

CONTRACT BIDDING DOCUMENTS FOR

UNDERGROUND STORAGE TANK REPLACEMENT At HARWINTON CONSOLIDATED SCHOOL


Justin Downes
SOY approval

BID # 2025-01


Brandon Jacques
Health Department 12-15-25


Terence Fennotti
Fire Marshal 10/26/2025



TOWN OF HARWINTON

Reviewed for Code Compliance

Sign: 

Date: 10/28/25



PROJECT INFORMATION

UNDERGROUND STORAGE TANK REPLACEMENT
at
HARWINTON CONSOLIDATED SCHOOL
115 Litchfield Road
Harwinton, CT 06791

OWNER
Regional School District No. 10
24 Lyon Road
Burlington, CT 06013

OWNER'S PROJECT MANAGER

RICH MILLER
DIRECTOR OF FACILITIES

ENGINEER
Fuss & O'Neill, Inc.
1 Financial Plaza
15th Floor
Hartford, Connecticut 06103

ALL QUESTIONS TO

RICH MILLER
DIRECTOR OF FACILITIES

Project Narrative

This project shall include removal of one 6,000-gallon underground storage tank ("UST") and installation of one new 6,000-gallon Convault aboveground storage tank ("AST") in the parking area of the Harwinton Consolidated School in Harwinton, CT. The new AST will utilize a submersible fuel pump to provide a new 100-gallon day tank with return pump in the basement-level boiler room of the Harwinton Consolidated School building ("School Building"). This daytank will connect to an existing Simplex fuel transfer pumpset. An **alternate bid** will consist of replacing this fuel transfer pumpset with a combination daytank/fuel transfer system.

The boilers in the School Building are currently fed by an existing temporary fuel tank located in a courtyard west of the boiler room. This temporary fuel tank does not interfere with the removal or installation of the new fuel system and will remain in place until the new fuel system is installed. The existing tank overfill alarm and automatic tank gauge will be replaced as part of this project. The parking area will be modified to add parking and replace the fence on the west side of the drive area as part of this project.

Contaminated soil removal, if encountered in the performance of the Work, will be part of this project, and will be performed by the Contractor on a unit price basis per the specifications contained in the Contract Documents. Soil testing will be performed by the Engineer.

Work for the project by the contractor awarded the contract for the project must be coordinated with the Regional School District No. 10 Director of Facilities, Rich Miller. The project site will be available for performance of contract work from 7AM through 4PM, including Saturday and Sunday if needed. The site and work area must be kept clean, free of hazards, and protected at all times by the contractor awarded the contract for this project.

The scope of work to be performed for the Project will include, but not necessarily be limited to, all labor, materials, equipment, services, systems, machinery, controls, and incidentals necessary to complete the construction of the Project in accordance with, as described in, and as may be reasonably inferable from the Project Drawings, Specifications, and other Bidding Documents, and compliance with all applicable federal, state and local codes.

Regional School District No. 10

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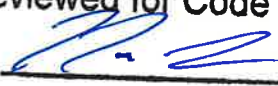

Justin Downes
Soil official


Brandon Jacques 12-15-25
TAHD


Terrence Ferrante, 10/29/2025
Fire Marshal

TOWN OF HARWINTON

Reviewed for Code Compliance

Sign: 

Date: 10/28/25



List of Drawings

HARWINTON CONSOLIDATED SCHOOL UST REMOVAL/REPLACEMENT, JUNE 9, 2025, STATE PROJECT NO: 210-0037CV/OT, PERMIT SET, Prepared for Regional School District 10, 24 Lyon Road, Burlington, CT 06013 by Fuss & O'Neill, One Financial Plaza, 15th Floor, Hartford, CT 06103

<u>NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
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MS-100	Mechanical Demolition and New Work Site Plan	06/09/2025
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M-101	Mechanical First Floor New Work Plan	06/09/2025
M-501	Mechanical Details	06/09/2025
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INVITATION TO BID
Regional School District No. 10
Underground Storage Tank Replacement
Invitation to Bid # 2026-01
State Project No. 210-0037CV/OT

On behalf of Regional School District No. 10 ("RSD10"), the Regional School District No. 10 Board of Education (the "Board") and the Regional School District No. 10 Board of Education Building Committee ("RSD10 BC") are soliciting sealed bids from responsible qualified contractors for construction and related services for the removal and replacement of one 6,000-gallon underground storage tank ("UST") at the Harwinton Consolidated School ("the "Premises") located at 115 Litchfield Road in Harwinton, CT (the "Project").

The Work for the Project generally consists of removal of one underground storage tank, installation of one aboveground storage tank, indoor daytank, and parking lot modifications, including all labor, materials, equipment, and incidentals necessary to complete the construction of the Project in accordance with the specifications contained in and the requirements of the Bidding Documents.

Sealed bids with the words "**SEALED BID – HARWINTON CONSOLIDATED SCHOOL UNDERGROUND STORAGE TANK REMOVAL PROJECT – BID# RSD10 2026-01: Attention: Richard Miller**" and the bidder's name all clearly marked on the outer envelope, must be received by the RSD10 BC at the RSD10 Office of Director of Finance and Operations within the RSD10 Central Office located at 24 Lyon Road, Burlington, CT, 06013, no later than **12:00 p.m. EST on Tuesday, April 21, 2026**, at which time bids timely received and which are submitted in accordance with the requirements of the Instructions to Bidders will be opened publicly in the RSD10 Central Office Conference Room. In the event of the closure of the RSD10 Central Office on April 21, 2026, bids will be opened publicly at 12:00 p.m. EST on the next business day that the RSD10 Central Office is open. Any bid received after the time and date specified shall not be considered. Bid submissions must be delivered in hard copy by mail, or by hand delivery, and shall include the original and three (3) copies. Faxed or emailed bid submissions will not be accepted.

This Invitation to Bid, Instructions to Bidders, drawings, specifications, and other Bidding Documents (as defined in the Instructions to Bidders) may be accessed on the Department of Administrative Services (DAS) website <https://portal.ct.gov/das/ctsource/bidboard> under the State Procurement Marketplace, State Contracting Portal ("DAS Website"). To access the documents, click on the Contracting Organization, "Cities, Towns & Municipalities", and "Regional School District No. 10." Bidding Documents will also be available on RSD10's website at <https://www.region10ct.org> ("RSD10 Website"). Each bidder is responsible for checking the RSD10 Website and/or the DAS Website to determine if any addenda to the Bidding Documents have been issued.

A mandatory pre-bid walkthrough will be conducted at the Project site at 10:00 a.m. on Tuesday, March 31, 2026, at the Harwinton Consolidated School located at 115 Litchfield Road, Harwinton, CT 06791, for all interested bidders. The walkthrough will begin at the main entry of the school building. No bid shall be considered responsive by the RSD10 BC and the Board unless the Bidder shall have attended the mandatory pre-bid walkthrough. No visitors will be

allowed on the school Premises without an escort.

All questions by interested bidders concerning this Invitation to Bid shall be submitted in writing via email or letter to Richard Miller, Director of Facilities for RSD10 at MillerR@region10ct.org, no later than 10:00 a.m. EST, on **Friday, April 10, 2026** to be considered. Please see the Instructions to Bidders for details regarding bid questions.

This Project is subject to the prevailing wage law requirements of CGS Section 31-53, *et seq.* Current prevailing wage rate information is included with the Bidding Documents.

The contract awarded to the successful Bidder will be partially funded by a Non-Priority List school building project grant from the State of Connecticut under the Department of Administrative Services ("DAS") school construction grant program for public schools.

The contractor who is selected to perform this State project must comply with CGS Sections 4a-60, 4a-60g, and 46a-68b through 46a-68f.

This contract will be subject to State contract compliance requirements, including nondiscrimination statutes and spending allocation goals. State law requires a minimum spending allocation goal of twenty-five (25%) percent of the state-funded portion of the contract for award to subcontractors holding current certification from DAS under the provisions of CGS Section 60g (25% of the total state-funded value with DAS-certified Small Businesses and 6.25% of the total state-funded value with DAS-certified Minority-, Women-, and/or Disabled-owned Businesses). The contractor must demonstrate good faith efforts to meet the spending allocation goals.

The Board and RSD10 BC hereby notify all interested bidders that it will ensure that in any contract entered into in connection with this Invitation to Bid, disadvantaged business enterprises will be afforded full opportunity to submit bids in response to this Invitation to Bid and will not be discriminated against on the grounds of race, color, national origin or sex, in consideration for this award.

Except as otherwise expressly provided in the Instructions to Bidders, bid security in the form of a surety Bid Bond in an amount equal to ten percent (10%) of the amount of the bid must be submitted with each bid, on the Bid Bond form included within the Bidding Documents. The selected contractor shall be required to provide performance and labor and material payment bonds, each in the amount of the total contract price.

No Bidder may withdraw its bid for a period of sixty (60) days after the bids are opened.

The Board and RSD10 BC reserve the right to amend or withdraw this Invitation to Bid for any reason, to accept or reject any or all Bids, to waive any informalities or non-material deficiencies or irregularities in any Bid, and to make such award (or make no award) of a contract in connection with this Invitation to Bid, all as determined by the Board, in its discretion, to be in the best interest of RSD10. A Bid may be rejected for irregularities of any kind, including without limitation, alteration of form, additions not called for, conditional proposals, and incomplete Bids. The Board and RSD10 BC reserve the right to reject any Bid if, in the opinion of the Board or RSD10 BC, the Bid does not meet the standard of quality

established and required by the Bidding Documents for the Work. Any or all Bids may be rejected if there is any reason to believe that collusion exists among two or more Bidders. The foregoing provisions are for illustrative purposes and shall in no way limit the right of the Board or RSD10 BC to reject any and all Bids. The foregoing provisions are for illustrative purposes and shall in no way limit the right of the Board or RSD10 BC to reject any or all Bids, in whole or in part. Any contract awarded in connection with this Invitation to Bid shall be awarded to the lowest responsible qualified bidder.

RSD10 IS AN AFFIRMATIVE ACTION/EQUAL OPPORTUNITY EMPLOYER. MBEs, WBEs and SBEs ARE ENCOURAGED TO BID.

REGIONAL SCHOOL DISTRICT NO. 10 BOARD OF EDUCATION

Richard Miller
Director of Facilities, Regional School District No. 10: March 25, 2026

**LEGAL NOTICE
INVITATION TO BID**

Regional School District No. 10
Underground Storage Tank Replacement
Invitation to Bid # 2026-01
State Project No. 210-0037CV/OT

On behalf of Regional School District No. 10 ("RSD10"), the Regional School District No. 10 Board of Education (the "Board") and the Regional School District Board of Education Building Committee ("RSD10 BC") are soliciting sealed bids from responsible qualified contractors for construction and related services for the removal and replacement of one 6,000-gallon underground storage tank ("UST") at the Harwinton Consolidated School ("the "Premises") located at 115 Litchfield Road in Harwinton, CT (the "Project").

Sealed bids with the words "**SEALED BID – HARWINTON CONSOLIDATED SCHOOL UNDERGROUND STORAGE TANK REMOVAL PROJECT – BID# RSD10 2026-01 Attention: Richard Miller**" and the bidder's name all clearly marked on the outer envelope, must be received by the RSD10 BC at the RSD10 Office of Director of Finance and Operations within the RSD10 Central Office located at 24 Lyon Road, Burlington, CT, 06013, no later than **12:00 p.m. EST on Tuesday, April 21, 2026**, at which time bids timely received and which are submitted in accordance with the requirements of the Instructions to Bidders will be opened publicly in the RSD10 Central Office Conference Room. In the event of the closure of the RSD10 Central Office on April 21, 2026, bids will be opened publicly at 12:00 p.m. EST on the next business day that the RSD10 Central Office is open. Any bid received after the time and date specified shall not be considered. Bid submissions must be delivered in hard copy by mail, or by hand delivery, and shall include the original and three (3) copies. Faxed or emailed bid submissions will not be accepted.

This Invitation to Bid, Instructions to Bidders, drawings, specifications, and other Bidding Documents (as defined in the Instructions to Bidders) may be accessed on the Department of Administrative Services (DAS) website <https://portal.ct.gov/das/ctsource/bidboard> under the State Procurement Marketplace, State Contracting Portal ("DAS Website"). To access the documents, click on the Contracting Organization, "Cities, Towns & Municipalities", and "Regional School District No. 10." Bidding Documents will also be available on RSD10's website at <https://www.region10ct.org> ("RSD10 Website"). Each bidder is responsible for checking the RSD10 Website and/or the DAS Website to determine if any addenda to the Bidding Documents have been issued.

A mandatory pre-bid walkthrough will be conducted at the Project site at 10:00 a.m. on Tuesday, March 31, 2026, at the Harwinton Consolidated School located at 115 Litchfield Road, Harwinton, CT 06791, for all interested bidders. The walkthrough will begin at the main entry of the school building.

All questions by interested bidders concerning the Invitation to Bid shall be submitted in writing in accordance with the Instructions to Bidders and other Bidding Documents. Please see the Instructions to Bidders and other Bidding Documents for details regarding bid questions.

Except as otherwise expressly provided in the Instructions to Bidders, a Bid Bond in an amount equal to ten percent (10%) of the total Bid amount must be submitted with each Bid. The selected contractor shall be required to provide performance and labor and material payment bonds each in the amount of the total contract price.

This Project is subject to the prevailing wage law requirements of Connecticut General Statutes (CGS) Section 31-53, et

seq. Current prevailing wage rate information is included with the Bidding Documents.

This contract is partially funded by a Non-Priority List school building project grant from the State of Connecticut under the Department of Administrative Services ("DAS") school construction grant program for public schools. This Project is subject to the prevailing wage requirements of CGS Section 31-53, *et seq.* This contract is subject to state contract compliance requirements, including spending allocation goals (25% SBE and 6.25% M/W/DisBE) and non-discrimination requirements enforced by the Commission on Human Rights and Opportunities.

The Board and RSD10 BC reserve the right to amend or withdraw the Invitation to Bid for any reason, to accept or reject any or all Bids, to waive any informalities or non-material deficiencies or irregularities in any Bid, and to make such award (or make no award) of a contract in connection with the Invitation to Bid, all as determined by the Board, in its discretion, to be in the best interest of RSD10. A Bid may be rejected for irregularities of any kind, including without limitation, alteration of form, additions not called for, conditional proposals, and incomplete Bids. The Board and RSD10 BC reserve the right to reject any Bid if, in the opinion of the Board or RSD10 BC, the Bid does not meet the standard of quality established and required by the Bidding Documents for the Work. Any or all Bids may be rejected if there is any reason to believe that collusion exists among two or more Bidders. The foregoing provisions are for illustrative purposes and shall in no way limit the right of the Board or RSD10 BC to reject any and all Bids. The foregoing provisions are for illustrative purposes and shall in no way limit the right of the Board or RSD10 BC to reject any or all Bids, in whole or in part. Any contract awarded in connection with this Invitation to Bid shall be awarded to the lowest responsible qualified bidder.

RSD10 IS AN AFFIRMATIVE ACTION/EQUAL OPPORTUNITY EMPLOYER. MBEs, WBEs and SBEs ARE ENCOURAGED TO BID.

REGIONAL SCHOOL DISTRICT NO. 10 BOARD OF EDUCATION

Richard Miller

Director of Facilities, Regional School District No. 10: March 25, 2026

INSTRUCTIONS TO BIDDERS

PART 1 – PROJECT DESCRIPTION AND SCHEDULE

1.1 Project Description

The Work for the Project generally consists of and includes the removal and replacement of a 6,000 gallon underground fuel tank (“UST”) at the Harwinton Consolidated School premises located at 115 Litchfield Road, Harwinton, CT 06791; installation of one new 6,000-gallon Convault aboveground storage tank (“AST”) in the parking area of the Harwinton Consolidated School with a submersible fuel pump to provide a new 100-gallon daytank with return pump in the basement-level boiler room of the Harwinton Consolidated School building (“School Building”); connection of the daytank to an existing Simplex fuel transfer pumpset; replacement of a tank overfill alarm and an automatic tank gauge for an existing temporary fuel tank located in a courtyard west of the boiler room of the School Building; modifications to the School Building parking area to create additional parking and to replace the fence on the west side of the drive area; and removal of contaminated soil if encountered during performance of the Work, and will include all labor, materials, equipment, services, systems, machinery, controls, and incidentals necessary to complete the construction of the Project in accordance with, and more particularly described in, and as may be reasonably inferable from the Bidding Documents. The specific work for this Project will be defined and included within the Contract Documents comprising the contract between RSD10 and the contractor selected for this Project.

1.2 Project Schedule

It is anticipated that the successful Bidder will commence construction of the Work at the Project site on or about June 22, 2026, and achieve Substantial Completion of the entirety of Work no later than August 25, 2026; and that final completion of the Work and the entirety of the Project will be achieved no later than October 15, 2026.

PART 2 – GENERAL INFORMATION

2.1 Definitions

- A. Addenda/Addendum: Written material which modify or interpret the Bidding Documents by additions, deletions, clarifications or corrections.
- B. Base Bid Amount: the total sum for which the Bidder offers to perform the Work described in the Bidding Documents.
- C. Bid: the complete submission provided by a Bidder in response to the Invitation to Bid.
- D. Bid Form: the form to be submitted by each Bidder attached hereto as **Attachment 1** to these Instructions to Bidders.
- E. Bidder: a person or entity who submits a Bid. A Sub-bidder is a person or entity who submits a bid to a Bidder for materials, equipment and/or labor for a portion of the Work.
- F. Bidding Documents shall include all of the documents identified as Bidding Documents in Section 2.2 of these Instructions to Bidders.
- G. Bid Timeline: The dates applicable to this solicitation and the Bid submission process in connection with the Invitation to Bid and set forth in Section 5.1 of these Instructions to Bidders.
- H. Contract: the Contract for the Work to be performed for the Project, entered into by RSD10 and the Contractor for the Project.
- I. Contract Documents: All of the documents identified as Contract Documents in the Form of

Contract for Construction and such other documents as may be identified as Contract Documents in the Contract.

J. Contract Price: The Contract Sum set forth in the Contract.

K. Contractor: the Bidder selected by the Board for the Project in connection with the Invitation to Bid and awarded the Contract for the Project by the Board.

L. Invitation to Bid: the Invitation to Bid included in Section 001113.

M. Bid Submission Deadline: the date and time by which all Bids must be submitted as set forth in Section 5.1 of these Instructions to Bidders.

N. Bid Submission Documents: the documents required to be submitted as part of any Bid, listed on **Attachment 4** to these Instructions to Bidders.

2.2 Bidding Documents

A. The Bidding Documents shall include the Invitation to Bid, these Instructions to Bidders and all attachments hereto listed below, all addenda issued prior to the opening of Bids, and all other documents identified as "Bidding Documents" in these Instructions to Bidders (the "Bidding Documents"). The Bidding Documents include, without limitation:

1. Invitation to Bid (Section 001113)
2. Instructions to Bidders (Section 002113) with Attachments:
 - Attachment 1 – Bid Form (including Bid Form Schedule A and Bid Form Schedule B)
 - Attachment 2 – Non-Collusion Affidavit
 - Attachment 3 – Corporate Resolution
 - Attachment 4 – List of Required Bid Submission Documents
 - Attachment 5 – Standard Bid Bond Form
 - Attachment 6 – Insurance Requirements
 - Attachment 7 – Statement of Qualifications
 - Attachment 8 – Certificate of Compliance Re Connecticut General Statutes Section 31-57b
 - Attachment 9 – Form of Contract: AIA A101-2017 Agreement and A201-2017 General Conditions, as modified by RSD10.
3. Supplementary Conditions Section 007300
4. Prevailing Wage Rates Section 007344
5. All Specifications listed on the Table of Contents Section 000110
6. All Drawings listed on the List of Drawings Section 000115
7. All Addenda issued by RSD10 prior to the Bid Submission Deadline

B. Bidding Documents may be accessed on the Department of Administrative Services (DAS) website <https://portal.ct.gov/das/ctsource/bidboard> under the State Procurement Marketplace, State Contracting Portal ("DAS Website"). To access the Bidding Documents, click on the Contracting Organization, "Cities, Towns & Municipalities", and "Regional School District No. 10." Bidding Documents will also be available on RSD10's website at <https://www.region10ct.org> ("RSD10 Website"). Each bidder is responsible for checking the RSD10 Website and/or the DAS Website to determine if any addenda to the Bidding Documents have been issued.

C. Bidders shall use complete sets of Bidding Documents in preparing Bids. The Board and RSD10 BC do not assume any responsibility for errors or misinterpretations resulting from a Bidder's use of incomplete Bidding Documents.

D. The Board and RSD10 BC reserve the right to amend the Bidding Documents by issuance of Addendum if the Board and/or RSD10 BC deems it to be necessary, appropriate, or otherwise in the best interest of RSD10.

2.3 Requests for Information or Clarification

A. Any questions and requests for interpretation or information (collectively, "RFIs") from any prospective Bidder regarding the Invitation to Bid, these Instructions to Bidders, or other Bidding Documents, must be submitted in writing and, to be given consideration, must be received by the RSD10 BC on or before the deadline of submission of RFIs set forth in the Bid Timeline in Section 5.1 of these Instructions to Bidders, as it may be adjusted by Addendum in the discretion of the Board and/or RSD10 BC. RFIs shall be submitted by email to Richard Miller at MillerR@region10ct.org. Responses to all RFIs will be provided by written Addenda to the Bidding Documents. RFIs that are not submitted in accordance with this Section 2.3 will not be answered. RFIs answered other than by formal written Addenda published in accordance with this Section 2.3 will not be binding on RSD10 and will be without legal effect.

B. EX-PARTE COMMUNICATION: To ensure the bidding process for the Project is accordance with applicable law, RSD10 BC prohibits ex parte communication between any prospective Bidder or Bidder with any Board, RSD10 BC, or RSD10 officer, consultant or employee involved in the evaluation of Bids or award of the Contract to the selected Bidder which relates to the Bidding Documents or the Project, other than communications for the submission of an RFI, from the date of the Invitation to Bid until a decision to award a contract in connection with the Invitation to Bid (or to award no contract) has been made. Prohibited ex parte communications may be grounds for disqualifying the offending Bidder from consideration of their Bid.

C. Addenda including responses to RFIs will be published on the DAS Website and the RSD10 Website in accordance with the Bid Timeline included in Section 5.1 of these Instructions to Bidders, as it may be adjusted in the discretion of the Board or RSD10 BC. It is the responsibility of each prospective Bidder to check the DAS Website and the RSD10 Website from time to time to confirm whether any Addenda have been published. A Bidder's lack of knowledge of any Addenda that have been published as described above, shall not relieve the Bidder from its obligations under its Bid submission. Addenda, once published, will become a part of the Bidding Documents.

D. The Board and RSD10 BC reserve the right to respond or not to respond to specific questions, clarifications or requests concerning the solicitation and selection process.

2.4 Substitutions

A. The materials, products and equipment described in the Bidding Documents establish the

standard required for the function, dimension, appearance and quality to be met by any substitution proposed by a Bidder.

B. No proposed substitution will be considered unless the prospective Bidder's written request for approval of such substitution has been received by the RSD10 BC on or before the date for substitution requests set forth in the Bid Timeline in Section 5.1 of these Instructions to Bidders, as it may be adjusted by Addendum in the discretion of the Board and/or RSD10 BC. Requests for substitutions shall include the name of the material or equipment for which the proposed substitution is to be substituted, and a complete description of the proposed substitution including drawings, performance and test data, and other information necessary for a thorough evaluation of the proposed substitution. A statement setting forth changes that would be required in other materials, equipment or other portions of the Work shall be included with any request for approval of a substitution. The burden of proof of the merit of the proposed substitution is upon the Bidder. RSD10 BC's decision to approve or disapprove of a proposed substitution shall be final.

C. If RSD10 BC approves a timely submitted request for a substitution, such approval will be set forth in an Addendum. Bidders shall not rely upon approvals made in any other manner.

2.5 Addenda

A. Addenda, once published, will become a part of the Bidding Documents.

B. All Addenda will be issued in accordance with the Bid Timeline in Section 5.1 of these Instructions to Bidders, as it may be adjusted by Addendum in the discretion of the Board and/or RSD10 BC.

C. Each Bidder shall confirm in writing as required on the Bid Form submitted as part of its Bid that the Bidder is aware of and has reviewed all Addenda issued.

2.6 Bid Security

A. Except as otherwise provided in subparagraph B of this Section 2.6, each Bid must be accompanied by a bid bond in the form attached hereto as **Attachment 5**, in an amount equal to Ten Percent (10%) of the Base Bid Amount set forth on the Bid Form submitted by the Bidder, executed by the Bidder and a surety authorized issue bonds in the State of Connecticut. In lieu of a Bid Bond, a Bidder may submit a certified check, cashier's check, Treasurer's check, or money order in the same amount as required for a Bid Bond.

B. If the Bidder is a small contractor or a minority business enterprise as defined by Connecticut General Statutes (CGS) Section 4a-60g, the Bidder may, in lieu of providing a Bid Bond, certified check, cashier's check, Treasurer's check, or money order as bid security, provide a letter of credit in an amount equal to ten percent (10%) of the Base Bid Amount if the Base Bid Amount is less than One Hundred Thousand Dollars (\$100,000), or an amount equal to twenty-five percent (25%) if the Base Bid Amount exceeds One Hundred Thousand Dollars (\$100,000.00).

C. Failure of the selected Contractor to execute the Contract in accordance with its Bid and the Bidding Documents shall result in the forfeiture of the Contractor's bid security to RSD10 and/or entitle RSD10 to enforcement of the Bid Bond submitted by the Contractor.

D. Bids submitted without bid security in accordance with this Section 2.6 will be deemed nonresponsive and invalid.

E. RSD10 shall not be liable for the accrual of interest on any certified deposit check submitted in lieu of a Bid Bond.

F. All bid security will be refunded or returned to the unselected Bidders after award of the contract by the Board to Bidder selected as the Contractor. The check, Bid Bond, or letter of credit of the Bidder selected as the Contractor will be held in escrow by RSD10 BC until such time as the Board determines that the selected Bidder has or will meet their obligations as required under the Bidding Documents and its Bid. If the Bidder selected as the Contractor fails or refuses to execute the Contract within a reasonable time after notice by the Board or RSD10 BC that the Contract has been awarded to the selected Bidder, an amount representing the loss to RSD10 by reason of such failure or refusal shall be retained and paid into RSD10's account containing funds for the Project and/or the Bidder and its surety issuing a Bid Bond shall be required to perform their obligations under such Bid Bond.

G. Bid security will be retained until the Bidder selected as the Contractor and the Board have executed the Contract or such earlier time as the Board and/or RSD10 BC have withdrawn and/or cancelled the Invitation to Bid. Thereafter, the bid security furnished by all Bidders will be returned to them.

2.7 Performance and Payment Bond Requirements

A. Except as provided in subparagraph C of this Section 2.7, the Contractor will be required to provide a performance bond and labor and material payment bond, in an amount not less than 100% of the total contract price set forth in the Contract. The bonds must be issued by a surety rated A minus or better by A.M. Best and listed on the U.S. Department of Treasury's Listing of Approved Sureties. The bonds must be submitted to the RSD10 BC prior to or upon the execution of the Contract. The cost of such bonds shall be separately identified on the Bid Form but included in the total Bid amount.

B. The bonds shall comply with the following requirements:

1. It is preferred that the bonds be written on the AIA Document A312-2010 forms. Both bonds shall be written in the full amount of the Contract Price.
2. The bonds shall be dated the same date as the Contract.
3. RSD10 shall be named as the obligee on all bonds provided for the Project.
4. The Contractor shall require the attorney-in-fact who executes the required bonds on behalf of the surety to affix thereto a certified and current copy of the power of attorney.

C. If the Contractor is a small contractor or a minority business enterprise as defined by CGS Section 4a-60g, the Contractor may: (1) in lieu of providing performance bond, provide a letter of credit in an amount equal to ten percent (10%) of the Contract Price if the Contract Price is less than One Hundred Thousand Dollars (\$100,000.00), or an amount equal to twenty-five percent (25%) if the Contract Price exceeds One Hundred Thousand Dollars (\$100,000.00), and; (2) in lieu of providing a labor and material payment bond, provide a letter of credit in an amount equal to ten percent (10%) of the Contract Price if the Contract Price is less than One Hundred Thousand Dollars (\$100,000.00), or an amount equal to twenty-five percent (25%) if the Contract Price exceeds One Hundred Thousand Dollars (\$100,000.00).

D. Each Bidder shall furnish with its Bid, satisfactory evidence from its surety of such Bidder's ability to obtain the required performance bond and labor and materials payment bond, in the full amount of the Bidder's total Base Bid Amount, or, satisfactory evidence that it is a small contractor or a minority business enterprise as defined by CGS Section 4a-60g together with satisfactory evidence of its ability to provide to RSD10 a letter of credit in lieu of the required performance bond and/or a letter of credit in lieu of the required labor and material payment bond.

E. A labor and material payment bond will be required from all subcontractors, except that in accordance with CGS Section 49-41(a), a labor and material payment bond shall not be required to be furnished in relation to any sub-bid in which the total estimated cost of labor and materials under the subcontract with respect to which such sub-bid is submitted is less than One Hundred Thousand Dollars (\$100,000.00).

2.8 Insurance Requirements

A. The Bidder selected as the Contractor will be required to purchase and maintain, without interruption, from the date of commencement of the Work until the date of final payment, and for the additional periods specified in the Bidding Documents, insurance in accordance with the requirements set forth in **Attachment 6** to these Instructions to Bidders, and all insurance that may otherwise be required under any applicable laws.

B. The selected Contractor shall submit to RSD10, certificates of insurance or other evidence of compliance with the insurance requirements set forth in Attachment 6 to these Instructions to Bidders, at the time and in the manner set forth in Attachment 6.

C. The cost of the required insurance to the extent attributable to the Project shall be separately identified on the Bid Form but included in the Base Bid Amount of each Bidder's Bid.

2.9 Prevailing Wage Requirements

A. Prevailing wages are required on this Project in accordance with the rates attached hereto as Section 007344, pursuant to CGS Section 31-53(a) through (h), as amended. For further information on prevailing wage requirements, visit the Connecticut Department of Labor's website.

B. The Contractor and each subcontractor performing any Work for the Project shall be subject to provisions of the CGS Sections 31-53 and 31-55a concerning annual adjustments to prevailing wages.

C. The selected Contractor and all subcontractors shall be responsible for identifying any adjustments made to Connecticut Department of Labor prevailing wage rate requirements throughout the life of the Contract. Such prevailing wage rate adjustments shall not be considered a matter for any Contract amendment or adjustment to the Contract Price. No escalation clauses shall be included in any Bid submission. Wage Rates will be posted each July 1st on the Departments of Labor websites: https://portal.ct.gov/dol/divisions/wage-and-workplace-standards/prevailing-wage?language=en_US

D. The Contract shall provide, and the selected Contractor and subcontractors for the Project shall comply with the following: "The wages paid on an hourly basis to any person performing the work of any mechanic, laborer or worker on the Work herein contracted to be done and the amount of payment or contribution paid or payable on behalf of each such person to any employee welfare fund, as defined in subsection (i) of CGS Section 31-53, shall be at a rate equal to the rate customary or prevailing for the same work in the same trade or occupation in the Town of Harwinton. Any contractor who is not obligated by agreement to make payment or contribution on behalf of such persons to any such employee welfare fund shall pay to each mechanic, laborer or worker as part of such person's wages the amount of payment or contribution for such person's classification on each pay day."

E. Certified Payrolls: In accordance with CGS Section 31-53 Certified Payrolls with a statement of compliance shall be submitted monthly by the Contractor to RSD10 BC and certified payrolls for the Contractor and all subcontractors working during the period shall be submitted with each Application for Payment submitted by the Contractor, covering all activities relating to such Application for Payment. Contractor shall provide pay scale verification as may be required by the Connecticut Department of Labor.

F. Each Bidder shall confirm prior to submission of its Bid that the Bidder is carrying in its Bid and Base Bid Amount the proper trade classification for all Work required for the Project including composite crews of different trade classifications if needed, as required by the Connecticut Department of Labor and/or union agencies if applicable.

G. Forms and additional information can be found on the Connecticut Department of Labor's website.

2.10 Non-Resident Contractors

Any Bidder that is a Non-Resident Contractor shall be prepared, if identified as the selected Contractor, to provide upon award of the Contract, a certificate from the Connecticut Commissioner of Revenue Services which evidences that the Bidder has complied with the requirements of CGS Section 12-430(7). For further information, contact the Connecticut Department of Revenue Services.

2.11 Incurring Cost

Each Bidder is solely responsible for any and all costs and expenses incurred in the preparation and submission of its Bid.

PART 3 – NON-DISCRIMINATION and EQUAL EMPLOYMENT OPPORTUNITY COMPLIANCE REQUIREMENTS

3.1 Non-Discrimination in Employment

A. The Contract will be partially funded by a Non-Priority List school building project grant from the State of Connecticut under the DAS school construction grant program for public schools. The contractor who is selected to perform this State project must comply with CGS Sections 4a-60, 4a-60a, 4a-60g, and 46a-68b through 46a-68f, inclusive, and Sections 46a-68j-21 through 43 of the Regulations of Connecticut State Agencies (RCSA).

B. The Contractor and all subcontractors and suppliers, shall be subject to, and shall comply with requirements of all applicable Federal, state and local statutes, ordinances and regulations relating to discrimination in employment including, without limitation, those set forth below ("Non-Discrimination Requirements").

CGS Section 4a-60:

- (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, sexual orientation, gender identity or expression, status as a veteran, status as a victim of domestic violence, status as a victim of sexual assault or status as a victim of trafficking in persons, 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; and the contractor further agrees to take affirmative action to ensure that applicants with job-related qualifications are employed and that employees are treated when employed without regard to their race, color, religious creed, age, marital status, national origin, ancestry, sex, gender identity or expression, sexual orientation, status as a veteran, status as a victim of domestic violence, status as a victim of sexual assault or status as a victim of trafficking in persons, 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 on Human Rights and Opportunities ("CHRO");
- (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 on Human Rights and Opportunities 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; and
(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.

It shall be the responsibility of each Bidder to be familiar with and knowledgeable about the non-discrimination Requirements.

C. The Contractor may be required to undergo a pre-award compliance review for the purpose of ascertaining whether, in the opinion of the Board and RSD10 BC the Contractor is willing and/or capable of complying with the Non-Discrimination Requirements.

D. Spending Allocation Goal Participation: The Contract will be subject to State contract compliance requirements, including nondiscrimination statutes and spending allocation goals. The Contractor who is selected to perform this State project must comply with CONN. GEN. STAT. §§ 4a-60, 4a-60g, and 46a-68b through 46a-68f. Connecticut State law requires a minimum spending allocation goal 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 under the provisions of CONN. GEN. STAT. § 4a-60g. (25% of the total state-funded value with DAS-certified Small Businesses and 6.25% of the total state-funded value with DAS-certified Minority-, Women-, and/or Disabled-owned Businesses.) The Contractor must demonstrate good faith effort to meet the spending allocation goals. The Contractor is responsible for ensuring the SBE/MBE firms that have been selected are eligible contractors. and must submit a Good Faith Efforts Plan to CHRO.

E. As required under CGS Section 46a-68c and any regulations and requirements of CHRO, a Good Faith Efforts Plan must be filed by the Contractor who is selected to perform this Project with the CHRO within thirty (30) days following the intent to award notice, and must be approved by the CHRO prior to the award of the construction Contract. If required by CHRO, the Contractor must file a written or electronic non-discrimination certification with the CHRO. Information and required forms can be found at: <https://portal.ct.gov/chro/contract-compliance/contract-compliance/contract-compliance-forms-and-reports>

F. All provisions of all applicable State Labor Standards must be complied with under the Contract. RSD10 is an Affirmative Action Equal Opportunity Employer. The selected Contractor will not discriminate or permit discrimination against any person or group of persons on the grounds of 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 except as permitted by law in the case of a bona fide occupational qualification or need.

The selected Contractor shall provide CHRO with such information requested by the CHRO concerning the employment practices and procedures of the selected Contractor. The Bidder confirms and represents that it is an Affirmative Action/Equal Opportunity Employer.

G. The selected Contractor shall provide any/all additionally required affirmative action statements, fair employment plans and non-discrimination programs and statements as might be required by the Board or RSD10 BC. In connection with the execution of its Bid, subsequent purchase orders, and/or contracts in connection with the Project, the selected Contractor shall not discriminate against any employee or applicant for employment on the grounds of 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 except as permitted by law in the case of a bona fide occupational qualification or need, and shall otherwise comply with all laws and regulations of the State of Connecticut applicable to equal employment opportunities as pertains to regional school districts.

PART 4 – GENERAL AND SPECIAL BIDDING CONDITIONS

4.1 Taxes

Tax Exempt Project: The Project is tax exempt. A certificate of tax exemption will be provided by RSD10 BC to the Contractor. State sales and use taxes are excluded except for taxes on certain rentals, tools, and other incidentals as determined by the State Department of Revenue and for which the Contractor is responsible. The successful Bidder shall familiarize themselves with current regulations of the State of Connecticut Department of Revenue Services. The tax on materials or supplies exempted by such regulations shall not be included as part of a Bid.

4.2 Form Of Contract

The Board and RSD10 BC intend to use as the Form of Contract for the Contract for Construction, and the selected Contractor will be expected to execute, the modified version of AIA Document A101-2017 Agreement (as so modified, the "Agreement") and the modified version of AIA Document A201-2017 General Conditions (as so modified, the "General Conditions"), and exhibits and other documents designated therein as Contract Documents, including modifications as appropriate to incorporate the terms of the selected Contractor's Bid which are accepted by RSD10. The form of Agreement and General Conditions are included as part of the Bidding Documents. Bidders should review the aforementioned documents.

By submitting a Bid, the Bidder warrants and certifies that if the Bidder is awarded the Contract for this Project, the Bidder will execute the aforementioned Contract Documents without condition, modification, or exception, except as required to incorporate the acceptable terms of the selected Contractor's Bid, which Contract Documents as-executed by RSD10 and the selected Contractors shall form and constitute the Contract. The selected Contractor shall execute the Agreement within five (5) days after presentation thereof by the Board to the selected Contractor and the Contractor shall include the provisions of the Contract Documents in each subcontract issued by the Contractor for the Project, with the applicability of terms to be adjusted appropriately. Notwithstanding the foregoing, the Board and RSD10 BC reserve the

right to modify the Form of Contract (and the Contract) prior to execution of the Contract as deemed by the Board and RSD10 BC to be in the best interest of the RSD10. If the selected Contractor fails to execute the Agreement within five (5) days after presentation of the Agreement by the Board, the selected Contractor shall forfeit its Bid Security and, at the option of the Board, the award of the Contract shall be withdrawn and become null and void. The Board may then proceed to award the Contract to the next lowest responsible qualified Bidder.

The Form of Contract will include a "Hold Harmless" indemnification, which shall include the interests of RSD10, the Board, the RSD10 BC, and the State of Connecticut.

4.3 Liquidated Damages

Liquidated damages shall apply as provided in the Form of Contract. Liquidated Damages may be assessed against the selected Contractor in the amount of Two Thousand Five Hundred Dollars (\$2,500.00) per calendar day that timely completion of the Work is delayed beyond the time required in the Contract.

4.4 Background Checks

The selected Contractor shall comply with all applicable laws including, without limitation, CGS Section 10-222c, as applicable. To the extent permitted by law, the selected Contractor shall perform (or cause to be performed) as regards all of its employees, agents, and representatives (each, a "Contractor Employee"), and all of the employees, agents, and representatives of subcontractors and sub-subcontractors (each, a "Subcontractor Employee"), who will be physically present at the Project site in connection with the Project, appropriate background checks on all such Contractor Employees and Subcontractor Employees. Such background checks shall include, at a minimum and without limitation, a search of both the Connecticut Department of Emergency Services and Public Protection's sexual offender registry and the Abuse and Neglect Registry of the Connecticut Department of Children and Families.

4.5 Miscellaneous

A. OSHA Training: Pursuant to CGS Section 31-53b (a) each contract for the construction, remodeling, refinishing, refurbishing, rehabilitation, alteration or repair of any public building project by the state or any of its agents, or by any political subdivision of the state or any of its agents, where the total cost of all work to be performed by all contractors and subcontractors in connection with the contract is at least One Hundred Thousand Dollars (\$100,000), shall contain a provision requiring that, not later than thirty days after the date such contract is awarded, each contractor furnish proof to the Labor Commissioner that all employees performing manual labor on or in such public building, pursuant to such contract, have 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, in the case of telecommunications employees, have completed at least ten hours of training in accordance with 29 CFR 1910.268. It is required that all on-site workers hold current OSHA 10-hour training certifications.

B. Waste Disposal: The Contractor will be responsible for removal and legal disposal of all construction waste/debris generated by the Project including dumpsters.

C. Hours of Operation: The normal hours of work on the Project site shall be 7:00am until 3:30pm unless other arrangements are made in advance with the RSD10.

PART 5 – BID TIMELINE, PROCEDURES AND SUBMISSION REQUIREMENTS

5.1 BID TIMELINE

Advertisement of Invitation to Bid/Bidding Documents Available:	March 25, 2026
Mandatory Pre-Bid Walkthrough at the Project Site	March 31, 2026
Deadline for Submission of Requests for Information and/or Request for Substitutions	April 10, 2026
Issuance of all Addenda including Responses to Requests for Information and Requests for Substitutions by:	April 15, 2026
Bid Submission Deadline (and Bid Opening)	April 21, 2026
Selection of Successful Bidder/Letter of Intent to Award	April 28, 2026
Contract Execution	May 12, 2026
Start Construction (on or about)	TBD

The Board and RSD10 BC reserve the right to adjust and/or extend the dates and times set forth in the foregoing Bid Timeline as best serve the interests of RSD10. Any such adjustment and/or extension will be set forth in an Addendum to the Bidding Documents and posted on the State Contracting Portal and RSD10 Website.

5.2 Pre-Bid Walkthrough

A **mandatory** pre-bid walkthrough will be conducted at the Project site at 10:00 a.m. on **Tuesday, March 31, 2026**, at the Harwinton Consolidated School located at 115 Litchfield Road, Harwinton, CT 06791, for all interested bidders. The walkthrough will begin at the main entry of the school building. No bid shall be considered responsive by the RSD10 BC and the Board unless the Bidder shall have attended the mandatory pre-bid walkthrough. No visitors will be allowed on the school Premises without an escort.

Each Bidder shall fully inform themselves prior to bidding as to the existing conditions for the Project site. By submission of its Bid, each Bidder represents that the Bidder has: (i) made an examination of the Project Site; (ii) satisfied itself as to actual conditions of the Project Site and the requirements and scope of the Work required to be performed for the Project; (iii) considered Federal, State and local laws and regulations that may affect cost, progress, performance or furnishing of the work for the Project; and (iv) reviewed and become thoroughly familiar with the Bidding Documents including, without limitation, the Drawings and Specifications for the Project included in the Bidding Documents.

A. Sealed Bids will be received by the RSD10 BC at the RSD10 Office of Director of Finance and Operations within the RSD10 Central Office located at 24 Lyon Road, Burlington, CT, 06013, **until the Bid Submission Deadline set forth in the Bid Timeline in Section 5.1 as it may be adjusted by Addendum in the discretion of the Board and/or RSD10 BC**, at which time Bids received will be opened publicly in the RSD10 Central Office Conference Room and read aloud. In the event of the closure of the RSD10 Central Office on Bid Submission Deadline, Bids will be opened publicly at 12:00 p.m. EST on the next business day that the RSD10 Central Office is open. Bid submissions must be delivered in hard copy by U.S. Mail, Overnight Mail, or by hand delivery. Bids submitted by mail shall be addressed to:

**Regional School District No. 10 Central Office
24 Lyon Road
Burlington, CT 06013
Attention: Richard Miller, Director of Facilities**

Faxed or emailed Bid submissions will not be accepted. Bids received after the Bid Submission Deadline (as it may be adjusted by Addenda) will not be considered and will be returned unopened.

B. All Bid submissions must be enclosed in a sealed envelope addressed as described above and clearly marked with the following: **“SEALED BID – HARWINTON CONSOLIDATED SCHOOL UNDERGROUND STORAGE TANK REMOVAL PROJECT – BID# RSD10 2026-01 Attention: Richard Miller”** along with name of the Bidder clearly marked on the outer envelope.

C. All Bids must be submitted on forms included or identified in these Instructions to Bidders or the other Bidding Documents. The Board reserves the right to reject any Bid submission which reflects omissions, alterations of form, additions not called for, conditional or alternate Bids, or irregularities of any kind. All blank spaces in the Bid Form attached hereto as Attachment 1 - Bid Form, must be filled in (typed or printed in ink) completely, correctly and legibly, and all prices and quantities must be inserted where indicated. If any price or quantity is omitted, the Bid may be rejected. “Ditto” marks are not considered writing or printing and shall not be used. All Bids must be based on the exact materials and/or equipment specified in the Bidding Documents and referenced on the Bid Form. Bids containing different materials or equipment models than those specified will be considered non-responsive. A properly authorized representative of the Bidder must sign the Bid submission where indicated. If the proposal is made by an individual, the individual’s name and mailing address must be listed. If made by a partnership, limited liability company or a corporation, the Bid must be signed by an official of the partnership, limited liability company or corporation authorized to sign contracts, and must reflect the mailing address of the partnership, limited liability company or corporation.

Bidders are encouraged to “double check” and verify all pricing submitted as part of their Bid. An award of the Contract to the selected Contractor based on unit prices or other pricing submitted by a Bidder in error, will be nonetheless be deemed by the Board and RSD10 BC to be a firm Bid by the Bidder. “Adjustments” to correct any errors in Bid pricing may not be made to any Bid

after the Bid is opened.

The Board and RSD10 BC reserve the right to reject any Bid in which unit prices or other pricing are, in the opinion of the Board or RSD10 BC, unbalanced.

D. All Bid submissions must include one (1) original and three (3) paper copies of the documents listed on **Attachment 4 Bid Submission Documents**.

Any Bid which fails to include all the required Bid Submission Documents shall be deemed non-responsive and invalid.

E. On each copy of the Bid Form submitted, the Bidder shall insert the legal name of the Bidder and the Bidder's current business address and telephone number for communication and notice purposes. The name and title of each person signing the Bid Form on behalf of the Bidder shall be typed or printed below the signature. If the Bidder is a corporation, the Bid Form shall be signed on behalf of the corporation by a duly authorized officer of the corporation. If the Bidder is a limited liability company, the Bid Form shall be signed by a duly authorized Member or Manager of the company. If the Bidder is a partnership, the Bid Form shall be signed on behalf of the partnership by one or more duly authorized partners of the partnership. If the Bidder is an individual, that individual shall sign the Bid Form as an individual noting, as applicable, the name under which that individual is doing business.

F. All Bids must be submitted in the form and manner required by the Bidding Documents. Any Bid not submitted in the form and manner required by the Bidding Documents, or Bid which contains information, statements, conditions, or qualifications which place conditions or qualifications on a Bid for purposes of making an award of the Contract, or Bid which purports to alter any Bid Form terms, conditions, specifications, or forms that are part of the Bidding Documents, or Bid which contains modifications, revisions, conditions or deletions to the Bid Form included with the Bidding Documents for purposes other than inserting information requested of the Bidder per the Bid Form, or Bid which fails to provide all requested information on the Bid Form, or Bid which is not typewritten or is otherwise illegible, or Bid which fails to comply with all applicable legal requirements, shall be deemed non-responsive and invalid. Any Bid that does not fully respond to and comply with all requirements of the Bidding Documents for the submissions of Bids, may be deemed non-responsive and rejected by the Board and RSD10 BC. Neither the Board nor RSD10 BC be responsible for any errors or omissions of any Bidder in their Bid.

G. NON-COLLUSION STATEMENTS: In order for any Bid to be considered, a non-collusion affidavit must be submitted with the Bid. A sample non-collusion affidavit is included as part of the Bidding Documents, provided, Bidders may elect to submit their own notarized non-collusion affidavit.

5.4 Bid Pricing

A. Lump Sum Pricing. The compensation to be paid to the selected Contractor for the

performance of the Work for the Project, and each Bidder's Bid, shall be based on a lump sum price, except as otherwise provided in these Instruction to Bidders.

B. Allowances. Bidders shall include the following allowance in the base bid amount portion of each Bid: \$8000 for tank grave backfill materials and installation (approx. 20 CY) in accordance with technical specifications.

C. Unit Price Schedule

This subsection includes administrative and procedural requirements for the following unit prices and provisions that are to be included in and become part of the Contract, and to be used in evaluating additions to or deductions from the Work set forth in the Specifications, Drawings, and/or other Contract Documents.

Item Description	Unit of Measurement	\$ Add Unit Price	\$ Deduct Unit Price
Contaminated Soil Disposal	Ton		
Asphalt	Ton		
Backfill*	Cubic yard		
Fuel Disposal (in excess of 6")	Gallon		
Processed Aggregate Base*	Ton		
Granular Fill	Ton		

1. The \$ Add Unit Prices and \$ Deduct Unit Prices shown in the table above are a price per unit measurement for materials, services, or work added to or deducted from the Contract Sum by appropriate modification in the event the Base Bid Quantities for the Work listed in the above Schedule and described in the corresponding Section and/or Drawing are increased or decreased.
2. The Base Bid Quantities for each type of Work listed in the above Unit Price Schedule and described in the corresponding Section shall be included in the Contractor's Lump Sum Base Bid.
3. All items marked with an asterisk (*) in the unit price schedule above shall include the completion of the excavation, formation and compaction of sub-grade and the disposal of surplus or unsuitable materials in accordance with the Drawings and/or Specifications or as directed by the RSD10 and the Engineer.

5.5 Modification or Withdrawal of Bid

A. Bid Withdrawal: A Bid may only be withdrawn by written request of the Bidder received by Richard Miller (MillerR@region10ct.org) prior to the Bid Submission Deadline (as it may be adjusted by Addenda). No Bidder may withdraw its Bid within sixty (60) days after the date that Bids are actually opened (the "Bid Holding Period"). Bids withdrawn prior to the Bid Submission

Deadline may be resubmitted up to the Bid Submission Deadline, provided such resubmitted Bids are then fully in conformance with these Instructions to Bidders.

B. Extension: Bids shall be valid until the expiration of the Bid Holding Period. If for any reason the Contract will not be awarded and the Contract executed prior to the expiration of the Bid Holding Period, the Bid Holding Period may be extended by mutual agreement between RSD10 and the selected Contractor.

C. Bid Modification: A Bid may be modified by written notice signed by the Bidder and received by Richard Miller prior to the Bid Submission Deadline. Such notice shall be accepted only if duly executed and submitted in the same manner as required in these Instruction to Bidders for the submission of Bids.

D. Bid Clarification: The Board and RSD10 BC reserve the right to request clarifications from any Bidder. Such clarifications shall be provided at the Bidder's sole cost and expense.

