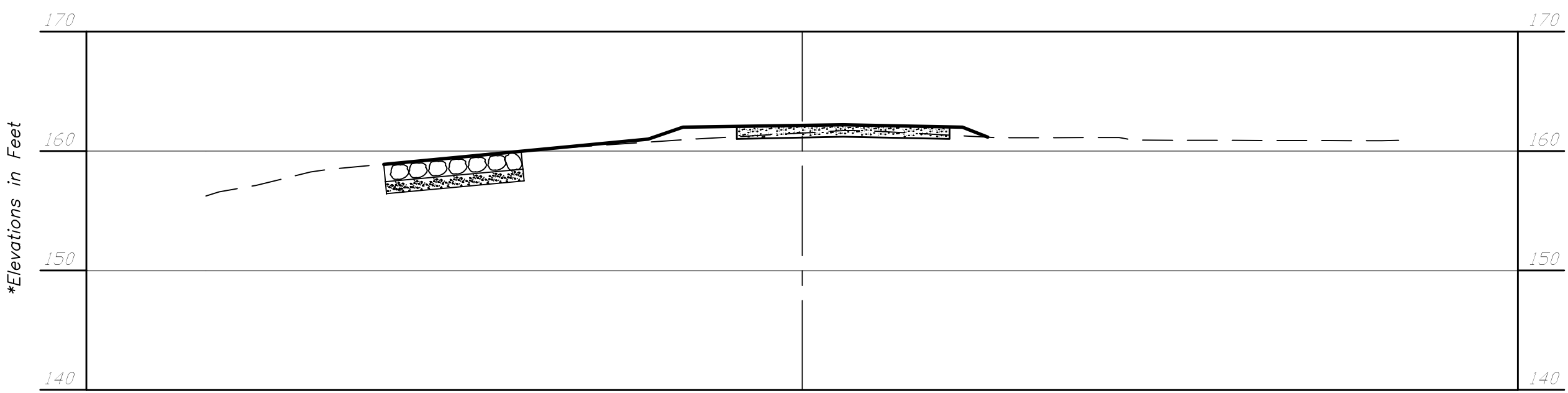


STA. 0+00

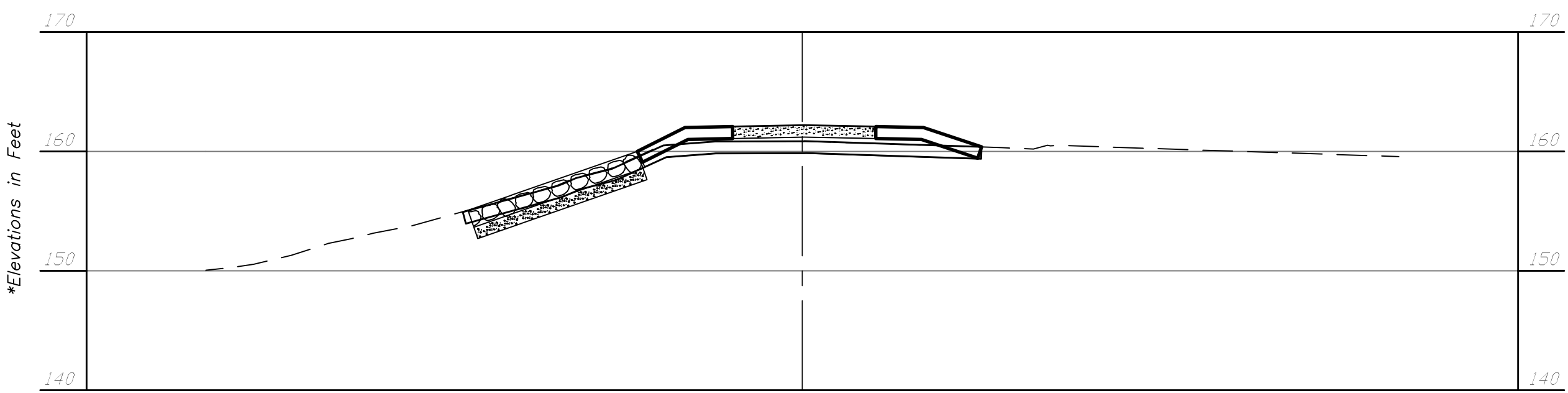
*Elevations Shown Refer to NAVD 1988.