5.6 Consideration of Bids

A. Bids submitted timely and in accordance with the requirements of theses Instruction to Bidders will be opened publicly.

B. RSD10 reserves the right to do any of the following without liability, including but not limited to:

1. Award in whole or in part;
2. Reject any and all Bids in whole or in part for misrepresentation or if the Bidder is not deemed to be qualified to perform the Project, or if the Bid limits, conditions or modifies any of the terms and conditions and/or specifications of the Bid;
3. Cancel the award or decide not to execute the Contract subsequent to award;
4. Terminate the solicitation and rebid the Project by advertising for new bids;
5. Waive technical defects, irregularities and omissions in a Bid if, in the Board's or RSD10 BC's discretion, the best interest of RSD10 would be served;
6. Revoke the award of the Contract if such award was made on the basis of inaccuracies and clerical errors; and
7. Reject a Bid as non-responsive if the Bidder does not make all required pre-award submittals within the timeframes designated by RSD10.

PART 6 – SELECTION PROCESS

6.1 Basis for Selection

A. Lowest Responsible Qualified Bidder: It is the intent of Board and RSD10 BC that the Board will award the Contract for the Project to the "lowest responsible qualified Bidder." The "lowest responsible qualified Bidder" will be the Bidder (i) whose Total Lump Sum Base Bid Amount set forth in its Bid Form is the lowest of those Bidders possessing the skill, ability and integrity necessary to faithful performance of the Work based on objective criteria considering past performance and financial responsibility; and (ii) whose Bid was submitted in accordance with the requirements set forth in the Bidding Documents. The Bidder will be required to establish to

the satisfaction of the Board and RSD10 BC that the persons or entities proposed to furnish and perform the Work described in the Bidding Documents are reliable, responsible and capable. To the extent that the Bid Form asks for alternate bids, the Board's and RSD10 BC's determination of the lowest Bid will be based on the sum of the base bid amount and the alternate bid prices for the alternates that are selected by the Board for acceptance as determined by the Board to be in the best interest of RSD10.

B. Statement of Qualifications: To assist the Board and RSD10 BC in the determination as to whether or not a Bidder is qualified to perform the Work for the Project, each Bidder shall complete and submit a Statement of Qualifications using the form included in the Bidding Documents as **Attachment 7** to these Instruction to Bidders along all required supporting documentation.

C. The Selection Criteria to be employed by the Board and RSD10 BC shall include, without limitation, the following:

1. Bidder's experience as a general contractor in the successful completion of projects of similar scope, complexity, and size as this Project, within budget, and on time, and with skill, integrity, and reliability; or the Bidder's inability to do so;
2. Bidder's capacity to perform the Project in light of Bidder's ongoing and future obligations;
3. Bidder's credit history and financial stability;
4. The experience of the Bidder's project team proposed to be used for the Project in the successful completion of projects of similar scope, complexity, and size as this Project, within budget and on time;
5. The ability of the Bidder to provide the required surety bonds;
6. and of the Bidders' experience or lack of experience with projects of the nature and scope of the project for which the Bid is submitted;
7. The ability and capacity of the Bidder to perform the Work based on an evaluation of the character, integrity, reputation, and experience of the Bidder, including the Bidder's past performance on projects with RSD10, other school districts, or other agencies, as well as the Bidder's skill, ability and integrity in the fulfillment of its contract obligations, the quality of the work performed by the Bidder, and the degree of satisfaction of the project owner with work performed by the Bidder.
8. The financial resources of the Bidder and the Bidder's ability to secure any required bonds and/or insurance;
9. Compliance by the Bidder with all applicable federal, state, and local laws, including any licensing requirements and/or contract compliance requirements; and
10. Involvement in litigation.

D. Investigation: The Board and RSD10 BC reserve the right to make any investigation to further determine the ability of any Bidder to perform and complete the obligations of the selected Contractor under the Contract and other Bidding Documents, and any Bidder shall furnish to the Board all such information and data for this purpose as are required under the Bidding Documents.

E. Interviews: The Board and RSD10 BC reserve the right to conduct interviews with one or more of the Bidders at a time and date to be determined by the Board and/or RSD10 BC. If a Bidder is requested by the Board or RSD10 BC to attend an interview, the attendees representing the Bidder shall include one or more representatives of the Bidder capable of responding to questions regarding the Bid submitted as well as the Bidder's proposed superintendent/project manager for the Project.

F. Negotiations: The Board and RSD10 BC reserve the right to negotiate with the lowest responsible qualified Bidder as determined by the Board or RSD10 BC to serve the best interests of RSD10.

6.2 Selection and Award

A. The Bidder selected as the Contractor for the Project, if any, must be determined by the Board to be the lowest responsible qualified bidder, qualified and capable of performing the Work for the Project and the obligations of the Contractor for the Project in accordance with the requirements of the Bidding Documents and in accordance with the Contract, based on the Selection Criteria set forth in these Instructions to Bidders and the entirety of such Bidder's Bid submission.

B. Upon identifying the lowest responsible qualified Bidder, if any, the RSD10 BC and the Board will send a written notice of intent to award to such Bidder. Notwithstanding receipt of such notice of intent to award, neither RSD10, nor the Board, nor the RSD10 BC shall have any obligation to such Bidder until such time as the Contract is fully executed by and between the Bidder as Contractor and RSD10 as Owner.

C. Neither RSD10, nor the Board, nor the RSD10 BC shall have any obligation to select the Bidder submitting the Bid with the lowest Base Bid Amount if the Board or RSD10 BC deem the Bidder to be either not responsible or not qualified.

RSD10 is An Affirmative Action/Equal Opportunity Employer. Minority/Women's Business Enterprises are encouraged to apply.

ATTACHMENT 1

BID FORM

PROJECT IDENTIFICATION

Regional School District No. 10

Underground Storage Tank Replacement at Harwinton Consolidated School

Invitation to Bid # 2026-01

State Project Number: 210-0037CV/OT

BID PROPOSAL SUBMITTED BY: _____

(Name and Address of Bidder)

Contact Person: _____

Tel. No. _____

Email Address: _____

THIS BID IS SUBMITTED TO: Regional School District No. 10 Board of Education Building Committee ("RSD10 BC"), 24 Lyon Road, Burlington, CT 06013 ATTN: Richard Miller, Director of Facilities

The undersigned Bidder proposes and agrees, if this Bid is accepted by the Regional School District No. 10 Board of Education (the "Board"), to enter into a contract with Regional School District No. 10 ("RSD10") in the form included in the Bidding Documents to perform and furnish all work described in and reasonably inferable from the Bidding Documents ("Work") within the times set forth in the Bidding Documents for the above-referenced Project and in accordance with the other terms and conditions of the Bidding Documents and the Contract, for the following sums of money:

A. Base Bid Amount:

Lump Sum in the amount of _____ Dollars (\$_____).

(write amount in words and numbers)

The Base Bid Amount includes the following Allowance Amount: \$8,000 for UST grave backfill materials and installation.

The Base Bid Amount includes all labor, materials, equipment, fixtures, systems, supplies, tools, temporary facilities, temporary transportation, supervision and other services necessary to complete the Work for the Project as described in the Bidding Documents inclusive of, without limitation all charges such as overhead, profit, general conditions, general requirements, insurance and permits.

B. Alternate Item Bid Amount:

Replace existing Simplex pumpset with new combination daytank/pumpset: the amount of

_____ Dollars (\$_____).

(write amount in words and numbers)

C. Unit Price Bid Amounts:

Item Description	Unit of Measurement	\$ Add/Deduct Unit Price
Contaminated Soil Disposal	Ton	
Asphalt	Ton	
Backfill	Cubic yard	
Fuel Disposal (in excess of 6")	Gallon	
Processed Aggregate Base	Ton	
Granular Fill	Ton	

Bid Price Itemization: Submitted herewith as Bid Form Schedule A is the Bid Price Itemization which includes an amount for each component of the Work for the Project required by and described in the Bidding Documents. The sum of all listed components shall equal the Base Bid Amount. Bidder acknowledges that, should conditions make it necessary to revise the scope of the Work for the Project, the Bid Price Itemization shall serve as the basis for adjustments to the Base Bid Amount.

Subcontractors: Submitted herewith as Bid Form Schedule B is a list of the names and addresses of all Subcontractors proposed to be utilized on the Project. The Bidder agrees that the Subcontractors listed on Schedule B, if any, will be used for the Work indicated at the amount stated, unless a substitution is permitted by RSD10.

Bidder accepts all terms and conditions of the Invitation to Bid, Instructions to Bidders and all other Bidding Documents (as defined) in the Instructions to Bidders, including, without limitation those dealing with the disposition of Bid Security. This Bid will remain subject to acceptance by the Board **for sixty (60) days** after the Bids are opened. Bidder will sign and deliver the required number of counterparts of the Contract along with the required payment and performance bonds and other documents required by the Bidding Documents within five (5) days after the Contract is presented by RSD10 to the Bidder for signature.

In submitting this Bid, Bidder represents and acknowledges that:

1. Bidder has examined and carefully studied the Bidding Documents and the following Addenda;
2. Bidder's failure to gain familiarity with the Bidding Documents, if any, shall in no way relieve Bidder of responsibility for all aspects of its Bid and the obligations set forth in the Bidding Documents;
3. The Bidder understands the requirements of the Bidding Documents and the scope of Work represented by the Bidding Documents to be performed by or on behalf of a Bidder;
4. Bidder has visited the Project site and become familiar with and is satisfied as to the general, local and site conditions under which the Work is to be performed, that may affect cost, progress, performance and furnishing of the Work and have correlated Bidder's personal observations with the requirements of the Bidding Documents;
5. Bidder is familiar with and agrees to comply with all federal, state, and local Laws and regulations, ordinances, codes and orders that relate to the Project and/or performance of the Work described in

- the Bidding Documents and/or which may affect cost, progress, performance and furnishing of the Work;
6. Bidder has given the Board, RSD10 BC and Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents and the written resolution thereof by Engineer is acceptable to Bidder, and Bidder acknowledges that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work for which this Bid is submitted;
 7. Bidder has checked all of the amounts set forth in this Bid and the Schedules attached hereto and understands that neither RSD10, nor the Board, nor the RSD10 BC will be responsible for any errors or omissions on the part of the Bidder in preparing this Bid;
 8. The Base Bid Amount set forth in this Bid Form includes all labor, materials, equipment, fixtures, systems, supplies, tools, temporary facilities, transportation, supervision and other services necessary to complete the Work for the Project as described in the Bidding Documents, inclusive of, without limitation, overhead, profit, general conditions, general requirements and insurance and bond costs, all without exception or qualification;
 9. Bidder has confirmed and incorporated into its Bid and Base Bid Amount the proper prevailing wage rate for its industry;
 10. In submitting this Bid, it is understood that the right is reserved by the Board to reject any or all Bids and waive all technicalities and informalities in connection therewith, including negotiating with the selected Bidder, all as may be in the best interest of RSD10. It is agreed that this Bid may not be withdrawn for a period of sixty (60) days after the actual date the Bids are opened;
 11. Bidder will complete the Work in accordance with the Bidding Documents for the prices set forth above in the Base Bid Amount, plus the amount of Bids for Add Alternative Items agreed to by RSD10 in the Contract;
 12. Bidder agrees that the Work will be substantially completed and ready for final payment in accordance with the Bidding Documents on or before the dates or within the number of calendar days indicated in the Bidding Documents;
 13. Bidder received all the Bidding Documents and following addenda, receipt all of which is hereby acknowledged by the Bidder (list Addenda by Addendum number and date):

Invitation to Bid:	Date: _____	Initials: _____
Instructions to Bidders:	Date: _____	Initials: _____
Project Manual/Specifications:	Date: _____	Initials: _____
Bid Drawings:	Date: _____	Initials: _____
Addendum #: _____	Date: _____	Initials: _____
Addendum #: _____	Date: _____	Initials: _____
Addendum #: _____	Date: _____	Initials: _____
Addendum #: _____	Date: _____	Initials: _____
Addendum #: _____	Date: _____	Initials: _____
Addendum #: _____	Date: _____	Initials: _____

14. The following documents are attached to and made a part of this Bid:

- (1) This Bid Form
- (2) Completed and executed Non-Collusion Affidavit
- (3) Completed Corporate Resolution (if Bidder is a corporation)
- (4) Bid Security:
 - ☐ Executed Bid Bond
 - ☐ Certified Check, Cashier's Check, Treasurer's check, or Money Order
 - ☐ Letter of Credit (small contractor or minority business enterprise only)
- (5) Completed and executed Certification re: CGS Section 31-57b
- (6) Bidder's Contractor Qualification Statement
- (7) ☐ Evidence of Bidder's Ability To Obtain Performance Bond and Labor and Materials Payment Bond
or
☐ Evidence of Bidders Ability to Provide Letters of Credit in Lieu of Performance Bond and Payment Bond (small contractor or minority business enterprise only)

Communications by the Board to the Bidder concerning this Bid shall be addressed to the contact person for the Bidder identified on the first page of this Bid Form.

Bidder certifies, under the penalty of false statement, that: (1) the information in this Bid Form and its Bid is true and accurate; (2) that the copy of any Bid Bond submitted with this Bid Form is a true, accurate and unmodified copy of the original bond issued by the Bidder's surety for the Project; (3) that there has been no substantial change in the Bidder's financial position or corporate structure since the Bidder's most recent prequalification certificate was issued or renewed, other than those changes noted in the update statement; and (4) that the Bid was made without fraud or collusion with any person.

In submitting this Bid, it is understood that the right is reserved by RSD10 to reject any or all Bids and waive all technicalities and informalities in connection therewith, including negotiating with the selected Bidder or Bidders, all as may be in the best interest of RSD10. It is agreed that this Bid may not be withdrawn for a period of sixty (60) days after the actual date the Bids are opened.

The undersigned declares that the person or persons signing this Bid is/are fully authorized to sign on behalf of the Bidder.

Signed this day ____ of _____, 2026

_____(Name of Bidder)

By: _____ (Signature of individual signing on behalf of Bidder)

_____ (Print name of individual signing on behalf of Bidder)

Its _____ (Title)

BID FORM SCHEDULE A (part of Attachment 1)

Bid Price Itemization

Bidder's Name and Address:

(Name) _____

(Address) _____

(Address) _____

Trade Contracts: \$ _____

General Conditions Costs: \$ _____

Insurance Costs: \$ _____

Bond Premiums: \$ _____

Base Bid Amount \$ _____

Alternate Bid Amount \$ _____

Allowance Amount \$ _____

Unit Prices

Item Description	Unit of Measurement	\$ Add/Deduct Unit Price (Enter Single Value)
Contaminated Soil Disposal	Ton	
Asphalt	Ton	
Backfill	Cubic yard	
Fuel Disposal (in excess of 6")	Gallon	
Processed Aggregate Base	Ton	
Granular Fill	Ton	

Signed this day ____ of _____, 202__

_____(Name of Bidder)

By: _____ (Signature of individual signing on behalf of Bidder)

_____(Print name of individual signing on behalf of Bidder)

Its _____ (Title)

ATTACHMENT 2
BIDDER NON-COLLUSION AFFIDAVIT

STATE OF _____)
) ss: _____
COUNTY OF _____)

I, _____ (affiant), being first duly sworn, deposes and says that:
(name)

1. I am over the age of 18 and understand the obligations of an oath;
2. I am the owner, partner, officer, representative or agent _____ (name of bidder), the Bidder that has submitted the attached Bid to Regional School District No. 10;
3. I am fully informed regarding the preparation and contents of the attached Bid and of all pertinent circumstances regarding such Bid;
4. Such Bid(s) is genuine and is not a collusive or sham Bid;
5. Neither the said Bidder nor any of its officers, partners, owner, agents, representatives, employees or parties in interest, including this affiant, has in any way colluded, conspired, connived, or agreed, directly or indirectly with any other bidder, firm or person to submit a collusive or sham bid in connection with the contract for which the attached Bid has been submitted or to refrain from bidding in connection with such contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other Bidder, firm or person to fix the price or prices in the attached Bid or of any Bidder, or to fix any overhead, profit or cost element of the Bid price or the Bid price of any other Bidder or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage with Regional School District No. 10 and/or any person interested in the proposed contract;
6. The price(s) quoted in the attached Bid are fair and proper and are not tainted by collusion, conspiracy, connivance, or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees, or parties in interest; and
7. That no officer, agent, employee or consultant for Regional School District No. 10, the Regional School District No. 10 Board of Education, or the Regional School District No. 10 Board of Education Building Committee is directly or indirectly interested in the Bid, or in supplies, materials, equipment, work or labor to which it relates, or in any of the profits thereof.

Dated this _____ day of _____, 202____.

Signed: _____
Name: _____
(print name)
Title: _____

Subscribed and sworn to before me, the undersigned officer, this ____ day of _____, 202____.

Notary Public
My Commission expires:
Commissioner of the Superior Court

ATTACHMENT 3
CORPORATE RESOLUTION

(Must be submitted on corporate letterhead if Bidder is a Corporation)

I _____ (name of Corporation's Secretary), Secretary of
_____ (legal name of Corporation), a Corporation duly
organized and operating under the laws of _____ (State) do hereby certify that the
following is a true, correct and accurate copy of a Resolution duly adopted at a meeting of the Board of
Directors of such Corporation, duly convened and held on _____
_____, at which meeting a duly constituted quorum of the Board of
Directors was present and voted in favor of such Resolution. I further CERTIFY that such Resolution has
not been modified, rescinded, or revoked since the date on which it was enacted, and it is present in full
force and effect: _____.

RESOLVED: That the following Officers of this Corporation, or any one of them:

(Name and Title of Officer or Officers)

is empowered to execute and deliver in the name and on the behalf of this Corporation contracts, bids, and
other documents to Regional School District No. 10, and are further authorized to affix the Corporate Seal
to such documents and to bind the Corporation to such contracts, bids or other documents.

IN WITNESS WHEREOF, the undersigned has affixed his signature and Corporate Seal of the
Corporation, this ____ day of _____, 202____.

(Affix Corporate Seal Below)

SIGNATURE OF SECRETARY

(Typed Name of Corporation's Secretary)

ATTACHMENT 4
BID SUBMISSION DOCUMENTS

The following forms and documents must be completed and submitted as part of each Bid:

1. Completed and Executed Bid Form (including Bid Form Schedule A and Bid Form Schedule B)(use Attachment 1)
2. Completed and executed Non-Collusion Affidavit
3. Completed Corporate Resolution (if Bidder is a corporation)
4. Bid Security: Executed Bid Bond (use Attachment 5) or certified check, cashier's check, Treasurer's check, or money order (letter of credit as bid security to the extent permitted in the Instructions to Bidders).
5. Bidder's Statement of Qualifications
6. Completed and executed Certificate of Compliance with C.G.S Sec. 31-57b (use Attachment 8)
7. Evidence from the Bidder's bonding company evidencing that the Bidder, if awarded the Contract, can obtain the required performance bond and labor and materials payment bonds in the full amount of the Base Bid Amount (or evidence that Bidder it is a small contractor or a minority business enterprise as defined by CGS Section 4a-60g together with satisfactory evidence of its ability to provide to a letter of credit in lieu of the required performance bond and/or a letter of credit in lieu of the required labor and material payment bond).

ATTACHMENT 5
STANDARD BID BOND FORM

KNOW ALL MEN BY THESE PRESENTS, That we _____ (hereinafter "Principal"), as principal, and, _____ (hereinafter "Surety"), a corporation organized and existing under the laws of the State of _____, and duly authorized to transact a surety business in the State of Connecticut, as surety, are held and firmly bound unto **Regional School District No. 10**, as Obligee, in the penal sum of ten (10) percent of the amount of the bid set forth in a proposal hereinafter mentioned, lawful money of the United States of America, for the payment of which, well and truly to be made to the Obligee, the Principal and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, That, whereas the Principal has submitted or is about to submit a bid to the Obligee related to a contract for a project for removal of an underground fuels storage tank and associated work at the Harwinton Consolidated School located at 115 Litchfield Road, Harwinton, Connecticut 06791.

NOW, THEREFORE, if the said contract be awarded to the Principal and the Principal shall, within such time as may be specified, enter into the said contract in writing with Regional School District No. 10 and give the required bonds, with surety acceptable to the Obligee, or if the Principal shall fail to do so, pay to the Obligee the damages which the Obligee may suffer by reason of such failure not exceeding the penalty of this bond, then this obligation shall be void, otherwise to remain in full force and effect.

SIGNED, SEALED AND DELIVERED this _____ day of _____, 2026

Principal: _____ (Name of Contractor)
By _____ (Contractor as Principal)
Name: _____ (Print Name)
Title: _____

Surety: _____ (Name of Surety)
By _____
Name: _____ (Print Name)
Title: _____

ATTACHMENT 6
INSURANCE REQUIREMENTS

I. Contractor's Insurance Requirements

Before commencement of construction of the Work at the Project site, the Contractor shall purchase and maintain the following types and limits of insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the State of Connecticut. The Contractor shall maintain the required insurance until the expiration of the period for correction of Work as set forth in Section 12.2.2 of the AIA A201-General Conditions contained in the Bidding Documents, except that the Contractor shall maintain its Commercial General Liability Policy for seven (7) years after the date of Substantial Completion of the Work.

Insurance requirements set forth in this Attachment 5 will be independent of, and in addition to, the Contractor's liability under the Contract Documents. Nothing in the Contract Documents shall be deemed to limit Contractor's liability under the Contract Documents to the limits of coverage of insurance required hereunder. The Contractor shall be solely responsible for payment of all deductible or retention amounts pertaining to any insurance required hereunder. The limit and coverages set forth herein are the minimum requirements under the Contract Documents. The inclusion of these minimum requirements shall not be interpreted to restrict the rights of the additional insureds to the stated minimum coverage amounts in the event the Contractor maintains coverage at higher limits.

A. Commercial General Liability

Commercial General Liability insurance for the Project written on an occurrence form with policy limits of not less than One Million Dollars (\$1,000,000) each occurrence, Two Million Dollars (\$2,000,000) general aggregate, and Two Million Dollars (\$2,000,000) aggregate for products-completed operations hazard, providing coverage for claims including

- (1) damages because of bodily injury, sickness or disease, including occupational sickness or disease, and death of any person;
- (2) personal injury and advertising injury;
- (3) damages because of physical damage to or destruction of tangible property, including the loss of use of such property;
- (4) bodily injury or property damage arising out of completed operations;
- (5) the Contractor's indemnity obligations under Section 3.18 of the AIA A201-General Conditions contained in the Bidding Documents; and
- (6) electronic data liability (under endorsement ISO CG 04 37 or its equivalent).

The Contractor's Commercial General Liability policy shall not contain an exclusion or restriction of coverage for the following:

- (1) Claims by one insured against another insured, if the exclusion or restriction is based solely on the fact that the claimant is an insured, and there would otherwise be coverage for the claim;
- (2) Claims for property damage to the Contractor's Work arising out of the products-completed operations hazard where the damaged Work or the Work out of which the damage arises was performed by a Subcontractor;

- (3) Claims for bodily injury other than to employees of the insured;
- (4) Claims for indemnity under Section 3.18 of the AIA A201-General Conditions contained in the Bidding Documents arising out of injury to employees of the insured;
- (5) Claims or loss excluded under a prior work endorsement or other similar exclusionary language;
- (6) Claims or loss due to physical damage under a prior injury endorsement or similar exclusionary language;
- (7) Claims related to roofing, if the Work involves roofing;
- (8) Claims related to exterior insulation finish systems (EIFS), synthetic stucco or similar exterior coatings or surfaces, if the Work involves such coatings or surfaces;
- (9) Claims related to earth subsidence or movement, where the Work involves such hazards;
- (10) Claims related to explosion, collapse and underground hazards, where the Work involves such hazards.

The Commercial General Liability coverage general aggregate limit shall apply separately to each project on a per-project basis and shall be unimpaired at commencement of the Work. The Commercial General Liability coverage shall be written on the most recent ISO occurrence form (CG 00 01) or a substitute occurrence-based form providing equivalent coverage, and shall include coverage for liability arising from premises, operations, independent contractors, products/completed operations covering construction means and methods to be maintained for no less than a period of seven (7) years after completion of the Work, personal and advertising injury, contractual liability (without requiring privity of contract), and liability assumed under an insured contract (including the tort liability of another assumed in a business contract). The Commercial General Liability coverage shall apply to, and not exclude coverage for: joint negligence of the Contractor and other persons; acts and/or omissions of Subcontractors and Subcontractors' sub-subcontractors; and completed operations. In addition, such policy shall contain a broad form contractual liability endorsement or similar wording within the policy form, if applicable.

Regional School District No. 10 (the "Owner"), the Regional School District No. 10 Board of Education, the Regional School District No. 10 Board of Education Building Committee, and their members, affiliates, employees, volunteers, directors, and officers, shall be included as additional insureds under the Commercial General Liability policy, to the extent commercially available using an endorsement with coverage no less than that provided under CG 20 10 07 04, CG 20 37 07 04, and, with respect to Fuss & O'Neill, Inc. (the "Engineer"), and the Engineer's consultants, CG 20 32 07 04. Insurance for additional insureds shall be as broad as the coverage provided for the named insured. Commercial General Liability coverage shall apply as primary and non-contributory insurance before any other insurance or self-insurance, including any deductible maintained by or provided to the additional insureds.

B. Commercial Automobile Liability insurance written on the most recent ISO form CA 00 01 or its equivalent, covering vehicles owned, hired vehicles, and non-owned vehicles, including trailers, used by the Contractor and/or used in connection with the Work, with policy limits of not less than One Million Dollars (\$1,000,000) per accident, for bodily injury, death of any person, and property damage arising out of the ownership, maintenance and use of those motor vehicles along with any

other statutorily required automobile coverage. If vehicles are used to transport hazardous material then ISO CA 99 48 (broadened pollution) and an MCS90 endorsement will be included unless Pollution Liability coverage as described in Section I.H is applicable to operations and vehicles being used.

C. Umbrella or Excess liability insurance on an occurrence basis in excess of the coverages and limits required for the primary liability insurance required under Sections I.A, I.B, and I.F (Contractor's Commercial General Liability insurance, Commercial Automobile Liability insurance, and Employer's Liability insurance), in an amount not less than One Million Dollars (\$1,000,000) per occurrence and One Million Dollars (\$1,000,000) unimpaired general aggregate per policy year. Umbrella or Excess coverage shall be follow form on a primary and non-contributory basis. The Umbrella or Excess insurance policies shall provide the same or greater coverage as the Contractor's Commercial General Liability insurance, Commercial Automobile Liability insurance, and Employer's Liability insurance, and in no event shall any excess or umbrella liability insurance provide narrower coverage than the primary policy. The Umbrella or Excess insurance policy shall not require the exhaustion of the underlying limits only through the actual payment by the underlying insurers. Umbrella or Excess coverage must include as additional insureds all entities that are additional insureds on the Commercial General Liability coverage, Automobile Liability, and Employer's Liability insurance required under Sections I.A, I.B, and I.F, and Umbrella or Excess coverage for such additional insureds shall apply as primary and non-contributory before any other insurance or self-insurance or self-insured retention, including any deductible maintained by or provided to the additional insured, and shall apply without the need for privity of contract as to any additional insured.

D. The Contractor may achieve the required limits and coverage for Commercial General Liability insurance, Automobile Liability insurance, and Employers' Liability insurance, through a combination of primary and excess or umbrella "follow form" liability insurance, provided such primary and excess or umbrella insurance policies result in the same or greater coverage as the coverages required under Sections I.A, I.B, and I.F, and in no event shall any excess or umbrella liability insurance provide narrower coverage than the primary policy. The excess policy shall not require the exhaustion of the underlying limits only through the actual payment by the underlying insurers, and aggregate limits of liability shall apply separately with respect to the Work.

E. Workers' Compensation at statutory limits.

In addition to any other requirements related to worker's compensation insurance, if Contractor is a sole proprietor, a single member limited liability company or otherwise has no employees, Contractor shall maintain Worker's Compensation Insurance as if it were an "employer" as such term is defined in and in accordance with Connecticut's General Statutes.

F. Employers' Liability insurance with policy limits not less than One Million Dollars (\$1,000,000) each accident, One Million Dollars (\$1,000,000) each employee, and One Million Dollars (\$1,000,000) policy limit.

G. If the Contractor is required to furnish professional services as part of the Work, including without

limitation, surveying, geotechnical investigation, design, engineering, stamping of drawings or specifications, consulting, programing or development of software, the Contractor shall procure Professional Liability insurance covering performance of the professional services, with policy limits of not less than One Million Dollars (\$1,000,000) per occurrence or claim and One Million Dollars (\$1,000,000) in the aggregate. If Professional Liability insurance procured and maintained is on claims-made basis, the insurance policy shall have a retroactive date which shall precede the commencement of the Work and which date is no later than the policy inception date, and coverage shall be continuously maintained until at no less than seven (7) years after Substantial Completion of the Project.

H. If the Work involves the handling, abatement, clean-up, removal, transport, dissemination, use, or release of pollutants or hazardous materials, including but not limited to asbestos, PCBs, contaminated soils, and lead-based paint, the Contractor shall procure Pollution Liability insurance, with policy limits of not less than One Million Dollars (\$1,000,000) per occurrence and One Million Dollars (\$1,000,000) in the aggregate. The policy shall provide coverage for pollution, lead, mold and asbestos liability. The policy must specifically include coverage for "asbestos, lead paint, and other hazardous building materials such as PCB's, abatement operations" and have the "Pollution Exclusion" eliminated or modified so as not to apply to any bodily injury, including but not limited to asbestos, lead paint, and other hazardous building materials such as PCB's abatement, handling, transport or disposal. All policies shall be written on an "occurrence" basis. Coverage shall include first party, third party, clean-up, legal and claim expense including transit and disposal. Full policy forms and endorsements are subject to review by the Owner.

I. Coverage under Section I.G and I.H may be procured through a Combined Professional Liability and Pollution Liability insurance policy, with combined policy limits of not less than Two Million Dollars (\$2,000,000) per claim and Two Million Dollars (\$2,000,000) in the aggregate.

J. The Contractor's Commercial General Liability, Umbrella/Excess Liability, Automobile Liability, and Worker's Compensation Insurance policies shall include a waiver of subrogation endorsement in favor of Regional School District No. 10, the Regional School District No. 10 Board of Education, the Regional School District No. 10 Board of Education Building Committee, and their members, affiliates, employees, volunteers, directors, and officers.

K. Additional Insured Obligations.

1. To the fullest extent permitted by law, the Contractor shall cause the commercial general liability coverage, automobile liability coverage, and excess or umbrella coverage to include (1) Regional School District No. 10, the Regional School District No. 10 Board of Education, the Regional School District No. 10 Board of Education Building Committee, and their members, affiliates, employees, volunteers, directors, and officers, the Engineer, and the Engineer's consultants, as additional insureds for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's operations; and (2) Regional School District No. 10, the Regional School District No. 10 Board of Education, the Regional School District No. 10 Board of Education Building Committee, and their members, affiliates, employees, volunteers, directors, and officers, as additional insureds for claims caused in whole or in part by

the Contractor's negligent acts or omissions for which loss occurs during completed operations. The additional insured coverage shall be primary and non-contributory to any general liability insurance policies maintained by the Owner or any other additional insured and shall apply to both ongoing and completed operations. To the extent commercially available, the additional insured coverage shall be no less than that provided by Insurance Services Office, Inc. (ISO) forms CG 20 10 07 04, CG 20 37 07 04, and, with respect to the Engineer and the Engineer's consultants, CG 20 32 07 04.

2. The Owner, the Engineer, and the Engineer's consultants, and all of their affiliates, subsidiaries and respective partners, officers, directors, agents, employees and servants, shall be named as an additional insured on the insurance policies described in Sections I.A, I.B, I.C, I.F, I.H, and I.I, without a requirement for privity of contract. The additional insured coverage in such policies procured by the Contractor, as named insured, shall not limit coverage thereunder to vicarious liability of the additional insured or liability arising out of only the named insured's negligence.

L. All insurance policies maintained by the Contractor shall be deemed primary and non-contributory to insurance maintained by any additional insured, up to and including the limits of any Umbrella or Excess coverage, in the event of loss arising out of the Contractor's performance of the Work, and all such insurance policies shall provide that where there is more than one insured thereunder the policy will apply to each insured separately as if there were a separate policy covering each insured except with respect to the policy limits of such policy. The Contractor shall obtain certificates for each policy which evidence that coverage is in accordance with these requirements.

M. To the fullest extent permitted by law, the Contractor, for itself and its insurers, shall waive all rights of recovery and all rights of subrogation against Regional School District No. 10, the Regional School District No. 10 Board of Education, the Regional School District No. 10 Board of Education Building Committee, and their members, affiliates, employees, volunteers, directors, and officers, the Engineer, and the Engineer's consultants, and their subsidiaries, affiliates, employees, volunteers, directors and officers, and any other person designated by the Owner or with whom the Owner has agreed to waive its rights in the event of loss including loss which should have been covered by the insurance required pursuant to the Contract to be procured and maintained by the Contractor, for losses within the scope of any liability insurance policy which the Contractor is required to purchase and maintain pursuant to the Contract and/or covered by any liability insurance policy which the Contractor in-fact purchases and maintains.

N. To the extent commercially available, all insurance policies required to be procured by the Contractor pursuant to the this Attachment 5 and/or the Contract and/or which the Contractor in-fact procures in connection with the Work and/or which otherwise apply to the Work or the Project, shall not prohibit and shall permit the Contractor to waive rights of subrogation against, and shall include a waiver of subrogation endorsement in favor of Regional School District No. 10, the Regional School District No. 10 Board of Education, the Regional School District No. 10 Board of Education Building Committee, and their members, affiliates, employees, volunteers, directors, and officers,

the Engineer, and the Engineer's consultants, and its subsidiaries, affiliates, employees, volunteers, directors, officers, and agents.

O. Limits of coverage stated above for any insurance are minimum required amounts, and if higher limits of coverage are maintained for any coverage such higher limits will become those required by this Attachment 5 and/or the Contract. Minimum coverage limits required for insurance required to be procured and maintained by the Contractor may be satisfied through any combination of primary and umbrella or excess coverage, provided there shall be no gaps in the form or limits between primary and umbrella or excess coverage. Policy limits available to any additional insured shall be the full policy limits maintained by the named insured. The amounts of insurance specified herein and agreed to by the parties are minimum requirements only and shall in no way limit the liability of the Contractor, nor the applicability or availability of the Contractor's insurance.

II. Additional General Insurance Requirements

A. Certificates of Insurance. The Contractor shall provide current certificates of insurance acceptable to the Owner evidencing compliance with the insurance requirements set forth herein and the other Bidding Documents at the following times: (1) prior to commencement of the Work; (2) upon renewal or replacement of each required policy of insurance; and (3) upon the Owner's written request. An additional certificate evidencing continuation of commercial liability coverage, including coverage for completed operations, shall be submitted with the final Application for Payment and thereafter upon renewal or replacement of such coverage until the expiration of the periods required by Section I, above. The certificates will show Regional School District No. 10, the Regional School District No. 10 Board of Education, the Regional School District No. 10 Board of Education Building Committee, and their members, affiliates, employees, volunteers, directors, and officer as additional insureds on the Contractor's Commercial General Liability, Automobile Liability, and excess or umbrella liability policy or policies. The Contractor's policies shall be written by insurance companies licensed to do business in the State of Connecticut, with an AM Best rating of no less than A-, XI or otherwise acceptable to the Owner. The Contractor and its insurer(s) for each liability insurance policy required under this Attachment 5 and/or the Contract shall give the Owner and any additional insured under any such policy, no less than thirty (30) days' prior written notice in advance of any termination, expiration, cancellation, or reduction or other change in coverage, and in advance the date by which renewal is required to continue coverage under any such policy, and (10) days' prior written notice of a termination or cancellation of a policy for non-payment. All certificates of insurance and notices required pursuant to the Contract and Contract Documents shall be sent by registered mail:

Richard Miller, Director of Facilities
Regional School District No. 10
24 Lyon Road
Burlington, CT 06013

B. The Contractor shall provide evidence of coverage that meets the requirements of the Contract (including without limitation this Attachment 5) by providing to the Owner certificates of insurance

for each policy, and if requested by the Owner redacted certified copies of such policies or any part thereof deemed necessary in the sole opinion of the Owner to demonstrate compliance with the Contractor's obligations under the Contract. The Owner's acceptance of evidence of insurance shall in no way constitute or be construed as the Owner's affirmation that the Contractor has fully satisfied any or all of such obligations or the Owner's waiver of any right or claim arising out of or relating to the Contract Documents. As soon as possible after the execution of the Contract, and in no event later than seven (7) days prior to the commencement of the Work, the Contractor shall provide to the Owner certificates of insurance and/or certified copies of the policies requested by the Owner as evidence that all insurance coverage required pursuant to the Contract to be procured and maintained by the Contractor during performance of the Work has been so procured. The Contractor nor any Subcontractor may perform activities for construction of the Work at or on the Project site prior to Contractor's delivery of such evidence to the Owner, and no failure to or delay in delivering such evidence to the Owner shall constitute a basis for any increase to the Contract Sum or the Contract Time.

C. Deductibles and Self-Insured Retentions. The Contractor shall disclose to the Owner any deductible or self-insured retentions applicable to any insurance required to be provided by the Contractor. Any retention or deductible applicable on any insurance policy procured and maintained by the Contractor shall be clearly stated and shall be the sole responsibility of the Contractor together with any applicable premium charge, claim cost, penalties, assessment, tax or other costs associated with the Contractor's risk funding obligations. Self-insured retention or any deductible in excess of \$100,000 shall require the Owner's prior written approval.

D. The Contractor shall ensure that all Subcontractors maintain insurance policies, written by insurance companies licensed to do business in the State of Connecticut with an AM Best rating of no less than A-, VII, which policies are consistent with the requirements set forth in this Attachment 5 and otherwise in the Contract, including without limitation, the naming of additional insureds as provided and required in Section I, above, with coverage limits not less than those required for the insurance policies required to be procured and maintained by the Contractor or such lower limits as are agreed to by the Owner in writing on a case-by-case basis for a specific Subcontractor. The Contractor shall include in all subcontract agreements the obligation of the Subcontractors to comply with these insurance requirements. The Contractor shall not permit any Subcontractor or sub-subcontractor to perform any Work on the Project site until such time as the Contractor has obtained satisfactory evidence from such Subcontractors and sub-subcontractors that the foregoing insurance requirements have been satisfied.

E. The Contractor shall require all its Subcontractors and their insurers to waive all rights of recovery against Regional School District No. 10, the Regional School District No. 10 Board of Education, the Regional School District No. 10 Board of Education Building Committee, and their members, affiliates, employees, volunteers, directors, and officers, and the Engineer, and the Engineer's consultants, and their subsidiaries, affiliates, employees, volunteers, directors and officers, and any other person designated by the Owner or with whom the Owner has agreed to waive its rights in the event of loss, for losses covered by any policy of liability insurance which any such Subcontractor is required to purchase and maintain pursuant to the Contract Documents

and/or their Subcontract with the Contractor in connection with the Work, and/or which the Subcontractor in-fact purchases and maintains in connection with the Project and/or the Work.

F. If, as a result, in whole or in part, of the negligence (or other act for which there is legal liability) of the Contractor, its employees, agents, or subcontractors of any tier, any person (including employees of the Contractor) injury or death occurs or any property is damaged, lost or destroyed, or any other loss occurs, the Contractor assumes the liability therefor and agrees, to the fullest extent permitted by law, to indemnify, defend, and hold the Owner and its affiliates, subsidiaries, partners, directors, officers, members, managers, agents, servants, employees, and volunteers harmless from any and all such injury, death, property damage or other loss, including reasonable attorneys' fees incurred in connection therewith. The foregoing obligations are independent from, and not limited in any manner by, the Contractor's insurance coverage obtained pursuant to the Contract or otherwise. The Contractor shall not be required to defend, indemnify or hold harmless an indemnitee against claims for bodily injury or property damage solely caused by or resulting from the negligence of such indemnitee.

ATTACHMENT 7
STATEMENT OF QUALIFICATIONS

1. A Letter of Transmittal signed by a principal of the Bidder, not to exceed two (2) pages, describing in narrative form the company and the company's qualifications for the Project.
2. Company Overview:
 - a. Name and location, including the office location that will be serving the RSD10
 - b. Number of years the company has been in the business of providing the services or performing the work upon which they are bidding
 - c. Number of employees and how many of them will be dedicated to the Project
 - d. Evidence of the company's licensing/authority to do business in the State of Connecticut
3. Client Base:
 - a. Names and contact information for the three references for whom or which the Bidder has provided services or performed work for school districts in the last 2 years in connection with projects similar in size and scope to the services and/or work upon which they are bidding. Provide Owner name and telephone number for each Project.
 - b. Provide a description of each of the three projects and the contractor's role in each project.
4. Company Information:
 - a. Name, email and telephone number of the Bidder's contact person.
 - b. A list of the subcontractors that the Bidder would engage for the Project
 - c. A list of projects for which the company has provided services in the last five years which projects have similar challenges to the Project and indicate if any claims, disputes, arbitration or litigation proceedings have occurred on any of these projects. If so, identify if they were between Owner/Contractor or Contractor/Subcontractor and give the status of each.
5. Litigation/Disputes:

Provide information concerning any suits filed, judgments entered or claims made against your company during the last five (5) years with respect to contractual services provided by your company, or any declaration of default or termination for cause against your company with respect to such services.
6. Additional information, not included above, that the company feels may be useful and applicable to this Project and helpful to RSD10 BC's and the Board's evaluation of the Bidder (limit response to two pages).

ATTACHMENT 8
CERTIFICATE OF COMPLIANCE WITH
CONNECTICUT GENERAL STATUTES SECTION 31-57b

I, the undersigned, hereby certify that all the statements herein contained below have been examined by me and to the best of my knowledge and belief are true and correct.

_____ (Bidder name):

1. [] has [] has not: been cited for three or more wilful or serious violations of any occupational safety and health act or of any standard, order or regulation promulgated pursuant to such act, during the three-year period preceding the Bid, provided such violations were cited in accordance with the provisions of any state occupational safety and health act or the Occupational Safety and Health Act of 1970, and not abated within the time fixed by the citation and such citation has not been set aside following appeal to the appropriate agency or court having jurisdiction;
2. [] has [] has not: received one or more criminal convictions related to the injury or death of any employee in the three-year period preceding the Bid.

The list of violations (if applicable) is as follows:

BIDDER NAME: _____

Signed: By _____ Date _____

Its _____ (Title)

Subscribed and sworn to before me, the undersigned officer, on this _____ day of _____, 202__.

Notary Public
Commissioner of the Superior Court
My Commission expires:

ATTACHMENT 9

FORM OF CONTRACT

AIA A101-2017 Agreement and A201-2017 General Conditions, as modified by RSD10.

AIA® Document A101® – 2017

Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum

AGREEMENT made as of the day of in the year 2026
(In words, indicate day, month and year.)

BETWEEN the Owner:
(Name, legal status, address and other information)

Regional School District No. 10 (“Owner”)
24 Lyon Road
Burlington, CT 06013

and the Contractor:
(Name, legal status, address and other information)

NAME
STREET ADDRESS
CITY, STATE, ZIP

for the following Project:
(Name, location and detailed description)

Underground Storage Tank Replacement at Harwinton Consolidated School
115 Litchfield Road
Harwinton, CT 06791 (the “Project”)
State Project Number: 210-0037CV/OT

The Engineer:
(Name, legal status, address and other information)

Fuss & O’Neill, Inc.
1 Financial Plaza, 15 Floor
Hartford, CT 06103

The Owner and Contractor agree as follows.

ADDITIONS AND DELETIONS:

The author of this document may have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

The parties should complete A101®–2017, Exhibit A, Insurance and Bonds, contemporaneously with this Agreement. AIA Document A201®–2017, General Conditions of the Contract for Construction, is adopted in this document by reference. Do not use with other general conditions unless this document is modified.

ELECTRONIC COPYING of any portion of this AIA® Document to another electronic file is prohibited and constitutes a violation of copyright laws as set forth in the footer of this document.

TABLE OF ARTICLES

- 1 THE CONTRACT DOCUMENTS
- 2 THE WORK OF THIS CONTRACT
- 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION
- 4 CONTRACT SUM
- 5 PAYMENTS
- 6 DISPUTE RESOLUTION
- 7 TERMINATION OR SUSPENSION
- 8 MISCELLANEOUS PROVISIONS
- 9 ENUMERATION OF CONTRACT DOCUMENTS

ARTICLE 1 THE CONTRACT DOCUMENTS

The Contract Documents consist of this Agreement, AIA Document A201-2017 General Conditions of the Contract for Construction as modified by the Owner and appended hereto (as so modified, referred to hereinafter as the “AIA Document A201-2017”), Drawings, Specifications, Addenda issued prior to execution of this Agreement, other documents listed in this Agreement, and Modifications issued after execution of this Agreement as Contract Documents, all of which form the Contract for Construction between the Owner and the Contractor (the “Contract”) and are as fully a part of the Contract as if attached to this Agreement or repeated herein. The Contract represents the entire and integrated agreement between the Owner and the Contractor relating to the subject matter of this Agreement and supersedes prior negotiations, representations, or agreements, either written or oral, verifiable or alleged. If anything in the other Contract Documents, other than a Modification, is inconsistent with this Agreement, this Agreement shall govern. An enumeration of the Contract Documents, other than a Modification, appears in Article 9. No alteration, modification, or amendment to this Agreement shall be binding upon the parties hereto unless by written instrument, signed by the Owner and the Contractor. This Agreement may be amended only by written instrument signed by both Owner and the Contractor, by written Change Order, or writing as otherwise expressly permitted and provided in this Agreement or the other Contract Documents.

ARTICLE 2 THE WORK OF THIS CONTRACT

§ 2.1 The Contractor shall fully execute the Work described in, reasonably inferable from and as necessary to produce the results intended by, the Contract Documents including, but not limited to, the furnishing of (1) all materials, supplies, equipment, fixtures, tools, implements, and other items and facilities required for, or in connection with, or for inclusion or incorporation into, the Project and (2) all labor, supervision, transportation, utilities, storage and all other services required for or in connection with the Project, except as specifically indicated in the Contract Documents to be the responsibility of others.

§ 2.2 CONTRACTOR'S STANDARD OF CARE, CONDITIONS AND LEGAL REQUIREMENTS

§ 2.2.1 The Contractor shall be responsible for the performance of the Work as an independent contractor and in a good and workmanlike manner (i) consistent with the Contract Documents; (ii) consistent with the instructions, guidance and direction of the Owner and Engineer; (iii) consistent with prevailing applicable professional and industry standards; (iv) consistent with sound practices; (v) as expeditiously as is consistent with such professional skill and care and the orderly progress of the Work and with the Contract Documents and the instructions, guidance and direction of the Owner and Engineer; and (vi) in a manner that will not exceed the Contract Sum as set forth in the Contract (the standards of this Section 2.2.1 shall be referred to herein as the “Contractor’s Standard of Care”). The Contractor shall exercise the Contractor’s Standard of Care in performing all aspects of the Work. All references in the Contract Documents to the knowledge, inference, reliance, awareness, determination, belief, observation, recognition or discovery of or by the Contractor or reference to any similar term shall include the constructive knowledge, inference, reliance, awareness, determination, belief, observation, recognition attributed to the Contractor (“Constructive Knowledge”). Such Constructive Knowledge shall include the knowledge, inference, reliance, awareness, determination, belief, observation and recognition the Contractor would have obtained upon

the exercise of the Contractor's Standard of Care.

§ 2.2.2 The Contractor shall be responsible for the performance of the Work in accordance with the Contract Documents, and the Conditions (as defined hereinafter), and the Contractor shall obtain and post all necessary permits at the site. The term "Conditions" shall mean and include all "**Legal Requirements**" (as defined in Section 3.7.2 of the AIA Document A201-2017) and/or all guidelines, standards and conditions of funding imposed on the Work and/or Project by the Agencies, as defined hereinafter.

§ 2.2.3 The "Agencies" or an "Agency" mean and include the Connecticut Department of Administrative Services ("DAS"), the Connecticut Commission on Human Rights and Opportunities ("CHRO"), and the Connecticut Department of Energy and Environmental Protection ("CTDEEP"), and all other governmental authorities having regulatory or administrative jurisdiction over the Work and/or the Project, and all representatives or designees of DAS, CHRO, CTDEEP, and such other governmental authorities.

§ 2.2.4 Legal Requirements and Agency Requirements

§ 2.2.4.1 Without limiting the responsibility of the Contractor under other provisions of the Contract Documents, the Contractor shall comply with and conduct the Work in accordance with all Legal Requirements, which shall include, without limitation, compliance with the requirements of Connecticut Regulation Sections 16a-38k-1 through 9 ("High Performance Building Requirements") to the extent such High Performance Building Requirements are specified in the Contract Documents, including without limitation any waste stream management requirements.

§ 2.2.4.2 Notwithstanding anything to the contrary in this Agreement, the Contractor shall attend such meetings and site-visits, and make such submissions, as are necessary to comply with applicable Legal Requirements.

§ 2.2.4.3.1 Contractor shall provide Change Orders and supporting documents and other required documentation in the form required by DAS and any other Agencies. Contractor shall also maintain records and reports as required by DAS, CHRO, CTDEEP, and other Agencies.

§ 2.2.4.3.2 Contractor shall preserve and maintain financial books and records relating to this Contract and the Contractor's performance of the Work for a period of five (5) years after the date of final payment, or for such longer period as may be required by Legal Requirements or the Conditions, and upon request by the Owner or an Agency, shall make such records available to the Owner and/or such Agency as needed to address any audit by an Agency, including without limitation by DAS, CHRO, and/or CTDEEP. Such records shall include, without limitation, the Contractor's accounting records including complete documentation to support accounting entries, books, job cost reports, correspondence, instructions, drawings, receipts, subcontracts, Subcontractor bids, Subcontractor or supplier invoices, purchase orders, vouchers, memoranda, written policies and procedures, Change Order files (including documentation covering negotiated settlements), back charge logs and supporting documentation, general ledger entries detailing cash and trade discounts earned, insurance rebates and dividends; electronic or computer data, any other supporting evidence deemed necessary to substantiate charges, and other data relating to this Contract reasonably requested by the Owner or an Agency. Upon request by the Owner and/or any Agency, the Contractor shall deliver to the Owner such records, or any other records or items as are reasonably requested by the Owner in connection with any audit of the Project by the Owner or DAS in connection with any grant or financial assistance from the State of Connecticut for the Project ("DAS Grants"). The Contractor shall comply with all accounting procedures and record retention policies reasonably requested by the Owner and/or required by Legal Requirements or other Conditions, including without limitation DAS's rules and regulations relating to the DAS Grant.

§ 2.2.4.3.3 Upon request of the Owner or the Engineer, the Contractor will cooperate with and assist the Owner and Engineer with any audit of the Project conducted by the Owner or an Agency at any time after Substantial Completion. Such cooperation shall be at no cost to the Owner unless such cooperation is (1) in connection with an audit other than an audit by CHRO, CTDEEP, or the audit to be conducted by DAS for the Project in connection with DAS Grants, (2) provided after the close-out of the Project and demobilization by the Contractor and its Subcontractors, in which case the Contractor shall be entitled to reasonable compensation determined in the manner provided under Section 7.3.3 of AIA Document A201-2017.

§ 2.2.4.4 Any information obtained by the Contractor from the Owner or Engineer may not be used, published, distributed, sold or divulged by the Contractor, its Subcontractors, or any Sub-subcontractors for such party's own purposes or for the benefit of any person, firm, corporation or other entity other than the Owner, without the prior written consent of the Owner. Any information obtained by the Contractor or its Subcontractors or any Sub-subcontractors that is designated by the Owner in accordance with applicable Legal Requirements as confidential shall not be disclosed to any other parties without the prior written consent of the Owner.

§ 2.2.4.5 The Contractor shall comply with Legal Requirements applicable to its performance under this Contract, including all equal employment opportunity programs, and other programs as may be required by governmental and quasi-governmental authorities (including without limitation that identified or referenced in Sections 2.2.4.6, 8.8.3, 8.8.4, or 8.8.5 of this Agreement). The Contractor shall be responsible for all fines and penalties assessed against the Owner or the Contractor by any Agency to the extent such fines and penalties arise from the violation of any of the foregoing by the Contractor, any Subcontractor or Sub-subcontractor (as defined in Section 5.1 of the AIA Document A201-2017) or anyone for whom or which any of them is responsible.

§ 2.2.4.6 The Contractor shall be solely responsible for assuring that the procurement and award of Subcontracts for the Work is conducted in a manner consistent with applicable Legal Requirements and the Contract Documents.

§ 2.2.4.7 In procuring any Subcontracts with Subcontractors for performance of any portion of Work, the Contractor shall:

- .1 Coordinate all processes for the solicitation of bids, selection of successful bidders, and award of Subcontracts;
- .2 Incorporate applicable requirements and regulations of the Owner and Town of Harwinton, as applicable, and of Agencies, as required into bid documents, including without limitation, project labor agreements, compliance with prevailing wage laws and regulations, compliance with local hiring ordinances, compliance CHRO regulations and rules, and compliance with rules and requirements of DAS;
- .3 Develop and prepare bid packages in compliance with all Legal Requirements and the rules and requirements of DAS;
- .4 Solicit and engage Subcontractors with the qualifications and ability to perform the Work and complete the Project;
- .5 Lead and coordinate all pre-bid meetings and Project walk-throughs with the Owner;
- .6 Coordinate with the Owner and the Engineer to manage the collection and response to question from prospective bidders;
- .7 Evaluate all bid submissions to determine qualifications and scope and recommend the lowest responsible bidder; and
- .8 Ensure state CHRO, DAS, and CTDEEP requirements are satisfied and provide all reporting required site reporting required of Contractor by CHRO, DAS or CTDEEP.

§ 2.3 THE CONTRACTOR'S PROJECT TEAM

§ 2.3.1 The Contractor accepts the relationship of trust and confidence established by this Agreement and covenants with the Owner to cooperate with the Engineer and exercise the Contractor's reasonable skill and judgment in furthering the interests of the Owner. The Contractor agrees to furnish efficient business administration and supervision and to use Contractor's best efforts to furnish, at all times, an adequate supply of skilled workers and materials, and to perform the Work in the most expeditious and economical manner consistent with the Owner's interests.

§ 2.3.2 The Contractor's project team ("Project Team") will consist of, at a minimum, the following:

Project Executive: _____
Project Manager: _____
Superintendent: _____

The Contractor acknowledges that, in entering into this Agreement, the Owner is relying upon the fact that each of the members of the Project Team will continue to perform their services throughout the entirety of the performance of the Work. No change will be made in the membership of the Contractor's Project Team without the Owner's prior written approval, which approval shall not be unreasonably withheld. The Contractor will, upon reasonable notice from the Owner, replace any member of the Project Team whom the Owner reasonably deems unsatisfactory.

ARTICLE 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

§ 3.1 The date of commencement of the Work shall be:

(Check one of the following boxes.)

☒ The date of this Agreement.

☐ A date set forth in a notice to proceed issued by the Owner.

☐ Established as follows:

(Insert a date or a means to determine the date of commencement of the Work.)

If a date of commencement of the Work is not selected, then the date of commencement shall be the date of this Agreement.

§ 3.2 The Contract Time shall be measured from the date of commencement of the Work.

§ 3.3 Substantial Completion

§ 3.3.1 Subject to adjustments of the Contract Time as provided in the Contract Documents, the Contractor shall achieve Substantial Completion of the entire Work:

(Check one of the following boxes and complete the necessary information.)

☐ Not later than () calendar days from the date of commencement of the Work.

☒ By the following date: **AUGUST 25, 2026**

§ 3.3.2 Subject to adjustments of the Contract Time as provided in the Contract Documents, if portions of the Work are to be completed prior to Substantial Completion of the entire Work, the Contractor shall achieve Substantial Completion of such portions by the following dates:

Portion of Work

Substantial Completion Date

§ 3.3.3 If the Contractor fails to achieve Substantial Completion as provided in this Section 3.3, liquidated damages, if any, shall be assessed as set forth in Section 4.5. **TIME IS OF THE ESSENCE** in the completion of the Work.

ARTICLE 4 CONTRACT SUM

§ 4.1 The Owner shall pay the Contractor the Contract Sum in current funds for the Contractor's performance of the Contract. The Contract Sum shall be **XXXXXXXX and XX/100 Dollars (\$ X,XXX,XXX.XX)**, subject to additions and deductions as provided in the Contract Documents.

§ 4.2 Alternates

§ 4.2.1 Alternates, if any, included in the Contract Sum:

Item

Price

§ 4.2.2 Subject to the conditions noted below, the following alternates may be accepted by the Owner following execution of this Agreement. Upon acceptance, the Owner shall issue a Modification to this Agreement.

(Insert below each alternate and the conditions that must be met for the Owner to accept the alternate.)

Item	Price	Conditions for Acceptance
------	-------	---------------------------

§ 4.3 Allowances, if any, included in the Contract Sum:
(Identify each allowance.)

Item	Price
Tank grave backfill materials and installation (approx. 20 CY) in accordance with technical specifications.	Eight Thousand Dollars (\$8,000.00)

§ 4.4 Unit prices applicable to the Work, if any, are set forth below (the “Unit Prices”). Unit Prices shall be valid for the life of the Project and are inclusive of all costs associated with the complete performance, furnishing, and installation of the portion of the Work subject to Unit Prices including, without limitation, labor, materials, equipment, machinery, services, engineering, transportation, taxes and insurance as well as overhead and profit. Unit Prices shall be applicable to both additions to and deductions from the Work:
(Identify the item and state the unit price and quantity limitations, if any, to which the unit price will be applicable.)

Item	Units and Limitations	Price per Unit Added (\$0.00)	Price per Unit Deducted (\$0.00)
Contaminated Soil Disposal	Ton		
Asphalt	Ton		
Backfill	Cubic yard		
Fuel Disposal (in excess of 6”)	Gallon		
Processed Aggregate Base	Ton		
Granular Fill	Ton		

§ 4.5 Liquidated damages, if any:
Two Thousand Five Hundred and 00/100 Dollars (\$2,500.00) per day.

It is acknowledged that the Contractor’s failure to achieve Substantial Completion of the entire Work within the Contract Time established in Section 3.3.1 of this Agreement will cause the Owner to incur substantial economic damages and losses of types and in amounts which are impossible to compute and ascertain with certainty as a basis for recovery by the Owner of actual damages, and that liquidated damages represent a fair, reasonable and appropriate estimate thereof. Accordingly, in lieu of actual damages for such delay, the Contractor agrees that liquidated damages may be assessed and recovered by the Owner as against the Contractor and its Surety in the event of delayed completion of the Work, without the Owner being required to present any evidence of the amount or character of actual damages sustained by reason thereof. Therefore, the Contractor shall be liable to the Owner for payment of liquidated damages in the **amount of Two Thousand Five Hundred and 00/100 Dollars (\$2,500.00)** for each day that Substantial Completion of the entire Work is delayed beyond the Contract Time established in Section 3.3.1 of this Agreement for the achievement of Substantial Completion of the entirety of the Work, as the Contract Time may adjusted for time extensions granted by the Owner through a Change Order in accordance with the terms and conditions of the Contract Documents. Such liquidated damages are intended to represent estimated actual damages and are not intended as a penalty. The Contractor shall pay liquidated damages assessed by the Owner, to the Owner, without prejudice to or limiting Owner’s right to terminate this Agreement as provided elsewhere in this Agreement.

The collection of liquidated damages by the Owner under this Section 4.5 shall be in addition to, and not in lieu of, the Owner’s right to recover from the Contractor the Owner’s increased costs to complete the Project arising from the Contractor’s delay. Further, such liquidated damages shall in no way limit the Owner’s other rights under this Agreement or the Owner’s entitlement to damages for any other injury, damage or loss, other than for delay, for which Contractor may be responsible.

§ 4.6 Other:
(Insert provisions for bonus or other incentives, if any, that might result in a change to the Contract Sum.)

None.

§ 4.6.1 The Contractor represents and warrants that the Drawings and Specifications and other materials and information furnished to the Contractor are sufficiently detailed to enable the Contractor to firmly establish the Contract Sum, subject to clarifications and assumptions (if any) expressly herein set forth.

ARTICLE 5 PAYMENTS

§ 5.1 Progress Payments

§ 5.1.1 Based upon Applications for Payment submitted to the Engineer and Owner by the Contractor and Certificates for Payment issued by the Engineer, the Owner shall, upon its determination that the Work or a portion of the Work, as applicable, has been completed in a manner consistent with the Contract Documents, make progress payments on account of the Contract Sum to the Contractor as provided below and elsewhere in the Contract Documents.

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

§ 5.1.3 Each month on or before the fifth (5th) business day of such month, the Contractor shall submit to the Engineer and the Owner a final version of the Contractor's Application for Payment along with all required Supporting Documentation (as defined in and in accordance with Section 9.3 of AIA Document A201-2017) for all Work properly performed in the prior month. The Owner shall, subject to the provisions of Section 9.6.8 of AIA Document A201-2017, make payment to the Contractor of the amount certified by the Engineer to be due and payable to the Contractor under such Application for Payment not later than thirty (30) days after the date the Engineer receives the final version of the Application for Payment and all required Supporting Documentation.

§ 5.1.3.1 Commencing with the second Application for Payment, and continuing with each Application for Payment submitted thereafter, Supporting Documentation shall include, without limitation, a properly executed release and waiver of claims and mechanic's liens from the Contractor and each Subcontractor and material supplier whose Work was included on the previous Application for Payment for which payment by Owner was made to the Contractor. In addition to the foregoing, commencing with the first Application for Payment and continuing with each Application for Payment submitted thereafter, the Contractor shall provide a properly executed conditional release and waiver of claims and mechanic's liens, in form acceptable to the Owner, from the Contractor and each Subcontractor and material or equipment supplier whose Work is included on the Application for Payment subject only to receipt of payment under such Application for Payment.

§ 5.1.4 Each Application for Payment shall be based on the most recent schedule of values submitted by the Contractor in accordance with the Contract Documents and approved by the Owner and the Engineer pursuant to Section 9.2 of the AIA Document A201-2017 (the "Schedule of Values"). The Schedule of Values shall allocate the entire Contract Sum among the various portions of the Work. The Schedule of Values shall be prepared in such form, and supported by such data to substantiate its accuracy, as the Engineer may require. This Schedule of Values shall be used as a basis for reviewing the Contractor's Applications for Payment.

§ 5.1.5 Applications for Payment shall show the percentage of completion of each portion of the Work as of the end of the period covered by the Application for Payment. Each Application for Payment shall include a statement showing the status of all pending change orders, other pending change directives and approved changes to the Contract. Such statement shall identify the pending change orders and other pending change directives, and shall include the date such change orders and directives were initiated, the costs associated with their performance, and a description of any Work completed.

§ 5.1.6 In accordance with AIA Document A201-2017, and subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

§ 5.1.6.1 The amount of each progress payment shall first include:

- .1 That portion of the Contract Sum properly allocable to completed Work based on the Schedule of Values;
- .2 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; and
- .3 That portion of Construction Change Directives that the Engineer determines, in the Engineer's professional

judgment, to be reasonably justified.

§ 5.1.6.2 The amount of each progress payment shall then be reduced by:

- .1 The aggregate of any amounts previously paid by the Owner;
- .2 The amount, if any, for Work that remains uncorrected and for which the Engineer has previously withheld a Certificate for Payment as provided in Article 9 of AIA Document A201–2017;
- .3 Any amount for which the Contractor does not intend to pay a Subcontractor or material supplier, unless the Work has been performed by others the Contractor intends to pay;
- .4 For Work performed or defects discovered since the last payment application, any amount for which the Engineer may withhold payment, or nullify a Certificate of Payment in whole or in part, as provided in Article 9 of AIA Document A201–2017;
- .5 Retainage withheld pursuant to Section 5.1.7;
- .6 In addition to retainage withheld pursuant to Section 5.1.7, unless the Contractor is exempted by CHRO from the requirements of, or compliance with, Connecticut General Statutes Section 46a-68e, the Owner shall withhold from each progress payment to the Contractor an amount equal to two percent (2%) of the amount otherwise due (the “CHRO Holdback”), until such time as the Contractor has filed with CHRO and caused all Subcontractors to file with CHRO all compliance reports required by CHRO pursuant to General Statutes Section 46a-68e, and such reports have been approved by the executive director of CHRO or the executive director's designee or deemed by CHRO deficient without consequence.
- .7 In addition to retainage withheld pursuant to Section 5.1.7, any additional amounts required by law to be withheld or retained by the Owner due to the Contractor's failure to comply with its obligations under Connecticut General Statutes Sections 4a-60, 4a-60g, 4a-60h, or Sections 46a-68c, 46a-68d, 46a-68e and/or 46a-68f, inclusive, or as required by an order of CHRO made pursuant to Connecticut General Statutes Section 46a-56.

§ 5.1.7 Retainage

§ 5.1.7.1 For each progress payment, the Owner may withhold the following amount, as retainage, from the payment otherwise due:

(Insert a percentage or amount to be withheld as retainage from each Application for Payment. The amount of retainage may be limited by governing law.)

Five percent (5%)

§ 5.1.7.1.1 The following items are not subject to retainage:

(Insert any items not subject to the withholding of retainage, such as general conditions, insurance, etc.)

Not applicable

§ 5.1.7.2 Intentionally omitted.

(If the retainage established in Section 5.1.7.1 is to be modified prior to Substantial Completion of the entire Work, including modifications for Substantial Completion of portions of the Work as provided in Section 3.3.2, insert provisions for such modifications.)

§ 5.1.7.3 Upon Substantial Completion of the Work and such acceptance, and consent of surety if any, the Owner may, in its sole and absolute discretion, release and make payment of all or a portion of retainage as applicable to the Work that is complete in accordance with the Contract Documents. The Owner shall not, however, be obligated to release any portion of retainage held by the Owner until the Contractor has fulfilled all of its obligations under, and in accordance with, the Contract Documents.

(Insert any other conditions for release of retainage upon Substantial Completion.)

§ 5.1.8 If final completion of the Work is materially delayed through no fault of the Contractor, any Subcontractor, Sub-

subcontractor or any other person or entity for whom or which any of them is responsible, the Owner shall pay the Contractor any additional amounts to the extent required under Article 9 of AIA Document A201–2017.

§ 5.1.9 Except with the Owner’s prior approval, the Contractor shall not make advance payments to suppliers for materials or equipment which have not been delivered and stored at the site.

§ 5.1.10 The Contractor shall use payments made under this Agreement solely for the purpose of paying for the performance of the Work pursuant to the Contract Documents. Contractor shall pay for all labor and services performed and materials, equipment and machinery supplied by others in connection with the performance of the Work in accordance with the Contract Documents and as required by applicable Legal Requirements.

§ 5.1.11 The Contractor shall pay any amounts due a Subcontractor or supplier or other person or entity providing or performing Work, whether for labor or services performed or materials, equipment or machinery furnished, not later than fifteen (15) days after the date the Contractor receives payment from the Owner which encompasses such labor or services performed or materials, equipment or machinery furnished by such Subcontractor or supplier or other person or entity providing or performing Work. Payment shall be the amount to which the Subcontractor or supplier or other person or entity is entitled, reflecting percentages actually retained by the Owner from payments to the Contractor on account of the portion of the Work performed by the Subcontractor or supplier or other person or entity.

The Contractor shall, by appropriate agreement with each Subcontractor or supplier or other person or entity providing or performing Work for the Contractor, require each person or entity providing or performing such Work to make payments to subconsultants or Sub-subcontractors in a similar manner. The Contractor shall include in each subcontract entered into by the Contractor with any Subcontractor or supplier or other person or entity in connection with the Work, a provision requiring the Subcontractor or supplier or other person or entity to pay any amounts due any of their Sub-subcontractors or suppliers, whether for labor or services performed or materials, equipment or machinery furnished, within thirty (30) days after such Subcontractor or supplier or other person or entity receives a payment from the Contractor which encompasses labor or services performed, or materials, equipment or machinery furnished by such sub-subcontractor or supplier.

§ 5.1.11 Retainage withheld by the Contractor on amounts due any Subcontractor or supplier or other person or entity performing or providing the Work shall not exceed five percent (5%) of such amount due.

§ 5.2 Final Payment

§ 5.2.1 Final payment, constituting the entire unpaid balance of the Contract Sum, shall be made by the Owner to the Contractor when

- .1 the Contractor has fully performed the Work and all of its obligations under the Contract Documents except for the Contractor’s responsibility to correct Work as provided in Article 12 of AIA Document A201–2017, and to satisfy other requirements, if any, which extend beyond final payment;
- .2 the Contractor has submitted a final Application for Payment together with all required Supporting Documentation; and
- .3 a final Certificate for Payment has been issued by the Engineer in accordance with Section 9.10 of AIA Document A201-2017.

§ 5.2.2 The Owner’s final payment to the Contractor, including retainage withheld pursuant to Section 5.1.7, shall be made no later than ninety (90) days after the Owner’s acceptance of all Work required by the Contract Document and issuance of the Engineer’s final Certificate for Payment. The Engineer’s final Certificate for Payment shall not be issued unless and until all required Supporting Documentation required by the Contract Documents, and such additional information as is reasonably requested by the Owner, have been submitted to the Engineer by the Contractor.

§ 5.2.2.1 Notwithstanding anything to the contrary set forth herein or in any other Contract Documents, Owner shall not be required to make final payment until the Contractor has submitted all documentation required by the Contract Documents to the Owner and the Owner has accepted the same, including without limitation, all warranties and guarantees associated with the Work and “as built” surveys in form acceptable to the Owner.

§ 5.2.2.2 In the discretion of the Owner, the Owner may make final payment to the Contractor by joint checks made payable in each case to the Contractor and the appropriate Subcontractor or supplier. The Contractor acknowledges and agrees that such

payment by joint check shall constitute payment by Owner to the Contractor.

§ 5.3 Interest

Payments due and unpaid under the Contract shall bear interest only to the extent required by Connecticut law and, if so required, at the minimum required rate.

§ 5.4 Any provision herein to the contrary notwithstanding, the Owner shall not be obligated to make payment to the Contractor hereunder to the extent any one or more of the following conditions exist:

- .1 The Contractor is in default of any of its obligations hereunder or otherwise is in default under any of the Contract Documents;
- .2 Any part of such payment is attributable to Work which the Owner or the Engineer determines that, because of the fault or neglect of the Contractor, is defective or not performed in accordance with the Contract Documents; provided, however, such payment shall be made as to the part thereof attributable to the Work which is performed in accordance with the Contract Documents and is not otherwise defective; or
- .3 The Contractor has failed to make payments properly to Subcontractors or for material or labor used in the Work for which the Owner has made payment to the Contractor.

ARTICLE 6 DISPUTE RESOLUTION

§ 6.1 Initial Decision Maker

The Engineer will serve as the Initial Decision Maker pursuant to Article 15 of AIA Document A201–2017, unless the parties appoint below another individual, not a party to this Agreement, to serve as the Initial Decision Maker.

(If the parties mutually agree, insert the name, address and other contact information of the Initial Decision Maker, if other than the Architect.)

§ 6.2 Binding Dispute Resolution

For any Claim subject to, but not resolved by, mediation pursuant to Article 15 of AIA Document A201–2017, the method of binding dispute resolution shall be as follows:

(Check the appropriate box.)

- [☐] Arbitration pursuant to Section 15.4 of AIA Document A201–2017
- [☒] Litigation in a court of competent jurisdiction
- [☐] Other *(Specify)*

§ 6.3 Choice of Law/Forum Selection/Waiver of Jury Trial

This Agreement, the Contract, and the Contract Documents shall be governed by and construed in accordance with the laws of the State of Connecticut, without regard to its choice of law or conflict of law principles which would result in the application of the laws of any jurisdiction other than the State of Connecticut and applicable federal law of the United States.

The Owner and the Contractor expressly agree and acknowledge that any action or legal proceeding by the Owner or Contractor against the other, which action or legal proceeding arises from or relates to the Contract, shall be commenced in the Superior Court of the State of Connecticut, Judicial District of Hartford at Hartford and maintained therein or in the Complex Litigation Docket at the Judicial District of Hartford, which shall be the exclusive forum and venue for any such action or legal proceeding.

THE CONTRACTOR HEREBY WAIVES THE RIGHT TO TRIAL BY JURY IN ANY ACTION OR LEGAL

PROCEEDING ARISING FROM OR RELATING TO THE CONTRACT, AND AS TO ANY AND ALL CLAIMS, DISPUTES, AND/OR CAUSES OF ACTION AGAINST OR WITH OWNER WHICH ARISE OUT OF, OR ARE IN CONNECTION WITH, THE CONTRACT AND/OR THE PROJECT.

ARTICLE 7 TERMINATION OR SUSPENSION

§ 7.1 The Contract may be terminated by the Owner or the Contractor as provided in Article 14 of AIA Document A201–2017.

§ 7.1.1 If the Contract is terminated for the Owner’s convenience in accordance with Article 14 of AIA Document A201–2017, then the Owner shall pay the Contractor as provided in Article 14 of AIA Document A201–2017.

§ 7.2 The Work may be suspended by the Owner as provided in Article 14 of AIA Document A201–2017.

ARTICLE 8 MISCELLANEOUS PROVISIONS

§ 8.1 Where reference is made in this Agreement to a provision of AIA Document A201–2017 or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Documents.

§ 8.2 The Owner’s representative:

(Name, address, email address, and other information)

Richard Miller, Director of Facilities

24 Lyon Road

Burlington, CT 06013

Email: MillerR@region10ct.org

Tel: 860-673-2538 Ext. 10104

§ 8.3 The Contractor’s representative:

(Name, address, email address, and other information)

NAME/TITLE

STREET ADDRESS

CITY, STATE, ZIP

Email:

Tel:

§ 8.4 The Contractor’s representative shall not be changed without at least ten (10) days’ prior notice to the Owner and Engineer.

§ 8.5 The Engineer’s representative:

Jennifer Thurber, P.E.

Fuss & O’Neill, Inc.

One Financial Plaza, 15th Floor

Hartford, CT 06103

E-mail: Jennifer.thurber@fando.com

Tel: (860) 783-4708

Mobile: (617) 771-3214

§ 8.6 Insurance

§ 8.6.1 The Contractor shall purchase and maintain insurance as required and set forth in **Exhibit A** attached hereto, and elsewhere in the Contract Documents.

§ 8.6.2 The Contractor shall provide surety bonds as set forth in Section 8.6.3 and elsewhere in the Contract Documents.

§ 8.6.3.1 Contractor Performance Bond and Payment Bond

Except as set forth in subsection 8.6.3.2, the Contractor shall provide surety bonds, from a company or companies lawfully authorized to issue surety bonds in the State of Connecticut with an AM Best rating of no less than A-, XI or who are otherwise acceptable to the Owner, as follows:

- .1 a Payment Bond in the amount of 100% of the Contract Sum, for the protection of persons supplying labor or materials in the prosecution of the Work for the use of each such person; and
- .2 a Performance Bond in the amount of 100% of the Contract Sum.

Payment and Performance Bonds shall be AIA Document A312-2010™, Payment Bond and Performance Bond, or contain provisions identical to AIA Document A312-2010™.

§ 8.6.3.2 Letter of Credit In Lieu of Surety Bonds

If the Contractor is a small contractor or a minority business enterprise as defined by Connecticut General Statutes Section 4a-60g, the Contractor may:

- .1 in lieu of providing a Payment Bond in accordance with Section 8.6.3.1.1, provide a letter of credit in an amount equal to twenty-five percent (25%) if the Contract Sum; and
- .2 in lieu of providing a Performance Bond in accordance with Section 8.6.3.1.2, provide a provide a letter of credit in an amount equal to twenty-five percent (25%) if the Contract Sum.

§ 8.6.3.3 Subcontractor Payment Bonds

The Contractor shall obtain from each Subcontractor with whom the Contractor enters into a Subcontract having a Subcontract value or price of One Hundred Thousand Dollars (\$100,000.00) or more, a Payment Bond for the protection of persons supplying labor or materials in the prosecution of the Work for the use of each such person, from a company or companies lawfully authorized to issue surety bonds in the State of Connecticut with an AM Best rating of no less than A-VII or who are otherwise acceptable to the Owner and the Contractor, which bond shall be in the amount of 100% of the amount of such Subcontract. Such Payment Bond shall be AIA Document A312-2010™, Payment Bond or contain provisions identical thereto.

§ 8.7 Notice in electronic format, pursuant to Article 1 of AIA Document A201–2017, may be given in accordance with a building information modeling exhibit, if completed, or as otherwise set forth below:

(If other than in accordance with a building information modeling exhibit, insert requirements for delivering notice in electronic format such as name, title, and email address of the recipient and whether and how the system will be required to generate a read receipt for the transmission.)

Notice pursuant to Section 1.6.1 of the AIA Document A201-2017 may be delivered by electronic mail to the email address for the recipient's representative identified in Sections 8.2, 8.3, and 8.5 above, as applicable. The subject line of the email shall include the address of the Project and be electronically flagged as "urgent."

§ 8.8 Other provisions:

§ 8.8.1 The Contractor hereby represents and warrants (in addition to other representations and warranties contained in the Contract Documents), as an inducement to the Owner to enter into the Contract, which representations and warranties shall survive the final completion of the Work:

- .1 that it is financially solvent, able to pay its debts as they mature and possessed of sufficient working capital to complete the Work and perform its obligations under the Contract Documents;
- .2 that it, through its Subcontractors or otherwise, is able to furnish the tools, materials, supplies, equipment and labor required to complete the Work and perform its obligations hereunder in a timely manner and has sufficient experience and competence to do so;
- .3 the Contractor is authorized to do business in the State of Connecticut and is properly licensed by all necessary governmental authorities having jurisdiction over the Contractor and the Project; and
- .4 the Contractor has visited the site of the Project and become familiar with the condition of the site and the Contract Documents, and knows of no reason why the Work cannot be performed as set forth in, and in the timeframe required by, the Contract Documents.

§ 8.8.2.1 Execution in Counterparts. This Agreement and any of the other Contract Documents requiring signature of the parties may be signed in two or more separate counterparts, each of which shall be treated as an original but which, when taken together, shall constitute one and the same instrument, provided such instrument not be effective until each party has executed and exchanged at least one counterpart. Exchange by fax, or by email attaching an executed copy of this Agreement or other Design-Build Document so-executed, and/or in Adobe Portable Document Format (“pdf”), will be considered to be a valid and binding obligation of the executing party.

§ 8.8.2.2 Electronic Signatures. Each party agrees that the parties may, to the extent that it is permissible under applicable law, sign this Agreement or other Contract Documents requiring signature of the parties, by way of electronic signature (such as DocuSign, AdobeSign, etc.), and that that method of signature is as conclusive of each party’s intent to be bound by this Agreement or other Contract Documents so-executed, as if it had been signed by each party’s manual “wet ink” signature.

§ 8.8.3 Nondiscrimination Affirmation.

The Contractor affirms that, by signing this Agreement, the Contractor certifies (i) that the Contractor has reviewed Connecticut General Statutes Sections 4a-60 (portions of which are set forth in Section 3.1.7 of AIA Document A201-2017), (ii) that the Contractor understands its obligations pursuant to Section 3.1.7 of AIA Document A201-2017 and Connecticut General Statutes Section 4a-60, and (iii) that the Contractor will maintain a policy for the duration of the Contract to assure that the Contract will be performed in compliance with the nondiscrimination requirements set forth in Section 3.1.7 of AIA Document A201-2017 and Connecticut General Statutes Section 4a-60(b).

§ 8.8.4 Utilization of Small Business and Minority Business Enterprises

This Contract and the Project are subject to compliance with Connecticut General Statutes Section 4a-60g and State of Connecticut law requirements for spending allocation goals (“SAGs”) established by CHRO for the award of subcontracts to small contractor and/or minority business enterprises. Connecticut law requires a minimum SAG of twenty-five (25%) percent of the total state-funded portion of the Contract for award to Subcontractors holding current certification from the Connecticut Department of Administrative Services under the provisions of Connecticut General Statutes Section 4a-60g as Small Business Enterprises (“SBE”), and a minimum of 6.25% of the total state-funded portion of the Contract for award to Subcontractors holding current certification from the Connecticut Department of Administrative Services under the provisions of Connecticut General Statutes Section 4a-60g as Minority-, Women-, and/or Disabled-owned businesses (“MBEs”). The Contractor must demonstrate good faith effort to meet the SAGs for the Project.

§ 8.8.4.1 The Contractor shall perform under this Contract in accordance with Connecticut General Statutes Sections 4a-60, 4a-60g and 4a-60h in the procurement of Subcontractors to perform the Work.

§ 8.8.4.2 Determination of the Contractor’s good faith efforts shall include, but shall not be limited to, the following factors: The Contractor’s employment and subcontracting policies, patterns and practices, including without limitation the Contractor’s utilization of reasonable steps and best suggested practices established by CHRO to achieve SAGs; affirmative advertising, recruitment and training; technical assistance activities and such other reasonable activities or efforts as CHRO may prescribe that are designed to promote the participation of SBEs and MBEs in public works projects.

§ 8.8.4.3 The Contractor shall develop and maintain adequate documentation, in a manner prescribed by CHRO, of its good faith efforts.

§ 8.8.5 Equal Employment Opportunity. The Contractor agrees and warrants that in the performance of the Contract, it 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, sex, sexual orientation, physical disability, including but not limited to blindness, unless it is shown by the Contractor that such disability prevents performance of the Work involved, in any manner prohibited by the laws of the United States or the State of Connecticut. The Contractor shall provide to the Owner such information that Owner requests concerning the employment practices and procedures of the Contractor as relates to the provisions of this Section 8.8.5. For the purpose of the aforesaid provision, performance of the Contract shall include, but not be limited to, the following: advertising, recruitment, layoff, termination, rates of pay or other forms of compensation, conditions or privileges of employment, selection for apprenticeship, selection for retention of subcontractors, or in the procurement of materials, equipment or services.

§ 8.8.5.1 The Contractor shall hereinafter post on the Project site, in conspicuous places available for employees and applicants for employment, notices setting forth its non-discrimination requirements.

§ 8.8.5.2 In all contracts between the Contractor and any Subcontractor or supplier, either for Work to be performed under a Subcontract or the procurement of materials, equipment or services, each consultant, Subcontractor or supplier shall be notified in writing by the Contractor of the Contractor's obligations under this Contract relating to non-discrimination, and each, by their contracting agent, shall agree to and be bound by the such terms of this Contract.

§ 8.8.5.3 Nothing in this Section 8.8.5 shall be deemed to relieve the Contractor from compliance with all applicable federal, state and municipal law concerning equal employment opportunity, non-discrimination, good faith efforts to award subcontracts to small contractors and minority business enterprises, and related subjects during the term of the Contract.

§ 8.8.6 Compliance with Connecticut General Statutes Section 31-52a. In the employment of labor to perform the Work specified under the Contract Documents, preference shall be given by the Contractor to residents of the State of Connecticut, who are, and continuously for at least six (6) months prior to the date of this Agreement have been, residents of the State of Connecticut, and if no such person is available then to residents of other states.

§ 8.8.7 Prevailing Wage. The Contractor shall comply with, and cause all Subcontractors and Sub-subcontractors providing labor for performance of the Work and/or off-site custom fabrication for the Work to comply with Connecticut General Statutes Section 31-53. The wages paid on an hourly basis to any person performing the work of any mechanic, laborer or worker on the Work herein contracted to be done and the amount of payment or contribution paid or payable on behalf of each such person to any employee welfare fund, as defined in subsection (i) of Connecticut General Statutes Section 31-53, shall be at a rate equal to the rate customary or prevailing for the same work in the same trade or occupation in the Town of Harwinton. Any contractor who is not obligated by agreement to make payment or contribution on behalf of such persons to any such employee welfare fund shall pay to each mechanic, laborer or worker as part of such person's wages the amount of payment or contribution for such person's classification on each pay day. For purposes of this Section 8.8.7, "off-site custom fabrication" means the fabrication of mechanical systems that are fabricated at a site located within the State of Connecticut other than the location of the Project, but are fabricated specifically for the Project, including plumbing systems, heating systems, cooling systems, pipefitting systems, ventilation systems or exhaust duct systems; provided, "off-site custom fabrication" does not include components or materials that are stock shelf items or readily available.

§ 8.9 Successors and Assigns

The Owner and the Contractor, respectively, bind themselves, their partners, successors, assigns, and legal representatives to the covenants, agreements, and obligations contained in the Contract Documents. Neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract. All terms and provisions of this Agreement shall be binding upon, inure to the benefit of, and be enforceable by, the Owner and the Contractor, and their respective administrators, legal representatives, directors, officers, employees, agents, successors and permitted assigns.

§ 8.10 Capitalization

Terms capitalized in this Agreement and the other Contract Documents include those that are (1) defined within the Contract Documents, (2) the titles of numbered articles, or (3) the titles of other AIA Contract Documents.

§ 8.11 Interpretation

§ 8.11.1 Unless otherwise stated in the Contract Documents, words which have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

§ 8.11.2 The invalidity of any provision of any of the Contract Documents shall not invalidate this Agreement or its remaining provisions, or any other provision of any other of the Contract Documents. If it is determined by a court of competent jurisdiction or arbitrator(s) that any provision of this Agreement or any of the other Contract Documents violates any law, or is otherwise invalid or unenforceable, then that provision shall be deemed revised to the extent necessary to make that provision legal, and/or valid and enforceable. In such case the Contract shall be construed, to the fullest extent permitted by law, to give effect to the parties' intentions and purposes in executing this Agreement, and the invalidity of any part or provision of the Contract Documents shall not impair or affect in any manner the validity, enforceability or effect of the remaining parts and provisions of the Contract Documents.

§ 8.12 Headings. Section headings in the Contract Documents are intended solely for convenience or reference, and they shall

be given no effect in the construction or interpretation of the Contract.

§ 8.13 Rights and Remedies. The rights and remedies of the Owner that are provided for in this Agreement, and all other rights and remedies that are available to the Owner at law or in equity, are, to the extent permitted by applicable law, cumulative and are not exclusive of any other right or remedy now or hereafter available at law or in equity to the Owner. Neither the Owner's assertion of a right nor employment of a remedy shall preclude the Owner from concurrently asserting any other right or the employment of any other remedy.

§ 8.14 No action or failure to act by the Owner to enforce any provision of the Contract shall constitute a waiver of a right or duty afforded the Owner under the Contract or constitute approval of or acquiescence of the Owner in a breach by the Contractor hereunder, except as the Owner may specifically agree in writing, nor shall such action or failure to act by the Owner constitute a waiver of any such provision or a limitation upon the right of Owner to subsequently enforce strict compliance with all provisions, terms and conditions of the Contract.

§ 8.15 Exhibits and Conflicts. To the extent that there is any conflict or inconsistency between the provisions of this Agreement and the provisions of any other Contract Document, the provisions of this Agreement shall control, unless the provisions of the concerned other Contract Document explicitly acknowledge such a conflict and explicitly state that it is the parties' intent that such provisions of the other Contract Document control with respect to the involved topic.

§ 8.16 Entire Agreement/Modifications. There are no oral agreements between the Owner and the Contractor affecting this Agreement, and this Agreement sets forth all of the covenants and agreements between the Owner and the Contractor with regard to the performance of the Work and the subject-matter of this Agreement. This Agreement, in all of its parts, represents the entire and integrated agreement between the parties hereto relating to the subject-matter of this Agreement and the Project, and supersedes and replaces all prior negotiations, representations, and agreements, oral or written, verifiable or alleged. This Agreement may be modified only by written amendment, signed by both of the Owner and the Contractor, or by written Change Order or writing as otherwise expressly permitted and provided in this Agreement. No alteration, modification, or amendment to this Agreement shall be binding upon the Parties hereto unless by written instrument.

ARTICLE 9 ENUMERATION OF CONTRACT DOCUMENTS

§ 9.1 This Agreement is comprised of the following documents:

- .1 This Agreement
- .2 **Exhibit A - Insurance Requirements**
- .3 AIA Document A201-2017, as modified by the Owner
- .4 Drawings

.1 HARWINTON CONSOLIDATED SCHOOL UST REMOVAL/REPLACEMENT, JUNE 9, 2025, STATE PROJECT NO: 210-0037CV/OT, PERMIT SET, Prepared for Regional School District 10, 24 Lyon Road, Burlington, CT 06013 by Fuss & O'Neill, One Financial Plaza, 15th Floor, Hartford, CT 06103

<u>NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
G-001	Cover Sheet	06/09/2025
G-002	General Notes	06/09/2025
L-100	Site Logistics Plan	06/09/2025
C-001	Civil General Notes	06/09/2025
C-101	Site Preparation and Erosion Plan & Sediment Control Plan	06/09/2025
C-102	Site Layout and Grading Plan	06/09/2025
C-501	Construction Details	06/09/2025
C-502	Construction Details	06/09/2025
V-101	Property & Topographic Survey (by Godfrey Hoffman Hodge)	03/12/2025
M-001	Mechanical Notes	06/09/2025
MS-100	Mechanical Demolition and New Work Site Plan	06/09/2025
MD-101	Mechanical First Floor Demolition Plan	06/09/2025
M-101	Mechanical First Floor New Work Plan	06/09/2025
M-501	Mechanical Details	06/09/2025
M-502	Mechanical Details and Schedules	06/09/2025

E-001	Electrical Notes and Legend	06/09/2025
ES-100	Electrical Demolition and New Work Site Plan	06/09/2025
ED-100	Electrical First Floor Demolition Plan	06/09/2025
E-101	Electrical First Floor New Work Plan	06/09/2025
E-501	Electrical Details	06/09/2025

.5 Specifications

.1 SPECIFICATIONS – CONTRACT BIDDING DOCUMENTS FOR UNDERGROUND STORAGE TANK REPLACEMENT AT HARWINTON CONSOLIDATED SCHOOL, 115 Litchfield Road, Harwinton, CT 06791, Regional School District No. 10 Invitation to Bid# 2026-01 State Project Number 210-0037CV/OT, JUNE 9, 2025 BID DOCUMENT SET, prepared by Fuss & O'Neill, Inc., 1 Financial Plaza, 15th Floor, Hartford, CT 06103

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000102	Project Information Page	06/09/2025	1
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001113	Invitation to Bid	06/09/2025	2
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	Attachment 8: Certificate of Compliance with Connecticut General Statutes Section 31-57b	06/09/25	1
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Portions of Addenda relating to bidding or proposal requirements are not part of the Contract Documents unless the bidding or proposal requirements are also enumerated in this Article 9.

.8 Other documents, if any, listed below:

(List here any additional documents that are intended to form part of the Contract Documents. AIA Document A201™-2017 provides that the advertisement or invitation to bid, Instructions to Bidders, sample forms, the Contractor's bid or proposal, portions of Addenda relating to bidding or proposal requirements, and other information furnished by the Owner in anticipation of receiving bids or proposals, are not part of the Contract Documents unless enumerated in this Agreement. Any such documents should be listed here only if intended to be part of the Contract Documents.)

.1 Exhibit B -- Contractor's Completed Bid Form, dated [MONTH, DAY, YEAR]

.2 Exhibit C – Connecticut Department of Labor Wage Rates System Annual Adjusted April 1st Rates, April 1, 2026

.3 Exhibit D - PROJECT MANUAL – HARWINTON CONSOLIDATED SCHOOL UNDERGROUND STORAGE TANK REMOVAL, 115 Litchfield Road, Harwinton, CT 06791, Prepared by Fuss & O'Neill, Inc, dated June 9, 2025.

.4 Exhibit E - Addenda No. 1 to RSD10 Invitation to Bid # 2026-01, dated [MONTH, DAY, YEAR]

This Agreement entered into as of the day and year first written above.

OWNER (Signature)

Dr. Fran Thompson, Superintendent

Regional School District 10

(Printed name and title)

CONTRACTOR (Signature)

NAME/TITLE

(Printed name and title)

EXHIBIT A
to A101-2017 Agreement dated [DATE] between
Regional School District No. 10 as Owner and [REDACTED] as Contractor

INSURANCE REQUIREMENTS

I. Contractor's Insurance Requirements

Before commencement of construction of the Work at the Project site, the Contractor shall purchase and maintain the following types and limits of insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the State of Connecticut. The Contractor shall maintain the required insurance until the expiration of the period for correction of Work as set forth in Section 12.2.2 of the AIA A201-General Conditions contained in the Bidding Documents, except that the Contractor shall maintain its Commercial General Liability Policy for seven (7) years after the date of Substantial Completion of the Work.

Insurance requirements set forth in this Exhibit A are independent of, and in addition to, the Contractor's liability under the Contract Documents. Nothing in the Contract Documents shall be deemed to limit Contractor's liability under the Contract Documents to the limits of coverage of insurance required hereunder. The Contractor shall be solely responsible for payment of all deductible or retention amounts pertaining to any insurance required hereunder. The limit and coverages set forth herein are the minimum requirements under the Contract Documents. The inclusion of these minimum requirements shall not be interpreted to restrict the rights of the additional insureds to the stated minimum coverage amounts in the event the Contractor maintains coverage at higher limits.

A. Commercial General Liability

Commercial General Liability insurance for the Project written on an occurrence form with policy limits of not less than One Million Dollars (\$1,000,000) each occurrence, Two Million Dollars (\$2,000,000) general aggregate, and Two Million Dollars (\$2,000,000) aggregate for products-completed operations hazard, providing coverage for claims including

- (1) damages because of bodily injury, sickness or disease, including occupational sickness or disease, and death of any person;
- (2) personal injury and advertising injury;
- (3) damages because of physical damage to or destruction of tangible property, including the loss of use of such property;
- (4) bodily injury or property damage arising out of completed operations;
- (5) the Contractor's indemnity obligations under Section 3.18 of the AIA A201-General Conditions contained in the Bidding Documents; and
- (6) electronic data liability (under endorsement ISO CG 04 37 or its equivalent).

The Contractor's Commercial General Liability policy shall not contain an exclusion or restriction of coverage for the following:

- (1) Claims by one insured against another insured, if the exclusion or restriction is based solely on the fact that the claimant is an insured, and there would otherwise be coverage for the claim;
- (2) Claims for property damage to the Contractor's Work arising out of the products-completed operations hazard where the damaged Work or the Work out of which the damage arises was performed by a Subcontractor;
- (3) Claims for bodily injury other than to employees of the insured;
- (4) Claims for indemnity under Section 3.18 of the AIA A201-General Conditions contained in the Bidding Documents arising out of injury to employees of the insured;
- (5) Claims or loss excluded under a prior work endorsement or other similar exclusionary language;

- (6) Claims or loss due to physical damage under a prior injury endorsement or similar exclusionary language;
- (7) Claims related to roofing, if the Work involves roofing;
- (8) Claims related to exterior insulation finish systems (EIFS), synthetic stucco or similar exterior coatings or surfaces, if the Work involves such coatings or surfaces;
- (9) Claims related to earth subsidence or movement, where the Work involves such hazards;
- (10) Claims related to explosion, collapse and underground hazards, where the Work involves such hazards.

The Commercial General Liability coverage general aggregate limit shall apply separately to each project on a per-project basis and shall be unimpaired at commencement of the Work. The Commercial General Liability coverage shall be written on the most recent ISO occurrence form (CG 00 01) or a substitute occurrence-based form providing equivalent coverage, and shall include coverage for liability arising from premises, operations, independent contractors, products/completed operations covering construction means and methods to be maintained for no less than a period of seven (7) years after completion of the Work, personal and advertising injury, contractual liability (without requiring privity of contract), and liability assumed under an insured contract (including the tort liability of another assumed in a business contract). The Commercial General Liability coverage shall apply to, and not exclude coverage for: joint negligence of the Contractor and other persons; acts and/or omissions of Subcontractors and Subcontractors' sub-subcontractors; and completed operations. In addition, such policy shall contain a broad form contractual liability endorsement or similar wording within the policy form, if applicable.

Regional School District No. 10 (the "Owner"), the Regional School District No. 10 Board of Education, the Regional School District No. 10 Board of Education Building Committee, and their members, affiliates, employees, volunteers, directors, and officers, shall be included as additional insureds under the Commercial General Liability policy, to the extent commercially available using an endorsement with coverage no less than that provided under CG 20 10 07 04, CG 20 37 07 04, and, with respect to Fuss & O'Neill, Inc. (the "Engineer"), and the Engineer's consultants, CG 20 32 07 04. Insurance for additional insureds shall be as broad as the coverage provided for the named insured. Commercial General Liability coverage shall apply as primary and non-contributory insurance before any other insurance or self-insurance, including any deductible maintained by or provided to the additional insureds.

B. Commercial Automobile Liability insurance written on the most recent ISO form CA 00 01 or its equivalent, covering vehicles owned, hired vehicles, and non-owned vehicles, including trailers, used by the Contractor and/or used in connection with the Work, with policy limits of not less than One Million Dollars (\$1,000,000) per accident, for bodily injury, death of any person, and property damage arising out of the ownership, maintenance and use of those motor vehicles along with any other statutorily required automobile coverage. If vehicles are used to transport hazardous material then ISO CA 99 48 (broadened pollution) and an MCS90 endorsement shall be included unless Pollution Liability coverage as described in Section I.H is applicable to operations and vehicles being used.

C. Umbrella or Excess liability insurance on an occurrence basis in excess of the coverages and limits required for the primary liability insurance required under Sections I.A, I.B, and I.F (Contractor's Commercial General Liability insurance, Commercial Automobile Liability insurance, and Employer's Liability insurance), in an amount not less than One Million Dollars (\$1,000,000) per occurrence and One Million Dollars (\$1,000,000) unimpaired general aggregate per policy year. Umbrella or Excess coverage shall be follow form on a primary and non-contributory basis. The Umbrella or Excess insurance policies shall provide the same or greater coverage as the Contractor's Commercial General Liability insurance, Commercial Automobile Liability insurance, and Employer's Liability insurance, and in no event shall any excess or umbrella liability insurance provide narrower coverage than the primary policy. The Umbrella or Excess insurance policy shall not require the exhaustion of the underlying limits only through the actual payment by the underlying insurers. Umbrella or Excess coverage must include as additional insureds all entities that are additional insureds on the Commercial General Liability coverage, Automobile Liability, and Employer's

Liability insurance required under Sections I.A, I.B, and I.F, and Umbrella or Excess coverage for such additional insureds shall apply as primary and non-contributory before any other insurance or self-insurance or self-insured retention, including any deductible maintained by or provided to the additional insured, and shall apply without the need for privity of contract as to any additional insured.

D. The Contractor may achieve the required limits and coverage for Commercial General Liability insurance, Automobile Liability insurance, and Employers' Liability insurance, through a combination of primary and excess or umbrella "follow form" liability insurance, provided such primary and excess or umbrella insurance policies result in the same or greater coverage as the coverages required under Sections I.A, I.B, and I.F, and in no event shall any excess or umbrella liability insurance provide narrower coverage than the primary policy. The excess policy shall not require the exhaustion of the underlying limits only through the actual payment by the underlying insurers, and aggregate limits of liability shall apply separately with respect to the Work.

E. Workers' Compensation at statutory limits.

In addition to any other requirements related to worker's compensation insurance, if Contractor is a sole proprietor, a single member limited liability company or otherwise has no employees, Contractor shall maintain Worker's Compensation Insurance as if it were an "employer" as such term is defined in and in accordance with Connecticut's General Statutes.

F. Employers' Liability insurance with policy limits not less than One Million Dollars (\$1,000,000) each accident, One Million Dollars (\$1,000,000) each employee, and One Million Dollars (\$1,000,000) policy limit.

G. If the Contractor is required to furnish professional services as part of the Work, including without limitation, surveying, geotechnical investigation, design, engineering, stamping of drawings or specifications, consulting, programing or development of software, the Contractor shall procure Professional Liability insurance covering performance of the professional services, with policy limits of not less than One Million Dollars (\$1,000,000) per occurrence or claim and One Million Dollars (\$1,000,000) in the aggregate. If Professional Liability insurance procured and maintained is on claims-made basis, the insurance policy shall have a retroactive date which shall precede the commencement of the Work and which date is no later than the policy inception date, and coverage shall be continuously maintained until at no less than seven (7) years after Substantial Completion of the Project.

H. If the Work involves the handling, abatement, clean-up, removal, transport, dissemination, use, or release of pollutants or hazardous materials, including but not limited to asbestos, PCBs, contaminated soils, and lead-based paint, the Contractor shall procure Pollution Liability insurance, with policy limits of not less than One Million Dollars (\$1,000,000) per occurrence and One Million Dollars (\$1,000,000) in the aggregate. The policy shall provide coverage for pollution, lead, mold and asbestos liability. The policy must specifically include coverage for "asbestos, lead paint, and other hazardous building materials such as PCB's, abatement operations" and have the "Pollution Exclusion" eliminated or modified so as not to apply to any bodily injury, including but not limited to asbestos, lead paint, and other hazardous building materials such as PCB's abatement, handling, transport or disposal. All policies shall be written on an "occurrence" basis. Coverage shall include first party, third party, clean-up, legal and claim expense including transit and disposal. Full policy forms and endorsements are subject to review by the Owner.

I. Coverage under Section I.G and I.H may be procured through a Combined Professional Liability and Pollution Liability insurance policy, with combined policy limits of not less than Two Million Dollars (\$2,000,000) per claim and Two Million Dollars (\$2,000,000) in the aggregate.

J. The Contractor's Commercial General Liability, Umbrella/Excess Liability, Automobile Liability, and Worker's Compensation Insurance policies shall include a waiver of subrogation endorsement in favor of Regional School

District No. 10, the Regional School District No. 10 Board of Education, the Regional School District No. 10 Board of Education Building Committee, and their members, affiliates, employees, volunteers, directors, and officers.