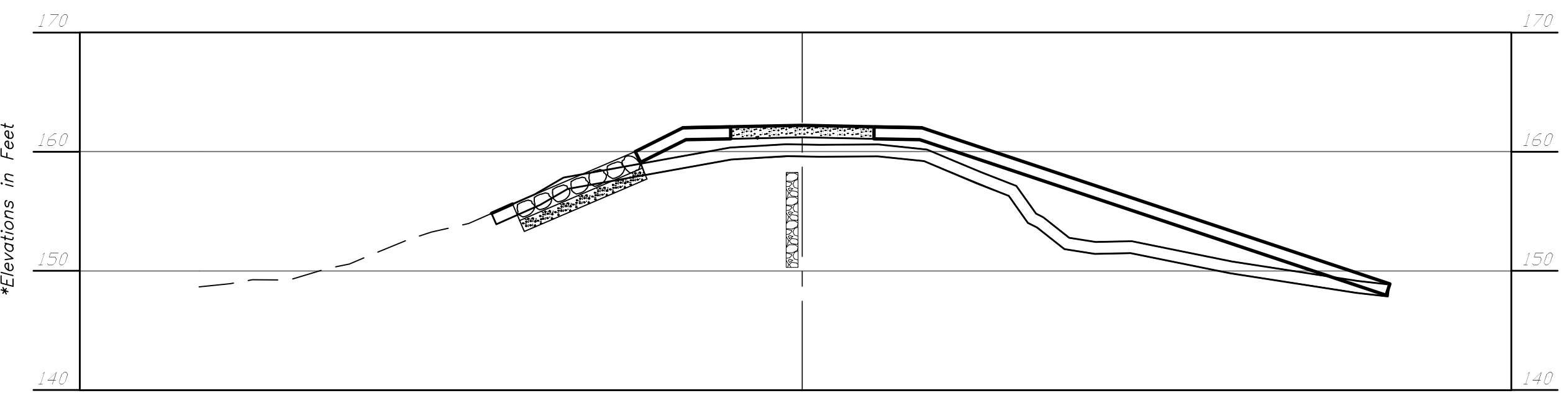
STA. 4+50



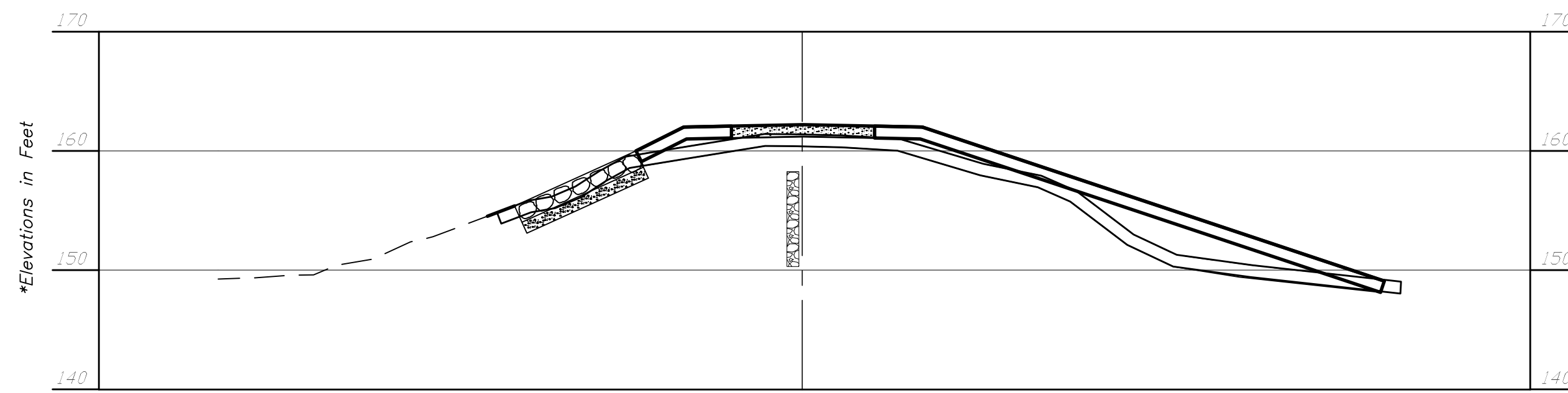
STA. 4+00



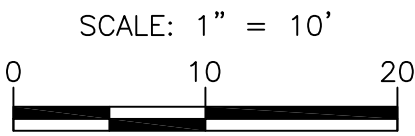
STA. 3+50



STA. 3+00



STA. 2+50



CITY OF MERIDEN, CONNECTIUT	RECONSTRUCTION OF BEAVER POND DAM			Approved By: WSA
	DAM EMBANKMENT SECTIONS			Designed By: WSA
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