K. Additional Insured Obligations.

1. To the fullest extent permitted by law, the Contractor shall cause the commercial general liability coverage, automobile liability coverage, and excess or umbrella coverage to include (1) Regional School District No. 10, the Regional School District No. 10 Board of Education, the Regional School District No. 10 Board of Education Building Committee, and their members, affiliates, employees, volunteers, directors, and officers, the Engineer, and the Engineer's consultants, as additional insureds for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's operations; and (2) Regional School District No. 10, the Regional School District No. 10 Board of Education, the Regional School District No. 10 Board of Education Building Committee, and their members, affiliates, employees, volunteers, directors, and officers, as additional insureds for claims caused in whole or in part by the Contractor's negligent acts or omissions for which loss occurs during completed operations. The additional insured coverage shall be primary and non-contributory to any general liability insurance policies maintained by the Owner or any other additional insured and shall apply to both ongoing and completed operations. To the extent commercially available, the additional insured coverage shall be no less than that provided by Insurance Services Office, Inc. (ISO) forms CG 20 10 07 04, CG 20 37 07 04, and, with respect to the Engineer and the Engineer's consultants, CG 20 32 07 04.

2. The Owner, the Engineer, and the Engineer's consultants, and all of their affiliates, subsidiaries and respective partners, officers, directors, agents, employees and servants, shall be named as an additional insured on the insurance policies described in Sections I.A, I.B, I.C, I.F, I.H, and I.I, without a requirement for privity of contract. The additional insured coverage in such policies procured by the Contractor, as named insured, shall not limit coverage thereunder to vicarious liability of the additional insured or liability arising out of only the named insured's negligence.

L. All insurance policies maintained by the Contractor shall be deemed primary and non-contributory to insurance maintained by any additional insured, up to and including the limits of any Umbrella or Excess coverage, in the event of loss arising out of the Contractor's performance of the Work, and all such insurance policies shall provide that where there is more than one insured thereunder the policy shall apply to each insured separately as if there were a separate policy covering each insured except with respect to the policy limits of such policy. The Contractor shall obtain certificates for each policy which evidence that coverage is in accordance with these requirements.

M. To the fullest extent permitted by law, the Contractor, for itself and its insurers, shall waive all rights of recovery and all rights of subrogation against Regional School District No. 10, the Regional School District No. 10 Board of Education, the Regional School District No. 10 Board of Education Building Committee, and their members, affiliates, employees, volunteers, directors, and officers, the Engineer, and the Engineer's consultants, and their subsidiaries, affiliates, employees, volunteers, directors and officers, and any other person designated by the Owner or with whom the Owner has agreed to waive its rights in the event of loss including loss which should have been covered by the insurance required pursuant to the Contract Documents to be procured and maintained by the Contractor, for losses within the scope of any liability insurance policy which the Contractor is required to purchase and maintain pursuant to the Contract Documents and/or covered by any liability insurance policy which the Contractor in-fact purchases and maintains.

N. To the extent commercially available, all insurance policies required to be procured by the Contractor pursuant to the this Exhibit A and/or the Contract Documents and/or which the Contractor in-fact procures in connection with the Work and/or which otherwise apply to the Work or the Project, shall not prohibit and shall permit the Contractor to waive rights of subrogation against, and shall include a waiver of subrogation endorsement in favor of Regional

School District No. 10, the Regional School District No. 10 Board of Education, the Regional School District No. 10 Board of Education Building Committee, and their members, affiliates, employees, volunteers, directors, and officers, the Engineer, and the Engineer's consultants, and its subsidiaries, affiliates, employees, volunteers, directors and officers, and agents.

O. Limits of coverage stated above for any insurance are minimum required amounts, and if higher limits of coverage are maintained for any coverage such higher limits will be deemed to be those required by this Exhibit A and/or the Contract. Minimum coverage limits required for insurance required to be procured and maintained by the Contractor may be satisfied through any combination of primary and umbrella or excess coverage, provided there shall be no gaps in the form or limits between primary and umbrella or excess coverage. Policy limits available to any additional insured shall be the full policy limits maintained by the named insured. The amounts of insurance specified herein and agreed to by the parties are minimum requirements only and shall in no way limit the liability of the Contractor, nor the applicability or availability of the Contractor's insurance.

II. Additional General Insurance Requirements

A. Certificates of Insurance. The Contractor shall provide current certificates of insurance acceptable to the Owner evidencing compliance with the insurance requirements set forth herein and the other Bidding Documents at the following times: (1) prior to commencement of the Work; (2) upon renewal or replacement of each required policy of insurance; and (3) upon the Owner's written request. An additional certificate evidencing continuation of commercial liability coverage, including coverage for completed operations, shall be submitted with the final Application for Payment and thereafter upon renewal or replacement of such coverage until the expiration of the periods required by Section I, above. The certificates will show Regional School District No. 10, the Regional School District No. 10 Board of Education, the Regional School District No. 10 Board of Education Building Committee, and their members, affiliates, employees, volunteers, directors, and officer as additional insureds on the Contractor's Commercial General Liability, Automobile Liability, and excess or umbrella liability policy or policies. The Contractor's policies shall be written by insurance companies licensed to do business in the State of Connecticut, with an AM Best rating of no less than A-, XI or otherwise acceptable to the Owner. The Contractor and its insurer(s) for each liability insurance policy required under this Exhibit A and/or any other Contract Documents shall give the Owner and any additional insured under any such policy, no less than thirty (30) days' prior written notice in advance of any termination, expiration, cancellation, or reduction or other change in coverage, and in advance the date by which renewal is required to continue coverage under any such policy, and (10) days' prior written notice of a termination or cancellation of a policy for non-payment. All certificates of insurance and notices required pursuant to the Contract Documents shall be sent by registered mail:

Richard Miller, Director of Facilities
Regional School District No. 10
24 Lyon Road
Burlington, CT 06013

B. The Contractor shall provide evidence of coverage that meets the requirements of the Contract Documents (including without limitation this Exhibit A) by providing to the Owner certificates of insurance for each policy, and if requested by the Owner redacted certified copies of such policies or any part thereof deemed necessary in the sole opinion of the Owner to demonstrate compliance with the Contractor's obligations under the Contract. The Owner's acceptance of evidence of insurance shall in no way constitute or be construed as the Owner's affirmation that the Contractor has fully satisfied any or all of such obligations or the Owner's waiver of any right or claim arising out of or relating to the Contract Documents. As soon as possible after the execution of the Contract, and in no event later than seven (7) days prior to the commencement of the Work, the Contractor shall provide to the Owner certificates of

insurance and/or certified copies of the policies requested by the Owner as evidence that all insurance coverage required pursuant to the Contract Documents to be procured and maintained by the Contractor during performance of the Work has been so procured. The Contractor nor any Subcontractor may perform activities for construction of the Work at or on the Project site prior to Contractor's delivery of such evidence to the Owner, and no failure to or delay in delivering such evidence to the Owner shall constitute a basis for any increase to the Contract Sum or the Contract Time.

C. Deductibles and Self-Insured Retentions. The Contractor shall disclose to the Owner any deductible or self-insured retentions applicable to any insurance required to be provided by the Contractor. Any retention or deductible applicable on any insurance policy procured and maintained by the Contractor shall be clearly stated and shall be the sole responsibility of the Contractor together with any applicable premium charge, claim cost, penalties, assessment, tax or other costs associated with the Contractor's risk funding obligations. Self-insured retention or any deductible in excess of \$100,000 shall require the Owner's prior written approval.

D. The Contractor shall ensure that all Subcontractors maintain insurance policies, written by insurance companies licensed to do business in the State of Connecticut with an AM Best rating of no less than A-, VII, which policies are consistent with the requirements set forth in this Exhibit A and otherwise in the Contract, including without limitation, the naming of additional insureds as provided and required in Section I, above, with coverage limits not less than those required for the insurance policies required to be procured and maintained by the Contractor or such lower limits as are agreed to by the Owner in writing on a case-by-case basis for a specific Subcontractor. The Contractor shall include in all subcontract agreements the obligation of the Subcontractors to comply with these insurance requirements. The Contractor shall not permit any Subcontractor or sub-subcontractor to perform any Work on the Project site until such time as the Contractor has obtained satisfactory evidence from such Subcontractors and sub-subcontractors that the foregoing insurance requirements have been satisfied.

E. The Contractor shall require all its Subcontractors and their insurers to waive all rights of recovery against Regional School District No. 10, the Regional School District No. 10 Board of Education, the Regional School District No. 10 Board of Education Building Committee, and their members, affiliates, employees, volunteers, directors, and officers, and the Engineer, and the Engineer's consultants, and their subsidiaries, affiliates, employees, volunteers, directors and officers, and any other person designated by the Owner or with whom the Owner has agreed to waive its rights in the event of loss, for losses covered by any policy of liability insurance which any such Subcontractor is required to purchase and maintain pursuant to the Contract Documents and/or their Subcontract with the Contractor in connection with the Work, and/or which the Subcontractor in-fact purchases and maintains in connection with the Project and/or the Work.

F. If, as a result, in whole or in part, of the negligence (or other act for which there is legal liability) of the Contractor, its employees, agents, or subcontractors of any tier, any person (including employees of the Contractor) injury or death occurs or any property is damaged, lost or destroyed, or any other loss occurs, the Contractor assumes the liability therefor and agrees, to the fullest extent permitted by law, to indemnify, defend, and hold the Owner and its affiliates, subsidiaries, partners, directors, officers, members, managers, agents, servants, employees, and volunteers harmless from any and all such injury, death, property damage or other loss, including reasonable attorneys' fees incurred in connection therewith. The foregoing obligations are independent from, and not limited in any manner by, the Contractor's insurance coverage obtained pursuant to the Contract Documents or otherwise. The Contractor shall not be required to defend, indemnify or hold harmless an indemnitee against claims for bodily injury or property damage solely caused by or resulting from the negligence of such indemnitee.

AIA® Document A201® – 2017

General Conditions of the Contract for Construction

for the following PROJECT:

(Name and location or address)

Underground Storage Tank Replacement at Harwinton Consolidated School
115 Litchfield Road
Harwinton, CT 06791 (the “Project”)
State Project Number: 210-0037CV/OT

THE OWNER:

(Name, legal status and address)

Regional School District No. 10 (“Owner”)
24 Lyon Road
Burlington, CT 06013

THE ENGINEER:

(Name, legal status and address)

Fuss & O’Neill, Inc.
1 Financial Plaza, 15 Floor
Hartford, CT 06103

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ADDITIONS AND DELETIONS:

The author of this document may have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

For guidance in modifying this document to include supplementary conditions, see AIA Document A503™–2017, Guide for Supplementary Conditions.

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ARTICLE 1 GENERAL PROVISIONS

§ 1.1 Basic Definitions

§ 1.1.1 The Contract Documents

The Contract Documents are enumerated in the Agreement between the Owner and Contractor (hereinafter the Agreement) and consist of the Agreement, these General Conditions of the Contract for Construction, Supplementary Conditions and/or other Conditions to the Contract for Construction, Drawings, Specifications, Addenda issued prior to execution of the Contract, other documents listed in the Agreement, and Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive, or (4) a written order for a minor change in the Work issued by the Engineer. Unless specifically enumerated in the Agreement, the Contract Documents do not include the advertisement or invitation to bid, Instructions to Bidders, sample forms, other information furnished by the Owner in anticipation of receiving bids or proposals, the Contractor's bid, or portions of Addenda relating to bidding or proposal requirements.

§ 1.1.2 The Contract

The Contract Documents form the Contract for Construction between the Owner and the Contractor. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the Contractor and the Engineer or the Engineer's consultants, (2) between the Owner and a Subcontractor, supplier, or a Sub-subcontractor, (3) between the Owner and the Engineer or the Engineer's consultants, or (4) between any persons or entities other than the Owner and the Contractor.

§ 1.1.3 The Work

The term "Work" means the construction and services required by, reasonably inferable from, and as necessary to produce the results intended by, the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment, and services provided or to be provided by the Contractor to fulfill the Contractor's obligations or to be provided by Subcontractors, material suppliers, Sub-subcontractors or any other entity for whom the Contractor is responsible under or pursuant to the Contract Documents. The Work may constitute the whole or a part of the Project.

§ 1.1.4 The Project

The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by the Owner and by Separate Contractors.

§ 1.1.5 The Drawings

The Drawings are the graphic and pictorial portions of the Contract Documents showing the design, location, and dimensions of the Work, generally including plans, elevations, sections, details, schedules, and diagrams. The Drawings and details for construction and changes to the Work show layouts as taken from available original Drawings and subsequent known changes. The Contractor shall make all necessary adjustments and changes in the construction of the Work required by actual conditions existing on the date of the Agreement, at no cost to the Owner.

§ 1.1.6 The Specifications

The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, systems, standards and workmanship for the Work, and performance of related services.

§ 1.1.7 Instruments of Service

Instruments of Service are representations, in any medium of expression now known or later developed, of the tangible and intangible creative work performed by the Engineer and the Engineer's consultants under their respective professional services agreements. Instruments of Service may include, without limitation, studies, surveys, models, sketches, drawings, specifications, and other similar materials.

§ 1.1.8 Initial Decision Maker

The Initial Decision Maker is the person identified in the Agreement to render initial decisions on Claims in accordance with Section 15.2. The Initial Decision Maker shall not show partiality to the Owner or Contractor and shall not be liable for results of interpretations or decisions rendered in good faith.

§ 1.9 Contractor

The term “Contractor” as used in these General Conditions or any of the Contract Documents, shall mean and refer to the person identified as the “Contractor” in the Agreement.

§ 1.2 Correlation and Intent of the Contract Documents

§ 1.2.1 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results. If the Contractor discovers any inconsistency within or among parts of the Contract Documents which set forth the requirements for the Work, or between the requirements for the Work set forth in Contract Documents and applicable standards, codes or ordinances, the Contractor shall promptly give notice to the Owner and the Engineer of such inconsistency and shall, unless otherwise instructed in writing by the Engineer or the Owner, provide work or materials that comply with applicable standards, codes or ordinances, and if not in conflict with such standards, codes and ordinances, further provide work or materials of the better quality and/or greater quantity set forth in the Contract Documents as instructed by the Engineer or the Owner. In the case of an inconsistency between the Drawings and Specifications, or within either that is not clarified by Addendum, the better quality or greater quantity of Work shall be provided in accordance with the Engineer’s interpretation.

§ 1.2.1.1 The invalidity of any provision of the Contract Documents shall not invalidate the Contract or its remaining provisions. If it is determined that any provision of the Contract Documents violates any law, or is otherwise invalid or unenforceable, then that provision shall be revised to the extent necessary to make that provision legal and enforceable. In such case the Contract Documents shall be construed, to the fullest extent permitted by law, to give effect to the parties’ intentions and purposes in executing the Contract.

§ 1.2.2 Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.

§ 1.2.3 Unless otherwise stated in the Contract Documents, words that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings. When applied to materials and equipment required for the Work, the words “furnish,” “install,” and “provide” shall be interpreted as follows:

- .1 The word “provide” shall mean to furnish, pay for, deliver, install, adjust, clean, and otherwise make materials and equipment fit and ready for their intended use.
- .2 The word “furnish” shall mean to secure, pay for, deliver to site, unload, and uncrate materials and equipment.
- .3 The word “install” shall mean to place in position, incorporate in the Work, adjust, clean, make fit and ready for use and perform all services except those included under the term “furnish”
- .4 The phrase “furnish and install” shall be equivalent to the word “provide.” Each shall be interpreted to mean ‘the Contractor shall furnish all labor, material and equipment and install.’
- .5 “As required” shall mean as required to produce a fully completed project or result to the satisfaction of the Engineer
- .6 Where irreconcilable conflicts between different Contract Documents occur:
 - .1 Amendments and Addenda shall take precedence over the Specifications.
 - .2 The Specifications shall take precedence over the Drawings.
 - .3 Stated dimensions shall take precedence over scaled dimensions.
 - .4 Large-scale detail drawings shall take precedence over small-scale drawings.
 - .5 Schedules shall take precedence over other data on the drawings.
- .7 In case of a difference between Drawings or Specifications or within either document itself in describing the Work, the better quality or greater quantity, regardless of cost, will be assumed to be and shall be included in the Work. The Contractor shall not proceed with such Work until the Engineer has been contacted for clarification and proper direction.
- .8 Schedules of materials in various sections of the Specifications are furnished to assist the Contractor. Contractor shall verify the schedules with the Drawings and shall provide any additional materials indicated on the Drawings but not included in the schedules. The greater quantity or highest quality will govern.

§ 1.2.4 All work shown or referred to in the Contract Documents shall be included in the Work, excepting only those items which are specifically noted not being part of the Work or specifically noted as to be provided by the Owner.

§ 1.2.5 The Contractor shall not take advantage of obvious error or apparent discrepancy in Contract Documents. Notice of discovered error or discrepancy shall immediately be given in writing to the Engineer to make such corrections and interpretations as the Engineer may deem necessary for completion of the Work in accordance with the requirements of the Contract Documents.

§ 1.3 Capitalization

Terms capitalized in these General Conditions include those that are (1) specifically defined, (2) the titles of numbered articles, or (3) the titles of other documents published by the American Institute of Architects.

§ 1.4 Interpretation

In the interest of brevity the Contract Documents frequently omit modifying words such as “all” and “any” and articles such as “the” and “an,” but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

§ 1.5 Ownership and Use of Drawings, Specifications, and Other Instruments of Service

§ 1.5.1 The Contractor, Subcontractors, Sub-subcontractors, and suppliers shall not own or claim a copyright in the Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with the Project is not to be construed as publication in derogation of the reserved rights of the Owner in and to such Instruments of Service.

§ 1.5.2 The Contractor, Subcontractors, Sub-subcontractors, and suppliers are authorized to use and reproduce the Instruments of Service provided to them, subject to any protocols established pursuant to Sections 1.7 and 1.8, solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. The Contractor, Subcontractors, Sub-subcontractors, and suppliers may not use the Instruments of Service on other projects or for additions to the Project outside the scope of the Work without the specific written consent of the Owner, Engineer, and the Engineer’s consultants.

§ 1.6 Notice

§ 1.6.1 Except as otherwise provided in Section 1.6.2, where the Contract Documents require one party to notify or give notice to the other party, such notice shall be provided in writing to the designated representative of the party to whom the notice is addressed and shall be deemed to have been duly served if delivered in person, by mail, by courier, or by electronic transmission if a method for electronic transmission is set forth in the Agreement.

§ 1.6.2 Notice of Claims as provided in Section 15.1.3 shall be provided in writing and shall be deemed to have been duly served only if delivered to the designated representative of the party to whom the notice is addressed by certified or registered mail, or by courier providing proof of delivery.

§ 1.7 Digital Data Use and Transmission

The parties shall agree upon written protocols governing the transmission and use of, and reliance on, Instruments of Service or any other information or documentation in digital form.

§ 1.8 Building Information Models Use and Reliance

Any use of, or reliance on, all or a portion of a building information model without agreement to written protocols governing the use of, and reliance on, the information contained in the model shall be at the using or relying party’s sole risk and without liability to the other party and its contractors or consultants, the authors of, or contributors to, the building information model, and each of their agents and employees.

ARTICLE 2 OWNER

§ 2.1 General

§ 2.1.1 The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Owner shall designate in writing a representative who shall have express authority to bind the Owner with respect to all matters requiring the Owner’s approval or authorization. Except as otherwise provided in Section 4.2.1, the Engineer does not have such authority. The term “Owner” means the Owner or the Owner’s authorized representative. The Owner’s representative shall be the person designated as such in the Agreement, or a successor to such

person designated by the Owner from time to time, which person shall have express authority to bind the Owner with respect to all matters requiring the Owner's approval or authorization, subject to such limitations as the Owner may specify in writing to the Contractor from time to time. Any action taken on the Owner's behalf other than by the representative so designated by Owner will not be binding upon the Owner. The Engineer does not have such authority. The term "Owner" means the Owner or the Owner's authorized representative. The Owner will provide written notification to the Contractor of the identity and contact information of any person (other than the person identified in Section 8.2 of the Agreement) that is to serve as a designated representative of the Owner.

§ 2.1.2 Intentionally omitted.

§ 2.2 Evidence of the Owner's Financial Arrangements

§ 2.2.1 Prior to commencement of the Work, upon written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract. If such evidence is so requested, the Contractor shall have no obligation to commence the Work until the Owner provides such evidence.

§ 2.2.2 Intentionally omitted.

§ 2.2.3 After the Owner furnishes evidence of financial arrangements under this Section 2.2, the Owner shall not materially vary such financial arrangements without prior notice to the Contractor.

§ 2.2.4 Where the Owner has designated information furnished under this Section 2.2 as "confidential," the Contractor shall keep the information confidential and shall not disclose it to any other person. However, the Contractor may disclose "confidential" information, after seven (7) days' notice to the Owner, where disclosure is required by law, including a subpoena or other form of compulsory legal process issued by a court or governmental entity, or by court or arbitrator(s) order. The Contractor may also disclose "confidential" information to its employees, consultants, sureties, Subcontractors and their employees, Sub-subcontractors, and others who need to know the content of such information solely and exclusively for the Project and who agree to maintain the confidentiality of such information.

§ 2.3 Information and Services Required of the Owner

§ 2.3.1 Except for permits, related fees and filings that are the responsibility of the Contractor under the Contract Documents, including those required under Section 3.7.1, the Owner shall secure, file and pay for necessary approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities, unless provided otherwise in the Contract Documents.

§ 2.3.2 The Owner shall retain an engineer or architect lawfully licensed to practice professional engineering or architecture, or an entity lawfully practicing professional engineering or architecture, in the jurisdiction where the Project is located. That person or entity is identified as the Engineer or Architect in the Agreement and is referred to throughout the Contract Documents as if singular in number.

§ 2.3.3 If the employment of the Engineer terminates, the Owner shall employ a successor provided the services of the Engineer are still needed for the Project at the time of termination.

§ 2.3.4 The Owner shall furnish surveys describing the general physical characteristics, legal limitations, and utility locations for the site of the Project. The Contractor shall be entitled to rely on the accuracy of such surveys to extent such documents affirmatively describe or identify the general physical characteristics, legal limitations, and utility locations for the site of the Project. Notwithstanding any information contained in any such surveys received by the Contractor, the Contractor shall at all times exercise proper precautions relating to the safe performance of the Work. Any other data provided by the Owner to the Contractor concerning the physical characteristics or measurements of the components that comprise the Project site; access to the Project site or staging and storing at the Project site; present obstructions and conditions of structures on or near the Project site; locations and depths of sewers, conduits, pipes, and gas lines on or near the Project site; positions of sidewalks, curbs and pavements on or near the Project site and other data concerning the conditions of the Project site and its surroundings (collectively, "Site Data"), have been obtained from sources the Owner believes to be reliable. Accuracy of the Site Data, however, is not guaranteed and is furnished solely for accommodation of the Contractor.

§ 2.3.5 The Owner shall furnish information or services required of the Owner by the Contract Documents with reasonable promptness. The Owner shall furnish such information and services with reasonable promptness after receiving the Contractor's written request for such information or services.

§ 2.3.6 Unless otherwise provided in the Contract Documents, the Owner shall furnish up to one (1) set of Contract Drawings and Specifications, and two (2) copies of each drawing which is issued after the date of the Contract. The Contractor shall pay costs of reproduction for any additional copies of Drawings or Specifications he requires. The Owner shall furnish to the Contractor, without charge, three (3) copies of Drawings and Project Manual. Additional requested by the Contractor will be furnished at the cost of reproduction, postage and handling.

§ 2.4 Owner's Right to Stop the Work

If the Contractor fails to correct Work that is not in accordance with the requirements of the Contract Documents as required by Section 12.2 or fails to carry out Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Section 6.1.3. The Owner's right to order the Contractor to stop the Work shall not relieve the Contractor of any of its obligations under or pursuant to the Contract Documents.

§ 2.5 Owner's Right to Carry Out the Work

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a five-day period after receipt of notice from the Owner to commence and continue correction of such default or neglect, and all deficiencies in the Work arising therefrom, with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such default or neglect and the deficiencies in the Work arising therefrom. In such case, an appropriate Change Order shall be issued deducting from payments then or thereafter due the Contractor for the Owner's cost of correcting the default or neglect and the deficiencies in the Work arising therefrom, including, without limitation, expenses, attorneys' fees, and compensation for the Engineer's additional services made necessary by such default, neglect, failure and deficiencies. The Contractor shall also be responsible for all the Owner's other costs, damages, delays, and associated impacts arising in the event that the Owner exercises its rights under this Section 2.5. The Engineer may, pursuant to Section 9.5.1, withhold or nullify a Certificate for Payment in whole or in part, to the extent necessary to pay the Owner the amounts due under this Section 2.5. If current and future payments are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner. If the Contractor disagrees with the actions of the Owner or the Engineer, or the amounts claimed as costs to the Owner, the Contractor may file a Claim pursuant to Article 15. The right of the Owner to carry out the Work pursuant to this Section 2.5 shall not give rise to any duties on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity. In performing any work pursuant to this Section 2.5, the Owner shall have the right to take possession of the site and of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor or any Subcontractor.

§ 2.6 Additional Rights

The rights stated in this Article 2 shall be in addition to, and not in limitation of, any other rights of the Owner provided in the Contract Documents, or as may be available to the Owner at law or in equity.

ARTICLE 3 CONTRACTOR

§ 3.1 General

§ 3.1.1 The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Contractor and Subcontractors of all tiers shall be lawfully licensed to the extent and as required in the jurisdiction where the Project is located. The Contractor shall designate in writing a representative who shall have express authority to bind the Contractor with respect to all matters under this Contract. The term "Contractor" means the Contractor or the Contractor's authorized representative.

§ 3.1.2 The Contractor shall perform the Work in accordance with the Contract Documents.

§ 3.1.2.1 Unless explicit quality or standards for materials or workmanship are established in the Contract Documents for any portion of the Work with which the Contractor is obligated to comply, the Contractor shall perform such Work in a good and workman like manner, in a manner of good quality for the intended use, and consistent with the quality of the surrounding Work and of the construction of the Project generally.

§ 3.1.2.2 All manufactured articles, materials and equipment shall be applied, installed, connected, erected, used, cleaned, and conditioned in accordance with the manufacturer's written or printed directions and instructions unless otherwise specifically indicated in the Contract Documents. The Contractor shall comply with all manufacturer's directions, specifications and recommendations for installation, handling, sorting, adjustment and operation of materials or equipment; provided, the Contractor shall be responsible for determining whether any such directions, specifications and recommendations may safely and suitably be employed in the Work, and for notifying the Owner and Engineer in advance, in writing, of any deviation or modification necessary for the safe installation or proper operation of the item of material or equipment.

§ 3.1.3 The Contractor shall not be relieved of its obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Engineer in the Engineer's administration of the Contract, or by tests, inspections or approvals required or performed by persons or entities other than the Contractor.

§ 3.1.4 The Contractor shall comply, and shall cause Subcontractors of every tier to comply, with all accounting procedures and record retention policies reasonably requested by the Owner.

§ 3.1.5 Non-Resident Contractor

If the Contractor is a "nonresident contractor" as defined in Section 12-430(7)(A) of the Connecticut General Statutes, as revised, the Contractor shall provide evidence to the Owner prior to commencement of the Work that Contractor has complied fully with the provisions of Section 12-430(7). The Contractor is hereby notified that, if any Subcontractor or supplier performing any part of the Work under the Contract Documents is a nonresident unverified contractor, the Contractor will withhold 5% of all payments to such Subcontractor or supplier unless and until such Subcontractor or supplier provides to the Contractor a Certificate of Compliance issued by the Connecticut Department of Revenue Services as defined in the Connecticut General Statutes Section 12-430(7). A nonresident unverified contractor is a contractor without an office in the State of Connecticut that is continuously maintained, occupied and used by the contractor's regular employees regularly in attendance to carry on the contractor's business in the contractor's own name and which contractor has not been verified pursuant to the requirements of the Connecticut Department of Revenue Services. The amount withheld pursuant to Connecticut General Statutes Section 12-430(7) shall be in addition to, and not in lieu of, the retainage held by the Contractor under its Subcontract with the Subcontractor or supplier.

§ 3.1.6 Notwithstanding anything to the contrary in the Contract Documents, the Contractor shall attend such meetings and site-visits, and make such submissions, as are necessary to comply with applicable Legal Requirements (as defined in the Agreement).

§ 3.1.7 Nondiscrimination

§ 3.1.7.1 Pursuant to the requirements of Connecticut General Statutes Section 4a-60:

- (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, sexual orientation, gender identity or expression, status as a veteran, status as a victim of domestic violence, status as a victim of sexual assault or status as a victim of trafficking in persons, 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; and the Contractor further agrees to take affirmative action to ensure that applicants with job-related qualifications are employed and that employees are treated when employed without regard to their race, color, religious creed, age, marital status, national origin, ancestry, sex, gender identity or expression, sexual orientation, status as a veteran, status as a victim of domestic violence, status as a victim of sexual assault or status as a victim of trafficking in persons, 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 Connecticut Commission on Human Rights and Opportunities;
- (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 Connecticut Commission on Human Rights and Opportunities advising the labor union or worker's 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 Section 4a-60 of the Connecticut General Statutes, Connecticut General Statutes Sections 46a-68e and 46a-68f, and with each regulation or relevant order issued by the Connecticut Commission on Human Rights and Opportunities pursuant to Connecticut General Statutes Sections 46a-56, 46a-68e, 46a-68f and 46a-86; and

(5) The Contractor agrees to provide the Connecticut 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 Connecticut General Statutes Sections 4a-56 and 4a-60.

(b) The Contractor agrees and warrants that it will make good faith efforts to employ minority business enterprises as subcontractors and suppliers of materials on the Project.

(c) Pursuant to Connecticut General Statutes Section 4a-60(g), the Contractor shall include the provisions of subsections (a) and (b) of this Section 3.1.7.1 in every subcontract or purchase order entered into in order to fulfill any obligation of a contract with the state, and in every subcontract entered into in order to fulfill any obligation of a public works contract, 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 Connecticut General Statutes Section 46a-56; provided, if the 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) The Contractor agrees to comply with the regulations referred to in this Section 3.1.7.1 as they exist on the date of the Contract and as they may be adopted or amended from time to time during the term of this Contract and any amendments thereto.

§ 3.2 Review of Contract Documents and Field Conditions by Contractor

§ 3.2.1 Execution of the Contract by the Contractor shall constitute a representation that the Contractor has (i) visited the site, become generally familiar with local conditions under which the Work is to be performed, and correlated personal observations with requirements of the Contract Documents, and (ii) evaluated and satisfied itself and will cause its Subcontractors to satisfy themselves as to the conditions and limitations under which the Work is to be performed, including, without limitation (1) the location, condition, layout and physical conditions of the Project site and surrounding areas, (2) generally prevailing climatic conditions, (3) anticipated labor supply and costs, (4) anticipated availability and costs of materials, tools and equipment, and (5) except as provided in Section 10.3, and subject to the provisions of Section 3.7.4, anticipated soil and subsurface conditions of the Project site. Failure by the Contractor to comply with this Section 3.2.1 and to fully acquaint itself with conditions which may affect the Work and/or the cost thereof, including, but not limited to, conditions relating to transportation, handling, storage of materials, availability of labor, water, other known projects in the region, applicable provisions of law, and the character and availability of equipment and facilities needed preliminary to and during the prosecution the Work, shall not relieve the Contractor of its responsibilities under the Contract Documents and shall not constitute a basis for extension of the Contract Time or any increase in the Contract Sum. The Owner shall not be required to pay any amount, including any increase in the Contract Sum, or make any adjustment in the Contract Time, in connection with any failure by the Contractor or any Subcontractor to comply with the requirements of this Section 3.2.1. Owner assumes no responsibility for any representations concerning conditions made by any of its officers, or employees or representatives, prior to the execution of the Contract, unless such representations are expressly stated in the Contract Documents. The provisions of this Section 3.2.1 shall not be construed to limit the investigative and review responsibilities of the Contractor under any other provisions of the Contract Documents. The provisions of this Section 3.2.1 shall not be construed to limit the investigative and review responsibilities of the Contractor under any other provisions of the Contract Documents.

§ 3.2.1.1 Execution of the Contract by the Contractor shall constitute a representation by the Contractor that the Contractor has carefully reviewed the Contract Documents, and that the Contract Documents are sufficiently detailed and complete to permit the Contractor, (i) to complete the Project for an amount not in excess of the Contract Sum; and (ii) complete the Work within the Contract Time and in accordance with the Contract Documents and all applicable Legal Requirements (as defined in Section 3.7.2). The Contractor shall not perform any construction activity it knows constitutes a recognized error, inconsistency, or omission. If the Contractor performs any construction activity knowing it involves a recognized error, inconsistency, or omission in the Contract Documents without reporting the error, inconsistency or omission to the Engineer, the Contractor shall assume appropriate responsibility for such performance and shall bear an appropriate amount of the costs of correction.

§ 3.2.2 Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 2.3.4, shall take field measurements of any existing conditions related to that portion of the Work, and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Engineer any errors, inconsistencies or omissions discovered by or made known to the Contractor as a request for information in such form as the Engineer may require. It is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents.

§ 3.2.3 The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, but the Contractor shall promptly report to the Engineer any nonconformity discovered by or made known to the Contractor as a request for information in such form as the Engineer may require.

§ 3.2.4 If the Contractor believes that additional cost or time is involved because of clarifications or instructions the Engineer issues in response to the Contractor's notices or requests for information pursuant to Sections 3.2.2 or 3.2.3, the Contractor shall submit Claims as provided in Article 15. If the Contractor fails to perform the obligations of Sections 3.2.2 or 3.2.3, the Contractor shall pay such costs and damages to the Owner as would have been avoided if the Contractor had performed such obligations and the Contractor shall be responsible for associated delays and impacts. If the Contractor performs those obligations, the Contractor shall not be liable to the Owner or Engineer for damages resulting from errors, inconsistencies or omissions in the Contract Documents, for differences between field measurements or conditions and the Contract Documents, or for nonconformities of the Contract Documents to applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities. If the Contractor proceeds with such Work without obtaining further Drawings or instructions from the Owner, or without providing prompt prior written notification to the Engineer and Owner, the incorrect or improperly completed/attempted Work shall be corrected by the Contractor's at its expense.

§ 3.2.5 If the Contractor fails to fulfill its obligations to report to the Engineer or Owner under this Article 3, such failure shall preclude the Contractor from any subsequent Claim arising from or relating to the factors giving rise to the Contractor's obligation to make such report.

§ 3.2.6 The Owner assumes no contractual liability or responsibility for the physical condition or safety of the Project site or of any improvements thereon. Except as set forth in Section 10.3, the Contractor shall be solely responsible for providing safe conditions for the performance of the Work.

§ 3.2.7 If the Contractor shall give the Engineer notice of any additional Drawings, Specification or instructions required to define the Work in greater detail, or to permit the proper progress of the Work. Requests for such information shall be made by the Contractor sufficiently in advance of the time such information is needed by the Contractor so as to permit the Engineer a reasonable time for responding to such requests without affecting the progress of the Work.

§ 3.3 Supervision and Construction Procedures

§ 3.3.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, sequences, and procedures, and for coordinating all portions of the Work under the Contract. In no event shall the Contractor employ construction means, methods, techniques, sequences, or procedures that violate (1) requirements of any warranties applicable to the Work; or (2)

any Legal Requirements.

§ 3.3.2 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor, Contractor's employees, Subcontractors, Sub-subcontractors, suppliers, and their respective agents and employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors.

§ 3.3.3 The Contractor shall be responsible for inspection of portions of Work already performed to determine that such portions are in proper condition to receive subsequent Work.

§ 3.3.4 The Contractor shall furnish sufficient forces, plant and equipment as may be necessary to insure the progress of the Work in accordance with the Construction Schedule. If, in the opinion of the Owner, the Contractor has fallen behind the Construction Schedule, the Contractor shall submit its proposal demonstrating the manner in which the desired rate of progress may be achieved and the Contractor shall take such steps as may be necessary to meet the Construction Schedule. Unless the Contractor has fallen behind schedule due to delays which entitle Contractor to an adjustment in the Contract Time in accordance with the terms and conditions of the Contract Documents, the taking of such steps shall be at the sole costs and expense of the Contractor. It shall be the responsibility of the Contractor to maintain its schedule so as not to delay the progress of the Work or the scheduled work of separate contractors.

§ 3.3.5 The Contractor's coordination of Work shall include, without limitation, review of all shop drawings (including, without limitation, architectural, civil, structural, mechanical, and electrical shop drawings) submitted by Subcontractors for various trades or subdivisions of work, as indicated by Contractor's approval in accordance with Section 3.12.

§ 3.3.6 The Contractor shall be solely responsible for properly laying out the Work, and for all lines, elevations, and measurements for all of the Work. Contractor shall verify the figures shown on the Drawings before laying out the Work and will be responsible for any errors or inaccuracies resulting from Contractor's failure to do so. In the event that the Contractor shall, while laying out the Work, become aware of: (1) any conflicts between (a) the Drawings, the Specifications or any Modification to the Drawings or the Specifications and (b) the actual layout of the Work, or (2) any conflicts or inconsistencies in the Drawings, the Specifications or any Modification to the Drawings or the Specifications themselves, Contractor shall promptly notify the Engineer. If the Contractor proceeds without the Engineer's clarification and instruction on the matter, the Contractor shall proceed at Contractor's own risk.

§ 3.4 Labor and Materials

§ 3.4.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

§ 3.4.2 Except in the case of minor changes in the Work approved by the Engineer in accordance with Section 3.12.8 or ordered by the Engineer in accordance with Section 7.4, the Contractor may make substitutions only with the written consent of the Owner, after evaluation by the Engineer and in accordance with a Change Order or Construction Change Directive.

§ 3.4.3 All labor shall be performed by workmen skilled in their respective trades, and workmanship shall be of good quality so that first class work in accordance with the standards of construction set forth in the Contract Documents and the Contractor's Standard of Care will be achieved. The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them.

§ 3.4.3.1 The Contractor shall take all necessary steps to ensure harmony between persons performing labor as part of the Work. The Contractor shall perform Work in accordance with Legal Requirements, including regulations, applicable to the Project labor.

§ 3.4.3.2 The Contractor shall be solely responsible for the proper and safe operation and maintenance of all utility systems within the areas of site where the Work is performed, whether supplied by the Owner's distribution system or otherwise, until the Work is complete and accepted by the Owner and the Owner has notified the Contractor that other arrangements for utility service have been made. The Contractor shall maintain, protect, and/or operate equipment or facilities within the site

construction area which serve the distribution system, subject to periodic inspection by the Owner's on-site personnel. Inspection by any representative or personnel of the Owner shall not relieve the Contractor of responsibilities in connection with operation, maintenance and protection of these facilities and equipment. The Contractor shall notify the Owner's representatives no less than 72 hours in advance of the desire to extend, connect, disconnect, turn on or off any steam, electric, water or other service from the Owner's utility supply systems at the site. The actual operation shall be witnessed and approved by authorized representatives of the Owner. All plumbing, heating and electrical work, including installation of equipment and any other Work to be performed by the Contractor, shall be performed without interference with the Owner's normal operations at the site.

§ 3.4.3.3 The Owner will supply to the Contractor all water and electricity reasonably required for construction of the Work at the Project site. Utilities furnished by the Owner will be discontinued if, in the opinion of the Owner, wastefully used by the Contractor. The Contractor shall supply all hoses, extension cords, etc., necessary for the proper installation of the Work.

§ 3.4.3.4 Adequate toilet facilities for use during construction of the Work shall be provided by the Contractor.

§ 3.4.3.5 The Contractor shall be responsible for materials which are removed from the Work and to be subsequently re-installed as part of the Work. All cost, damage and loss of such materials while removed from the Work shall be the responsibility of the Contractor.

§ 3.4.4.1 As required under Section 31-53 of the Connecticut General Statutes, the wages paid on an hourly basis to any person performing the work of any mechanic, laborer or worker on the Work herein contracted to be done and the amount of payment or contribution paid or payable on behalf of each such person to any employee welfare fund, as defined in subsection (i) of Connecticut General Statutes Section 31-53, shall be at a rate equal to the rate customary or prevailing for the same work in the same trade or occupation in the Town of Harwinton. If the Contractor or any Subcontractor is not obligated by agreement to make payment or contribution on behalf of such persons to any such employee welfare fund, the Contractor or such Subcontractor pay to each mechanic, laborer or worker as part of such person's wages the amount of payment or contribution for such person's classification on each pay day.

§ 3.4.4.2 As required pursuant to Connecticut General Statutes Section 31-53b, the Contractor shall furnish proof, and shall cause its Subcontractors to furnish proof, with the weekly certified payroll form for the first week each employee begins work on the Project that any person performing the work of a mechanic, laborer or worker pursuant to the classifications of labor under Connecticut General Statutes Section 31-53 on the 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 and that any plumber or electrician subject to the continuing education requirements of Connecticut General Statutes Section 20-334d, who 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 five or more years prior to the date such electrician or plumber begins work on the Project, has completed a supplemental refresher training course of at least four hours in duration in construction safety and health taught by a federal Occupational Safety and Health Administration authorized trainer.

§ 3.4.4.3 To the extent consistent with any provision regarding residence requirements contained in a collective bargaining agreement to which the Contractor is a party, in the employment of labor to perform the Work specified under the Contract Documents, preference shall be given by the Contractor to residents of the State of Connecticut, who are, and continuously for at least six (6) months prior to the date of this Agreement have been, residents of the State of Connecticut, and if no such person is available then to residents of other states.

§ 3.4.5 If the Contractor desires to substitute a product or method in lieu of what has been specified or shown in the Contract Documents, the Contractor may propose to do so in a written request delivered to the Engineer and the Owner in accordance with the Contract Documents. Any such request shall include all such data as the Engineer requires to evaluate products. Any written request for a substitution by the Contractor shall be a representation by the Contractor to the Owner that: (1) the Contractor has investigated the product or method proposed to be substituted and found it to be equivalent to or better than the product or method specified in the Contract Documents, (2) except to the extent otherwise expressly stated in such request, the Contractor is waiving any Claim for additional costs related to such substitution; (3) the Contractor will provide the same warranty for the substitution that the Contractor would for that specified; (4) the substitution will not entail changes in detail

and construction of related Work; and (5) the Contractor shall coordinate the installation of the accepted substitution, making such changes as may be required for the Work to be complete in all respects. The Engineer's decision shall be final. If any requested substitution is so approved by the Engineer, the Contractor shall be responsible, at its sole cost and expense, for space requirements of the substitutions, execution of necessary changes in adjacent and relocated Work or affected parts of the building, execution of necessary changes in adjacent and relocated Work which resulting from such substitutions. The Contractor shall be responsible for any delays required for evaluation of proposed substitutions.

§ 3.4.5.1 Substitutions not properly approved and authorized in accordance with the Contract Documents, and work, materials or equipment which fail to perform under proper use and normal wear for intended purposes, may be deemed defective in the discretion of the Owner or the Engineer. If required by the Engineer or the Owner, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment to be incorporated in the Work.

§ 3.4.6 The Owner's prior written approval shall be required for the Contractor to utilize any "equal" materials or equipment other than a particular brand or make of material or equipment or "equal" specified in the Contract Documents.

§ 3.5 Warranty

§ 3.5.1 The Contractor warrants to the Owner and Engineer that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Work, materials, or equipment not conforming to these requirements may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, a Subcontractor, Sub-subcontractor, supplier or any other person or entity for whom or which any of them is responsible, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by the Engineer, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

§ 3.5.2 The Contractor shall procure and assign to the Owner at the time of Substantial Completion of the Work any and all Subcontractor, manufacturer and supplier warranties relating to any materials, equipment and labor incorporated in the Work. Such warranties shall supplement the warranties provided by the Contractor in Section 3.5.1. All material, equipment, or other special warranties required by the Contract Documents shall be issued in the name of the Owner, or shall be transferable to the Owner, and shall commence in accordance with Section 9.8.4.

§ 3.5.3.1 Project Warranty: Unless otherwise specified, Contractor shall warrant (guaranty) all the Work against defects resulting from the use of material, workmanship or equipment which is inferior, defective, or not in accordance with the terms of the Contract. This warranty, unless stated otherwise in a given section of the Specifications, shall be for a period of two (2) years from the date of issuance of the Certificate of Substantial Completion for the Project.

§ 3.5.3.2 Specified Product Warranty is a warranty issued by a manufacturer or fabricator for compliance with requirements of the Contract Documents. Refer to sections of Specifications for requirements of specified warranties. The Contractor shall cause all Specified Product Warranties required by the Contract Documents to be issued for the benefit of the Owner.

§ 3.5.3.3 Coincidental Product Warranty is a warranty available on a product incorporated into the Work, by virtue of manufacturer's publication of warranty, without requiring a warranty application. The Contractor shall identify each Coincidental Product Warranty applicable to the Work.

§ 3.5.3.4 Warranty Obligations. Notwithstanding any other provision in these General Conditions:

- .1 the Contractor shall restore, or remove and replace, warrantied Work to its originally specified condition, at such time during the applicable warranty as the Work does not comply with or fulfill the terms of such warranty;
- .2 the Contractor shall restore or remove and replace other Work which has been damaged by failure of warrantied Work, or which must be removed and replaced to gain access to warrantied Work;
- .3 the Contractor shall pay for and be solely responsible for the cost of restoration or removal and replacement of warrantied Work or Work affected by the Contractor's performance of its warranty obligations with respect to the Work, without regard to whether the Owner has already benefited from use of failing Work;
- .5 upon restoration or removal and replacement of warrantied Work, the Contractor shall reinstate the applicable

- warranty by issuing newly executed warranty documents for at least the remaining period of time of the original warranty, provided such warranty period shall not be less than half of the original warranty period;
- .6 warranties and warranty periods shall not diminish implied warranties, and shall not deprive the Owner of any rights or remedies otherwise available for the Contractor's failure to fulfill the requirements of the Contract Documents;
 - .7 Owner reserves the right to reject product warranties which conflict with or are less than the requirements of the Contract Documents;
 - .8 the Contractor shall furnish fully executed warranties to the Owner in accordance with these General Conditions and the Contract Documents.

§ 3.5.4 The Contractor further agrees that each Subcontract shall contain a warranty of the portion of the Work performed thereunder in the same form as the above stated warranty of Contractor. Included in said warranty shall be the statement that it shall be enforceable directly by the Owner if the Owner so elects. The warranty of any Subcontractor shall not relieve the Contractor of its warranty as set forth above and the Owner may look to the Contractor, directly, and in the first instance to correct any defects in the Work.

§ 3.5.5 The representations and warranties under this Section 3.5 shall be in addition to, and not a substitute for, any other rights of the Owner under the Contract Documents or existing in law or equity.

§ 3.5.6 The representations and warranties set forth in this Section 3.5 shall survive final payment and termination of the Contract.

§ 3.6 Taxes

The Owner is exempt from the payment of sales, use and similar taxes. The Contractor shall be familiar with the current regulations of the Connecticut Department of Revenue Services and the sales or use tax on materials or supplies exempted by such regulations shall not be included in the Contract Sum. A sales tax certificate will be provided to the Contractor by the Owner upon request.

§ 3.7 Permits, Fees, Notices and Compliance with Laws

§ 3.7.1 Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the building permit as well as for other permits, fees, licenses, certifications and inspections by government agencies necessary for proper execution and completion of the Work that are customarily secured after execution of the Contract and required by applicable Legal Requirements as of the effective date of this Contract. The Contractor shall provide the Owner and Engineer with reproductions of all permits, licenses, permissions, certifications, and receipts for payments and, upon submission of the final Application for Payment, shall deliver all originals of such documents to the Owner with copies to the Engineer.

§ 3.7.2 The Contractor shall comply with, be responsible for performance of the Work in accordance with, and give notices required by all applicable local, state and federal laws, statutes, ordinances, codes, building codes, rules, regulations, permits, and lawful orders enacted, promulgated, issued or ordered by any governmental body or public or quasi-public authority having jurisdiction over the Work, the Contractor and/ or the site of the Project (collectively, the "**Legal Requirements**"). Legal Requirements shall include, without limitation, those relating to equal opportunity, labor, wages and employment laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to the Project, the Contract, any Subcontract and/or the performance of the Work.

§ 3.7.3 If the Contractor performs Work knowing it to be contrary to applicable Legal Requirements, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.

§ 3.7.4 Concealed or Unknown Conditions

If the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall promptly provide notice to the Owner and the Engineer before conditions are disturbed and in no event later than three (3) days after first observance of the conditions. The Engineer will promptly investigate such conditions and, if the Engineer determines that they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend that an

equitable adjustment be made in the Contract Sum or Contract Time, or both. If the Engineer determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Engineer shall promptly notify the Owner and Contractor, stating the reasons. If either party disputes the Engineer's determination or recommendation, that party may submit a Claim as provided in Article 15.

§ 3.7.5 If, in the course of the Work, the Contractor encounters human remains, or encounters or recognizes the existence of burial markers, archaeological sites or wetlands not indicated in the Contract Documents, the Contractor shall immediately suspend any operations that would affect them and shall notify the Owner and Engineer. Upon receipt of such notice, the Owner shall promptly take any action necessary to obtain governmental authorization required to resume the operations. The Contractor shall continue to suspend such operations until otherwise instructed by the Owner but shall continue with all other operations that do not affect those remains or features. Requests for adjustments in the Contract Time arising from the existence of such remains or features may be made as provided in Article 15.

§ 3.8 Allowances

§ 3.8.1 The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities to whom the Contractor has reasonable objection.

§ 3.8.2 Unless otherwise provided in the Contract Documents,

- .1 allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;
- .2 Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit, and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowances; and
- .3 whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the allowances under Section 3.8.2.1 and (2) changes in Contractor's costs under Section 3.8.2.2.

§ 3.8.3 Materials and equipment under an allowance shall be selected by the Owner with reasonable promptness.

§ 3.9 Superintendent

§ 3.9.1 The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site at all times during performance of the Work. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor. Important communications shall be confirmed in writing. Other communications shall be similarly confirmed upon written request in each case. The Contractor shall provide the Owner with after-hours telephone numbers by which the superintendent may be contacted in the event of an emergency.

§ 3.9.2 The Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Engineer of the name and qualifications of a proposed superintendent. Within 14 days of receipt of the information, the Engineer may notify the Contractor, stating whether the Owner or the Engineer (1) has reasonable objection to the proposed superintendent or (2) requires additional time for review. Failure of the Engineer to provide notice within the 14-day period shall constitute notice of no reasonable objection; provided, however, the Contractor shall assign an alternate superintendent upon the reasonable request of the Owner.

§ 3.9.3 The Contractor shall not employ a proposed superintendent to whom the Owner or Engineer has made reasonable and timely objection. The Contractor shall not change the superintendent without the Owner's consent, which shall not unreasonably be withheld or delayed. The list of all supervisory personnel, including the project manager and superintendent that the Contractor intends to use on the Project shall be submitted to the Owner for approval prior to the commencement of the Work. The Contractor shall not engage supervisory personnel other than as approved by Owner. The Contractor shall not change and/or replace such personnel without prior written notice to and approval from the Owner (except in the case where such personnel's employment with Contractor has terminated), and shall not change or replace such supervisory personnel with any individual who does not have equivalent or superior experience and qualifications than the person to be replaced by such individual.

§ 3.10 Contractor's Construction and Submittal Schedules

§ 3.10.1 The Contractor, promptly after being awarded the Contract, and no later than the Project pre-construction conference, shall submit for the Owner's and Engineer's approval, a proposed construction schedule for the Work. The proposed construction schedule (i) shall comply with all of the applicable requirements of, and shall not exceed time limits current under, the Contract Documents, (ii) shall be in such form and detail and include such content as required by the Owner, (iii) shall be related to the entire Project to the extent required by the Contract Documents, (iv) shall provide for expeditious and practicable execution of the Work for completion within the time limits current under the Contract Documents; (v) shall include the date of commencement of the Work, interim schedule milestone dates, and the date required for Substantial Completion; and (vi) shall include an apportionment of the Work by construction activity and the time required for completion of each portion of the Work. If the Owner requires a precedence-style critical path method (CPM) schedule, the proposed construction schedule shall also: (a) provide a graphic representation of all activities and events that will occur during performance of the Work; (b) identify each phase of construction and occupancy (if applicable); and (c) set forth dates that are critical in ensuring the timely and orderly completion of the Work (hereinafter referred to as "Milestone Dates"). If the proposed construction schedule is not accepted by the Owner, the Contractor shall promptly modify the proposed construction schedule in accordance with the recommendations of the Owner and the Engineer and resubmit the revised schedules for acceptance. The schedule shall be revised at appropriate intervals as required by the conditions of the Work and Project.

§ 3.10.2 The Contractor, promptly after being awarded the Contract and thereafter as necessary to maintain a current submittal schedule, shall submit a submittal schedule for the Engineer's approval. The Engineer's approval shall not be unreasonably delayed or withheld. The submittal schedule shall (1) be coordinated with the Contractor's construction schedule, and (2) allow the Engineer reasonable time to review submittals. If the Contractor fails to submit a submittal schedule, or fails to provide submittals in accordance with the approved submittal schedule, the Contractor shall not be entitled to any increase in Contract Sum or extension of Contract Time based on the time required for review of submittals.

§ 3.10.3 The Contractor shall perform the Work in general accordance with the most recent construction schedules submitted to and approved by the Owner and Engineer (as so approved, the "Construction Schedule").

§ 3.10.4 The Contractor shall monitor the progress of the Work for conformance with the requirements of the Construction Schedule and shall promptly advise the Owner of any delays or potential delays. The Construction Schedule shall be updated to reflect actual conditions ("Progress Reports") (which updated schedule shall be subject to the approval of the Owner and the Engineer) at appropriate intervals as determined by the Contractor and as required by the conditions of the Work and the Project (but in no event less frequently than weekly) or as otherwise requested by the Owner. In the event any Progress Report indicates any delays, the Contractor shall propose an affirmative plan to correct the delay, including overtime and/or additional labor, if necessary. In no event shall any Progress Report constitute an adjustment in the Contract Time, any Milestone Date or the Contract Sum unless any such adjustment is agreed to by the Owner and authorized pursuant to a Change Order.

§ 3.10.5 In the event the Owner determines that the performance of the Work as of a Milestone Date has not progressed or reached the level of completion required by the Contract Documents, the Owner shall have the right, but not the obligation, to order the Contractor to take corrective measures necessary to expedite the progress of construction, including, without limitation, (1) working additional shifts or overtime, (2) supplying additional manpower, equipment, and facilities, and (3) other similar measures (hereinafter referred to collectively as "Extraordinary Measures"). Such Extraordinary Measures shall continue until the progress of the Work complies with the stage of completion required by the Contract Documents. The Owner's right to require Extraordinary Measures is solely for the purposes of ensuring the Contractor's compliance with the accepted construction schedule as adjusted for time extensions granted pursuant to Section 8.3. Except as provided in Section 8.3, the Contractor shall not be entitled to an adjustment in the Contract Sum in connection with Extraordinary Measures required by the Owner pursuant to this Section 3.10.5. The Owner may exercise the rights furnished the Owner under or pursuant to this Section 3.10.5 as frequently as the Owner deems necessary to ensure that that Contractor's performance of the Work will comply with any Milestone Date or the Substantial Completion Date, as the same may be extended by Change Order.

§ 3.10.6 The Owner shall have the right to direct a postponement or rescheduling of any date or time for the performance of any part of the Work that may interfere with the Owner's operations. Any postponement, rescheduling or performance of the Work under this Section 3.10.6 may be grounds for an extension of the Contract Time, if permitted under Section 8.3, and an equitable adjustment in the Contract Sum, to the extent permitted under the Contract Documents, if: (1) the performance of the Work was properly scheduled by the Contractor in compliance with the requirements of the Contract Documents and (2)

such rescheduling or postponement is requested by or required for the convenience of the Owner. Without limiting the foregoing, the Contractor will not be entitled to an extension of the Contract Time or an adjustment of the Contract Sum to the extent the interfering Work so interferes as a result of the negligent act or omission of the Contractor or any Subcontractor or Sub-subcontractor or the failure of any of the same to perform the Work in a manner consistent with the Contract Documents, including Section 3.10.3 hereof.

§ 3.11 Documents and Samples at the Site

The Contractor shall make available, at the Project site, the Contract Documents, including a record set of Change Orders, Construction Change Directives, and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and the approved Shop Drawings, Product Data, Samples, and similar required submittals. The record set of documents shall reflect all deviations from the Drawings and Specifications and shall be updated in detail from time to time to reflect the actual progress of the Work. The Owner and the Engineer shall have free and complete access to such documents during the construction of the Work. Upon Substantial Completion of the Work, the Contractor shall furnish to the Owner through the Engineer one set of “as built” plans in such form as the Owner shall require. Such plans shall completely record all Work in place and serve as a record of the Work as constructed.

§ 3.12 Shop Drawings, Product Data and Samples

§ 3.12.1 Shop Drawings are drawings, diagrams, schedules, and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-subcontractor, manufacturer, supplier, or distributor to illustrate some portion of the Work.

§ 3.12.2 Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams, and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.

§ 3.12.3 Samples are physical examples that illustrate materials, equipment, or workmanship, and establish standards by which the Work will be judged.

§ 3.12.4 Shop Drawings, Product Data, Samples, and similar submittals are not Contract Documents. Their purpose is to demonstrate how the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents for those portions of the Work for which the Contract Documents require submittals. Review by the Engineer is subject to the limitations of Section 4.2.7. Informational submittals upon which the Engineer is not expected to take responsive action may be so identified in the Contract Documents. Submittals that are not required by the Contract Documents may be returned by the Engineer without action.

§ 3.12.5 The Contractor shall review for compliance with the Contract Documents, approve, and submit to the Engineer, Shop Drawings, Product Data, Samples, and similar submittals required by the Contract Documents, in accordance with the submittal schedule approved by the Engineer or, in the absence of an approved submittal schedule, with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of Separate Contractors.

§ 3.12.6 By submitting Shop Drawings, Product Data, Samples, and similar submittals, the Contractor represents to the Owner and Engineer that the Contractor has (1) reviewed and approved them, (2) determined and verified materials, field measurements and field construction criteria related thereto, or will do so, and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents. Submittals shall be marked as reviewed by the Contractor for compliance with the Contract Documents and approved by the Contractor. Those that are not so marked may be returned by the Engineer without action. The Contractor shall meet with the Engineer in a timely fashion to discuss the schedule of submittals required under Section 3.10.2 and shall thereafter timely prepare and submit for approval by the Engineer a schedule of submittals for the Work. The Owner and Engineer shall be entitled to rely upon the accuracy and completeness of all calculations and certifications required by the Contract Documents.

§ 3.12.7 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples, or similar submittals, until the respective submittal has been approved by the Engineer.

§ 3.12.8 The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from the requirements of the Contract Documents by the Engineer’s approval of Shop Drawings, Product Data, Samples, or similar submittals, unless the Contractor has specifically notified the Engineer of such deviation at

the time of submittal and (1) the Engineer has given written approval to the specific deviation as a minor change in the Work, or (2) a Change Order or Construction Change Directive has been issued authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples, or similar submittals, by the Engineer's approval thereof.

§ 3.12.9 The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples, or similar submittals, to revisions other than those requested by the Engineer on previous submittals. In the absence of such notice, the Engineer's approval of a resubmission shall not apply to such revisions.

§ 3.12.10 The Contractor shall not be required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents for a portion of the Work or unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures. The Contractor shall not be required to provide professional services in violation of applicable law.

§ 3.12.10.1 If professional design services or certifications by a design professional related to systems, materials, or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Engineer will specify all performance and design criteria that such services must satisfy. The Contractor shall be entitled to rely upon the adequacy and accuracy of the performance and design criteria provided in the Contract Documents. The Contractor shall cause such services or certifications to be provided by an appropriately licensed design professional, who has been approved by the Owner and that carries such professional liability insurance coverage as required by the Owner and 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 the Engineer. The Owner and the Engineer shall be entitled to rely upon the adequacy and accuracy of the services, certifications, and approvals performed or provided by such design professionals, provided the Owner and Engineer have specified to the Contractor the performance and design criteria that such services must satisfy. Pursuant to this Section 3.12.10, the Engineer will review and approve or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents.

§ 3.12.10.2 If the Contract Documents require the Contractor's design professional to certify that the Work has been performed in accordance with the design criteria, the Contractor shall furnish such certifications to the Engineer at the time and in the form specified by the Engineer.

§ 3.13 Use of Site

§ 3.13.1 The Contractor shall confine operations at the site to areas permitted by applicable Legal Requirements and the Contract Documents, and shall not unreasonably encumber the site with materials or equipment.

§ 3.13.2 The Contractor shall locate, protect, and save from damage or disruption utilities and utility services lines of all kinds, either above or below grade found in the areas affected by the Work. The Contractor shall be responsible for all damage caused to such utilities by the operation of equipment or machinery, the delivery of materials, or as the direct or indirect result of any of the Work, and shall repair all such damage at its expense and as part of the Work included in the Contract Documents.

§ 3.13.3 The Contractor shall use only specifically assigned areas for parking, storage of materials, and construction operations, and such other areas as are authorized by the Owner. The Contractor shall comply with all Legal Requirements, including without limitation local municipal regulations, applicable to the use of and parking on public streets.

§ 3.13.4 The Contractor shall repair streets, drives, curbs, sidewalks, landscaping, and the other existing improvements at the site that are disturbed or damaged by the Contractor's construction operations, and restore the same to an equal condition as existed prior to any such disturbance or damage.

§ 3.13.5 The Contractor shall provide its own access to the existing building, and shall neither block nor interfere with the Owner's ordinary building operations, traffic, or parking facilities at the site, except as authorized in writing by the Owner.

§ 3.13.6 The Contractor shall be assigned, and shall use, and single point of access to the site of the Project, which shall be clearly posted with a Project sign approved by the Owner.

§ 3.13.7. Schedule for Contractor's Use of the Site.

§ 3.13.7.1 The Contractor shall perform construction of the Work on-site during the following hours: Monday through Friday, 7:00 a.m. through 3:30 p.m., EST. If school is in session at the Project site, the Contractor shall restrict Work activities to areas designated by the Owner, shall restrict deliveries and trucking to the building drive entrance to the Work area and laydown area designated by the Owner, and shall keep all public ways near the Project site clear of materials and traffic between the hours of 8:00a.m. through 8:30 a.m. to allow for student drop off, and 3:15p.m. through 3:45p.m. for student pick-up.

§ 3.13.7.2 The Contractor shall comply with all local noise ordinances in the performance of the Work.

§ 3.14 Cutting and Patching

§ 3.14.1 The Contractor shall be responsible for cutting, fitting, or patching required to complete the Work or to make its parts fit together properly. All areas requiring cutting, fitting, or patching shall be restored to the condition existing prior to the cutting, fitting, or patching, unless otherwise required by the Contract Documents.

§ 3.14.2 The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner or Separate Contractors by cutting, patching, or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter construction by the Owner or a Separate Contractor except with written consent of the Owner and of the Separate Contractor. Consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold from the Owner or a Separate Contractor, its consent to cutting or otherwise altering the Work.

§ 3.14.3 Unless authorized in writing by the Owner and the Engineer, structural elements of the Work shall not be cut, patched, or otherwise altered or repaired. Existing work that is cut, damaged, disturbed, or otherwise interfered with by the Contractor, a Subcontractor, or anyone for whom any of them is responsible shall be fully, properly and carefully repaired by the responsible Contractor or Subcontractor. All such repairs shall be completed to the satisfaction of the Engineer, and shall match similar existing adjoining work.

§ 3.14.4 The Contractor shall install all required sleeves and inserts for any built-in building component required for the Work, and shall not cut any existing finished materials or structural elements at the site unless and until the Contractor submits appropriate detail drawings to the Engineer and Owner, and the Engineer and Owner provide their written approval. Cutting and patching of all building elements caused by failure to provide or properly locate sleeves, forms and inserts, incorrect location of work or failure to cooperate with other trades, shall be performed by the Contractor at no additional cost to the Owner. Such repair work shall be carried out by mechanics skilled in the repair trade concerned, with due regard to trade practices, and with suitable protection of existing Work, all at no cost to the Owner.

§ 3.15 Cleaning Up

§ 3.15.1 The Contractor shall keep the premises and surrounding area free from accumulation of waste materials and rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery, and surplus materials from and about the Project.

§ 3.15.2 If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and the Owner shall be entitled to reimbursement from the Contractor.

§ 3.15.3 The Contractor shall remove all stains, spots, marks, debris and dirt resulting from construction operations from all surfaces of the existing building, and shall clean the entire site and Project grounds upon completion of the Work to the satisfaction of the Owner.

§ 3.16 Access to Work

The Contractor shall provide the Owner and Engineer with access to the Work in preparation and progress wherever located.

§ 3.17 Royalties, Patents and Copyrights

The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of

copyrights and patent rights, or failure to pay such royalty and license fees, and shall hold the Owner and Engineer harmless from loss on account thereof, but shall not be responsible for defense or loss when a particular design, process, or product of a particular manufacturer or manufacturers is required by the Contract Documents, or where the copyright violations are contained in Drawings, Specifications, or other documents prepared by the Owner or Engineer. However, if an infringement of a copyright or patent is discovered by, or made known to, the Contractor, the Contractor shall be responsible for the loss unless the information is promptly furnished to the Engineer.

§ 3.18 Indemnification

§ 3.18.1 To the fullest extent permitted by law, the Contractor shall indemnify, defend and hold harmless the Owner, the Owner's designated representative, the Engineer, the Engineer's consultants, and all of their respective directors, members of governing boards, officials, officers, partners, employees, shareholders, members, managers, beneficiaries, agents and representatives (each an "Indemnitee") from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, but only to the extent caused by the negligent acts or omissions, violations of Legal Requirements, or breach of contract by the Contractor, a Subcontractor, Sub-subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable. The obligations of the Contractor under the foregoing indemnity shall include, without limitation, to the fullest extent permitted by law, any and all claims (including attorneys' fees resulting therefrom) directly or indirectly arising or alleged to arise (1) out of the performance of or the failure to perform the Work, or the condition of the Work, the job site, adjoining land or driveways, or streets or alleys used in connection with the performance of the Work, and from any and all claims by workmen, suppliers or Subcontractors who are involved in the performance of the Work, and (2) under any scaffolding, structural work or safe place law or any law with respect to the protection of adjacent landowners. These indemnification obligations are not intended to include liability for damage arising out of bodily injury to person or damage to property to the extent caused by or resulting from the negligence of the indemnitee, such indemnitee's agents or employees, nor shall such obligations be construed to negate, abridge, or reduce other rights or obligations of indemnity that would otherwise exist as to a party or person described in this Section 3.18.

§ 3.18.2 In claims against any person or entity indemnified under this Section 3.18 by an employee of the Contractor, a Subcontractor, a Sub-subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, the indemnification obligation under Section 3.18.1 shall not be limited by a limitation on amount or type of damages, compensation, or benefits payable by or for the Contractor or a Subcontractor or a Sub-subcontractor under workers' compensation acts, disability benefit acts, or other employee benefit acts.

§ 3.18.3 To the fullest extent permitted by law, the Contractor shall further indemnify, defend and hold harmless each Indemnitee from and against (1) all claims for payment by any Subcontractor or supplier of any tier, (2) any and all actions, lawsuits, claims and proceedings brought against the Indemnitee as a result of liens filed against the Work, the Project site or any improvements thereon (referred to collectively as "Liens") by the Contractor, any Subcontractor, Sub-subcontractor or anyone claiming by, through or under them, and (3) all loss, liability, damage or expense, including reasonable attorney's fees and litigation expenses, arising out of any Lien, claim or other claim for payment by any Subcontractor or supplier of any tier. The Contractor shall pay any judgment or Lien resulting from any such actions, lawsuits, or proceedings. Upon receipt of notice of a Lien claim or other claim for payment, the Owner shall notify the Contractor. If approved by the applicable court, when required, the Contractor may substitute a surety bond for the property against which the Lien or other claim for payment has been asserted. The Contractor's obligations under this Section 3.18.3 are conditioned upon Owner having fulfilled its payment obligations to the Contractor with respect to the Work that is the subject of the Lien or claim and for which indemnification is sought.

§ 3.18.4 The Contractor shall bear any and all reasonable expenses incurred by any Indemnitee because of any claim or other matter indemnified against under this Section 3.18, including without limitation, attorneys' and consultants' fees and expenses, court costs, and costs related to the defense of, or preparing for the defense against, any such claim. If any such claim has not been settled or discharged or bonded at the time of final completion of the Work, and if such claim is not covered in full by a policy of insurance then in effect from a reputable and financially sound insurance company which has not declined or reserved the right to decline coverage of such claim, the Owner may withhold an amount equal to two hundred percent (200%) of the outstanding claim until any such claim is paid or settled or the Contractor provides a bond, acceptable to the Owner, to satisfy such claim.

§ 3.19 Meetings

§ 3.19.1 A qualified representative of the Contractor shall attend periodic progress meetings held at such time and as such

place as the Engineer or the Owner shall designate.

§ 3.19.2 The Contractor shall schedule and conduct progress meetings at the Project site on a weekly basis. Attendance is required of each Subcontractor, supplier, or other entity whose portion of the Work is currently the subject of concern or discussion or planning of future construction activities. Contractor shall provide the Owner and Engineer with forty-eight (48) hours prior notice of each such progress meeting and be permitted to attend and participate in the meetings.

ARTICLE 4 ENGINEER

§ 4.1 General

§ 4.1.1 The Engineer is the person or entity retained by the Owner pursuant to Section 2.3.2 and identified as such in the Agreement.

§ 4.1.2 Duties, responsibilities, and limitations of authority of the Engineer as set forth in the Contract Documents shall not be restricted, modified, or extended without written consent of the Owner, Contractor, and Engineer. Consent shall not be unreasonably withheld.

§ 4.2 Administration of the Contract

§ 4.2.1 The Engineer will provide administration of the Contract as described in the Contract Documents and will be an Owner's representative during construction until the date the Engineer issues the final Certificate for Payment. The Engineer will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents.

§ 4.2.2 The Engineer will visit the site at intervals appropriate to the stage of construction, or as otherwise agreed with the Owner, to become generally familiar with the progress and quality of the portion of the Work completed, and to determine in general if the Work observed is being performed in a manner indicating that such portion of the Work is, and when the Work is fully completed the entirety of the Work will be, in accordance with the Contract Documents. However, the Engineer will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Engineer will not have control over, charge of, or responsibility for the construction means, methods, techniques, sequences, or procedures, or for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents. The Owner may elect to have an observer, in addition to the Engineer, present during the Work, who will record and report to the Owner any deviation in the Work from the requirements of the Contract Documents, and the progress of the Work. The observer shall have no authority to act on behalf of the Owner with respect to the Contract or Project, and no authority to change the Work or the requirements of the Contract Documents, to direct the Work, suspend the Work, or approve Submittals or Shop Drawings.

§ 4.2.3 On the basis of the site visits, the Engineer will keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and promptly report to the Owner (1) known deviations from the Contract Documents, (2) known deviations from the most recent construction schedule submitted by the Contractor, and (3) defects and deficiencies observed in the Work. The Engineer will not be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Engineer will not have control over or charge of, and will not be responsible for acts or omissions of, the Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

§ 4.2.4 Communications

The Owner and Contractor shall include the Engineer in all communications that relate to or affect the Engineer's services or professional responsibilities. The Owner shall promptly notify the Engineer of the substance of any direct communications between the Owner and the Contractor otherwise relating to the Project. Communications by and with the Engineer's consultants shall be through the Engineer. Communications by and with Subcontractors and suppliers shall be through the Contractor. Communications by and with Separate Contractors shall be through the Owner. The Contract Documents may specify other communication protocols.

§ 4.2.5 Based on the Engineer's evaluations of the Contractor's Applications for Payment, the Engineer will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.

§ 4.2.6 The Engineer has authority to reject Work that does not conform to the Contract Documents. Whenever the Engineer considers it necessary or advisable, the Engineer will have authority to require inspection or testing of the Work in accordance

with Sections 13.4.2 and 13.4.3, whether or not the Work is fabricated, installed, or completed. However, neither this authority of the Engineer nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Engineer to the Contractor, Subcontractors, suppliers, their agents or employees, or other persons or entities performing portions of the Work. Any such rejection of Work shall not relieve the Contractor of the responsibility for maintaining protection of the Work and the Owner's property.

§ 4.2.7 The Engineer will review and comment, or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data, and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Engineer's action will be taken in accordance with the submittal schedule approved by the Engineer or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time in the Engineer's professional judgment to permit adequate review. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Engineer's review of the Contractor's submittals shall not relieve the Contractor of the obligations under Sections 3.3, 3.5, and 3.12. The Engineer's review shall not constitute approval of safety precautions or of any construction means, methods, techniques, sequences, or procedures. The Engineer's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

§ 4.2.8 The Engineer will prepare Change Orders and Construction Change Directives, and may order minor changes in the Work as provided in Section 7.4. The Engineer will investigate and make determinations and recommendations regarding concealed and unknown conditions as provided in Section 3.7.4.

§ 4.2.9 The Engineer will conduct inspections to determine the date or dates of Substantial Completion and the date of final completion; issue Certificates of Substantial Completion pursuant to Section 9.8; receive and forward to the Owner, for the Owner's review and records, written warranties and related documents required by the Contract Documents and assembled by the Contractor pursuant to Section 9.10; and issue a final Certificate for Payment pursuant to Section 9.10.

§ 4.2.10 If the Owner and Engineer agree, the Engineer will provide one or more Project representatives to assist in carrying out the Engineer's responsibilities at the site. The Owner shall notify the Contractor of any change in the names of and any change in the duties, responsibilities, and limitations of authority of the Project representatives.

§ 4.2.11 The Engineer will interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of either the Owner or Contractor. The Engineer's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness.

§ 4.2.12 Interpretations and decisions of the Engineer will be consistent with the intent of, and reasonably inferable from, the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and decisions, the Engineer will endeavor to secure faithful performance by both Owner and Contractor, will not show partiality to either, and will not be liable for results of interpretations or decisions rendered in good faith.

§ 4.2.13 The Engineer's decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents.

§ 4.2.14 The Engineer will review and respond to requests for information about the Contract Documents. The Engineer's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If appropriate, the Engineer will prepare and issue supplemental Drawings and Specifications in response to the requests for information.

ARTICLE 5 SUBCONTRACTORS

§ 5.1 Definitions

§ 5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include a Separate Contractor or the subcontractors of a Separate Contractor.

§ 5.1.2 A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the site and, unless expressly provided otherwise, refers to subcontractors or any and all tiers other than Subcontractors. The term “Sub-subcontractor” is referred to throughout the Contract Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor.

§ 5.2 Award of Subcontracts and Other Contracts for Portions of the Work

§ 5.2.1 Unless otherwise stated in the Contract Documents, the Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Engineer of the persons or entities proposed for each principal portion of the Work, including those who are to furnish materials or equipment fabricated to a special design plus such other information as required under the Agreement. Unless otherwise provided in the Agreement, within 14 days of receipt of the information, the Engineer may notify the Contractor whether the Owner or the Engineer (1) has reasonable objection to any such proposed person or entity or (2) requires additional time for review. Failure of the Engineer to provide notice within the 14-day period shall constitute notice of no reasonable objection.

§ 5.2.1.1 The Contractor shall solicit bids for the performance of the Work from, and award subcontracts to, Subcontractors all in accordance with the requirements set forth in the Agreement and in compliance with applicable Legal Requirements.

§ 5.2.1.2 If requested by the Owner, the Contractor shall provide to the Owner copies of all Subcontracts and supply agreements entered into by the Contractor for the Work.

§ 5.2.2 The Contractor shall not enter into any subcontract with a proposed person or entity for such person or entity to perform any of the Contractor’s obligations under the Contract, for whom the Owner has not provided its express prior written approval.

§ 5.2.3 If the Owner or Engineer has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner or Engineer has no reasonable objection. If the proposed but rejected Subcontractor was reasonably capable of performing the Work, the Contract Sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute Subcontractor’s Work. However, no increase in the Contract Sum or Contract Time shall be allowed for such change unless the Contractor has acted promptly and responsively in submitting names as required.

§ 5.2.4 The Contractor shall not substitute a Subcontractor, person, or entity for one previously selected if the Owner or Engineer makes reasonable objection to such substitution. If the Contractor wishes to substitute a different person or entity for a person or entity previously selected and approved as a Subcontractor pursuant to this Section 5.2, the procedure set forth in this Section 5.2 and as may be provided in the Agreement shall be followed.

§ 5.3 Subcontractual Relations

Any part of the Work performed by a Subcontractor shall be pursuant to a written Subcontract between the Contractor and Subcontractor, which form of Subcontract shall be reasonably satisfactory to the Owner in all respects. Copies of all Subcontractor bids or proposals shall, upon request of Owner, be submitted to the Owner and Engineer. All Subcontracts shall provide that each Subcontractor, to the extent of the Work to be performed by the Subcontractor, be bound to the Contractor by the terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor’s Work that the Contractor, by these Contract Documents, assumes toward the Owner and Engineer. Each subcontract agreement shall preserve and protect the rights of the Owner and Engineer under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies, and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement that may be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

§ 5.4 Contingent Assignment of Subcontracts

§ 5.4.1 Each Subcontract and supply agreement for a portion of the Work is assigned by the Contractor to the Owner, provided

that

- .1 assignment is effective only after termination of the Contract by the Owner pursuant to and in accordance with Section 14 of these General Conditions and only for those Subcontract and supply agreements that the Owner accepts by notifying the Subcontractor or supplier and the Contractor; and
- .2 assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

When the Owner accepts the assignment of a subcontract agreement, the Owner assumes the Contractor's rights and obligations under the Subcontract to the extent such rights and obligations arise subsequent to Owner's acceptance of the assignment. The Contractor agrees to execute any and all other documents required to effect this assignment.

§ 5.4.2 Upon such assignment, if the Work has been suspended for more than 60 days, the Subcontractor's compensation shall be equitably adjusted for increases in cost resulting from the suspension.

§ 5.4.3 Upon assignment to the Owner under this Section 5.4, the Owner may further assign the Subcontract and/or supply agreement to a successor contractor or other entity.

ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

§ 6.1 Owner's Right to Perform Construction and to Award Separate Contracts

§ 6.1.1 The term "Separate Contractor(s)" shall mean other contractors retained by the Owner under separate agreements. The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and with Separate Contractors retained under Conditions of the Contract substantially similar to those of this Contract, including those provisions of the Conditions of the Contract related to insurance and waiver of subrogation.

§ 6.1.2 When separate contracts are awarded for different portions of the Project or other construction or operations on the site, the term "Contractor" in the contract documents comprising each such separate contract shall, in each case, mean the contractor who executes each separate contract with the Owner.

§ 6.1.3 The Owner shall provide for coordination of the activities of the Owner's own forces and of each Separate Contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with any Separate Contractors and the Owner in reviewing their construction schedules. The Contractor shall make any revisions to its construction schedule deemed necessary after a joint review and mutual agreement. The construction schedules shall then constitute the schedules to be used by the Contractor, Separate Contractors, and the Owner until subsequently revised.

§ 6.1.4 Intentionally omitted.

§ 6.2 Mutual Responsibility

§ 6.2.1 The Contractor shall afford the Owner and Separate Contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents.

§ 6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner or a Separate Contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly notify the Engineer of apparent discrepancies or defects discovered in the construction or operations by the Owner or Separate Contractor that render it unsuitable for proper execution and results of the Contractor's Work. Failure of the Contractor to notify the Engineer of apparent discrepancies or defects discovered prior to proceeding with the Work shall constitute an acknowledgment that the Owner's or Separate Contractor's completed or partially completed construction is fit and proper to receive the Contractor's Work. The Contractor shall not be responsible for discrepancies or defects in the construction or operations by the Owner or Separate Contractor that are not apparent.

§ 6.2.3 The Contractor shall reimburse the Owner for costs the Owner incurs that are payable to a Separate Contractor because of the Contractor's delays, disruption of the work of such Separate Contractor, improperly timed activities or defective construction. The Owner shall have the right to off-set such costs against any amounts owed to the Contractor by the Owner. The Owner shall be responsible to the Contractor for costs the Contractor incurs because of a Separate Contractor's delays, Separate Contractor's disruption of the Work, improperly timed activities, damage to the Work or defective construction provided that the Contractor promptly notifies the Owner of such delays, disruption, activities, damage or defective

construction.

§ 6.2.4 The Contractor shall promptly remedy damage that the Contractor wrongfully causes to completed or partially completed construction or to property of the Owner or Separate Contractor as provided in Section 10.2.5.

§ 6.2.5 The Owner and each Separate Contractor shall have the same responsibilities for cutting and patching as are described for the Contractor in Section 3.14.

§ 6.2.6 Upon the Owner's request, the Contractor shall defend any proceedings brought against the Owner by any Separate Contractor on account of any damage alleged to have been caused by the Contractor which arises from the Contractor's failure to comply with the terms and conditions of Sections 6.1 and 6.2.

§ 6.3 Owner's Right to Clean Up

If a dispute arises among the Contractor, Separate Contractors, and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish, the Owner may clean up and the Engineer will allocate the cost among those responsible, as the Engineer deems appropriate in its sole discretion.

ARTICLE 7 CHANGES IN THE WORK

§ 7.1 General

§ 7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, only by Change Order, Construction Change Directive or order for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents.

§ 7.1.2 A Change Order shall be based upon agreement among the Owner, Contractor, and Engineer. A Construction Change Directive requires agreement by the Owner and Engineer and may or may not be agreed to by the Contractor. An order for a minor change in the Work may be issued by the Engineer alone.

§ 7.1.3 Changes in the Work shall be performed under applicable provisions of the Contract Documents. The Contractor shall proceed promptly with changes in the Work, unless otherwise provided in the Change Order, Construction Change Directive, or order for a minor change in the Work.

§ 7.1.4 In the case of a change in the Work proposed by the Owner or a proposed Change Order submitted by the Contractor, upon the request of the Owner or the Engineer (with the Owner's approval), the Contractor shall submit to the Engineer, in such form as the Engineer may require, an accurate written estimate of the cost of any proposed extra Work or change in the Work. Such estimates shall be provided without cost to the Owner. The Contractor's estimate shall indicate the description, quantity, and unit cost of each item of material, and the number of hours of work and hourly rate for each class of labor, as well as all other costs chargeable under the terms of this Article 7. Unit labor costs for the installation of each item of materials shall be provided if required by the Engineer. The Contractor shall promptly revise and resubmit such estimate if the Engineer determines that it is not in compliance with the requirements of this Section 7.1.4, or that it contains errors of fact or mathematical errors. If required by the Engineer, in order to establish the exact cost of new Work added or of previously required Work omitted, the Contractor shall obtain and furnish to the Engineer bona fide proposals from recognized suppliers for furnishing any material included in such Work. Such estimates shall be furnished promptly so as to occasion no delay in the Work. The Contractor shall also state in the estimate any change in the Contract Time that would result from the change or extra work.

§ 7.2 Change Orders

§ 7.2.1 A Change Order is a written instrument prepared by the Engineer and signed by the Owner, Contractor, and Engineer stating their agreement upon all of the following:

- .1 The change in the Work;
- .2 The amount of the adjustment, if any, in the Contract Sum; and
- .3 The extent of the adjustment, if any, in the Contract Time.

§ 7.2.2 A Change Order executed by the Owner and the Contractor shall constitute a final settlement of all matters relating to the subject matter of the Change Order including, without limitation, compensation to be paid to the Contractor in connection with any change in the Work required by the Change Order (provided that the Work that is the subject of such change is

performed in a manner consistent with the provisions of the Contract Documents and the applicable Change Order), including but not limited to all direct and indirect costs, profit, overhead, extended overhead, loss of productivity and general conditions associated with such change, and any and all adjustments to the Contract Sum, the Construction Schedule, and to the Contract Time. In the event a Change Order affects an increase in the Contract Sum, Contractor shall include the work covered by such the Change Order in Applications for Payment for such work as if the work were originally part of the Work as set forth in the Contract Documents.

§ 7.2.3 Notwithstanding anything to the contrary set forth in these General Conditions, if the Agreement sets forth the methodology for calculating adjustments in the Contract Sum associated with a change in the Work, and if, under the terms of the Contract Documents, an adjustment in the Contract Sum would be required, then the adjustment will be based on such methodology unless otherwise mutually agreed by the parties. This paragraph shall be applicable in the case of a change in the Work effected by a Change Order as well as a Construction Change Directive.

§ 7.2.4 Unless otherwise instructed by the Owner, Change Orders shall be prepared on the form AIA G-701.

§ 7.3 Construction Change Directives

§ 7.3.1 A Construction Change Directive is a written order prepared by the Engineer and signed by the Owner and Engineer, directing a change in the Work prior to agreement on adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions, or other revisions, the Contract Sum and Contract Time being adjusted accordingly.

§ 7.3.2 A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order.

§ 7.3.3 If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:

- (i) Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
- (ii) Unit prices stated in the Contract Documents or subsequently agreed upon;
- (iii) Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
- (iv) As provided in Section 7.3.4.

§ 7.3.3.1 Notwithstanding anything to the contrary contained in the foregoing provisions of this Section 7.3, in the case of a change in the Work for which the Contractor is entitled to an adjustment in the Contract Sum under the terms and conditions of the Contract Documents, such adjustment shall be limited as follows:

- (i) For that portion of the change in the Work that is self-performed by the Contractor, the Contractor's overhead and profit on such Work shall not exceed ten percent (10%) of the net increase in the Contractor's direct costs incurred in the performance of such Work;
- (ii) For that portion of the change in the Work that is performed by Subcontractors, the Contractor's markup for overhead and profit on such subcontracted Work shall not exceed five percent (5%) of the amount invoiced to the Contractor by the Subcontractors for that Work;
- (iii) For that portion of the change in the Work that is performed by a first-tier Subcontractor, that Subcontractor's overhead and profit on its portion of the change in the Work shall not exceed ten percent (10%) of the net increase in the Subcontractor's costs incurred in the performance of such Work directly by such Subcontractor
- (iv) For that portion of the change in the Work that is performed by a first-tier Subcontractor, that Subcontractor's markup for overhead and profit on its portion of the Change in the Work shall not exceed five percent (5%) of the amount invoiced to that Subcontractor by Sub-subcontractors or suppliers for that Work; and
- (v) The aggregate markup of Contractor, Subcontractors and Sub-subcontractors in connection with any change in the Work shall not exceed twenty percent (20%) of the net increase in the Cost of the Work for labor, materials and/or equipment arising from such change.

These limitations set forth in this Section 7.3.3.1 shall apply to both additions to and deductions from the Contract Sum.

For change order Work that is the subject of Unit Prices under the Contract Documents, there will be no markup permitted on

the applicable Unit Prices.

The Contractor shall include the markup limitations set forth in this Section 7.3.3.1 in all Subcontracts and require in all Subcontracts that the Subcontractors include such limitations in all lower tier Subcontracts.

§ 7.3.3.2 All Change Orders and Construction Change Directives shall provide itemized accounting that provides a detailed break-out of all materials and labor rates applicable thereto, including:

- (i) Costs of labor, including social security, old age and unemployment insurance, fringe benefits required by agreement or custom, and workers' compensation insurance;
- (ii) Costs of materials, supplies, and equipment, including cost of transportation, whether incorporated or consumed;
- (iii) Fair market rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others provided, if rented from the Contractor, such rental and the rental rates have been approved by the Owner;
- (iv) Costs of premiums for all bonds and insurance, permit fees, and sales, use or similar taxes related to the Work;
- (v) Additional costs of supervision and field office personnel directly attributable to the change to the extent permitted under the Contract Documents.

§ 7.3.3.3 The costs described in Section 7.3.3.2 shall not include any of the following:

- (i) Salaries and other compensation of the Contractor's personnel stationed at the Contractor's principal office or offices other than the site office, except as specifically approved by the Owner;
- (ii) Expenses of the Contractor's principal office and offices other than the site office;
- (iii) Overhead and general expenses, except as may be expressly included in Section 7.3.3.1;
- (iv) The Contractor's capital expenses, including interest on the Contractor's capital employed for the Work;
- (v) Costs due to the negligence or failure of the Contractor, Subcontractors and suppliers or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable to fulfill a specific responsibility of the Contract Documents; or
- (vi) Any cost not described in Section 7.3.3.2.

§ 7.3.4 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the Engineer shall determine the adjustment on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, an amount for overhead and profit as set forth in the Agreement and subject to the limitations set forth in Section 7.3.3.1. In such case, and also under Section 7.3.3(iii), the Contractor shall keep and present, in such form as the Engineer may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.3.4 shall be limited to the following:

- .1 Costs of labor, including applicable payroll taxes, fringe benefits required by agreement or custom, workers' compensation insurance, and other employee costs approved by the Engineer;
- .2 Costs of materials, supplies, and equipment, including cost of transportation, whether incorporated or consumed;
- .3 Rental costs (not to exceed fair market rental costs) of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others provided, if rented from the Contractor, such rental and the rental rates have been approved by the Owner;
- .4 Costs of premiums for all bonds and insurance, permit fees, and sales, use, or similar taxes, directly related to the change; and
- .5 Costs of supervision and field office personnel directly attributable to the change to the extent permitted under the Contract Documents.

§ 7.3.5 If the Contractor disagrees with the adjustment in the Contract Time, the Contractor may make a Claim in accordance with applicable provisions of Article 15.

§ 7.3.6 Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and, prior to proceeding with such Work, advise the Engineer of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.

§ 7.3.7 A Construction Change Directive signed by the Contractor indicates the Contractor's agreement therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.

§ 7.3.8 The amount of credit to be allowed by the Contractor to the Owner for a deletion or change that results in a net decrease in the Contract Sum shall be actual net cost as confirmed by the Engineer. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.

§ 7.3.9 Pending final determination of the total cost to the Owner of a Construction Change Directive, the Contractor may request payment for Work completed under the Construction Change Directive in Applications for Payment. The Engineer will make an interim determination for purposes of monthly certification for payment for those costs and certify for payment actual costs incurred by the Contractor in the performance of the work under a Construction Change Directive which are substantiated to the reasonable satisfaction of the Engineer; provided that such costs are of the type included in the Cost of the Work as described in the Contract Documents and such Construction Change Directive is not made necessary by the negligent act or omission of the Contractor, a Subcontractor or anyone for whom any of them is responsible. This interim determination of cost shall adjust the Contract Sum on the same basis as a Change Order, subject to the right of either party to disagree and assert a Claim in accordance with Article 15.

§ 7.3.10 When the Owner and Contractor agree with a determination made by the Engineer concerning the adjustments in the Contract Sum and Contract Time, or otherwise reach agreement upon the adjustments, such agreement shall be effective immediately and the Engineer will prepare a Change Order. Change Orders may be issued for all or any part of a Construction Change Directive.

§ 7.4 Minor Changes in the Work

The Engineer may order minor changes in the Work that are consistent with the intent of the Contract Documents and do not involve an adjustment in the Contract Sum or an extension of the Contract Time. The Engineer's order for minor changes shall be in writing. If the Contractor believes that the proposed minor change in the Work will affect the Contract Sum or Contract Time, the Contractor shall notify the Engineer and shall not proceed to implement the change in the Work. If the Contractor performs the Work set forth in the Engineer's order for a minor change without prior notice to the Engineer that such change will affect the Contract Sum or Contract Time, the Contractor waives any adjustment to the Contract Sum or extension of the Contract Time.

ARTICLE 8 TIME

§ 8.1 Definitions

§ 8.1.1 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

§ 8.1.2 The date of commencement of the Work is the date established in the Agreement.

§ 8.1.3 The date of Substantial Completion is the date Substantial Completion is achieved as provided in Section 9.8.1.

§ 8.1.4 The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

§ 8.2 Progress and Completion

§ 8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement, the Contractor confirms that the Contract Time is a reasonable period for performing the Work and that the Contractor is capable of completing the Work within the Contract Time.

§ 8.2.2 The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, commence the Work prior to the effective date of insurance required to be furnished by the Contractor and Owner.

§ 8.2.3 The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion of the Work in accordance with the Contract Documents within the Contract Time.

§ 8.3 Delays and Extensions of Time

§ 8.3.1 If the Contractor is delayed at any time in the commencement or progress of the Work by (1) an act or neglect of the Owner or Engineer, of an employee of either, or of a Separate Contractor; (2) changes ordered in the Work by the Owner, which changes were not necessitated by the fault of the Contractor, a Subcontractor, a Sub-subcontractor, a material or equipment supplier or anyone for whom any of them is responsible; (3) area-wide labor disputes not directed at the Contractor or any of its Subcontractors, or by illegal labor actions or disputes; (4) fire, unusual and unanticipated delay in deliveries, unavoidable casualties, abnormally adverse weather conditions documented in accordance with Section 15.1.6.2, or other causes beyond the Contractor's control; (5) delay authorized by the Owner pending mediation and binding dispute resolution; or (6) other causes that the Contractor asserts, and the Engineer determines, justify delay, then the Contract Time shall be extended by Change Order for such reasonable time as the Engineer may determine; provided that (i) any such delay has the effect of delaying completion of components of the Work on any critical path indicated in the Construction Schedule, (ii) any such delay is not caused by, or could not have been avoided by the exercise of reasonable efforts of the Contractor, (iii) any such delay could not be limited or avoided by the Contractor's timely notice to the Owner of the delay, and (iv) such delay has an impact of at least one (1) day.

§ 8.3.2 Claims relating to time shall be made in accordance with applicable provisions of Article 15.

§ 8.3.3 No Damage For Delay. Notwithstanding anything to the contrary set forth in the Contract Documents, the Owner shall not be liable to the Contractor or any Subcontractor for Claims or damages of any nature caused by or arising out of delays. The sole remedy against the Owner for delays shall be the allowance of additional time for completion of the Work, the amount of which shall be subject to the procedures set forth in the Contract Documents. Except to the extent, if any, expressly prohibited by law, the Contractor expressly agrees not to make and hereby waives any Claim for damages for any delay, including, but not limited to, those resulting from increased labor or material costs; directions given or not given by the Owner or Engineer, including scheduling and coordination of the Work; the Engineer's preparation of drawings and specifications or review of shop drawings and requests for instruction(s); or, on account of any delay, obstruction or hindrance for any cause whatsoever by the Owner, Engineer, or any other contractor on the Project, whether or not foreseeable or anticipated. The Contractor agrees that its sole right and remedy therefore shall be an extension of the Contract Time, if appropriate.

§ 8.3.4 It is expressly understood that notwithstanding anything to the contrary set forth in the Contract Documents, no Subcontractor shall be entitled to make any Claim for additional compensation, costs or damages against the Contractor (nor may the Contractor assert against Owner such Claims as pass-through claims of Subcontractor or otherwise) for delay. Unless agreed by Owner in writing, Contractor shall include in every Subcontract a 'No-Damage-For-Delay' provision in a form reasonably approved by the Owner.

ARTICLE 9 PAYMENTS AND COMPLETION

§ 9.1 Contract Sum

§ 9.1.1 The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

§ 9.1.2 Intentionally omitted.

§ 9.2 Schedule of Values

The Contractor shall submit a schedule of values to the Engineer before the first Application for Payment, allocating the entire Contract Sum to the various portions of the Work. The schedule of values shall be prepared in the form, and supported by the data to substantiate its accuracy, required by the Engineer. This schedule, upon the approval thereof by the Owner and the Engineer, shall be used as a basis for reviewing the Contractor's Applications for Payment. Any changes to the schedule of values shall be submitted to the Engineer and supported by such data to substantiate its accuracy as the Engineer may require, and unless objected to by the Engineer, shall be used as a basis for reviewing the Contractor's subsequent Applications for Payment.

§ 9.3 Applications for Payment

§ 9.3.1.1 Not later than fifteen (15) calendar days before the date established for submission of a final version of an Application for Payment pursuant to the Agreement, the Contractor shall submit to the Engineer and the Owner for review and consideration a draft itemized Application for Payment prepared in accordance with the Contract Documents and the Schedule

of Values for portions of the Work completed and projected to be completed during such month. The draft Application shall be submitted along with all data, information and documentation substantiating the Contractor's right to payment as required under the Contract Documents and as may otherwise be required by the Owner or Engineer (collectively, the "Supporting Documentation"). Within five (5) days of the Contractor's submission of a draft Application for Payment, the Engineer and Owner shall notify the Contractor of any necessary changes to be included in the Contractor's final version of the Application for Payment. Subsequent to the Engineer's and the Owner's review and comment, the Contractor shall make all necessary changes to the draft Application for Payment and resubmit a final version of the Application for Payment to the Engineer and the Owner for payment as provided in Section 9.3.1 and Article 5 of the Agreement.

§ 9.3.1.2 "Supporting Documentation" may include, without limitation, payrolls, petty cash accounts, receipted invoices or invoices with check vouchers attached, releases and waivers of liens and claims from the Contractor, Subcontractors, Sub-subcontractors and suppliers, and other evidence required by the Owner or Engineer to demonstrate that cash disbursements already made by the Contractor to others on account of the Contractor's cost of performing the Work equal or exceed progress payments already received by the Contractor.

§ 9.3.1.3 No later than the fifth (5th) business day of each month, the Contractor shall submit to the Engineer an itemized final version of an Application for Payment prepared in accordance with the Schedule of Values for portions of the Work completed during the preceding month, inclusive of the value of materials delivered and suitably stored at the Project site during the month covered by such Application for Payment. The Application for Payment shall be notarized, if required, and supported by all data substantiating the Contractor's right to payment that the Owner or Engineer require, such as copies of requisitions, and releases and waivers of claims and liens from Subcontractors, Sub-subcontractors, and suppliers, and shall reflect retainage as provided for in the Contract Documents. Within five (5) days of submission of the final version of the Application for Payment and Supporting Documentation, the Engineer shall approve or deny the Application for Payment as described by Section 9.4.1 below. Within thirty (30) days of Contractor's submission of a final version of an Application for Payment and Supporting Documentation, the Owner shall make payment to the Contractor of the amount certified by the Engineer in a Certificate for Payment to be paid to the Contractor.

§ 9.3.1.4 Applications for Payment shall reflect retainage as provided for in the Contract Documents.

§ 9.3.1.5 As provided in Section 7.3.9, such applications may include requests for payment on account of changes in the Work that have been properly authorized by Construction Change Directives, or by interim determinations of the Engineer, but not yet included in Change Orders.

§ 9.3.1.6 Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or supplier, unless such Work has been performed by others whom the Contractor intends to pay.

§ 9.3.2 Unless otherwise provided in the Contract Documents or prohibited by an Agency (as defined in the Agreement) or any person or entity providing funding for the Project, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. The Contractor shall protect such stored materials and equipment from fire, theft, vandalism, weather and other damage and such items shall be available at all times for inspection by the Owner and the Engineer. If approved in advance by the Owner, and not prohibited by an Agency or any person or entity providing funding for the Project, payment may similarly be made for materials and equipment suitably stored off the site at a location agreed upon in writing. Payment for materials and equipment stored on or off the site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, and shall include the costs of applicable insurance (which insurance shall include coverage naming the Owner and such others as may be identified by the Owner from time to time, if any, as additional insureds, and which shall specify and relate to the address where the stored materials and equipment are located including, if applicable, the Project site), storage, and transportation to the site, for such materials and equipment stored off the site. The Contractor shall be responsible for protection of all such materials from loss or damage, at no additional cost to the Owner, until such materials are incorporated into the Work on-site, whether or not paid for by the Owner.

§ 9.3.3 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information, and belief, be free and clear of liens, claims, security interests, or encumbrances, in

favor of the Contractor, Subcontractors, suppliers, or other persons or entities that provided labor, materials, and equipment relating to the Work.

§ 9.3.3.1 Commencing with the second Application for Payment, and continuing with each Application for Payment submitted thereafter, the Contractor shall furnish to the Owner a properly executed release and waiver of claims in a form acceptable to the Owner, from the Contractor and each Subcontractor and material supplier whose Work was included on the previous Application for Payment for which payment by Owner was made to the Contractor. In addition to the foregoing, if requested by the Owner, commencing with the first Application for Payment and continuing with each Application for Payment submitted thereafter, the Contractor shall also provide a properly executed conditional release and waiver of claims in form acceptable to the Owner from the Contractor and each Subcontractor and material or equipment supplier whose Work is included on the Application for Payment subject only to receipt of payment under such Application for Payment.

§ 9.3.4 Unless otherwise required by the Owner, Applications for Payment shall be on AIA Documents G702 and G703.

§ 9.4 Certificates for Payment

§ 9.4.1 The Engineer will, within ten (10) days after receipt of the final version of Contractor's Application for Payment and Supporting Documentation submitted therewith, either (1) issue to the Owner a Certificate for Payment in the full amount of the Application for Payment, with a copy to the Contractor; or (2) issue to the Owner a Certificate for Payment for such amount as the Engineer determines is properly due, and notify the Contractor and Owner of the Engineer's reasons for withholding certification in part as provided in Section 9.5.1; or (3) withhold certification of the entire Application for Payment, and notify the Contractor and Owner of the Engineer's reason for withholding certification in whole as provided in Section 9.5.1.

§ 9.4.2 The issuance of a Certificate for Payment will constitute a representation by the Engineer to the Owner, based on the Engineer's evaluation of the Work and the data in the Application for Payment and Supporting Documentation submitted therewith, that, to the best of the Engineer's knowledge, information, and belief, the Work has progressed to the point indicated, the quality of the Work is in accordance with the Contract Documents, and that the Contractor is entitled to payment in the amount certified. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion, and to specific qualifications expressed by the Engineer. However, the issuance of a Certificate for Payment will not be a representation that the Engineer has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work; (2) reviewed construction means, methods, techniques, sequences, or procedures; (3) reviewed copies of requisitions received from Subcontractors and suppliers and other data requested by the Owner to substantiate the Contractor's right to payment; or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

§ 9.5 Decisions to Withhold Certification

§ 9.5.1 The Engineer may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Engineer's opinion the representations to the Owner required by Section 9.4.2 cannot be made. If the Engineer is unable to certify payment in the amount of the Application, the Engineer will notify the Contractor and Owner as provided in Section 9.4.1. If the Contractor and Engineer cannot agree on a revised amount, the Engineer will promptly issue a Certificate for Payment for the amount for which the Engineer is able to make such representations to the Owner. The Engineer may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Engineer's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from acts and omissions described in Section 3.3.2, because of

- .1 defective Work not remedied;
- .2 third party claims filed or reasonable evidence indicating probable filing of such claims, unless security acceptable to the Owner is provided by the Contractor;
- .3 failure of the Contractor to make payments properly to Subcontractors or suppliers for labor, materials, or equipment, in accordance with the provisions of the Contract Documents and the applicable agreement between the Contractor and the Subcontractor or supplier with respect to the Project and/or the Work;
- .4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- .5 damage to the Owner or a Separate Contractor;
- .6 reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay;

- .7 repeated failure to carry out the Work in accordance with the Contract Documents;
- .8 amounts previously paid to the Contractor are in excess of amounts properly due the Contractor; or
- .9 failure of the Contractor to comply with any of the Contractor's indemnification obligations under the Contract Documents.

§ 9.5.2 When either party disputes the Engineer's decision regarding a Certificate for Payment under Section 9.5.1, in whole or in part, that party may submit a Claim in accordance with Article 15.

§ 9.5.3 When the reasons for withholding certification are removed, certification will be made for amounts previously withheld.

§ 9.5.4 If the Engineer withholds certification for payment under Section 9.5.1.3, the Owner may, at its sole option, issue joint checks to the Contractor and to any Subcontractor or supplier to whom the Contractor failed to make payment for Work properly performed or material or equipment suitably delivered. Upon request by the Owner, the Contractor shall properly endorse such joint checks to enable the deposit thereof by the other payee. If the Owner makes payments by joint check, the Owner shall notify the Engineer and such payments shall be reflected on the Contractor's subsequent Applications for Payment as payments received by the Contractor.

§ 9.6 Progress Payments

§ 9.6.1 After the Engineer has issued a Certificate for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents, and shall so notify the Engineer.

§ 9.6.2 The Contractor shall use payments made under the Contract solely for the purpose of performance of the Work pursuant to the Contract Documents. Contractor shall pay for all labor and services performed and materials, equipment and machinery supplied by others in connection with the performance of the Work, in accordance with the Contract Documents and as required by applicable Legal Requirements.

§ 9.6.3 The Engineer will, on request, furnish to a Subcontractor, if practicable, information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Engineer and Owner on account of portions of the Work done by such Subcontractor.

§ 9.6.4 The Owner has the right to request written evidence from the Contractor that the Contractor has properly paid Subcontractors and suppliers amounts paid by the Owner to the Contractor for subcontracted Work. If the Contractor fails to furnish such evidence within seven days, the Owner shall have the right to contact Subcontractors and suppliers to ascertain whether they have been properly paid. Neither the Owner nor Engineer shall have an obligation to pay, or to see to the payment of money to, a Subcontractor or supplier, except as may otherwise be required by law.

§ 9.6.5 The Contractor's payments to suppliers shall be treated in a manner similar to that, and subject to the same requirements as are, provided in Sections 9.6.2, 9.6.3 and 9.6.4.

§ 9.6.6 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents and/or applicable Legal Requirements.

§ 9.6.7 Unless the Contractor provides the Owner with a payment bond in the full penal sum of the Contract Sum, payments received by the Contractor for Work properly performed by Subcontractors or provided by suppliers shall be held by the Contractor for those Subcontractors or suppliers who performed Work or furnished materials, or both, under contract with the Contractor for which payment was made by the Owner. Nothing contained herein shall require money to be placed in a separate account and not commingled with money of the Contractor, create any fiduciary liability or tort liability on the part of the Contractor for breach of trust, or entitle any person or entity to an award of punitive damages against the Contractor for breach of the requirements of this provision.

§ 9.6.8 Any provision in the Contract Documents to the contrary notwithstanding, the Owner shall not be obligated to make payment to the Contractor hereunder to the extent that the Contractor has not performed the Work or supplied the materials, for which payment is requested, in accordance with the Contract Documents.

§ 9.7 Failure of Payment

If the Engineer does not issue a Certificate for Payment in accordance with the requirements of the Contract Documents, through no fault of the Contractor, within ten (10) days after receipt of the Contractor's Application for Payment, or if the Owner does not pay the Contractor within ten (10) days after the date such payment is due to be paid by the Owner pursuant to the terms of the Contract Documents, the amount certified by the Engineer or awarded by binding dispute resolution, then the Contractor may, upon ten (10) additional days' notice to the Owner and Engineer, stop the Work until payment of the amount owing has been received. The Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's actual reasonable additional costs incurred as a result of shutdown and start-up.

§ 9.8 Substantial Completion

§ 9.8.1 The Work shall be considered to be "Substantially Complete(d)" or to have reached "Substantial Completion" on the date as determined by the Engineer when (1) the entirety of the Work is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for the use for which it is intended (subject only items on the Punchlist, the completion of which can be accomplished within thirty (30) days without interfering with the actual use of the Work by the Owner or those claiming by, through or under the Owner), (2) the Contractor has obtained a temporary or permanent certificate of occupancy for the Work permitting the lawful occupancy of the entire Project or such other permits, approvals, licenses, and other documents, for which the Contractor is responsible, from any governmental authority having jurisdiction thereof which are necessary for the beneficial occupancy and use of the Project site and building, and (3) the Engineer has issued a Certificate of Substantial Completion for the entirety of the Work pursuant to Section 9.8.4 of these General Conditions.

Without limitation of the foregoing, Substantial Completion of the Work shall not be deemed to have occurred until construction and installation of all facilities and systems (including but not limited to instrumentation and controls) are complete in all respects as required for the issuance of all required use and occupancy permits and approvals by all Agencies and applicable governmental authorities. Further, if and to the extent applicable given the Work required to be performed under the Contract Documents, Substantial Completion shall require commissioning systems, including but not limited to testing of individual system components and equipment and full operational startup and certification testing, as necessary to obtain all required use and occupancy permits and approvals by all Agencies and applicable governmental authorities.

Contractor shall prepare all documentation required by the Owner and any Agencies, including without limitation the State of Connecticut Department of Administrative Services ("DAS") in connection with grant(s) or other financial assistance by the State of Connecticut to the Owner for the Project and compliance with State audit requirements applicable to the Project and/or any such grants, the Connecticut Commission on Human Rights and Opportunities ("CHRO"), and the Connecticut Department of Energy and Environmental Protection ("CTDEEP").

§ 9.8.2 When the Contractor considers that the Work is substantially complete, the Contractor shall prepare and submit to the Engineer a comprehensive list of items to be completed or corrected prior to final payment (the "Punchlist"). Failure to include an item on the Punchlist does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

§ 9.8.3 Upon receipt of the Contractor's Punchlist, the Engineer will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Engineer's inspection discloses any item, whether or not included on the Contractor's list, which is not sufficiently complete in accordance with the Contract Documents as described in Section 9.8.1(1), the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Engineer. In such case, the Contractor shall then submit a request for another inspection by the Engineer to determine Substantial Completion.

§ 9.8.4 When the Work is Substantially Complete (with the exception of the Engineer's issuance of a Certificate of Substantial Completion), the Engineer will prepare a Certificate of Substantial Completion that shall establish the date of Substantial Completion; establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance; and fix the time within which the Contractor shall finish all remaining items on the Punchlist accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

§ 9.8.5 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in the Certificate.

§ 9.9 Partial Occupancy or Use

§ 9.9.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is consented to by the insurer and authorized by public authorities having jurisdiction over the Project. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage, if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the Contractor considers a portion substantially complete, the Contractor shall prepare and submit the Punchlist to the Engineer as provided under Section 9.8.2 and 9.8.3. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. The stage of the progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, by decision of the Engineer. The facility may be occupied and open to normal use during part or all of the construction of the Work. Such normal usage of the facility shall in no way affect the insurance coverages required pursuant to the Contract Documents, including without limitation Article 11.

§ 9.9.2 Immediately prior to such partial occupancy or use, the Owner, Contractor, and Engineer shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

§ 9.9.3 Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

§ 9.10 Final Completion and Final Payment

§ 9.10.1 Upon receipt of the Contractor's notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Engineer and the Owner will promptly make such inspection. When the Engineer and the Owner find the Work acceptable under the Contract Documents and the Contract fully performed, the Engineer will promptly issue a final Certificate for Payment stating that to the best of the Engineer's knowledge, information and belief, and on the basis of the Engineer's and the Owner's on-site visits and inspections, the Work has been completed in accordance with the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Engineer's final Certificate for Payment will constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled. All warranties and guarantees required under or pursuant to the Contract Documents not previously delivered shall be assembled and delivered by the Contractor to the Owner and Engineer as part of the final Application for Payment. The final Certificate for Payment will not be issued by the Engineer until all warranties and guarantees and all other close-out deliverables (including those set forth in Section 9.10.2 below) have been received and accepted by the Owner.

§ 9.10.2 The Contractor shall be required to submit the following to the Owner and the Engineer, in the form satisfactory to the Owner, as conditions to the issuance of a final Certificate for Payment and delivery of final payment:

- (1) an affidavit and waiver of claims attesting that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied;
- (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect, which shall include, without limitation product liability and completed operations, for the six (6) year period following final completion and evidence that such insurance will not be canceled or allowed to expire;
- (3) a written statement that the Contractor knows of no reason that the insurance will not be renewable to cover the period required by the Contract Documents;
- (4) consent of surety to final payment, on AIA Document G706 or G707;
- (5) final prints for record drawing use marked by the Contractor with record information as set forth in the Contract Documents;
- (6) all guarantees and warranties to which the Owner is entitled hereunder including documentation of any special warranties, such as manufacturers' warranties or specific Subcontractor warranties, including without limitation, the Contractor's guarantee that for no less than two (2) years after the date of Substantial Completion the Contractor shall correct and/or replace all defective workmanship, supplies, and/or materials included in the Work to the satisfaction of the Owner;
- (7) a final sworn statement from the Contractor duly executed and acknowledged showing all Subcontractors to be

- fully paid and similar sworn statements from Subcontractors and, where appropriate, from Sub-subcontractors;
- (8) satisfactory proof that all claims, including taxes (if any), arising out of the Work (including any claims of Subcontractors or suppliers) have been released or bonded and other data establishing payment or satisfaction of obligations, such as receipts and releases and waivers of liens, claims, security interests, or encumbrances arising out of the Contract signed by each Subcontractor, Sub-subcontractor and material supplier who performed or provided Work or materials under the Contract Documents and conditioned only upon receipt of final payment, the amount of which is consistent with the final Application for Payment, all to the extent and in such form as may be designated by the Owner;
 - (9) final documents of similar nature to those required by the Contract Documents for any monthly payments hereunder;
 - (10) all final permits, approvals (including, without limitation, the approval of the Owner's insurance company, if required and requested in a timely fashion) certificates (including, without limitation, certificates in respect of electrical systems and life safety systems) and authorizations for use and occupancy of the Project required by any authority having jurisdiction, including any building permits, temporary and unconditioned permanent and full certificate of occupancy and any other necessary occupancy and use permits;
 - (11) formally prepared "as built" drawings, records and related data including all field notes of all the Work (such drawings shall be in the form of "mylar" reproducible drawings, or as otherwise called for in the Contract Documents);
 - (12) the Operating and Maintenance Manual for the Project as provided below;
 - (13) a final statement of accounting for all allowances in form satisfactory to the Owner and/or DAS; and
 - (14) delivery of all spare parts required to be submitted pursuant to the Contract Documents.

§ 9.10.2.1 The "Operating and Maintenance Manual" for the Project shall be defined in the Contract Documents. Except as required otherwise by the Contract Documents, the "Operating and Maintenance Manual" for the Project shall contain, as applicable to the Work, (1) full information for each item of mechanical, electrical, or other operating equipment, copies of warranties therefor, schematic diagrams of control systems, circuit directories for each electric and communications panel board, and charts showing the tagging of all valves; and (2) complete keying schedules, paint color schedules, and paint color samples. Each volume of the manual shall be clearly indexed, and shall include a directory of all Subcontractors and maintenance contractors, indicating the area of responsibility of each, and the name and telephone number of the responsible member of each organization. The volumes shall be in both electronic and in bound book form.

§ 9.10.2.2 If a Subcontractor, Sub-subcontractor or supplier refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien, claim, security interest, or encumbrance. If no such bond is provided, the Owner may, without limiting its remedies under law, in equity, or under the Contract Documents, withhold the portion of final payment claimed to be due by the relevant Subcontractor, Sub-subcontractor or supplier until such lien, claim, security interest, or encumbrance is resolved. The Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging or otherwise resolving such lien, claim, security interest, or encumbrance, including all costs and reasonable attorneys' fees.

§ 9.10.2.3 If the final documentation submitted by the Contractor is not deemed complete by the Owner or if the Owner deems the Work incomplete in any respect, the Contractor shall promptly complete any such Work and shall promptly resubmit the final documentation.

§ 9.10.3 If, after Substantial Completion of the Work, final completion thereof is materially delayed through no fault of the Contractor, any Subcontractor, Sub-subcontractor, supplier or any other person or entity for whom or which any of them is responsible, or by issuance of Change Orders affecting final completion, and the Engineer so confirms, the Owner shall, upon application by the Contractor and certification by the Engineer, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed, corrected, and accepted. If the remaining balance for Work not fully completed or corrected is less than retainage stipulated in the Contract Documents, and if bonds have been furnished, the written consent of the surety to payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Engineer prior to certification of such payment. Such payment shall be made under terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

§ 9.10.4 Intentionally omitted.

§ 9.10.5 Acceptance of final payment by the Contractor, a Subcontractor, Sub-subcontractor, or a supplier, shall constitute a

waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment.

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

§ 10.1 Safety Precautions and Programs

The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs required by the applicable Legal Requirements, the Contract Documents or as reasonably requested by the Owner in connection with the performance of the Contract. The Contractor shall monitor all job site safety and promptly report deficiencies to responsible Subcontractors and to the Owner.

§ 10.2 Safety of Persons and Property

§ 10.2.1 The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury, or loss to

- .1** employees on the Work and other persons who may be affected thereby;
- .2** the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody, or control of the Contractor, a Subcontractor, or a Sub-subcontractor; and
- .3** other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction.

§ 10.2.2 The Contractor shall comply with, and give notices required by the Legal Requirements, bearing on safety of persons or property or their protection from damage, injury, or loss, including without limitation of Connecticut General Statutes Section 31-40m relating to toxic substances, the requirements of the Occupational Safety and Health Act and the Construction Safety Act of 1969, as amended, and regulations and standards promulgated thereunder, and/or ordinances, rules, regulations and lawful orders of governmental authorities bearing on safety of persons or property or the environment or their protection from damage, injury, destruction, pollution or loss. The Contractor shall be directly responsible for compliance therewith on the part of its agents, employees, materialmen and Subcontractors and suppliers, and Sub-subcontractors, and shall directly receive and be responsible for all citations, assessments, fines or penalties which may be incurred by reason of the failure of the Contractor's agents, employees, Subcontractors or suppliers, or of any Sub-subcontractor, to so comply.

§ 10.2.3 The Contractor shall implement, erect, and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards; promulgating safety regulations; and notifying the owners and users of adjacent sites and utilities of the safeguards. The Contractor shall also be responsible for all measures necessary to protect any property adjacent to the Project and improvements thereon. Any damage to such property or improvements shall be promptly repaired by the Contractor at its cost and expense.

§ 10.2.4 When use or storage of explosives or other hazardous materials or equipment, or unusual methods are necessary for execution of the Work, the Contractor shall obtain all necessary permits from regulating agencies, exercise utmost care, and carry on such activities under supervision of properly qualified personnel, and strictly and fully comply with all applicable Legal Requirements relating to the storage or use explosives or other hazardous materials or equipment.

§ 10.2.5 The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contract Documents) to property referred to in Sections 10.2.1.2 and 10.2.1.3 caused in whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 10.2.1.2 and 10.2.1.3. The Contractor may make a Claim for the cost to remedy the damage or loss to the extent such damage or loss is attributable to acts or omissions of the Owner or Engineer or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor, a Subcontractor, a supplier, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable. The foregoing obligations of the Contractor are separate from and in addition to the Contractor's obligations under Section 3.18.

§ 10.2.6 The Contractor shall designate a responsible member of the Contractor's 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 Owner and Engineer.

§ 10.2.7 The Contractor shall not permit any part of the construction or site to be loaded so as to cause damage or create an unsafe condition.

§ 10.2.8 Injury or Damage to Person or Property

If either party suffers injury or damage to person or property because of an act or omission of the other party, or of others for whose acts such party is legally responsible, notice of the injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding ten days after discovery. The notice shall provide sufficient detail to enable the other party to investigate the matter. The Contractor shall protect and maintain in operation all existing pipelines, conduits, sewers, drains, poles, wiring and similar conditions at the site which are within the area for construction of the Work, whether or not specifically shown on the Drawings. The Contractor shall ensure that all such items are protected, supported and/or moved as necessary for performance of the Work.

§ 10.2.9 In the event the Contractor identifies activities or conditions during performance of the Work or at the Project, which, in the Contractor's good faith opinion, pose an unreasonable risk of bodily injury or property damage, whether immediate or in the future, the Contractor shall have the right to immediately take steps to protect its personnel and Subcontractors and stop Work and remove its personnel from the affected area.

§ 10.2.10 The Contractor shall at all times provide protection against weather (rain, wind, storms or heat) so as to maintain all Work, materials, apparatus and fixtures free from damage. At the end of the day's work, all new Work likely to be damaged shall be reasonably protected against such weather.

§ 10.2.11 The Contractor shall provide adequate fire protection for all operations associated with the Work, and such protection must meet all applicable federal (including OSHA), State and municipal regulations.

§ 10.2.12 The Contractor shall remove and replace with new Work, at the Contractor's own expense, any Work damaged by failure to provide protection pursuant to Sections 10.2.10 and 10.2.11.

§ 10.2.13 Fire Protection: During any flame cutting and/or welding operation for the Work, the Contractor shall use or require Subcontractors or other persons performing such Work to use incombustible curtains and blankets to intercept, contain, and otherwise prevent the spread of hot metal, sparks and burning embers. In the performance of such Work, the Contractor shall employ a watchperson equipped with portable fire extinguishing equipment to maintain a fire watch continuously during all flame cutting and welding operation and for four (4) hours minimum thereafter. No flammable rubbish or liquid shall be kept in any part of the existing buildings at the site, except one-gallon quantities in approved safety cans or sealed metal containers. All fire doors at the site shall be kept clear of rubbish and in operating condition, and closed during non-working hours. The Contractor shall not allow any locking and blocking of any door in the existing building at the site during nonworking hours except entrance doors. Used construction materials, solvent soaked rags, empty volatile containers, and any other material or container which may be combustible shall be removed from the site each day at the conclusion of construction activities for the Work.

§ 10.2.14 The Contractor shall be responsible, to the extent not covered by insurance, for damage, loss or liability due to theft or vandalism to the Work and stored materials whether the same occurs while Work is in progress or not, and during the day or at night, or on weekdays, weekends or holidays.

§ 10.2.15 The Contractor shall protect and prevent damage to all finished and unfinished phases of the Work during the course of the Project.

§ 10.2.16 Securing the Site

The Contractor is responsible for securing, and preventing access by unauthorized individuals to, the Project site from such date as the Contractor, Subcontractors, suppliers, consultants, or agents commence the Work until the date of Final Completion, unless the Owner and Contractor agree in writing to an earlier date.

§ 10.3 Hazardous Materials and Substances

§ 10.3.1 The Contractor is responsible for compliance with any requirements included in the Contract Documents regarding any material, substance, chemical, waste, product, derivative, compound, mixture, solid, liquid, mineral or gas, whether

naturally occurring or manmade, that is hazardous, toxic, or words of similar import or regulatory effect, and any petroleum or petroleum-derived products, radon, radioactive materials or wastes, asbestos in any form, lead or lead-containing materials, urea formaldehyde foam insulation, and polychlorinated biphenyls (collectively, "Hazardous Materials"). If the Contractor believes its Work will disturb or otherwise implicate any actual or suspected Hazardous Material or encounters a Hazardous Material not addressed in the Contract Documents, the Contractor shall not disturb any such Hazardous Material, immediately report the condition to the Owner and the Engineer in writing and take all necessary precautions to prevent release of and exposure to the Hazardous Materials and foreseeable bodily injury or death to persons resulting from such Hazardous Material. If such reasonable precautions will be inadequate to prevent release of and exposure to Hazardous Materials, or foreseeable bodily injury and death, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area.

§ 10.3.2 Upon receipt of the Contractor's notice pursuant to Section 10.3.1 of the existence of actual or suspect Hazardous Materials not addressed in the Contract Documents, the Owner shall obtain the services of a licensed laboratory to verify the presence or absence of the Hazardous Material or substance reported by the Contractor and, in the event such Hazardous Material or substance is found to be present, to cause it to be rendered harmless or abated, or otherwise obtain verification from such licensed laboratory that such Hazardous Material or substances has been rendered harmless. When the Hazardous Material or substance has been rendered harmless and/or otherwise abated in accordance with all applicable Legal Requirements, Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time may be extended appropriately, and the Contract Sum shall be increased by the amount of the Contractor's reasonable additional costs of shutdown and start-up.

§ 10.3.3 Intentionally omitted.

§ 10.3.4 The Owner shall not be responsible under this Section 10.3 for Hazardous Materials or substances the Contractor, any Subcontractor, Sub-subcontractor, materialman or supplier, or any person or entity for whom or which any of them is responsible, brings to the site. The Contractor shall be responsible for the Contractor's fault or negligence and the fault or negligence of any of any Subcontractor, Sub-subcontractor, materialman or supplier, or any person or entity for whom or which any of them is responsible to the Owner, in the use and handling of such Hazardous Materials or substances required by the Contract Documents and/or a failure by any of them to comply with the Contract Documents or applicable Legal Requirements. The Contractor agrees not to use any fill or other materials to be incorporated into the Work which are hazardous, toxic or comprised of any items that are hazardous or toxic except to the extent required by the Contract Documents.

§ 10.3.5 To the fullest extent permitted by law, the Contractor shall indemnify, defend and hold harmless the Owner, its agents and employees, and the State of Connecticut, against claims, damages, losses and expenses, including but not limited to attorney's fees, resulting from (1) an actual or suspect Hazardous Material which the Contractor, any Subcontractor, Sub-subcontractor, supplier or any other person or entity for whom or which any of them is responsible to the Owner, brings to the Project site and negligently handles, or (2) the Contractor's failure to perform its obligations under Section 10.3.1, except to the extent that the claims, damages, losses, costs and expenses are due to the Owner's fault or negligence.

§ 10.3.6 If, without negligence of fault on the part of the Contractor, or any party for whose acts the Contractor is responsible, the Contractor is held liable by a government agency for the cost of remediation of a hazardous material or substance solely by reason of properly performing Work as required by the Contract Documents, the Owner shall reimburse the Contractor for all cost and expense thereby incurred.

§ 10.3.7 The Contractor shall perform all required procedures necessary to ensure that there will be no release, discharge, spillage, uncontrolled loss, seepage or filtration (each a "Release") of any Hazardous Material brought on the Project site by the Contractor, any Subcontractor, Sub-subcontractor or supplier in the course of the performance of the Work. The Contractor is responsible for any and all costs and liabilities associated with the investigation and remediation of any such Release, or as required by regulating authorities having jurisdiction under any of the applicable Legal Requirements, and holds the Owner, its employees and agents, and the fee owner of the Project site (if other than the Owner), harmless against any current or future liabilities resulting from such incidents.

§ 10.3.8 All material and equipment furnished under the Contract Documents shall be free of asbestos, lead based paint, and PCBs. Unless otherwise specified in the Contract Documents, any material or equipment containing these, and any other Hazardous Materials shall be considered defective and shall be removed by the Contractor at the Contractor's sole expense.

§ 10.4 Emergencies

In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury, or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Article 15 and Article 7. The Contractor shall promptly notify insurers as applicable, and the Engineer and the Owner of the nature of the emergency. Immediately thereafter, the Contractor shall submit to the Engineer and the Owner a written report including description of circumstances of the emergency and details of actions taken.

§ 10.4.1 The Contractor shall furnish the Owner and Engineer, in writing, the names, addresses and telephone numbers of the Contractor's personnel to be contacted in the event of an emergency, including without limitation emergencies that occur after normal working hours.

ARTICLE 11 INSURANCE AND BONDS

§ 11.1 Contractor's Insurance and Bonds

§ 11.1.1 The Contractor shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Contractor shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized and properly licensed to issue insurance in the jurisdiction where the Project is located. The Owner and such other parties as are identified in the Contract Documents and such others as may be required by the Owner, shall be named as additional insureds under the Contractor's liability insurance policies required under the Contract Documents to be procured and maintained by the Contractor.

§ 11.1.2 The Contractor shall provide surety bonds of the types, for such penal sums, and subject to such terms and conditions as required by the Contract Documents. The Contractor shall purchase and maintain the required bonds from a company or companies lawfully authorized and properly licensed to issue surety bonds in the jurisdiction where the Project is located.

§ 11.1.3 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.

§ 11.1.4 Notice of Cancellation or Expiration of Contractor's Required Insurance. Within three (3) business days of the date the Contractor becomes aware of an impending or actual cancellation or expiration of any insurance required by the Contract Documents, the Contractor shall provide notice to the Owner of such impending or actual cancellation or expiration. Upon receipt of notice from the Contractor, the Owner shall, unless the lapse in coverage arises from an act or omission of the Owner, have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by the Contractor. In the event of such suspension, the Contractor shall be responsible for, and shall not receive an extension of the Contract Time in connection with, the delay in the Work arising from the suspension. The furnishing of notice by the Contractor shall not relieve the Contractor of any contractual obligation to provide any required coverage.

§ 11.2 Owner's Insurance

§ 11.2.1 The Owner shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as customarily maintained by the Owner.

§ 11.2.2 Property Insurance. If the Contractor is required under the Contract Documents to maintain property insurance for the Project and fails to purchase and maintain such insurance, with all of the coverages and in the amounts described in the Agreement or elsewhere in the Contract Documents, the Contractor shall be responsible to the Owner for all of the Owner's losses, costs and damages caused by, arising from or attributable thereto to the extent that such losses, costs and damages would have been covered by such insurance.

§ 11.2.3 Notice of Cancellation or Expiration of Contractor's Required Property Insurance. Within three (3) business days of the date the Contractor becomes aware of an impending or actual cancellation or expiration of property insurance required to be maintained by the Contractor under the Contract Documents, if any, the Contractor shall provide notice to the Owner of such impending or actual cancellation or expiration. Unless the lapse in coverage arises from an act or omission of the Owner, upon receipt of notice from the Contractor, the Owner shall have the right to stop the Work until the lapse in coverage has been

cured by the procurement of replacement coverage by either the Owner or the Contractor. If the Owner purchases replacement coverage, the cost of the insurance shall be charged to the Contractor by an appropriate Change Order. The furnishing of notice by the Contractor shall not relieve the Contractor of any contractual obligation to provide required insurance or responsibility to the Owner pursuant to Section 11.2.2.

§ 11.3 Waivers of Subrogation

§ 11.3.1 If the Contractor is required under the Contract Documents to maintain property insurance for the Project, the Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents, and employees, each of the other; (2) the Engineer and Engineer's consultants; and (3) Separate Contractors, if any, and any of their subcontractors, sub-subcontractors, agents, and employees, for damages caused by fire, or other causes of loss, to the extent those losses are covered by the Contractor's property insurance, except such rights as they have to proceeds of such insurance. The Owner or Contractor, as appropriate, shall require similar written waivers in favor of the individuals and entities identified above from the Engineer, Engineer's consultants, Separate Contractors, subcontractors, and sub-subcontractors. Such policy of insurance shall not prohibit this waiver of subrogation. This waiver of subrogation shall be effective as to a person or entity (1) even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, (2) even though that person or entity did not pay the insurance premium directly or indirectly, or (3) whether or not the person or entity had an insurable interest in the damaged property.

§ 11.3.2 Intentionally omitted.

§ 11.4 Loss of Use, Business Interruption, and Delay in Completion Insurance

The Owner, at the Owner's option, may purchase and maintain insurance that will protect the Owner against loss of use of the Owner's property, or the inability to conduct normal operations, due to fire or other causes of loss. The Owner waives all rights of action against the Contractor and Engineer for loss of use of the Owner's property, due to fire or other hazards however caused.

§ 11.5 Adjustment and Settlement of Insured Loss

§ 11.5.1 A loss insured under any property insurance required by the Agreement shall be adjusted by the Owner and made payable to the Owner for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause and of Section 11.5.2. The Owner shall pay the Engineer and Contractor their just shares of insurance proceeds received by the Owner, and by appropriate agreements the Engineer and Contractor shall make payments to their consultants and Subcontractors in similar manner.

§ 11.5.2 Prior to settlement of an insured loss, the Owner shall notify the Contractor of the terms of the proposed settlement as well as the proposed allocation of the insurance proceeds. The Contractor shall have 5 days from receipt of notice to object to the proposed settlement or allocation of the proceeds. If the Contractor does not object, the Owner may settle the loss and the Contractor shall be bound by the settlement and allocation. Upon receipt, the Owner shall make the appropriate distributions. Thereafter, if no other agreement is made or the Owner does not terminate the Contract for convenience, the Owner and Contractor shall execute a Change Order for reconstruction of the damaged or destroyed Work in the amount allocated for that purpose. If the Contractor timely objects to either the terms of the proposed settlement or the allocation of the proceeds, the Owner may proceed to settle the insured loss, and any dispute between the Owner and Contractor arising out of the settlement or allocation of the proceeds shall be resolved pursuant to Article 15. Pending resolution of any dispute, the Owner may issue a Construction Change Directive for the reconstruction of the damaged or destroyed Work.

§ 11.6 Performance Bond and Payment Bond

§ 11.6.1 The Owner shall have the right to require the Contractor to furnish bonds covering faithful performance of the Contract and payment of obligations arising thereunder as stipulated in bidding requirements or specifically required in the Contract Documents on the date of execution of the Contract.

§ 11.6.2 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.

§ 11.6.3 The Contractor shall increase the principal amount of the performance and labor and materials payments bond(s) in direct proportion to any increase in the Contract Sum resulting from Change Orders.

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

§ 12.1 Uncovering of Work

§ 12.1.1 If a portion of the Work is covered contrary to the Engineer's or the Owner's request or to requirements specifically expressed in the Contract Documents, it must, if requested in writing by the Engineer or Owner, be uncovered for the Engineer's or Owner's examination and be replaced at the Contractor's expense without change in the Contract Time.

§ 12.1.2 If a portion of the Work has been covered that the Engineer or Owner has not specifically requested to examine prior to its being covered, the Engineer or Owner may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, the Contractor shall be entitled to an equitable adjustment to the Contract Sum and Contract Time as may be appropriate. If such Work is not in accordance with the Contract Documents, the costs of uncovering the Work, and the cost of correction, shall be at the Contractor's expense.

§ 12.2 Correction of Work

§ 12.2.1 Before Substantial Completion

The Contractor shall promptly correct Work rejected by the Engineer or failing to conform to the requirements of the Contract Documents, discovered before Substantial Completion and whether or not fabricated, installed or completed. Costs of correcting such rejected Work, including additional testing and inspections, the cost of uncovering and replacement, and compensation for the Engineer's services and expenses made necessary thereby, shall be at the Contractor's expense.

§ 12.2.2 After Substantial Completion

§ 12.2.2.1 In addition to the Contractor's obligations under Section 3.5, if, within two years after the date of Substantial Completion of the Work or after the date for commencement of warranties established under Section 9.9.1, or by terms of any applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly at the Contractor's sole expense after receipt of notice from the Owner to do so, unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. If the Contractor fails to correct nonconforming Work within a reasonable time during that period after receipt of notice from the Owner or Engineer, the Owner may correct it in accordance with Section 2.5.

§ 12.2.2.2 The two-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.

§ 12.2.2.3 The two-year period for correction of Work shall not be extended by corrective Work performed by the Contractor pursuant to this Section 12.2.

§ 12.2.3 The Contractor shall remove from the site portions of the Work that are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

§ 12.2.4 The Contractor shall bear the cost of correcting destroyed or damaged construction of the Owner or Separate Contractors, whether completed or partially completed, caused by the Contractor's correction or removal of Work that is not in accordance with the requirements of the Contract Documents.

§ 12.2.5 Nothing contained in this Section 12.2 shall be construed to modify the Contractor's obligations under Section 3.5 or to establish a period of limitation with respect to other obligations the Contractor has under the Contract Documents. Establishment of the two-year period for correction of Work as described in Section 12.2.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

§ 12.2.6 Audits

Upon request of the Owner, the Contractor will cooperate, and secure the cooperation of all Subcontractors, suppliers, and Sub-subcontractors, and assist the Owner during any audit of the Project conducted by the Owner and/or DAS at any time after Substantial Completion at no cost to the Owner. Such cooperation shall include providing the Owner with access to all

records related to the Project.

§ 12.3 Acceptance of Nonconforming Work

If the Owner prefers to accept Work that is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Sum will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

ARTICLE 13 MISCELLANEOUS PROVISIONS

§ 13.1 Governing Law

The Contract shall be governed by the law of the place where the Project is located, excluding that jurisdiction's choice of law rules.

§ 13.2 Successors and Assigns

§ 13.2.1 The Owner and Contractor respectively bind themselves, their partners, successors, assigns, and legal representatives to covenants, agreements, and obligations contained in the Contract Documents. Except as provided in Section 13.2.2, neither party to the Contract shall assign the Contract, in whole or in part, without written consent of the other. If either party attempts to make an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

§ 13.2.2 The Owner may, without consent of the Contractor, assign the Contract to a lender providing construction financing for the Project, if the lender assumes the Owner's rights and obligations under the Contract Documents that arise subsequent to the effective date of such assignment. The Contractor shall execute all consents reasonably required to facilitate the assignment.

§ 13.3 Rights and Remedies

§ 13.3.1 Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights, and remedies otherwise imposed by or available at law or in equity.

§ 13.3.2 No action or failure to act by the Owner, Engineer, or Contractor shall constitute a waiver of a right or duty afforded them under the Contract, nor shall such action or failure to act constitute approval of or acquiescence in a breach thereunder, except as may be specifically agreed upon in writing.

§ 13.3.3 No provision contained in the Contract Documents shall create or give to third parties any claim or right against the Owner or the Contractor except as specifically provided herein.

§ 13.4 Tests and Inspections

§ 13.4.1 Tests, inspections, and approvals of portions of the Work shall be made as required by the Contract Documents and by applicable Legal Requirements. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections, and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections, and approvals. The Contractor shall give the Engineer and the Owner timely notice of when and where tests and inspections are to be made so that the Engineer and the Owner may be present for and observe such inspections, testing or approval. The Owner shall bear costs of tests, inspections, or approvals that do not become requirements until after bids from Subcontractors are received or negotiations concluded. Unless otherwise provided in the Contract Documents, the Owner shall directly arrange and pay for tests, inspections, or approvals where building codes or applicable laws or regulations so require.

§ 13.4.2 If the Engineer, Owner, or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection, or approval not included under Section 13.4.1, the Engineer will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection, or approval, by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Engineer of when and where tests and inspections are to be made so that the Engineer may be present for such procedures. Such costs, except as provided in Section 13.4.3, shall be at the Owner's expense. If the inspections and tests conducted under Section 13.4.1 or this Section 13.4.2 reveal failure in a portion of the Work, the Owner may order the inspection and testing at the Contractor's expense of any and all portions of the Work that are identical or similar to the failing portion.

§ 13.4.3 If procedures for testing, inspection, or approval under Sections 13.4.1 and 13.4.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure, including those of repeated procedures and compensation for the Engineer's services and expenses, shall be at the Contractor's expense.

§ 13.4.4 Required certificates of testing, inspection, or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Engineer.

§ 13.4.5 If the Engineer is to observe tests, inspections, or approvals required by the Contract Documents, the Engineer will do so promptly and, where practicable, at the normal place of testing.

§ 13.4.6 Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

§ 13.5 Interest

Payments due and unpaid under the Contract Documents shall bear interest as provided in the Agreement.

§ 13.6 Prohibited Activities and Background Check Requirements

§ 13.6.1 Contractor shall comply with all applicable Legal Requirements including, without limitation, Connecticut General Statutes Section 10-222c, as applicable.

§ 13.6.2 Interaction with School Community. The scope of the Work does not, and will not under any circumstances, require any contact with students or any other minors physically present in the facilities of, or the grounds surrounding, the school where the Project is located (the "School Grounds"). None of the Contractor, Subcontractors, Sub-subcontractor, or any of their respective employees, agents or representatives shall, under any circumstances, converse or interact in any manner, with students or any minors physically present on the School Grounds. None of the Contractor, Subcontractors, Sub-subcontractor, or any of their respective employees, agents or representatives shall interact with any adult members of the school community (including, without limitation, employees, officials, or visitors, including parents of students enrolled in the Owner's schools) with respect to the Project with the exception of the Owner's Designated Representative as provided in the Agreement. All of the Contractor, Subcontractors, Sub-subcontractors, and their respective employees, agents or representatives shall, while on the School Grounds, refrain from use of vulgar language, obscene gestures, or any other behavior inappropriate for a school environment and/or property on which minor children are or may be present.

§ 13.6.3 Background and Employment History Checks

§ 13.6.3.1 To the extent permitted by law, the Contractor shall perform (or cause to be performed) as regards all of its employees, agents, and representatives (each a "Contractor Employee"), and all of the employees, agents, and representatives of Subcontractors and Sub-subcontractors (each a "Subcontractor Employee"), who will be physically present on the School Grounds in connection with the Project, appropriate background checks on all such Contractor Employees and Subcontractor Employees. Such background checks shall include, at a minimum and without limitation, a search of both the Connecticut Department of Emergency Services and Public Protection's sexual offender registry and the Abuse and Neglect Registry of the Connecticut Department of Children and Families. For those Contractor Employees and Subcontractor Employees who are to be physically present on the School Grounds in connection with the Project and whose current or most recent employment occurred out of state, the out-of-state equivalent of the Connecticut Department of Emergency Services and Public Protection's sexual offender registry and the Abuse and Neglect Registry of the Connecticut Department of Children and Families registry shall be checked. The Contractor shall complete (or cause to be completed) background checks as to each Contractor Employee and Subcontractor Employee prior to such Contractor Employee or Subcontractor Employee being permitted to be physically present on the School Grounds. If the Contractor receives any information indicating that any Contractor Employee or Subcontractor Employee may be registered as a sexual offender, may have a record of abuse or neglect, or is, in any other manner, unfit to perform services which could involve direct contact with minor children, or which may involve working in or near property on which minor children may be present, the Contractor shall immediately forward such information to the Owner, to the extent permitted by law, and shall immediately remove the individual from the School Grounds and from participation in the Project.

§ 13.6.3.2 The Contractor represents and warrants that, in its best professional judgment, each Contractor Employee and each

Subcontractor Employee maintains the appropriate qualifications and is fit to perform services which could involve direct contact with minor children, or which may involve working in or near property on which minor children may be present. The Contractor shall immediately remove any Contractor Employee or Subcontractor Employee from the School Grounds and from the Project if requested to do so by the Owner (which request shall be made in the Owner's sole discretion) or if it becomes known to the Contractor that such Contractor Employee or Subcontractor Employee may be a danger to the health, safety or well-being of the school community, its students, or any minor children.

§ 13.6.3.3 The Contractor shall include and shall require all Subcontractors to include this Section 13.6 in all Subcontracts for the Project.

§ 13.6.3.4 By execution of the Contract, the Contractor represents and warrants that it has fully complied with the requirements of this Section 13.6. To the extent permitted by law, the Contractor agrees that upon the Owner's request, Contractor shall promptly provide the Owner with any documentation related to such compliance, including, without limitation, the results of the background and employment history checks required by this Section.

§ 13.6.3.5 Failure by the Contractor to comply with its obligations under this Section 13.6 shall constitute a material breach of the Contract.

ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

§ 14.1 Termination by the Contractor

§ 14.1.1 The Contractor may terminate the Contract if the Work is stopped for a period of 60 consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, for any of the following reasons:

- .1 Issuance of an order of a court or other governmental authority having jurisdiction that requires all Work to be stopped;
- .2 An act of government, such as a declaration of national emergency, that requires all Work to be stopped; or
- .3 Because the Owner has repeatedly defaulted, beyond any applicable notice and cure periods, in its payment obligations to the Contractor under the Contract Documents.

§ 14.1.2 The Contractor may terminate the Contract if, through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, supplier or any of their respective agents or employees, or any other persons or entities performing portions of the Work, repeated suspensions, delays, or interruptions of the entire Work by the Owner as described in Section 14.3, constitute in the aggregate more than one hundred percent (100%) of the total number of days scheduled for completion of the Work, or 120 days in any 365-day period, whichever is less.

§ 14.1.3 If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon ten days' prior written notice to the Owner and the Engineer, terminate the Contract and recover from the Owner payment pursuant to the Contract Documents for Work executed in accordance with the Contract Documents, along with direct costs incurred by the Contractor by reason of such termination.

§ 14.1.4 If the Work is stopped for a period of 60 consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, supplier or their respective agents or employees or any other persons or entities performing portions of the Work by or on behalf of any of them, because the Owner has repeatedly failed to fulfill the Owner's obligations under the Contract Documents with respect to matters important and critical to the progress of the Work, the Contractor may, upon 10 additional days' prior written notice to the Owner and the Engineer, terminate the Contract and recover from the Owner as provided in Section 14.1.3.

§ 14.1.5 The notice of termination delivered pursuant to Section 14.1.3 or 14.1.4 must state with specificity the means by which the Owner may cure its nonperformance, and the Contractor shall not terminate the Contract if, within the applicable ten (10) day period, the Owner substantially takes such curative measures.

§ 14.2 Termination by the Owner for Cause

§ 14.2.1 The Owner may, without prejudice to and without waiving any other rights or remedies the Owner may have, terminate the Contract if the Contractor

- .1 repeatedly refuses or fails to supply enough properly skilled workers or proper materials;

- .2 fails to make payment to Subcontractors or suppliers in accordance with the respective agreements between the Contractor and the Subcontractors or suppliers;
- .3 disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority;
- .4 otherwise is guilty of substantial breach of a provision of the Contract Documents;
- .5 institutes proceedings or consent to proceedings requesting relief or arrangement under the Federal Bankruptcy Act or similar or applicable federal or state law, or a petition under any federal or state bankruptcy or insolvency law is filed against the Contractor and such petition is not dismissed within sixty (60) days from the date of said filing, or the Contractor admits in writing its inability to pay its debts as they become due, or it makes a general assignment for the benefit of its creditors, or a receiver, liquidator, trustee, or assignee is appointed, or a receiver of all or any substantial portion of the Contractor's properties is appointed;
- .6 abandons the Work;
- .7 fails to prosecute the Work promptly and diligently;
- .8 submits an Application for Payment, sworn statement, waiver of lien, affidavit or document of any nature whatsoever which is intentionally falsified;
- .9 fails to make prompt payment to Subcontractors or for materials or labor in accordance with the respective Subcontracts or otherwise breaches its obligations under any Subcontract with a Subcontractor; or
- .10 after a mechanics or materialman's lien or notice of lien is filed against any part of the Work or the Project site, the lien and underlying claim are not promptly resolved as required under the Contract Documents.

§ 14.2.2 When any of the reasons described in Section 14.2.1 exist, the Owner may, without prejudice to and without waiving any other rights or remedies the Owner may have, and after giving the Contractor and the Contractor's surety, if any, seven days' notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:

- .1 Exclude the Contractor from the site and take possession of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
- .2 Accept assignment of subcontracts pursuant to Section 5.4; and
- .3 Finish the Work by whatever reasonable method the Owner may deem expedient. Upon written request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.

§ 14.2.3 When the Owner terminates the Contract for one of the reasons stated in Section 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

§ 14.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Engineer's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall be certified by the Initial Decision Maker, upon application, and this obligation for payment shall survive termination of the Contract.

§ 14.3 Suspension by the Owner for Convenience

§ 14.3.1 The Owner may, without cause, and without prejudice and without waiving any other rights or remedies the Owner may have, order the Contractor in writing to suspend, delay or interrupt the Work, in whole or in part for such period of time as the Owner may determine.

§ 14.3.2 The Contract Sum and Contract Time shall be adjusted for increases in the cost and time caused by suspension, delay, or interruption under Section 14.3.1. Adjustment of the Contract Sum shall include profit to the extent provided and permitted in the Contract Documents. No adjustment shall be made to the extent

- .1 that performance is, was, or would have been, so suspended, delayed, or interrupted, by another cause for which the Contractor is responsible; or
- .2 that an equitable adjustment is made or denied under another provision of the Contract.

§ 14.4 Termination by the Owner for Convenience

§ 14.4.1 The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause.

§ 14.4.2 Upon receipt of notice from the Owner of such termination for the Owner's convenience, the Contractor shall

- .1 cease operations as directed by the Owner in the notice;
- .2 take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and
- .3 except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing Subcontracts and purchase orders and enter into no further Subcontracts and purchase orders.

§ 14.4.3 In case of such termination for the Owner's convenience, the Owner shall pay the Contractor for Work properly executed in accordance with the Contract Documents and direct costs incurred by reason of the termination, including costs directly attributable to termination of Subcontracts.

ARTICLE 15 CLAIMS AND DISPUTES

§ 15.1 Claims

§ 15.1.1 Definition

A Claim is a demand or assertion by one of the parties seeking, as a matter of right, payment of money, a change in the Contract Time, or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. The responsibility to substantiate Claims shall rest with the party making the Claim. This Section 15.1.1 does not require the Owner to file a Claim in order to impose liquidated damages in accordance with the Contract Documents.

§ 15.1.2 Time Limits on Claims

The Owner and Contractor shall commence all Claims and causes of action against the other and arising out of or related to the Contract, whether in contract, tort, breach of warranty or otherwise, in accordance with the requirements of the binding dispute resolution method selected in the Agreement and within the period specified by applicable law, but in any case not more than 10 years after the date of Substantial Completion of the Work. The Owner and Contractor waive all Claims and causes of action not commenced in accordance with this Section 15.1.2.

§ 15.1.3 Notice of Claims

§ 15.1.3.1 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered prior to expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party and to the Initial Decision Maker with a copy sent to the Engineer, if the Engineer is not serving as the Initial Decision Maker. Claims by either party under this Section 15.1.3.1 shall be initiated within 10 days after occurrence of the event giving rise to such Claim or within 10 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later.

§ 15.1.3.2 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party. In such event, no decision by the Initial Decision Maker is required.

§ 15.1.4 Continuing Contract Performance

§ 15.1.4.1 Pending final resolution of a Claim, except as otherwise agreed in writing or as provided in Section 9.7 and Article 14, the Contractor shall proceed diligently with performance of the Work and its obligations under the Contract Documents and the Owner shall continue to make payments in accordance with the Contract Documents.

§ 15.1.4.2 The Contract Sum and Contract Time shall be adjusted in accordance with the Initial Decision Maker's decision, subject to the right of either party to proceed in accordance with this Article 15. The Engineer will issue Certificates for Payment in accordance with the decisions of the Initial Decision Maker.

§ 15.1.5 Claims for Additional Cost

If the Contractor wishes to make a Claim for an increase in the Contract Sum, notice as provided in Section 15.1.3 shall be given before proceeding to execute the portion of the Work that is the subject of the Claim. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

§ 15.1.6 Claims for Additional Time

§ 15.1.6.1 If the Contractor wishes to make a Claim for an increase in the Contract Time, notice as provided in Section 15.1.3 shall be given. The Contractor's Claim shall include an estimate of the probable effect of the delay on the progress of the Work. In the case of a continuing delay, only one Claim is necessary.

§ 15.1.6.2 If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated, and had an adverse effect on the scheduled construction. No extension of the Contract Time will be granted for adverse weather conditions unless the number of days of inclement weather is substantially greater or conditions substantially more severe than the average for the calendar period as recorded by a recognized weather observation government agency.

§ 15.1.7 Intentionally omitted.

§ 15.1.8 Notwithstanding anything to the contrary herein or in the Contract Documents, neither the Contract Sum nor the Contract Time shall be adjusted if the increased costs or delay underlying the Contractor's claim for adjustment stems from the negligent act or omission of the Contractor, its subcontractors of any tier, or of anyone for whose performance the Contractor is responsible to the Owner, or as a result of the error of any of the same or of the failure of any of the same to comply with, and fulfill their responsibilities under, the Contract Documents.

§ 15.2 Initial Decision

§ 15.2.1 Claims, excluding those where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2 or arising under Sections 10.3, 10.4, and 11.5, shall be referred to the Initial Decision Maker for initial decision. The Engineer will serve as the Initial Decision Maker, unless otherwise indicated in the Agreement. Except for those Claims excluded by this Section 15.2.1, an initial decision shall be required as a condition precedent to mediation of any Claim. If an initial decision has not been rendered within 45 days after the Claim has been referred to the Initial Decision Maker, the party asserting the Claim may demand mediation and binding dispute resolution without a decision having been rendered. Unless the Initial Decision Maker and all affected parties agree, the Initial Decision Maker will not decide disputes between the Contractor and persons or entities other than the Owner.

§ 15.2.2 The Initial Decision Maker will review Claims and within ten days after the receipt of a Claim take one or more of the following actions: (1) request additional supporting data from the claimant or a response with supporting data from the other party, (2) reject the Claim in whole or in part, (3) approve the Claim, (4) suggest a compromise, or (5) advise the parties that the Initial Decision Maker is unable to resolve the Claim if the Initial Decision Maker lacks sufficient information to evaluate the merits of the Claim or if the Initial Decision Maker concludes that, in the Initial Decision Maker's sole discretion, it would be inappropriate for the Initial Decision Maker to resolve the Claim.

§ 15.2.3 In evaluating Claims, the Initial Decision Maker may, but shall not be obligated to, consult with or seek information from either party or from persons with special knowledge or expertise who may assist the Initial Decision Maker in rendering a decision. The Initial Decision Maker may request the claimant to authorize retention of such persons at the claimant's expense.

§ 15.2.4 If the Initial Decision Maker requests a party to provide a response to a Claim or to furnish additional supporting data, such party shall respond, within ten days after receipt of the request, and shall either (1) provide a response on the requested supporting data, (2) advise the Initial Decision Maker when the response or supporting data will be furnished, or (3) advise the Initial Decision Maker that no supporting data will be furnished. Within ten days after receipt of the response or supporting data, if any, the Initial Decision Maker will either reject or approve the Claim in whole or in part, or suggest a compromise.

§ 15.2.5 The Initial Decision Maker will render an initial decision approving or rejecting the Claim, or indicating that the Initial Decision Maker is unable to resolve the Claim. This initial decision shall (1) be in writing; (2) state the reasons therefor; and (3) notify the parties and the Engineer, if the Engineer is not serving as the Initial Decision Maker, of any change in the Contract Sum or Contract Time or both. The initial decision shall be final and binding on the parties but subject to mediation and, if the parties fail to resolve their dispute through mediation, to binding dispute resolution.

§ 15.2.6 Either party may file for mediation of an initial decision at any time, subject to the terms of Section 15.2.6.1.

§ 15.2.6.1 Either party may, within 30 days from the date of receipt of an initial decision, demand in writing that the other party file for mediation. If such a demand is made and the party receiving the demand fails to file for mediation within 30 days after receipt thereof, then both parties waive their rights to mediate or pursue binding dispute resolution proceedings with respect to the initial decision.

§ 15.2.7 In the event of a Claim against the Contractor, the Owner may, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Contractor's default, the Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

§ 15.2.8 If a Claim relates to or is the subject of a mechanic's lien, the party asserting such Claim may proceed in accordance with applicable law to comply with the lien notice or filing deadlines.

§ 15.3 Mediation

§ 15.3.1 Claims, disputes, or other matters in controversy arising out of or related to the Contract, except those waived as provided for in Section 9.10.5, shall be subject to mediation as a condition precedent to binding dispute resolution.

§ 15.3.2 The parties shall endeavor to resolve their Claims by mediation which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Mediation Procedures in effect on the date of the Agreement. A request for mediation shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the mediation. The request may be made concurrently with the filing of binding dispute resolution proceedings but, in such event, mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order. If an arbitration is stayed pursuant to this Section 15.3.2, the parties may nonetheless proceed to the selection of the arbitrator(s) and agree upon a schedule for later proceedings.

§ 15.3.3 Either party may, within 30 days from the date that mediation has been concluded without resolution of the dispute or 60 days after mediation has been demanded without resolution of the dispute, demand in writing that the other party file for binding dispute resolution. If such a demand is made and the party receiving the demand fails to file for binding dispute resolution within 60 days after receipt thereof, then both parties waive their rights to binding dispute resolution proceedings with respect to the initial decision.

§ 15.3.4 The parties shall share the mediator's fee and any filing fees equally. The mediation shall be held in the place where the Project is located, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof.

§ 15.4 Intentionally Omitted

§ 15.4.1 Intentionally omitted.

§ 15.4.1.1 Intentionally omitted.

§ 15.4.2 Intentionally omitted.

§ 15.4.3 Intentionally omitted.

§ 15.4.4 Intentionally omitted.

§ 15.4.4.1 Intentionally omitted.

§ 15.4.4.2 Intentionally omitted.

§ 15.4.4.3 Intentionally omitted.

SUPPLEMENTARY CONDITIONS

General

1. Contractor, Supervisory, and Trades personnel will be required to be familiar with and adhere to the Project Work Rules. Failure to comply with the Work Rules may result in being banned from the project site.
2. The Contractor shall take direction only from the Director of Facilities, or their representative.
3. All construction activities that are disruptive to school operations (due to noise, vibration, dust, orders, etc.) shall occur outside regular school instructional hours.
4. Contractors shall not use RSD10-owned dumpsters for refuse disposal unless given prior written permission from the RSD10 Director of Facilities/Project Manager.
5. No entry into the building is allowed without prior permission from the RSD10 Director of Facilities/Project Manager. When entry is granted, each individual must sign in at the main office and obtain a visitor's badge.
6. Have staff available on site to receive and upload your materials whenever deliveries are made. If Contractor staff is not available, the delivery will be refused.
7. The Contractor shall maintain, at the site, one copy of the drawings, specifications, addenda, change orders and other modifications, in good order and marked currently; and one copy of approved shop drawings, product data, samples and similar required submittals.
8. Maintain complete files of Material Safety Data Sheets (MSDS) on the jobsite.
9. The Owner does not provide secure storage for the Contractor's materials and tools.

Foreman/Supervisory Personnel

1. The Trade Foreman/Superintendent must be on the jobsite whenever their staff is on site. This includes subcontractor personnel.

All Contractor Personnel

1. Contractors, subcontractors, and all their personnel shall wear a clothing with their company's logo or name while on site.
2. For individuals working in school buildings or on school sites, the Contractors must conduct a criminal background check. Prior to working in any school building, the Contractor shall provide verification that their employees and subcontractors do not appear on any Sex Offender Registry.
3. Job hours are 7:00 AM to 3:30 PM..
4. Materials deliveries or movement of construction vehicles is not permitted among buses and students during drop-off of pickup times **8:00-8:45 AM & 3:15-3:45 PM Monday, Tuesday, Thursday, Friday and 1:45-2:15 PM on Wednesday**. Times vary among elementary, middle and high school and will be confirmed with the Contractor.
5. No alcohol or controlled substances are allowed on the school property.
6. No smoking is allowed within the building or on the school property.
7. No food is to be eaten in the building. All food-related trash is to be removed from the site at the end of each day.
8. Use of radios and other amplified sound systems is disruptive to building occupants and is not permitted during classroom instructional hours.
9. Clean up all work areas daily. Keep the job clean and debris free.
10. Contractor shall coordinate its Work with the work of other trades. Check preceding work prior to

starting new work. Do not proceed unless the preceding work is completely acceptable.

11. Protect your work at all times from damage.
12. Park in designated areas only. Keep parking areas accessible for emergency vehicles. Privately owned vehicles are not permitted in areas of construction.
13. Passenger elevators are not to be used by Contractors for transporting materials.
14. Dumpsters shall be either emptied or removed at the end of each work week to prevent unauthorized use.

Safety

1. All work activities are to be planned with Safety as the highest priority.
2. A copy of the Contractor's safety program shall be present at job site.
3. A first aid kit appropriate to the size of the work crew is to be provided by the Contractor
4. Appropriate fire extinguishing supplied by the Contractor shall be present at the work area.
5. All personnel in work areas will have at a minimum, hard hats, safety glasses, work shoes, shirts with sleeves, and long pants. Hard hats must have company and employees' name.
6. No interruption of building services (e.g. power, water, fire alarm intercom, ventilation, heating, cooling, etc.) without prior coordination with, and permission from, the Owner.
7. No use of any tools, equipment or supplies, other than those supplied by the Contractor.

Preconstruction/Pre-Install Meeting Requirements

1. Preconstruction meeting: Persons or representatives who have a responsibility or significant role in the Project shall attend a preconstruction meeting. This includes the school superintendent, facility director, the Engineer of record, and fire marshal. The preconstruction meeting shall be coordinated by the Owner on a date shortly after the Contract is awarded by the Owner.
2. Safety Meetings: Review past activities, plan for new or changed operations, review pertinent aspects of appropriate Activity Hazard Analyses (AHA) (by trade), establish safe working procedures for anticipated hazards, and provide pertinent safety and health training and motivation.
 - a. Meetings shall be conducted at least once a month for all supervisors on the project location and at least once a week for all workers by supervisors or foremen.
 - b. Meetings shall be documented, including the date, persons in attendance, subjects discussed, and names of individual(s) who conducted the meeting. Documentation shall be maintained and copies furnished to the Engineer on request.
 - c. The Engineer shall be informed of all scheduled meetings in advance and be invited to attend.
3. Owner-Engineer-Contractor (OEC) Meetings: A minimum of biweekly OAC meetings shall be held in person or remotely to review construction status, documentation, major equipment installation, and RFI reviews, and schedule. A meeting with all parties shall be held prior to installation of major equipment.
4. Training: The Contractor and/or equipment representatives shall provide training on all new equipment installed as part of the fuel storage and transfer system. This training shall include the Owner and school facility and maintenance personnel. See Section 017900.

Compensation for Changes in the Work

1. At any time, without invalidating the Contract and by a written order and without notice to the

sureties, the Owner, through the Engineer, may order modifications in the Work consisting of additions, deletions or other revisions. Upon request, the Contractor shall supply the Engineer promptly with a detailed proposal for the same, showing quantities of and Unit Prices for the Work and that of any Subcontractor involved.

2. Modifications to the Work will be authorized by a written Change Order, or if necessary to expedite the Work, a written Construction Change Directive, issued by the Owner. Change Orders and Construction Change Directives shall be processed in accordance with the terms of the Contract Documents. Upon receipt of the written Change Order, the Contractor shall proceed with the Work when and as directed.

3. If a Change Order makes the Work less expensive for the Contractor, the proper deductions shall be made from the Contract Sum, said deductions to be computed in accordance with the provisions listed in this Section.

4. The Contractor shall not be entitled to an extension of time if in the opinion of the Owner the Additional Work in conjunction with the Work can be performed without impact on the Contract Time.

5. The Contractor may request, and the Owner may grant additional Contract Time when, in the opinion of the Owner, the Contractor has demonstrated that the Additional Work cannot be performed in conjunction with the Work without impact on the original Substantial Completion and/or Acceptance (if applicable) date.

6. The amount of compensation to be paid to the Contractor for any Additional or Deleted Work that results in a Change Order shall be determined in one of the following manners:

Unit Price	As stated in the Contract Documents
Unit Price	As subsequently agreed upon by the Contractor and Owner
Lump Sum	Agreed upon sum by the Owner and the Contractor. The Owner may rely on costs, prices, and documentation provided by the Contractor or Subcontractor in agreeing to a Lump Sum. If the Owner believes that additional information is necessary to substantiate the accuracy of the cost, the Owner reserves the right to request and receive additional information from the Contractor.

Overhead and Profit Percentages For Changes Orders

A. Contractor's markup for Work performed by its own forces:

Change Order Amount	Overhead and Profit
\$0 and greater	10%

B. Contractor's markup for Work performed by its Subcontractor's forces and not allowable for any subsidiary in which the Contractor has a majority ownership:

Change Order Amount	Overhead and Profit
\$0 and greater	Subcontractor = 10% Contractor = 5% Total = 15%



DEPARTMENT OF ADMINISTRATIVE SERVICES (DAS)
Office of School Construction Grants & Review (OSCG&R)

PREVAILING WAGE RATE INFORMATION

FORM SCG-6001

**Information regarding Prevailing Wage Rate requirements can
be accessed through the following website link:**

<https://www.ctdol.state.ct.us/wgwkstnd/prevailwage.htm>

**If you have questions regarding wages and workplace standards refer to the
State of Connecticut Department of Labor (DOL) website:**

<http://www.ctdol.state.ct.us> or call 860-263-6000

SECTION 015713
TEMPORARY EROSION AND SEDIMENT CONTROL

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of contract, including General and Supplementary Conditions and Division 01 specification Sections apply to the work of this Section.

1.02 SECTION INCLUDES

- A. Prevention of erosion due to construction activities.
- B. Prevention of sedimentation of waterways, open drainage ways, and storm and sanitary sewers due to construction activities.
- C. Restoration of areas eroded due to insufficient preventive measures.

1.03 RELATED REQUIREMENTS

- A. Section 311000 - Site Clearing: Limits on clearing; disposition of vegetative clearing debris.
- B. Section 312300 - Earthwork
- C. Section 329200 - Turf and Grasses: Permanent turf for erosion control.

1.04 REFERENCE STANDARDS

- A. Connecticut Guidelines for Soil Erosion and Sediment Control by The Connecticut Council on Soil and Water Conservation.
- B. ASTM D98 - Standard Specification for Calcium Chloride; 2015.
- C. ASTM D3786/D3786M - Standard Test Method for Bursting Strength of Textile Fabrics-- Diaphragm Bursting Strength Tester Method; 2018 (Reapproved 2023).
- D. ASTM D4355/D4355M - Standard Test Method for Deterioration of Geotextiles by Exposure to Light, Moisture, and Heat in a Xenon Arc-Type Apparatus; 2021.
- E. ASTM D4491/D4491M - Standard Test Methods for Water Permeability of Geotextiles by Permittivity; 2022.
- F. ASTM D4533/D4533M - Standard Test Method for Trapezoid Tearing Strength of Geotextiles; 2015 (Reapproved 2023).
- G. ASTM D4632/D4632M - Standard Test Method for Grab Breaking Load and Elongation of Geotextiles; 2015a (Reapproved 2023).
- H. ASTM D4751 - Standard Test Methods for Determining Apparent Opening Size of a Geotextile; 2021a.
- I. ASTM D4833/D4833M - Standard Test Method for Index Puncture Resistance of Geomembranes and Related Products; 2007 (Reapproved 2020).
- J. ASTM G155 - Standard Practice for Operating Xenon Arc Lamp Apparatus for Exposure of Materials; 2021.
- K. Standard Specifications - Form 819 - State of Connecticut Department of Transportation Standard Specifications for Roads, Bridges, Facilities and Incidental Construction; 2024.

1.05 PERFORMANCE REQUIREMENTS

- A. Do not begin clearing, grading, or other work involving disturbance of ground surface cover until applicable permits have been obtained; furnish all documentation required to obtain applicable permits.
 - 1. Obtain and pay for permits and provide security required by authority having jurisdiction.
 - 2. Owner will withhold payment to Contractor equivalent to all fines resulting from non-compliance with applicable regulations.
- B. Timing: Put preventive measures in place as soon as possible after disturbance of surface cover and before precipitation occurs.

- C. Stormwater Runoff: Control increased stormwater runoff due to disturbance of surface cover due to construction activities for this project.
 - 1. Prevent runoff into storm and sanitary sewer systems, including open drainage channels, in excess of actual capacity or amount allowed by authorities having jurisdiction, whichever is less.
 - 2. Anticipate runoff volume due to the most extreme short term and 24-hour rainfall events that might occur in 10 years or as stated on the drawings.
- D. Erosion On Site: Minimize wind, water, and vehicular erosion of soil on project site due to construction activities for this project.
 - 1. Control movement of sediment and soil from temporary stockpiles of soil.
 - 2. Prevent development of ruts due to equipment and vehicular traffic.
 - 3. If erosion occurs due to non-compliance with these requirements, restore eroded areas at no cost to Owner.
- E. Erosion Off Site: Prevent erosion of soil and deposition of sediment on other properties caused by water leaving the project site due to construction activities for this project.
 - 1. Prevent windblown soil from leaving the project site.
 - 2. Prevent tracking of mud onto public roads outside site.
 - 3. Prevent mud and sediment from flowing onto sidewalks and pavements.
 - 4. If erosion occurs due to non-compliance with these requirements, restore eroded areas at no cost to Owner.
- F. Sedimentation of Waterways On Site: Prevent sedimentation of waterways on the project site, including rivers, streams, lakes, ponds, open drainage ways, storm sewers, and sanitary sewers.
 - 1. If sedimentation occurs, install or correct preventive measures immediately at no cost to Owner; remove deposited sediments; comply with requirements of authorities having jurisdiction.
 - 2. If sediment basins are used as temporary preventive measures, pump dry and remove deposited sediment after each storm.
- G. Sedimentation of Waterways Off Site: Prevent sedimentation of waterways off the project site, including rivers, streams, lakes, ponds, open drainage ways, storm sewers, and sanitary sewers.
 - 1. If sedimentation occurs, install or correct preventive measures immediately at no cost to Owner; remove deposited sediments; comply with requirements of authorities having jurisdiction.
- H. Open Water: Prevent standing water that could become stagnant.
- I. Maintenance: Maintain temporary preventive measures until permanent measures have been established.

1.06 SUBMITTALS

- A. Certificates of Compliance:
 - 1. Manufactured Temporary Tracking Pads
 - 2. Catch Basin Inserts/Stormwater Inlet Protection
 - 3. Compost Filter Sock
 - 4. Dewatering Bag
 - 5. Dust Control
- B. Maintenance Instructions: Provide instructions covering inspection and maintenance for temporary measures that must remain after Substantial Completion.

PART 2 PRODUCTS

2.01 MATERIALS

- A. General: See Drawings for materials and other required control measures.
- B. Manufactured Temporary Tracking Pads:

1. FODS Trackout Control Mat System: Manufacturer FODS, 844-200-3637, <http://getfods.com>.
 2. Or approved equal.
- C. Catch Basin Inserts/Stormwater Inlet Protection
1. Regular Flow Silt Sacks: Woven polypropylene that meets the following:

Properties	Test Method	Units
Grab Tensile Strength	ASTM D4632/D4632M	300 lbs.
Grab Tensile Elongation	ASTM D4632/D4632M	25 Percent
Puncture Strength	ASTM D4833/D4833M	120 lbs.
Trapezoid Tear	ASTM D4533/D4533M	120 lbs.
Flow Rate	ASTM D4491/D4491M	40 Gal/Min/Sq. Ft.
Permittivity	ASTM D4491/D4491M	0.55 sec-1
Mullen Burst	ASTM D3786/D3786M	800 psi
UV Resistance	ASTM D4355/D4355M	80 Percent
Apparent Opening Size	ASTM D4751	no larger than #20 US Sieve and no smaller than #40 US Sieve
 2. Acceptable Products and Manufacturers:
 - a. Regular Flow Siltsack, ACF Environmental, Richmond, VA 23237 (800-844-9223).
 - b. U.S. Silt & Site Supply, P.O. Box 2461, Concord, NH 03302, Model CB2448CT.
 - c. Or approved equal.
- D. Compost Filter Sock
1. Tubular Mesh Sleeve: High density polyethylene mesh that meets the following:
 - a. Material Characteristic: Photodegradable
 - b. Comply with AASHTO Designation: MP 9-06 (Latest Revision).
 - c. Tensile Strength (ASTM D5035) 26 psi.
 - d. UV Resistance (at 100 hours) (Retained strength) (ASTM G155) 23%.
 - e. Mesh Opening Size: Minimum 3/8 inch.
 2. Compost Filter Material: Weed-free from well-decomposed source of organic matter conforming to the following:
 - a. Comply with AASHTO Designation: MP 9-06 (Latest Revision).
 - b. PH: 5.0 – 8.0.
 - c. Maximum Moisture Content: 60%
 - d. Particle Size:
 - 1) 2-inch: 100% passing
 - 2) 3/8-inch: 0-40% passing
 3. Hardwood Stakes:
 - a. For compost filter socks 18 inches or less in diameter, wooden stakes shall be 1 inch by 1 inch, at 10-foot intervals on center, and of a length that shall project into the soil 1 foot leaving 3 inches to 4 inches protruding above the filter sock.
 - b. For compost filter socks greater than 18 inches in diameter, wooden stakes shall be 2 inches by 2 inches at 10-foot intervals on center, and of a length that shall project into the soil 1 foot, leaving 3 inches to 4 inches protruding above the filter sock.
 4. Acceptable Products and Manufacturers:
 - a. SiltSoxx for perimeter control by Filtrexx, Akron, OH. or approved equal
- E. Dewatering Bag
1. Filter Bag (Silt Bag): Manufactured non-woven geotextile fabric bag, sewn with high-strength thread, with a spout to accommodate a 4-inch discharge hose (maximum), and attached straps.
 2. Non-woven Geotextile Fabric:

Properties	Test Method	Units
Grab Tensile Strength	ASTM D4632/D4632M	200 lbs.
Puncture	ASTM D4833/D4833M	165 lbs.
Flow Rate	ASTM D4491/D4491M	70 Gal/Min/Sq. Ft.
Permittivity	ASTM D4491/D4491M	1.3 sec-1
Mullen Burst	ASTM D3786/D3786M	550 psi
UV Resistance	ASTM D4355/D4355M	70 percent
Apparent Opening Size	ASTM D4751	#40 US Sieve
Percent Retained		100 percent

3. Acceptable Products and Manufacturers:
 - a. Dirtbag® by ACF Environmental, Richmond, VA.
 - b. Dandy Dewatering Bag by Dandy Products, Inc., Dublin, OH.
 - c. HD Dewatering Bags by U.S. Silt & Site Supply, P.O. Box 2461, Concord, NH 03302
 - d. Or approved equal.
- F. Dust Control
 1. Calcium Chloride: ASTM D98, Type 1 or Type 2.
 2. Water: Potable.
- G. Construction Entrance
 1. Stone or Gravel: Standard Specifications - Form 819, Section M.01.02, 2" or No. 3.

PART 3 EXECUTION

3.01 GENERAL

- A. Minimize environmental damage during construction. Prevent discharge of fuel, oil, lubricants, and other fluids. Mitigate effects of discharge.
- B. Install erosion and sediment control measures prior to clearing, demolition or construction.
- C. Construct erosion and sediment control measures in accordance with standards and specifications of the Connecticut Guidelines for Soil Erosion and Sediment Control, Authorities Having Jurisdiction, indicated municipal regulations, and as follows:
 1. Attend a preconstruction meeting with the Engineer, to review permit conditions and construction methods.
 2. Provide additional sedimentation and erosion controls as required by municipality or Authorities Having Jurisdiction to address field conditions.
 3. Do not discharge turbid water from dewatering to inland wetlands or watercourses.
 4. Supply a 24-hour contact name and number as part of the erosion control plan.
- D. Install additional control measures, if deemed necessary by the State, Municipality, Authority Having Jurisdiction, or Owner.
- E. Implement and maintain the Erosion and Sediment Control Plan. Inform parties engaged on the construction site of the requirements and objectives of the plan. Notify the proper municipal agency of transfer of this responsibility.
- F. Do not discharge directly into wetlands or watercourses where dewatering is necessary. Utilize methods and devices as permitted by authorities having jurisdiction and appropriate regulations to minimize and retain suspended solids including pumping water into a temporary sedimentation bowl, providing surge protection at inlet and outlet of pumps, floating pump intake.
 1. If pumping operation results in turbidity problems, stop pumping until means of controlling turbidity are determined and implemented.

3.02 EXAMINATION

- A. Examine site and identify existing features that contribute to erosion resistance; maintain such existing features to greatest extent possible.

3.03 PREPARATION

- A. Schedule work so that soil surfaces are left exposed for the minimum amount of time.

3.04 SCOPE OF PREVENTIVE MEASURES

- A. In all cases, if permanent erosion resistant measures have been installed temporary preventive measures are not required.
- B. See Drawings for scope and extent of required erosion and sediment control measures.
- C. Construction Entrances: Manufactured Temporary Tracking Pads.
 - 1. Width: As required; 16 feet, minimum.
 - 2. Length: 30 feet, minimum.
 - 3. Provide at each construction entrance from internal site drivewa.
 - 4. Where necessary to prevent tracking of mud onto internal site driveways and adjacent right-of, provide wheel washing area out of direct traffic lane, with drain into sediment trap or basin.

- D. Linear Sediment Barriers: Made of compost filter socks.

- 1. Provide linear sediment barriers:
 - a. Along downhill perimeter edge of disturbed areas, including soil stockpiles.
 - b. Along the top of the slope or top bank of drainage channels and swales that traverse disturbed areas.
 - c. Along the toe of cut slopes and fill slopes.
 - d. Perpendicular to flow across the bottom of existing and new drainage channels and swales that traverse disturbed areas or carry runoff from disturbed areas; space as indicated on Drawings.
 - e. Across the entrances to culverts that receive runoff from disturbed areas.
- 2. Space sediment barriers with the following maximum slope length upslope from barrier:

Slope	Maximum Length (ft)
2:1	25
2:1 to 3:1	50
3:1 to 5:1	75
5:1 or flatter	100

- 3. Where control measures are required for longer than 60 days, use compost filter socks instead of straw bales.

- E. Cut Areas

- 1. Establish an erosion control line (compost filter sock) at toe of slope in cut areas and slope stabilization with mulch or grass within 14 days of start of cut operations.

- F. Fill Areas

- 1. Establish an erosion control line (compost filter sock) approximately 10 feet from toe of slope of proposed fill areas prior to beginning fill installation.
- 2. Initiate slope stabilization with mulch or grass within 14 days of start of fill installation.

- G. Within 7 days of completing slope construction, stabilize slopes with vegetation or matting to minimize exposure.

- H. Stockpiles

- 1. Side Slopes: 2:1 maximum.
- 2. Surround stockpiles by a sediment barrier.
- 3. Stabilize stockpiles that are not to be used within 14 days with temporary vegetation and mulch.

- I. Final Grading
 - 1. If final grading is delayed for more than 14 days after land disturbances cease, stabilize soils with temporary vegetation or mulch.
- J. Planting Season for Temporary Vegetation
 - 1. April 1 to June 15 and August 15 to October 1.
 - 2. After September 15, stabilize areas with compost filter sock.
- K. Areas to Be Left Bare Prior to Finished Grading and Seeding
 - 1. Within Planting Seasons
 - a. Provide temporary seed.
 - 2. Outside of Planting Seasons
 - a. Provide mulch.

3.05 INSTALLATION

- A. General: Install temporary erosion and sediment controls as indicated on Drawings.
- B. Manufactured Temporary Tracking Pads:
 - 1. Install tracking pad to the approximate lines and grades indicated on the Drawings.
 - 2. Provide quantity of individual panels of tracking pad to make up the size required. Adjacent panels shall be butted together and be at approximately the same elevation. Anchor panels against sliding according to manufacturer's recommendations.
 - 3. Place H-Bracket between first and second mat, and all adjacent mats.
 - 4. Connect mats together using Long-Steel Straps per manufacturer's instructions.
 - 5. Anchor mats to surface per manufacturer's specification per substrate.
 - 6. Provide extra panels for turning radii, if needed to prevent trucks from running off the pad during turns.
- C. Compost Filter Sock
 - 1. Place compost filter socks directly over the ground. Drive wooden stakes through the center of the filter socks to anchor them to the ground. To ensure optimum performance, heavy vegetation shall be cut down or removed, and extremely uneven surfaces shall be graded to ensure that the compost filter sock uniformly contacts the ground surface.
 - 2. The ends of the filter sock should be directed upslope, to prevent stormwater from running around the end of the sock.
 - 3. For placement on frozen ground, pavement, or shallow bedrock provide cement blocks to hold the sock in place.
- D. Catch Basin Inserts/Stormwater Inlet Control
 - 1. Protect catch basins with catch basin inserts throughout construction until disturbed areas are stabilized.
 - 2. Remove catch basin grate, insert silt sack, and secure in place by replacing grate.
- E. Temporary Soil Protection
 - 1. Mulches:
 - a. Dry Straw: Apply 2-1/2 tons per acre; anchor using water soluble tackifiers or netting.
 - b. Erosion Control Blanket: Comply with manufacturer's instructions.
- F. Temporary Seeding:
 - 1. When hydraulic seeder is used, seedbed preparation is not required.
 - 2. When surface soil has been sealed by rainfall or consists of smooth undisturbed cut slopes, and conventional or manual seeding is to be used, prepare seedbed by scarifying sufficiently to allow seed to lodge and germinate.
 - 3. If temporary mulching was used on planting area but not removed, apply nitrogen fertilizer at 1 pound per 1000 sq ft.
 - 4. Apply 10-10-10 fertilizer at rate of 7.5 pounds per 1000 sq ft.
 - 5. Incorporate fertilizer into soil before seeding.
 - 6. Apply seed uniformly; if using drill or cultipacker seeders place seed 1/2 to 1 inch deep.
 - a. Temporarily seed with Perennial Ryegrass

- b. Apply at a rate of 2 pounds per 1000 sq. ft. at a depth of 1/2 inch.
- c. Where grass predominates, fertilize according to a soil test at a minimum application rate of one pound per acre.
- 7. Irrigate as required to thoroughly wet soil to depth that will ensure germination, without causing runoff or erosion.
- 8. Repeat irrigation as required until grass is established.

3.06 DUST CONTROL

- A. Control dust to prevent a hazard to traffic on adjacent roadways. Apply water and calcium chloride uniformly over the surface when dust becomes a nuisance or when directed by the Engineer.
 - 1. Provide shut-off valve in convenient location on water truck, to allow for regulating water flow.

3.07 MAINTENANCE

- A. Inspect preventive measures weekly, within 24 hours after the end of any storm that produces 0.5 inches or more rainfall at the project site, and daily during prolonged rainfall.
- B. Repair deficiencies immediately.
- C. Manufactured Temporary Tracking Pads:
 - 1. Clean dirt and debris from tracking pad as often as necessary or once debris has reached 2.5" in the lane of travel. Properly dispose of material removed so it does not leave the site or enter ditches of stormwater pipes.
- D. Compost Filter Sock
 - 1. Remove sediment deposits when sediment accumulates to one-half the of the height of the compost filter sock.
 - 2. Repair or replace split, torn, or unraveling socks. Replace broken or split stakes. Sagging or slumping compost filter socks must be repaired with additional stakes or replaced. Repair or replace at locations where rills and other evidence of concentrated runoff have occurred beneath the socks.
- E. Dewatering Bag Maintenance
 - 1. Maintain in good condition throughout construction period.
- F. Inlet Protection
 - 1. Remove, clean, and reinstall silt sack when sediment accumulates to half capacity of sack.
- G. Clean out temporary sediment control structures weekly and relocate soil on site.
- H. Place sediment in appropriate locations on site; do not remove from site.

3.08 CLEAN UP

- A. Remove temporary measures after permanent measures have been installed, unless permitted to remain by Engineer.
- B. Clean out temporary sediment control structures that are to remain as permanent measures.
- C. Where removal of temporary measures would leave exposed soil, shape surface to an acceptable grade and finish to match adjacent ground surfaces.

END OF SECTION 015713

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SECTION 015719
TEMPORARY ENVIRONMENTAL CONTROLS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Construction procedures to promote adequate indoor air quality after construction.

1.02 PROJECT GOALS

- A. Dust and Airborne Particulates: Prevent deposition of dust and other particulates in HVAC ducts and equipment.
 - 1. Cleaning of ductwork is not contemplated under this Contract.
 - 2. Contractor shall bear the cost of cleaning required due to failure to protect ducts and equipment from construction dust.
- B. Airborne Contaminants: Procedures and products have been specified to minimize indoor air pollutants.
 - 1. Furnish products meeting the specifications.
 - 2. Avoid construction practices that could result in contamination of installed products leading to indoor air pollution.

1.03 REFERENCE STANDARDS

- A. SMACNA (OCC) - IAQ Guidelines for Occupied Buildings Under Construction; 2007.

1.04 DEFINITIONS

- A. Adsorptive Materials: Gypsum board, acoustical ceiling tile and panels, carpet and carpet tile, fabrics, fibrous insulation, and other similar products.
- B. Contaminants: Gases, vapors, regulated pollutants, airborne mold and mildew, and the like, as specified.
- C. Particulates: Dust, dirt, and other airborne solid matter.
- D. Wet Work: Concrete, plaster, coatings, and other products that emit water vapor or volatile organic compounds during installation, drying, or curing.

PART 3 EXECUTION

2.01 CONSTRUCTION PROCEDURES

- A. Prevent the absorption of moisture and humidity by adsorptive materials by:
 - 1. Sequencing the delivery of such materials so that they are not present in the building until wet work is completed and dry.
 - 2. Delivery and storage of such materials in fully sealed moisture-impermeable packaging.
 - 3. Provide sufficient ventilation for drying within reasonable time frame.
- B. Begin construction ventilation when building is substantially enclosed.
- C. Do not store construction materials or waste in mechanical or electrical rooms.
- D. Prior to use of return air ductwork without intake filters clean up and remove dust and debris generated by construction activities.
 - 1. Inspect duct intakes, return air grilles, and terminal units for dust.
 - 2. Clean plenum spaces, including top sides of lay-in ceilings, outsides of ducts, tops of pipes and conduit.
 - 3. Clean tops of doors and frames.
 - 4. Clean mechanical and electrical rooms, including tops of pipes, ducts, and conduit, equipment, and supports.
 - 5. Clean return plenums of air handling units.
 - 6. Remove intake filters last, after cleaning is complete.
- E. Do not perform dusty or dirty work after starting use of return air ducts without intake filters.

- F. Use other relevant recommendations of SMACNA (OCC) for avoiding unnecessary contamination due to construction procedures.

END OF SECTION 015719

**SECTION 017900
DEMONSTRATION AND TRAINING**

PART 1 GENERAL

1.01 SUMMARY

- A. Demonstration of products and systems to be commissioned and where indicated in specific specification sections.
- B. Training of Owner personnel in operation and maintenance is required for:
 - 1. All software-operated systems.
 - 2. HVAC systems and equipment.
- C. Training of Owner personnel in care, cleaning, maintenance, and repair is required for:
 - 1. Items specified in individual product Sections.

1.02 SUBMITTALS

- A. Training Plan: Owner will designate personnel to be trained; tailor training to needs and skill-level of attendees.
 - 1. Submit to Engineer for transmittal to Owner.
 - 2. Submit not less than four weeks prior to start of training.
 - 3. Revise and resubmit until acceptable.
 - 4. Provide an overall schedule showing all training sessions.
 - 5. Include at least the following for each training session:
 - a. Identification, date, time, and duration.
 - b. Description of products and/or systems to be covered.
 - c. Name of firm and person conducting training; include qualifications.
 - d. Intended audience, such as job description.
 - e. Objectives of training and suggested methods of ensuring adequate training.
 - f. Methods to be used, such as classroom lecture, live demonstrations, hands-on, etc.
 - g. Media to be used, such as slides, hand-outs, etc.
 - h. Training equipment required, such as projector, projection screen, etc., to be provided by Contractor.
- B. Training Manuals: Provide training manual for each attendee; allow for minimum of two attendees per training session.
 - 1. Include applicable portion of O&M manuals.
 - 2. Include copies of all hand-outs, slides, overheads, video presentations, etc., that are not included in O&M manuals.
 - 3. Provide one extra copy of each training manual to be included with operation and maintenance data.

1.03 QUALITY ASSURANCE

- A. Instructor Qualifications: Familiar with design, operation, maintenance and troubleshooting of the relevant products and systems.
 - 1. Provide as instructors the most qualified trainer of those contractors and/or installers who actually supplied and installed the systems and equipment.
 - 2. Where a single person is not familiar with all aspects, provide specialists with necessary qualifications.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 DEMONSTRATION - GENERAL

- A. Demonstrations conducted during system start-up do not qualify as demonstrations for the purposes of this section, unless approved in advance by Owner.

- B. Demonstrations conducted during Functional Testing need not be repeated unless Owner personnel training is specified.
- C. Demonstration may be combined with Owner personnel training if applicable.
- D. Operating Equipment and Systems: Demonstrate operation in all modes, including start-up, shut-down, seasonal changeover, emergency conditions, and troubleshooting, and maintenance procedures, including scheduled and preventive maintenance.
 - 1. Perform demonstrations not less than two weeks prior to Substantial Completion.
 - 2. For equipment or systems requiring seasonal operation, perform demonstration for other season within six months.
- E. Non-Operating Products: Demonstrate cleaning, scheduled and preventive maintenance, and repair procedures.
 - 1. Perform demonstrations not less than two weeks prior to Substantial Completion.

3.02 TRAINING - GENERAL

- A. Conduct training on-site unless otherwise indicated.
- B. Owner will provide classroom and seating at no cost to Contractor.
- C. Provide training in minimum two hour segments.
- D. Training schedule will be subject to availability of Owner's personnel to be trained; re-schedule training sessions as required by Owner; once schedule has been approved by Owner failure to conduct sessions according to schedule will be cause for Owner to charge Contractor for personnel "show-up" time.
- E. Review of Facility Policy on Operation and Maintenance Data: During training discuss:
 - 1. The location of the O&M manuals and procedures for use and preservation; backup copies.
 - 2. Typical contents and organization of all manuals, including explanatory information, system narratives, and product specific information.
 - 3. Typical uses of the O&M manuals.
- F. Product- and System-Specific Training:
 - 1. Review the applicable O&M manuals.
 - 2. For systems, provide an overview of system operation, design parameters and constraints, and operational strategies.
 - 3. Review instructions for proper operation in all modes, including start-up, shut-down, seasonal changeover and emergency procedures, and for maintenance, including preventative maintenance.
 - 4. Provide hands-on training on all operational modes possible and preventive maintenance.
 - 5. Emphasize safe and proper operating requirements; discuss relevant health and safety issues and emergency procedures.
 - 6. Discuss common troubleshooting problems and solutions.
 - 7. Discuss any peculiarities of equipment installation or operation.
 - 8. Discuss warranties and guarantees, including procedures necessary to avoid voiding coverage.
 - 9. Review recommended tools and spare parts inventory suggestions of manufacturers.
 - 10. Review spare parts and tools required to be furnished by Contractor.
 - 11. Review spare parts suppliers and sources and procurement procedures.
- G. Be prepared to answer questions raised by training attendees; if unable to answer during training session, provide written response within three days.

END OF SECTION 017900

**SECTION 026500
UNDERGROUND STORAGE TANK REMOVAL**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Pre- and post-closure regulatory notifications.
- B. Removal and disposal of underground storage tanks and connected piping.
- C. Cleaning and vapor freeing of tanks.
- D. Fuel removal.
- E. Temporary containment of excavated soil.
- F. Sampling of UST tank grave.
- G. Potential Disposal of contaminated soil.
- H. Water disposal.
- I. Backfilling.
- J. Closure Reporting.
- K. .

1.02 PRICE AND PAYMENT PROCEDURES

- A. See Section 012200 - Unit Prices, for general requirements applicable to unit prices related to removal and disposal of underground storage tanks.
- B. Unit Prices: Assume for bidding purposes that bituminous pavement, soil and water encountered during the removal of the underground tanks are contaminated with fuel oil and shall be handled as specified herein.
 - 1. Payment for removal from temporary stockpile and disposal of contaminated soil and furnishing clean soil shall be paid for at the contract unit price per cubic yard.
 - 2. Bituminous pavement and concrete slabs shall be washed and disposed of as demolition debris. Wash water shall be collected and stored.
 - 3. Disposal of contaminated water shall be paid for at the contract unit price per liter.

1.03 REFERENCE STANDARDS

- A. API RP 1604 - Closure of Underground Petroleum Storage Tanks; 2021.
- B. API PUBL 1628 - Guide to the Assessment and Remediation of Underground Petroleum Releases; 1996.
- C. ASTM D4397 - Standard Specification for Polyethylene Sheeting for Construction, Industrial, and Agricultural Applications; 2016 (Reapproved 2023).
- D. 29 CFR 1910 - Occupational Safety and Health Standards; Current Edition.
- E. 29 CFR 1910.38 - Emergency action plans; Current Edition.
- F. 29 CFR 1910.134 - Respiratory protection; Current Edition.
- G. 40 CFR 280 - Technical Standards and Corrective Action Requirements for Owners and Operators of Underground Storage Tanks; current edition.
- H. COE EM-385-1-1 - Safety and Occupational Health Requirements; 2024.
- I. Regulation of Connecticut State Agencies § 22a-449(d)-107 – Closure of an Underground Storage Tank (UST) System
- J. Sampling and Analytical Methods for Underground Storage Tank Closure – CT DEEP Environmental Program Fact Sheet

1.04 SUBMITTALS

- A. Site Safety and Health Plan: Describe safety and health plan and procedures as related to

underground tank removal and pipe removal, including safe sampling of excavation sidewalls and bottoms without entering unsafe excavations, and as related to operations associated with petroleum contaminated soils and water.

- B. Excavation and Material Handling Plan: Describe methods, means, equipment, sequence of operations and schedule/phasing to be employed in excavation, transport, handling, and stockpiling of potentially contaminated soil and water during underground tank system removal.
 - 1. Submit to Engineer fifteen days before beginning tank removal work.
 - 2. Include soil testing requirements pursuant to RSCA 22a-449(d)-107(a)(2) and applicable guidance (e.g., sidewall and bottom sampling of native soil, chain of custody procedures, use of a CT DPH-certified laboratory), safety precautions and requirements, and water pumping and collection requirements.
- C. Spill and Discharge Control Plan: Describe procedures and plan related to potential spills and discharge of contaminated soils and water.
- D. Record Documents:
 - 1. Building permit, inspection permits, and other permits required for underground tank removal.

1.05 QUALITY ASSURANCE

- A. Perform work in accordance with local, state (in particular RSCA 22a-449(d)-107), and federal regulations and 40 CFR 280.
- B. Qualifications: Prior to start of work, submit documentation of recent experience and resumes of personnel working on the project.
 - 1. Data shall indicate that tank removal contractor, subcontractors, and personnel employed on the project have been engaged in removal, transportation, and disposal of underground tanks and associated piping, are familiar with and shall abide with the following:
 - a. API RP 1604.
 - b. 40 CFR 280 and State and local regulations and procedures.
 - c. Applicable safety rules and regulations.
 - d. Use of equipment and procedures for testing and vapor-freeing tanks.
 - e. Handling and disposal of types of wastes encountered in underground tank and pipe removal including disposal of underground tanks and associated piping.
 - 2. Furnish the name and qualifications of the proposed Site Safety and Health Officer, based on education, training, and work experience.
 - 3. Provide documentation that contractor maintains a valid permit issued by the DEEP Commissioner pursuant to Section 22a-454 of the Connecticut General Statutes.
 - 4. Confirm that the person who will be responsible for conducting the closure has received a certification of successful completion of 40-hour Hazardous Waste Operations and Emergency Response training under 29 CFR 1910.120, successfully passed the International Code Council Decommissioning Exam U2 or an examination listed on the DEEP's website, and received at least 8 hours of annual Hazardous Waste Operations and Emergency Response refresher training required under 29 CFR 1910.120, as applicable.
- C. References: Furnish data proving experience on at least three prior projects that included types of activities similar to those in this project. Provide project titles, dates of projects, owners of projects, point of contact for each project, and phone numbers of each point of contact.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Plastic Sheeting: ASTM D4397.

PART 3 EXECUTION

3.01 PREPARATION FOR TANK REMOVAL AND DISPOSAL

- A. Site Safety And Health Plan (SSHP): Furnish safety, health, and accident prevention provisions and develop a Site Safety and Health Plan (SSHP).
 - 1. The SSHP shall incorporate the requirements of 29 CFR 1910 and COE EM-385-1-1.
 - 2. Site work shall not start until the SSHP is approved by the Engineer.
- B. Site Safety And Health Officer: Identify an individual to serve as the Site Safety and Health Officer (SSHO) who is a Certified Industrial Hygienist (CIH).
 - 1. The SSHO CIH shall report problems and concerns regarding health and safety to the Engineer.
 - 2. The SSHO CIH shall have a working knowledge of local and Federal occupational safety and health regulations, and shall provide training to Contractor employees in air monitoring practices and techniques.
 - 3. The SSHO CIH shall also provide day-to-day industrial hygiene support, including air monitoring, training, and daily site safety inspections.
 - 4. The SSHO CIH shall be trained in the use of the monitoring and sampling equipment, interpretation of data required to implement the SSHP, and to administer the elements of the SSHP.
 - 5. The SSHO CIH shall remain on site during project operations and may be assigned other duties, such as project foreman or quality control manager.
- C. Spill And Discharge Control Plan: Develop, implement, and maintain a comprehensive spill and discharge control plan.
 - 1. The plan shall provide contingency measures for potential spills and discharges from handling and transportation of contaminated soils and water.
 - 2. A possible source of guidance for assessment and remediation is API PUBL 1628.
- D. Exclusion Zone (EZ) And Contamination Reduction Zone (CRZ): Do not permit personnel not directly involved with the project to enter work zones, called the EZ and CRZ.
 - 1. The EZ shall be an area around the tank a minimum of 10 feet from the limits of the tank excavation.
 - 2. At the perimeter of the EZ, establish a CRZ.
 - 3. The Contractor's site office, parking area, and other support facilities shall be located outside the EZ and CRZ.
 - 4. Clearly mark and post the boundaries of the EZ and CRZ.
 - 5. Include a site map, outlining the extent of work zones and location of support facilities, in the SSHP.
- E. Personnel Protection: Furnish appropriate personal safety equipment and protective clothing to personnel.
 - 1. Ensure that safety equipment and protective clothing is kept clean and well maintained.
- F. Decontamination: Decontaminate or properly dispose of personal protective equipment and clothing worn in contaminated areas at the end of the work day.
 - 1. The SSHO CIH shall be responsible for ensuring that personal protective clothing and equipment are decontaminated before being reissued.
- G. First Aid And Emergency Response Equipment And Procedures: Provide appropriate emergency first aid equipment for treatment of exposure to site physical and chemical hazards.
 - 1. Provide and post a list of emergency phone numbers and points of contact for fire, hospital, police, ambulance, and other necessary contacts.
 - 2. Provide and post a route map detailing the directions to the nearest medical facility.
- H. Ignition Sources: Do not permit ignition sources in the EZ and CRZ.
- I. Personnel And Equipment Decontamination: Decontaminate personnel and equipment before exiting the work zones.
- J. Waste Disposal: The SSHP shall detail the practices and procedures to be utilized to dispose of wastes. Upon completion of the project, certify that equipment and materials were properly

decontaminated prior to being removed from the site.

- K. Emergency Response Requirements: Furnish emergency response and contingency plan in accordance with 29 CFR 1910.38.
 - 1. In an emergency, take action to remove or minimize the cause of the emergency, alert the Engineer, and institute necessary measures to prevent repetition of the emergency.
 - 2. Equip site-support vehicles with route maps providing directions to the medical treatment facility.
- L. Unforeseen Hazards: Notify the Engineer of any unforeseen hazard or condition that becomes evident during work.

3.02 TANK CLEANING

- A. Provide clean and vapor free tank in accordance with API RP 1604.
- B. Fuel Removal:
 - 1. All possible fuel will be pumped or otherwise removed from the tank by Owner.
 - 2. Consider remaining fuel contaminated or waste fuel; pump into 55 gallon drums or other suitable containers for disposal in accordance with approved procedures meeting local, state, and federal regulations.
 - a. Drums or tanks used for containerizing waste fuel shall be furnished by Contractor.
 - 3. Dispose of remaining fuel emulsions in accordance with applicable local, state, and federal regulations.

3.03 TEMPORARY CONTAINMENT OF EXCAVATED SOIL

- A. Provide temporary containment area near the excavated area. Soil stockpiles will be tested by the Engineer for potential disposal options, however sampling stockpile or disturbed soils shall not be used for regulatory closure purposes nor can it substitute for the required native-soil sidewall and bottom sampling.
- B. Cover containment area with 30 mil polyethylene sheeting.
 - 1. Place excavated soil on the impervious barrier and cover with 6 mil polyethylene sheeting.
 - 2. Provide straw bale berm around the outer limits of the containment area and cover with polyethylene sheets.
 - 3. Secure edges of sheets to keep the polyethylene sheeting in place.

3.04 EXCAVATION

- A. Provide information as needed to support Engineer's written notification to the DEEP and the Town Fire Marshall at least 30 days before beginning closure activities, pursuant to RCSA § 22a-449(d)-107(a)(1).
- B. Notify Engineer at least 48 hours prior to start of tank removal work.
 - 1. Stage operations to minimize the time that tank excavation is open and the time that contaminated soil is exposed to the weather.
 - 2. Provide protection measures around the excavation area to prevent water runoff and to contain the soil within the excavation area.
- C. Excavation: Excavate as required to remove tanks and piping.
 - 1. Place soil removed from the excavation in a temporary containment area.
 - 2. Collect and temporarily store water runoff from stockpiled soils.
 - 3. If contaminated soil, contaminated groundwater, or free product as a liquid or vapor is observed on site or detected by sample analysis, then notify Engineer. The DEEP Emergency Response Unit shall be notified at the direction of the Owner.
- D. Sampling:
 - 1. Assist the Engineer in collecting field screenings and native-soil sidewall and bottom confirmatory soil samples within the tank grave at the time of tank removal and in no event later than five 5 days after closure of the UST system. Assist Engineer, as needed, in maintaining chain of custody.
 - 2. The Engineer will perform soil testing and determine if soil may be used as clean

backfill or if soil is contaminated.

- a. Samples shall be collected at each end of the tank, at the level of the tank bottom from each of the sidewalls, and from beneath the tank. If groundwater is present, then the sidewall samples should be obtained at the level of the groundwater and a water sample must be collected.
 - b. Sample locations shall also include any areas of staining; where holes or perforation in the removed tank are visible; beneath spill buckets, containment sumps, transition sumps, or dispensers; and in the case of piping closure, at least every 10 feet.
 - c. Soil samples will be analyzed by the appropriate analytical methods used to characterize petroleum releases.
- E. Excavation Methods: Select methods and equipment to remove soil to minimize disturbance to areas beyond the limits of the excavation area.
1. Material that becomes contaminated as a result of Contractor's operations shall be removed and disposed of at no additional cost to Owner.
 2. Where excavation extends into groundwater levels, dewatering methods shall be employed on a localized basis to facilitate excavation operations, as specified in Section 017000.
 3. Engineer will observe and document the excavation and related activities.

3.05 WATER DISPOSAL

- A. Dewatering will be permitted only with approval of Engineer.
- B. Store water generated during removal of tanks and piping. Water will be sampled in accordance with the previous section by the Engineer. All samples shall maintain chain-of-custody and be analyzed by the appropriate analytical methods used to characterize petroleum releases, and results reported to the Owner and Contractor.
 1. If contaminated, then at the direction of the Owner, the water will be transported and disposed in an approved disposal site in accordance with federal, state, and local requirements.
 2. Non-contaminated water may be disposed of on-site.

3.06 DISPOSAL OF UNDERGROUND TANKS, ANCHORS , SLABS, AND ASSOCIATED PIPING

- A. Preparation: API RP 1604. Remove the fill pipe, gauge pipe, and drop tube. Any piping that is incapable of being removed without damaging the integrity of the building such be capped.
 1. Cap or remove non-product piping, except vent piping.
 2. Plug tank openings so that vapors will exit through vent piping during the vapor-freeing process.
- B. Purging: Remove flammable vapors in accordance with API RP 1604. Tanks shall be certified as "vapor free" prior to further work.
- C. Cleaning and Testing: Clean tank and perform atmosphere testing in accordance with API RP 1604.
 1. Distribution (product delivery) piping shall be cleaned and removed or the piping shall be cleaned, filled with concrete, and abandoned in place.
 2. Test the tank atmosphere and the excavation area for flammable or combustible vapor concentrations, with a combustible gas indicator until the tank is removed from the excavation and from the site.
- D. Tank Removal and Disposal:
 1. Plug or cap accessible holes. One plug shall have a minimum 1/8 inch vent hole.
 2. Remove tank from the excavation, place it on a level surface and render it useless in accordance with API RP 1604.
 3. Transport and dispose of tank at an EPA approved disposal site in accordance with federal, state, and local regulations.

3.07 TANK CLOSURE NOTIFICATION AND REPORT

- A. Provide information as needed to support Engineer's written notification to the DEEP not later than 30 days after completing the UST system closure.
- B. Not later than 60 days after completing the UST system closure, a tank closure report will be provided by the Engineer to the Owner first in draft for review and comment prior to, at the direction of the Owner, being made final. The closure report shall include those items specified in RSCA § 22a-449(d)-107(c).

3.08 BACKFILLING

- A. Provide backfill, compaction, grading, and seeding; see Section 312323.
- B. Line the excavation with two plastic sheets before backfilling.

END OF SECTION 026500

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**SECTION 078400
FIRESTOPPING**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Firestopping systems.
- B. Firestopping of joints and penetrations in fire-resistance-rated and smoke-resistant assemblies, whether indicated on drawings or not, and other openings indicated.

1.02 REFERENCE STANDARDS

- A. ASTM E119 - Standard Test Methods for Fire Tests of Building Construction and Materials; 2024.
- B. ASTM E814 - Standard Test Method for Fire Tests of Penetration Firestop Systems; 2023a.
- C. ASTM E2174 - Standard Practice for On-Site Inspection of Installed Firestop Systems; 2020a.
- D. ASTM G21 - Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi; 2015, with Editorial Revision (2021).
- E. ITS (DIR) - Directory of Listed Products; Current Edition.
- F. FM (AG) - FM Approval Guide; Current Edition.
- G. SCAQMD 1168 - Adhesive and Sealant Applications; 1989, with Amendment (2022).
- H. UL 1479 - Standard for Fire Tests of Penetration Firestops; Current Edition, Including All Revisions.
- I. UL (FRD) - Fire Resistance Directory; Current Edition.

1.03 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide data on product characteristics, performance ratings, and limitations.
- C. Sustainable Design Submittal: Submit VOC content documentation for nonpreformed materials.
- D. Manufacturer's Installation Instructions: Indicate preparation and installation instructions.
- E. Manufacturer's qualification statement.

1.04 QUALITY ASSURANCE

- A. Fire Testing: Provide firestopping assemblies of designs that provide the scheduled fire ratings when tested in accordance with methods indicated.
 - 1. Listing in UL (FRD), FM (AG), or ITS (DIR) will be considered as constituting an acceptable test report.
- B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.

1.05 FIELD CONDITIONS

- A. Comply with firestopping manufacturer's recommendations for temperature and conditions during and after installation; maintain minimum temperature before, during, and for three days after installation of materials.
- B. Provide ventilation in areas where solvent-cured materials are being installed.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Firestopping Manufacturers:
 - 1. 3M Fire Protection Products: www.3m.com/firestop/#sle.

2. Hilti, Inc: www.hilti.com/#sle.
3. RectorSeal, a CSW Industrials Company; Metacaulk 150+ General Purpose Firestop Sealant: www.rectorseal.com/firestop-solutions/#sle.
4. Specified Technologies Inc: www.stifirestop.com/#sle.

2.02 MATERIALS

- A. Firestopping Materials: Any materials meeting requirements.
- B. Volatile Organic Compound (VOC) Content: Provide products having VOC content lower than that required by SCAQMD 1168.
- C. Mold and Mildew Resistance: Provide firestopping materials with mold and mildew resistance rating of zero(0) in accordance with ASTM G21.
- D. Primers, Sleeves, Forms, Insulation, Packing, Stuffing, and Accessories: Provide type of materials as required for tested firestopping assembly.

2.03 FIRESTOPPING SYSTEMS

- A. Firestopping: Any material meeting requirements.
 1. Fire Ratings: Use system that is listed by FM (AG), ITS (DIR), or UL (FRD) and tested in accordance with ASTM E814, ASTM E119, or UL 1479 with F Rating equal to fire rating of penetrated assembly and minimum T Rating Equal to F Rating and in compliance with other specified requirements.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify openings are ready to receive the work of this section.

3.02 PREPARATION

- A. Clean substrate surfaces of dirt, dust, grease, oil, loose material, or other materials that could adversely affect bond of firestopping material.
- B. Remove incompatible materials that could adversely affect bond.
- C. Install backing materials to prevent liquid material from leakage.

3.03 INSTALLATION

- A. Install materials in manner described in fire test report and in accordance with manufacturer's instructions, completely closing openings.
- B. Do not cover installed firestopping until inspected by authorities having jurisdiction.

3.04 CLEANING

- A. Clean adjacent surfaces of firestopping materials.

3.05 PROTECTION

- A. Protect adjacent surfaces from damage by material installation.

END OF SECTION 078400

**SECTION 101453
TRAFFIC SIGNAGE**

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. This Section includes the following:
 - 1. Site regulatory and directional traffic signs.
 - 2. Informational signs.
 - 3. Maintenance and protection of traffic signs.

1.03 SUBMITTALS

- A. Material Certification: For each product, certifying material meets the Specification requirements.
- B. Shop Drawings:
 - 1. Location and dimension of signs including details of copy, border and mounting holes.
 - 2. Sign post and mounting bolts.
- C. Maintenance and Protection of Traffic Plan
 - 1. Provide a complete construction schedule
 - 2. Provide construction phasing plans
 - 3. Provide maintenance and protection of traffic plans to keep vehicular traffic operational during the full extents of construction.

1.04 QUALITY ASSURANCE

- A. Standard Specifications - Form 819 - State of Connecticut Department of Transportation Standard Specifications for Roads, Bridges, Facilities and Incidental Construction; 2024.
- B. Where "Traffic Control Plans" is referenced, it shall mean "State of Connecticut Department of Transportation Bureau of Engineering and Highway Operations, Traffic Control Plans for Highway Construction."
- C. FHWA MUTCD - Manual on Uniform Traffic Control Devices for Streets and Highways; U.S. Department of Transportation, Federal Highway Administration; Current Edition.

PART 2 PRODUCTS

2.01 SIGNAGE

- A. Sign Posts: Galvanized, Standard Specifications - Form 819, Section M.18.14.
- B. Mounting Bolts: Standard Specifications - Form 819, Section M.18.15.
- C. Sign Panel: Sheet Aluminum, Standard Specifications - Form 819, Section M.18.13.
- D. Retroreflective Sheeting: ASTM D4956: Type IV, VIII, IX or XI, Standard Specifications - Form 819, Section M.18.09.
- E. Silk Screening: According to the requirements of the reflective sheeting manufacturer.

PART 3 EXECUTION

3.01 FABRICATION

- A. Panels: Fabricate aluminum sign blanks free of buckles, warps, dents, cockles, burrs and defects. Cut to size and shape and punch mounting holes prior to metal degreasing and application of reflective sheeting. Meet requirements of Standard Specifications - Form 819, Section 12.08 for sign face.

3.02 INSTALLATION

- A. Mark out in paint proposed location of all signs prior to installation for review and approval by the Owner.
- B. Install posts and signs in accordance with Standard Specifications - Form 819, Section 12.08.
- C. Placement and dimensions of copy, border and mounting holes in signs shall conform to the details of the Department of Transportation for regulatory warning and guide signs which are available for inspection at the Connecticut DOT office. Non-reflective copy, border and background shall be applied by the silk screen process in the manner specified by the reflective sheeting manufacturer.
- D. Fabrication of aluminum sign blanks including cutting to size and shape and the punching of mounting holes shall be completed prior to metal degreasing and the application of reflective sheeting. Aluminum sign blanks shall be free of buckles, warps, cockles, burrs and defects resulting from fabrication.
- E. After complete fabrication of the sign as indicated on the Drawings and in conformance of the requirements contained in the Specifications, the sign shall be mounted on the type of support designated on Connecticut DOT drawings for sign supports. Signs shall be mounted only after support has been satisfactorily installed in its proper location. The reinforcing plate shall be installed as required by the Connecticut DOT standard drawings.
- F. Metal sign post shall be driven or the holes augered and the backfill tamped after posts have been set level and plumb.

END OF SECTION 101453

**SECTION 231113
FACILITY FUEL-OIL PIPING**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Piping and fittings.
- B. Flanges and piping components.
- C. Pipe hangers and supports.
- D. Valves.
- E. Strainers.
- F. Flexible connectors.
- G. Aboveground fuel storage tanks.
- H. Fuel oil pumps.
- I. Transfer system.

1.02 REFERENCE STANDARDS

- A. API Spec 5L - Line Pipe; 2018, with Errata.
- B. API RP 1615 - Installation of Underground Petroleum Storage Systems; 2011 (Reaffirmed 2020).
- C. API Std 2000 - Venting Atmospheric and Low-Pressure Storage Tanks; 2014 (Reaffirmed 2020).
- D. ASME BPVC - Boiler and Pressure Vessel Code; 2023.
- E. ASME B1.1 - Unified Inch Screw Threads (UN, UNR, and UNJ Thread Forms); 2024.
- F. ASME B16.5 - Pipe Flanges and Flanged Fittings: NPS 1/2 through NPS 24 Metric/Inch Standard; 2020.
- G. ASME B16.12 - Cast Iron Threaded Drainage Fittings; 2019.
- H. ASME B16.39 - Malleable Iron Threaded Pipe Unions: Classes 150, 250, and 300; 2019.
- I. ASME B18.2.1 - Square, Hex, Heavy Hex, and Askew Head Bolts and Hex, Heavy Hex, Hex Flange, Lobed Head, and Lag Screws (Inch Series); 2012 (Reaffirmed 2021).
- J. ASME B18.2.2 - Nuts for General Applications: Machine Screw Nuts; and Hex, Square, Hex Flange, and Coupling Nuts (Inch Series); 2022.
- K. ASME B31.3 - Process Piping; 2024.
- L. ASME B31.9 - Building Services Piping; 2020.
- M. ASTM A105/A105M - Standard Specification for Carbon Steel Forgings for Piping Applications; 2023.
- N. ASTM A240/A240M - Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications; 2024b.
- O. ASTM A307 - Standard Specification for Carbon Steel Bolts, Studs, and Threaded Rod 60 000 PSI Tensile Strength; 2021.
- P. ASTM A312/A312M - Standard Specification for Seamless, Welded, and Heavily Cold Worked Austenitic Stainless Steel Pipes; 2022a.
- Q. ASTM A563/A563M - Standard Specification for Carbon and Alloy Steel Nuts (Inch and Metric); 2021a.
- R. ASTM D229 - Standard Test Methods for Rigid Sheet and Plate Materials Used for Electrical Insulation; 2019, with Editorial Revision.

- S. ASTM D2310 - Standard Classification for Machine-Made "Fiberglass" (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe; 2006 (Reapproved 2012).
- T. ASTM D2996 - Standard Specification for Filament-Wound "Fiberglass" (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe; 2023.
- U. ASTM D5677 - Standard Specification for Fiberglass (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe and Pipe Fittings, Adhesive Bonded Joint Type, for Aviation Jet Turbine Fuel Lines; 2017 (Reapproved 2023).
- V. ASTM F844 - Standard Specification for Washers, Steel, Plain (Flat), Unhardened for General Use; 2019 (Reaffirmed 2024).
- W. MSS SP-58 - Pipe Hangers and Supports - Materials, Design, Manufacture, Selection, Application, and Installation; 2018, with Amendment (2019).
- X. MSS SP-80 - Bronze Gate, Globe, Angle, and Check Valves; 2019.
- Y. MSS SP-110 - Ball Valves Threaded, Socket-Welding, Solder Joint, Grooved and Flared Ends; 2010, with Errata .
- Z. NACE SP0286 - Electrical Isolation of Cathodically Protected Pipelines; 2007.
- AA. NFPA 30 - Flammable and Combustible Liquids Code; 2024, with Errata (2025).
- BB. UL 142 - Steel Aboveground Tanks for Flammable and Combustible Liquids; Current Edition, Including All Revisions.
- CC. UL 971A OUTLINE - Outline of Investigation for Metallic Underground Fuel Pipe; Current Edition, Including All Revisions.

1.03 ADMINISTRATIVE REQUIREMENTS

- A. Preinstallation Meeting: Conduct a preinstallation meeting one week prior to the start of the work of this section; require attendance by all affected installers.
- B. Sequencing: Ensure that utility connections are achieved in an orderly and expeditious manner.

1.04 SUBMITTALS

- A. Product Data: Provide data on pipe materials, pipe fittings, valves, and accessories. Provide manufacturers catalog information. Indicate valve data and ratings.
- B. Shop Drawings: Indicate tanks, system layout, pipe sizes, location, and elevations. For fuel oil tanks, indicate dimensions and accessories, including manholes and hold down straps.
- C. Project Record Documents: Record actual locations of piping system, storage tanks, and system components.
- D. Maintenance Data: Include installation instructions, spare parts lists, exploded assembly views.
- E. Warranty: Submit manufacturer warranty and ensure forms have been completed in Owner's name and registered with manufacturer.
- F. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
 - 1. Valve Repacking Kits: One for each type and size of valve.

1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the type of products specified in this section, with minimum three years of documented experience.
- B. Valves: Manufacturer's name and pressure rating marked on valve body.

1.06 DELIVERY, STORAGE, AND HANDLING

PART 2 PRODUCTS

2.01 PIPING AND FITTINGS

- A. Regulatory Requirements:
 - 1. Comply with the material, fabrication, and operating requirements of ASME B31.3, except as modified herein.
 - 2. Comply with ASME B31.9 for installation of fuel oil piping.
 - 3. Comply with applicable regulations for installation of fuel oil system.
 - 4. Provide certificate of compliance from Authority Having Jurisdiction indicating approval of installation of fuel oil system.
 - 5. Products Requiring Electrical Connection: Listed and classified by Underwriters Laboratories Inc., as suitable for the purpose specified and indicated.
- B. Comply with the material, fabrication, and operating requirements of ASME B31.3, except as modified herein.
- C. Reinforced Thermosetting Resin Plastic (RTRP) Pipe: ASTM D2310 and ASTM D2996, UL listed filament wound fiberglass reinforced epoxy pipe with integral epoxy liner and exterior coating.
 - 1. Fittings: Compression-molded, filament-wound, fiberglass-reinforced epoxy.
 - 2. Joints: Tapered bell and spigot adhesive bonded.
- D. Exterior Containment Piping System: Factory fabricated, double-wall complying with ASME B31.3 and NFPA 30.
 - 1. Physical Characteristics:
 - a. Fiberglass reinforced plastic (FRP) complying with ASTM D5677.
 - b. Chemically compatible with type of fuel handled.
 - c. Non-corrosive.
 - d. Dielectric.
 - e. Non-biodegradable.
 - f. Microbial resistant.
 - g. Pressure Limitation: Capable of withstanding 5 psig minimum air pressure.
 - 2. Design Characteristics:
 - a. Piping and support allow for drainage.
 - b. Allows for complete inspection of the product piping prior to sealing of containment piping.
 - c. Pipe Supports:
 - 1) Design based on pipe size, pipe weight, fuel weight, and operating condition to evenly separate containment piping from product piping.
 - 2) Construct of same material as product piping.
 - 3) Design supports so no point loading occurs on the primary or exterior pipe.
 - 4) Permanently attach supports to product pipe by tack welding or adhesive.
 - 5) Design to allow for pipe movement of both product piping and exterior containment piping without causing damage to either.
 - 3. Product Pipe: Provide product pipe as indicated on drawings and specified in this Section.
- E. Double Containment Piping System - Underground and indoors: Factory fabricated, double-wall complying with ASME B31.3 and NFPA 30.
 - 1. Piping system to comply with UL 971A OUTLINE.
 - 2. Physical Characteristics:
 - a. Primary Pipe: Comply with ASTM A240/A240M for S31603 or SS316L stainless steel.
 - b. Outer Jacket: UV stabilized, non-metallic nylon 12.
 - c. Secondary Barrier: Ethylene fluorinated ethylene propylene (EFEP).

- d. Chemically compatible with type of fuel handled.
 - e. Non-corrosive.
 - f. Dielectric.
 - g. Non-biodegradable.
 - 3. Design Characteristics:
 - a. Piping and support allow for drainage.
 - b. Allows for complete inspection of the product piping prior to sealing of containment piping.
 - c. Pipe Supports:
 - 1) Comply with MSS SP-58.
 - 2) Design based on pipe size, pipe weight, fuel weight, and operating condition to evenly separate containment piping from product piping.
 - 3) Design supports so no point loading occurs on the primary or exterior pipe.
 - 4) Permanently attach supports to product pipe by tack welding or adhesive.
 - 5) Design to allow for pipe movement of both product piping and exterior containment piping without causing damage to either.
 - 4. Fittings: Provide compatible fittings for the same piping system manufacturer.
- F. Double Containment Piping System - Aboveground: Factory fabricated, double-wall complying with ASME B31.3 and NFPA 30.
- 1. Piping system to comply with UL 971A OUTLINE.
 - 2. Physical Characteristics:
 - a. Primary Pipe: Comply with ASTM A240/A240M for S31603 or SS316L stainless steel.
 - b. Outer Jacket: UV stabilized, non-metallic nylon 12.
 - c. Secondary Barrier: Ethylene fluorinated ethylene propylene (EFEP).
 - d. Chemically compatible with type of fuel handled.
 - e. Non-corrosive.
 - f. Dielectric.
 - g. Non-biodegradable.
 - h. Pressure Limitation: Capable of withstanding 50 psig minimum air pressure.
 - 3. Design Characteristics:
 - a. Piping and support allow for drainage.
 - b. Allows for complete inspection of the product piping prior to sealing of containment piping.
 - c. Pipe Supports:
 - 1) Comply with MSS SP-58.
 - 2) Design based on pipe size, pipe weight, fuel weight, and operating condition to evenly separate containment piping from product piping.
 - 3) Design supports so no point loading occurs on the primary or exterior pipe.
 - 4) Permanently attach supports to product pipe by tack welding or adhesive.
 - 5) Design to allow for pipe movement of both product piping and exterior containment piping without causing damage to either.
 - 4. Product Pipe: Provide product pipe as indicated on drawings and specified in this Section.
 - 5. Fittings: Provide compatible fittings for the same piping system manufacturer.

2.02 FLANGES, COUPLINGS, AND PIPING COMPONENTS

- A. Flanges:
 - 1. Provide flanged end connections on equipment, fittings, piping, piping components, adapters, couplings, and valves complying with ASME B16.5, Class 150.
 - 2. Carbon Steel: Comply with ASTM A105/A105M.
 - 3. Gaskets, Non-Isolating:
 - a. 1/8 inch thick.

- b. Comply with ASME B16.12, raised-faced type.
 - c. Material: Buna-N.
- 4. Gaskets, Electrically Isolating:
 - a. Comply with ASTM D229.
 - b. Electrical Insulating Material: 1000 ohms resistance.
 - c. Chemically compatible with fuel handled.
 - d. Full face type.
 - e. Provide full surface, spiral-wound, mylar, insulating sleeves between bolts and holes of flanges.
 - f. Furnish bolt shank diameter not less than diameter at root of threads.
 - g. Provide high-strength 1/8 inch thick, phenolic, insulating washers next to flanges with flat, circular, stainless steel washers over the insulating and under bolt heads and nuts.
 - h. Supply adequate bolt length to accommodate insulating gaskets and stainless steel washers.
- 5. Bolts, Nuts, and Washers:
 - a. Comply with ASME B18.2.1 and ASME B18.2.2.
 - b. Bolts:
 - 1) Regular hexagonal type.
 - 2) Threaded in accordance with ASME B1.1, Class 2A fit, Coarse Thread Series, for sizes 1 inch and smaller and Eight-Pitch Thread Series for sizes larger than 1 inch.
 - 3) Provide sufficient length to obtain full bearing on nuts, projecting no more than two full threads beyond nuts with bolts tightened to required torque.
 - c. Nuts:
 - 1) Hexagonal, heavy series type.
 - 2) Threaded in accordance with ASME B1.1, Class 2B fit, Coarse Thread Series for sizes 1 inch and smaller and Eight-Pitch Thread Series for sizes larger than 1 inch.
 - d. Carbon Steel Material:
 - 1) Bolts: Comply with ASTM A307, Grade B, hot-dipped galvanized.
 - 2) Nuts: Comply with ASTM A563/A563M, Grade A, hex-style, hot-dipped galvanized.
 - 3) Washers: Comply with ASTM F844, hot-dipped galvanized.
- B. Piping Components:
 - 1. Provide components that meet the material, fabrication, and operating requirements of ASME B31.3, except as modified herein.
 - 2. Pressure Design Class: Class 150, as defined in ASME B16.5.
 - 3. Steel Couplings: Comply with API Spec 5L, seamless, extra heavy, wrought steel with recessed ends.
 - 4. Threaded Unions:
 - a. Comply with ASME B16.39, Class 150.
 - b. Materials: Comply with ASTM A312/A312M, Grade 304 or 316.
 - c. Dielectric Unions: Comply with dimensional, strength, and pressure requirements of ASME B16.39, Class 150.
 - d. Provide galvanized, plated, or _____ steel parts.
 - e. Furnish water-impervious insulation barrier capable of limiting galvanic current to one percent of the short-circuit current in a corresponding bimetallic joint and withstand a 600-volt breakdown test when dry.
 - 5. Joint Compound: Resistant to water and suitable for use with fuel containing 40 percent aromatics.

2.03 PIPE HANGERS AND SUPPORTS

- A. Provide hangers and supports that comply with MSS SP-58.
 - 1. If type of hanger or support for a particular situation is not indicated, select appropriate type using MSS SP-58 recommendations.
- B. Hangers for Pipe Sizes 1/2 to 1-1/2 Inches: Malleable iron, adjustable swivel, split ring.
- C. Hangers for Pipe Sizes 2 Inches and Over: Carbon steel, adjustable, clevis.
- D. Multiple or Trapeze Hangers: Steel channels with welded spacers and hanger rods.
- E. Wall Support for Pipe Sizes to 3 Inches: Cast iron hook.
- F. Vertical Support: Steel riser clamp.
- G. Floor Support: Cast iron adjustable pipe saddle, lock nut, nipple, floor flange, and concrete pier or steel support.
- H. Copper Pipe Support: Carbon steel ring, adjustable, copper plated.

2.04 GATE VALVES

- A. MSS SP-80, Class 125, bronze body, bronze trim, rising stem, handwheel, inside screw, solid wedge disc, solder ends.

2.05 BALL VALVES

- A. MSS SP-110, Class 150, 400 psi CWP, bronze, two piece body, chrome plated brass ball, regular port, teflon seats and stuffing box ring, blow-out proof stem, lever handle with balancing stops, solder.

2.06 SWING CHECK VALVES

- A. MSS SP-80, Class 125, bronze body and cap, bronze swing disc, solder ends.

2.07 RELIEF VALVES

- A. Bronze body, teflon seat, steel stem and springs, automatic, direct pressure actuated at maximum 60 psi, UL listed for fuel oil, capacities ASME certified and labelled.

2.08 STRAINERS

- A. Threaded brass body for 175 psi CWP, Y pattern with 1/32 inch stainless steel perforated screen.

2.09 FLEXIBLE CONNECTORS

- A. Bronze inner hose and braided exterior sleeve, suitable for minimum 200 psi CWP and 250 degrees F.

2.10 ABOVEGROUND FUEL STORAGE TANKS

- A. Tank: UL2085 listed and labeled, welded steel, oval with steel support saddles, tapings for accessories, threaded connections.
- B. Accessories: Tank fill, gauge, vent, and outlet connections.
- C. Gauge: Remote reading, electronic, for two-wire, 24-volt power, with wall-mounted direct reading gauge.

2.11 FUEL OIL PUMPS

- A. Casing: Bronze, rated for 125 psi working pressure with integral pressure relief valve.
- B. Impeller: Bronze gears, positive displacement.
- C. Drive: Direct connected with flexible coupling.
- D. Accessories: Adjustable pressure control valve, bleed valve, mechanical seal.

2.12 TRANSFER SYSTEM

- A. System: Float valves and relays to energize transfer pumps to fill day tank from main storage tank automatically.
 - 1. Low level: Energize pumps when tank level drops below 50 percent of full volume.
 - 2. Full level: De-energize pumps when full.
 - 3. Alarm: Sound audible alarm when fuel overflows into return line.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that excavations are to required grade, are dry, and have not been over-excavated.

3.02 PREPARATION

- A. Ream pipe and tube ends. Remove burrs. Bevel plain end ferrous pipe.
- B. Remove scale and dirt, on inside and outside, before assembly.
- C. Prepare piping connections to equipment with flanges or unions.
- D. Excavate In Accordance With Division 31 Specifications.
- E. Backfill in Accordance With Division 32 Specifications

3.03 PIPING INSTALLATION

- A. Complete all hydrostatic and environmental testing prior to restoration of tank grave and backfilling of pipe trench.
- B. Perform leak testing of all buried fuel piping in accordance with state and local codes prior to burial.
- C. Install in accordance with manufacturer's instructions and API RP 1615.
- D. Provide nonconducting dielectric connections wherever jointing dissimilar metals. Install to NACE SP0286.
- E. Route piping in orderly manner and maintain gradient.
- F. Group piping whenever practical at common elevations.
- G. Install piping to allow for expansion and contraction without stressing pipe, joints, or connected equipment.
- H. Provide clearance for installation of insulation and access to valves and fittings.
- I. Install firestopping to preserve fire-resistance rating of partitions and other elements.
- J. Provide access where valves and fittings are not exposed.
- K. Where pipe support members are welded to structural building framing, scrape, brush clean, weld, and apply one coat of zinc-rich primer. See Section 099600.
- L. Prepare pipe, fittings, supports, and accessories not prefinished, ready for finish painting. See Section 099123.
- M. Install valves with stems upright or horizontal, not inverted.
- N. Protect piping systems from entry of foreign materials by temporary covers, completing sections of the work, and isolating parts of completed system.

3.04 FUEL TANK INSTALLATION

- A. Install tanks in accordance with manufacturer's instructions, Connecticut state fire and prevention code, and API RP 1615.
- B. Clean and flush underground tanks prior to delivery to site. Seal until pipe connections are made.
- C. Install underground tanks with minimum 24 inches cover.

- D. Provide piping connections to tanks with unions and swing joints. Provide venting to API Std 2000.
- E. Clean and flush day tank prior to delivery to site. Seal until pipe connections are made.
- F. Fill tanks at project turn-over with appropriate fuel.
- G. Provide a minimum of 4 hours' training to Owner and Maintenance personnel on all fuel system components.

END OF SECTION 231113

SECTION 260505
SELECTIVE DEMOLITION FOR ELECTRICAL

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Electrical demolition.

PART 2 PRODUCTS

2.01 MATERIALS AND EQUIPMENT

- A. Materials and equipment for patching and extending work: As specified in individual sections.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that abandoned wiring and equipment serve only abandoned facilities.
- B. Demolition drawings are based on casual field observation and existing record documents.
- C. Report discrepancies to Engineer before disturbing existing installation.
- D. Beginning of demolition means installer accepts existing conditions.

3.02 PREPARATION

- A. Provide temporary wiring and connections to maintain existing systems in service during construction. When work must be performed on energized equipment or circuits, use personnel experienced in such operations.

3.03 DEMOLITION AND EXTENSION OF EXISTING ELECTRICAL WORK

- A. Remove, relocate, and extend existing installations to accommodate new construction.
- B. Remove abandoned wiring to source of supply.
- C. Remove exposed abandoned conduit, including abandoned conduit above accessible ceiling finishes. Cut conduit flush with walls and floors, and patch surfaces.
- D. Disconnect abandoned outlets and remove devices. Remove abandoned outlets if conduit servicing them is abandoned and removed. Provide blank cover for abandoned outlets that are not removed.
- E. Repair adjacent construction and finishes damaged during demolition and extension work.
- F. Maintain access to existing electrical installations that remain active. Modify installation or provide access panel as appropriate.
- G. Extend existing installations using materials and methods compatible with existing electrical installations, or as specified.

3.04 CLEANING AND REPAIR

- A. See Section 017419 - Construction Waste Management and Disposal for additional requirements.
- B. Clean and repair existing materials and equipment that remain or that are to be reused.
- C. Panelboards: Clean exposed surfaces and check tightness of electrical connections. Replace damaged circuit breakers and provide closure plates for vacant positions. Provide typed circuit directory showing revised circuiting arrangement.

END OF SECTION 260505

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SECTION 260519
LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Single conductor building wire.
- B. Wiring connectors.
- C. Electrical tape.
- D. Heat shrink tubing.
- E. Wire pulling lubricant.
- F. Cable ties.

1.02 RELATED REQUIREMENTS

- A. Section 078400 - Firestopping.
- B. Section 260526 - Grounding and Bonding for Electrical Systems: Additional requirements for grounding conductors and grounding connectors.
- C. Section 260553 - Identification for Electrical Systems: Identification products and requirements.

1.03 REFERENCE STANDARDS

- A. ASTM B3 - Standard Specification for Soft or Annealed Copper Wire; 2013 (Reapproved 2018).
- B. ASTM B8 - Standard Specification for Concentric-Lay-Stranded Copper Conductors, Hard, Medium-Hard, or Soft; 2023.
- C. ASTM B33 - Standard Specification for Tin-Coated Soft or Annealed Copper Wire for Electrical Purposes; 2010, with Editorial Revision (2020).
- D. ASTM B787/B787M - Standard Specification for 19 Wire Combination Unilay-Stranded Copper Conductors for Subsequent Insulation; 2004 (Reapproved 2020).
- E. ASTM D3005 - Standard Specification for Low-Temperature Resistant Vinyl Chloride Plastic Pressure-Sensitive Electrical Insulating Tape; 2017.
- F. NECA 1 - Standard for Good Workmanship in Electrical Construction; 2023.
- G. NECA 120 - Standard for Installing Armored Cable (AC) and Type Metal-Clad (MC) Cable; 2018.
- H. NECA 121 - Standard for Installing Nonmetallic-Sheathed Cable (Type NM-B) and Underground Feeder and Branch-Circuit Cable (Type UF); 2007.
- I. NEMA WC 70 - Power Cables Rated 2000 Volts or Less for the Distribution of Electrical Energy; 2021.
- J. NETA ATS - Standard for Acceptance Testing Specifications for Electrical Power Equipment And Systems; 2025.
- K. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- L. UL 44 - Thermoset-Insulated Wires and Cables; Current Edition, Including All Revisions.
- M. UL 83 - Thermoplastic-Insulated Wires and Cables; Current Edition, Including All Revisions.
- N. UL 267 - Outline of Investigation for Wire-Pulling Compounds; Current Edition, Including All Revisions.
- O. UL 486A-486B - Wire Connectors; Current Edition, Including All Revisions.
- P. UL 486C - Splicing Wire Connectors; Current Edition, Including All Revisions.
- Q. UL 486D - Sealed Wire Connector Systems; Current Edition, Including All Revisions.

- R. UL 510 - Polyvinyl Chloride, Polyethylene, and Rubber Insulating Tape; Current Edition, Including All Revisions.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordination:
1. Coordinate sizes of raceways, boxes, and equipment enclosures installed under other sections with the actual conductors to be installed, including adjustments for conductor sizes increased for voltage drop.
 2. Coordinate the installation of direct burial cable with other trades to avoid conflicts with piping or other potential conflicts.
 3. Coordinate with electrical equipment installed under other sections to provide terminations suitable for use with the conductors to be installed.
 4. Notify Engineer of any conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.

1.05 SUBMITTALS

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide manufacturer's standard catalog pages and data sheets for conductors and cables, including detailed information on materials, construction, ratings, listings, and available sizes, configurations, and stranding.
- C. Manufacturer's Installation Instructions: Indicate application conditions and limitations of use stipulated by product testing agency. Include instructions for storage, handling, protection, examination, preparation, and installation of product.
- D. Project Record Documents: Record actual installed circuiting arrangements. Record actual routing for underground circuits.

1.06 QUALITY ASSURANCE

- A. Comply with requirements of NFPA 70.
- B. Maintain at the project site a copy of each referenced document that prescribes execution requirements.
- C. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.
- D. Product Listing Organization Qualifications: An organization recognized by OSHA as a Nationally Recognized Testing Laboratory (NRTL) and acceptable to authorities having jurisdiction.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Receive, inspect, handle, and store conductors and cables in accordance with manufacturer's instructions.

1.08 FIELD CONDITIONS

- A. Do not install or otherwise handle thermoplastic-insulated conductors at temperatures lower than 14 degrees F, unless otherwise permitted by manufacturer's instructions. When installation below this temperature is unavoidable, notify Engineer and obtain direction before proceeding with work.

PART 2 PRODUCTS

2.01 CONDUCTOR AND CABLE APPLICATIONS

- A. Do not use conductors and cables for applications other than as permitted by NFPA 70 and product listing.
- B. Provide single conductor building wire installed in suitable raceway unless otherwise indicated, permitted, or required.

2.02 CONDUCTOR AND CABLE GENERAL REQUIREMENTS

- A. Provide products that comply with requirements of NFPA 70.
- B. Provide products listed, classified, and labeled as suitable for the purpose intended.
- C. Provide new conductors and cables manufactured not more than one year prior to installation.
- D. Unless specifically indicated to be excluded, provide all required conduit, boxes, wiring, connectors, etc. as required for a complete operating system.
- E. Comply with NEMA WC 70.
- F. Thermoplastic-Insulated Conductors and Cables: Listed and labeled as complying with UL 83.
- G. Thermoset-Insulated Conductors and Cables: Listed and labeled as complying with UL 44.
- H. Conductor Material:
 - 1. Provide copper conductors only. Aluminum conductors are not acceptable for this project. Conductor sizes indicated are based on copper.
 - 2. Copper Conductors: Soft drawn annealed, 98 percent conductivity, uncoated copper conductors complying with ASTM B3, ASTM B8, or ASTM B787/B787M unless otherwise indicated.
 - 3. Tinned Copper Conductors: Comply with ASTM B33.
- I. Minimum Conductor Size:
 - 1. Branch Circuits: 12 AWG.
 - a. Exceptions:
 - 1) 20 A, 120 V circuits longer than 75 feet: 10 AWG, for voltage drop.
 - 2) 20 A, 120 V circuits longer than 150 feet: 8 AWG, for voltage drop.
 - 2. Control Circuits: 14 AWG.
- J. Where conductor size is not indicated, size to comply with NFPA 70 but not less than applicable minimum size requirements specified.
- K. Conductor Color Coding:
 - 1. Color code conductors as indicated unless otherwise required by the authority having jurisdiction. Maintain consistent color coding throughout project.
 - 2. Color Coding Method: Integrally colored insulation.
 - a. Conductors size 4 AWG and larger may have black insulation color coded using vinyl color coding electrical tape.
 - 3. Color Code:
 - a. 208Y/120 V, 3 Phase, 4 Wire System:
 - 1) Phase A: Black.
 - 2) Phase B: Red.
 - 3) Phase C: Blue.
 - 4) Neutral/Grounded: White.
 - b. Equipment Ground, All Systems: Green.

2.03 SINGLE CONDUCTOR BUILDING WIRE

- A. Description: Single conductor insulated wire.
- B. Conductor Stranding:
 - 1. Feeders and Branch Circuits:
 - a. Size 10 AWG and Smaller: Solid.
 - b. Size 8 AWG and Larger: Stranded.
- C. Insulation Voltage Rating: 600 V.
- D. Insulation:
 - 1. Copper Building Wire: Type THHN/THWN or THHN/THWN-2, except as indicated below.
 - a. Size 4 AWG and Larger: Type XHHW-2.

- b. Installed Underground: Type XHHW-2.

2.04 WIRING CONNECTORS

- A. Description: Wiring connectors appropriate for the application, suitable for use with the conductors to be connected, and listed as complying with UL 486A-486B or UL 486C as applicable.
- B. Connectors for Grounding and Bonding: Comply with Section 260526.
- C. Wiring Connectors for Splices and Taps:
 - 1. Copper Conductors Size 8 AWG and Smaller: Use twist-on insulated spring connectors.
 - 2. Copper Conductors Size 6 AWG and Larger: Use mechanical connectors or compression connectors.
- D. Wiring Connectors for Terminations:
 - 1. Provide terminal lugs for connecting conductors to equipment furnished with terminations designed for terminal lugs.
 - 2. Provide compression adapters for connecting conductors to equipment furnished with mechanical lugs when only compression connectors are specified.
 - 3. Where over-sized conductors are larger than the equipment terminations can accommodate, provide connectors suitable for reducing to appropriate size, but not less than required for the rating of the overcurrent protective device.
 - 4. Provide motor pigtail connectors for connecting motor leads in order to facilitate disconnection.
 - 5. Copper Conductors Size 8 AWG and Larger: Use mechanical connectors or compression connectors where connectors are required.
 - 6. Conductors for Control Circuits: Use crimped terminals for all connections.
- E. Do not use insulation-piercing or insulation-displacement connectors designed for use with conductors without stripping insulation.
- F. Do not use push-in wire connectors as a substitute for twist-on insulated spring connectors.
- G. Twist-on Insulated Spring Connectors: Rated 600 V, 221 degrees F for standard applications and 302 degrees F for high temperature applications; pre-filled with sealant and listed as complying with UL 486D for damp and wet locations.
- H. Mechanical Connectors: Provide bolted type or set-screw type.
- I. Compression Connectors: Provide circumferential type or hex type crimp configuration.
- J. Crimped Terminals: Nylon-insulated, with insulation grip and terminal configuration suitable for connection to be made.

2.05 ACCESSORIES

- A. Electrical Tape:
 - 1. Vinyl Color Coding Electrical Tape: Integrally colored to match color code indicated; listed as complying with UL 510; minimum thickness of 7 mil; resistant to abrasion, corrosion, and sunlight; suitable for continuous temperature environment up to 221 degrees F.
 - 2. Vinyl Insulating Electrical Tape: Complying with ASTM D3005 and listed as complying with UL 510; minimum thickness of 7 mil; resistant to abrasion, corrosion, and sunlight; conformable for application down to 0 degrees F and suitable for continuous temperature environment up to 221 degrees F.
 - 3. Moisture Sealing Electrical Tape: Insulating mastic compound laminated to flexible, all-weather vinyl backing; minimum thickness of 90 mil.
- B. Heat Shrink Tubing: Heavy-wall, split-resistant, with factory-applied adhesive; rated 600 V; suitable for direct burial applications; listed as complying with UL 486D.
- C. Wire Pulling Lubricant:
 - 1. Listed and labeled as complying with UL 267.

2. Suitable for use with conductors/cables and associated insulation/jackets to be installed.
 3. Suitable for use at installation temperature.
- D. Cable Ties: Material and tensile strength rating suitable for application.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that interior of building has been protected from weather.
- B. Verify that work likely to damage wire and cable has been completed.
- C. Verify that raceways, boxes, and equipment enclosures are installed and are properly sized to accommodate conductors and cables in accordance with NFPA 70.
- D. Verify that field measurements are as indicated.
- E. Verify that conditions are satisfactory for installation prior to starting work.

3.02 PREPARATION

- A. Clean raceways thoroughly to remove foreign materials before installing conductors and cables.

3.03 INSTALLATION

- A. Circuiting Requirements:
 1. Unless dimensioned, circuit routing indicated is diagrammatic.
 2. When circuit destination is indicated without specific routing, determine exact routing required.
 3. Arrange circuiting to minimize splices.
 4. Include circuit lengths required to install connected devices within 10 ft of location indicated.
 5. Circuiting Adjustments: Unless otherwise indicated, when branch circuits are indicated as separate, combining them together in a single raceway is not permitted.
 6. Common Neutrals: Unless otherwise indicated, sharing of neutral/grounded conductors among single phase branch circuits of different phases installed in the same raceway is not permitted. Provide dedicated neutral/grounded conductor for each individual branch circuit.
- B. Install products in accordance with manufacturer's instructions.
- C. Perform work in accordance with NECA 1 (general workmanship).
- D. Install underground feeder and branch-circuit cable (Type UF-B) in accordance with NECA 121.
- E. Install metal-clad cable (Type MC) in accordance with NECA 120.
- F. Installation in Raceway:
 1. Tape ends of conductors and cables to prevent infiltration of moisture and other contaminants.
 2. Pull all conductors and cables together into raceway at same time.
 3. Do not damage conductors and cables or exceed manufacturer's recommended maximum pulling tension and sidewall pressure.
 4. Use suitable wire pulling lubricant where necessary, except when lubricant is not recommended by the manufacturer.
- G. Paralleled Conductors: Install conductors of the same length and terminate in the same manner.
- H. Secure and support conductors and cables in accordance with NFPA 70 using suitable supports and methods approved by the authority having jurisdiction. Provide independent support from building structure. Do not provide support from raceways, piping, ductwork, or other systems.

- I. Install conductors with a minimum of 12 inches of slack at each outlet.
- J. Neatly train and bundle conductors inside boxes, wireways, panelboards and other equipment enclosures.
- K. Group or otherwise identify neutral/grounded conductors with associated ungrounded conductors inside enclosures in accordance with NFPA 70.
- L. Make wiring connections using specified wiring connectors.
 - 1. Make splices and taps only in accessible boxes. Do not pull splices into raceways or make splices in conduit bodies or wiring gutters.
 - 2. Remove appropriate amount of conductor insulation for making connections without cutting, nicking or damaging conductors.
 - 3. Do not remove conductor strands to facilitate insertion into connector.
 - 4. Clean contact surfaces on conductors and connectors to suitable remove corrosion, oxides, and other contaminates. Do not use wire brush on plated connector surfaces.
 - 5. Mechanical Connectors: Secure connections according to manufacturer's recommended torque settings.
 - 6. Compression Connectors: Secure connections using manufacturer's recommended tools and dies.
- M. Insulate splices and taps that are made with uninsulated connectors using methods suitable for the application, with insulation and mechanical strength at least equivalent to unspliced conductors.
 - 1. Damp Locations: Use insulating covers specifically designed for the connectors, electrical tape, or heat shrink tubing.
 - a. For connections with insulating covers, apply outer covering of moisture sealing electrical tape.
 - b. For taped connections, follow same procedure as for dry locations but apply outer covering of moisture sealing electrical tape.
 - 2. Wet Locations: Use heat shrink tubing.
- N. Insulate ends of spare conductors using vinyl insulating electrical tape.
- O. Field-Applied Color Coding: Where vinyl color coding electrical tape is used in lieu of integrally colored insulation as permitted in Part 2 under "Color Coding", apply half overlapping turns of tape at each termination and at each location conductors are accessible.
- P. Identify conductors and cables in accordance with Section 260553.
- Q. Install firestopping to preserve fire resistance rating of partitions and other elements, using materials and methods specified in Section 078400.
- R. Unless specifically indicated to be excluded, provide final connections to all equipment and devices, including those furnished by others, as required for a complete operating system.

3.04 FIELD QUALITY CONTROL

- A. See Section 014000 - Quality Requirements, for additional requirements.
- B. Inspect and test in accordance with NETA ATS, except Section 4.
- C. Perform inspections and tests listed in NETA ATS, Section 7.3.2. The insulation resistance test is required for all conductors. The resistance test for parallel conductors listed as optional is not required.
- D. Correct deficiencies and replace damaged or defective conductors and cables.

END OF SECTION 260519

SECTION 260529
HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Support and attachment requirements and components for equipment, conduit, cable, boxes, and other electrical work.

1.02 RELATED REQUIREMENTS

- A. Section 260533.13 - Conduit for Electrical Systems: Additional support and attachment requirements for conduits.
- B. Section 260533.16 - Boxes for Electrical Systems: Additional support and attachment requirements for boxes.

1.03 REFERENCE STANDARDS

- A. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products; 2017.
- B. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2023.
- C. ASTM B633 - Standard Specification for Electrodeposited Coatings of Zinc on Iron and Steel; 2023.
- D. MFMA-4 - Metal Framing Standards Publication; 2004.
- E. NECA 1 - Standard for Good Workmanship in Electrical Construction; 2023.
- F. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordination:
 - 1. Coordinate sizes and arrangement of supports and bases with actual equipment and components to be installed.
 - 2. Coordinate work to provide additional framing and materials required for installation.
 - 3. Coordinate compatibility of support and attachment components with mounting surfaces at installed locations.
 - 4. Coordinate arrangement of supports with ductwork, piping, equipment and other potential conflicts.
 - 5. Notify Engineer of conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.

1.05 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide manufacturer's standard catalog pages and data sheets for channel/strut framing systems.
- C. Manufacturer's Instructions: Indicate application conditions and limitations of use stipulated by product testing agency. Include instructions for storage, handling, protection, examination, preparation, and installation of product.

1.06 QUALITY ASSURANCE

- A. Maintain at project site one copy of each referenced document that prescribes execution requirements.
- B. Product Listing Organization Qualifications: Organization recognized by OSHA as Nationally Recognized Testing Laboratory (NRTL) and acceptable to authorities having jurisdiction.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Receive, inspect, handle, and store products in accordance with manufacturer's instructions.

PART 2 PRODUCTS

2.01 SUPPORT AND ATTACHMENT COMPONENTS

- A. General Requirements:
1. Comply with the following. Where requirements differ, comply with most stringent.
 - a. NFPA 70.
 - b. Applicable building code.
 - c. Requirements of authorities having jurisdiction.
 2. Provide required hangers, supports, anchors, fasteners, fittings, accessories, and hardware as necessary for complete installation of electrical work.
 3. Provide products listed, classified, and labeled as suitable for purpose intended, where applicable.
 4. Where support and attachment component types and sizes are not indicated, select in accordance with manufacturer's application criteria as required for load to be supported with minimum safety factor of 25%. Include consideration for vibration, equipment operation, and shock loads where applicable.
 5. Do not use products for applications other than as permitted by NFPA 70 and product listing.
 6. Do not use wire, chain, perforated pipe strap, or wood for permanent supports unless specifically indicated or permitted.
 7. Steel Components: Use corrosion-resistant materials suitable for environment where installed.
 - a. Indoor Dry Locations: Use zinc-plated steel or approved equivalent unless otherwise indicated.
 - b. Outdoor and Damp or Wet Indoor Locations: Use galvanized steel, stainless steel, or approved equivalent unless otherwise indicated.
 - c. Zinc-Plated Steel: Electroplated in accordance with ASTM B633.
 - d. Galvanized Steel: Hot-dip galvanized after fabrication in accordance with ASTM A123/A123M or ASTM A153/A153M.
- B. Conduit and Cable Supports: Straps and clamps suitable for conduit or cable to be supported.
1. Conduit Straps: One-hole or two-hole type; steel or malleable iron.
 2. Conduit Clamps: Bolted type unless otherwise indicated.
- C. Outlet Box Supports: Hangers and brackets suitable for boxes to be supported.
- D. Metal Channel/Strut Framing Systems:
1. Description: Factory-fabricated, continuous-slot, metal channel/strut and associated fittings, accessories, and hardware required for field assembly of supports.
 2. Comply with MFMA-4.
- E. Hanger Rods: Threaded, zinc-plated steel unless otherwise indicated.
- F. Anchors and Fasteners:
1. Unless otherwise indicated and where not otherwise restricted, use anchor and fastener types indicated for specified applications.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field measurements are as indicated.
- B. Verify that mounting surfaces are ready to receive support and attachment components.
- C. Verify that conditions are satisfactory for installation prior to starting work.

3.02 INSTALLATION

- A. Install products in accordance with manufacturer's instructions.
- B. Install hangers and supports in accordance with NECA 1.
- C. Provide independent support from building structure. Do not provide support from piping, ductwork, or other systems.
- D. Unless specifically indicated or approved by Engineer, do not provide support from suspended ceiling support system or ceiling grid.
- E. Unless specifically indicated or approved by Engineer, do not provide support from roof deck.
- F. Do not penetrate or otherwise notch or cut structural members without approval of Structural Engineer.
- G. Equipment Support and Attachment:
 - 1. Use metal, fabricated supports or supports assembled from metal channel/strut to support equipment as required.
 - 2. Use metal channel/strut secured to studs to support equipment surface mounted on hollow stud walls when wall strength is not sufficient to resist pull-out.
 - 3. Use metal channel/strut to support surface-mounted equipment in wet or damp locations to provide space between equipment and mounting surface.
 - 4. Securely fasten floor-mounted equipment. Do not install equipment such that it relies on its own weight for support.
- H. Conduit Support and Attachment: See Section 260533.13 for additional requirements.
- I. Box Support and Attachment: See Section 260533.16 for additional requirements.
- J. Secure fasteners in accordance with manufacturer's recommended torque settings.
- K. Remove temporary supports.

3.03 FIELD QUALITY CONTROL

- A. See Section 014000 - Quality Requirements for additional requirements.
- B. Inspect support and attachment components for damage and defects.
- C. Repair cuts and abrasions in galvanized finishes using zinc-rich paint recommended by manufacturer. Replace components that exhibit signs of corrosion.
- D. Correct deficiencies and replace damaged or defective support and attachment components.

END OF SECTION 260529

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SECTION 260533.13
CONDUIT FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Galvanized steel rigid metal conduit (RMC).
- B. Galvanized steel electrical metallic tubing (EMT).
- C. Rigid polyvinyl chloride (PVC) conduit.
- D. Liquidtight flexible nonmetallic conduit (LFNC).

1.02 RELATED REQUIREMENTS

- A. Section 078400 - Firestopping.
- B. Section 260529 - Hangers and Supports for Electrical Systems.
- C. Section 260553 - Identification for Electrical Systems: Identification products and requirements.

1.03 REFERENCE STANDARDS

- A. ANSI C80.1 - American National Standard for Electrical Rigid Steel Conduit (ERSC); 2020.
- B. ANSI C80.3 - American National Standard for Electrical Metallic Tubing -- Steel (EMT-S); 2020.
- C. NECA 1 - Standard for Good Workmanship in Electrical Construction; 2023.
- D. NECA 101 - Standard for Installing Steel Conduits (Rigid, IMC, EMT); 2020.
- E. NECA 111 - Standard for Installing Nonmetallic Raceways (RNC, ENT, LFNC); 2017.
- F. NEMA FB 1 - Fittings, Cast Metal Boxes, and Conduit Bodies for Conduit, Electrical Metallic Tubing, and Cable; 2014.
- G. NEMA TC 2 - Electrical Polyvinyl Chloride (PVC) Conduit; 2020.
- H. NEMA TC 3 - Polyvinyl Chloride (PVC) Fittings for Use with Rigid PVC Conduit and Tubing; 2021.
- I. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- J. UL 6 - Electrical Rigid Metal Conduit-Steel; Current Edition, Including All Revisions.
- K. UL 514B - Conduit, Tubing, and Cable Fittings; Current Edition, Including All Revisions.
- L. UL 651 - Schedule 40, 80, Type EB and A Rigid PVC Conduit and Fittings; Current Edition, Including All Revisions.
- M. UL 797 - Electrical Metallic Tubing-Steel; Current Edition, Including All Revisions.
- N. UL 1660 - Liquid-Tight Flexible Nonmetallic Conduit; Current Edition, Including All Revisions.
- O. UL 2419 - Outline of Investigation for Electrically Conductive Corrosion Resistant Compounds; Current Edition, Including All Revisions.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordination:
 - 1. Coordinate minimum sizes of conduits with actual type and quantity of conductors to be installed, including adjustments for conductor sizes increased for voltage drop.
 - 2. Coordinate arrangement of conduits with structural members, ductwork, piping, equipment, and other potential conflicts.
 - 3. Verify exact conduit termination locations required for boxes, enclosures, and equipment.
 - 4. Notify Engineer of conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.
- B. Sequencing:

1. Do not begin installation of conductors and cables until installation of conduit between termination points is complete.

1.05 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittals procedures.
- B. Product Data: Provide manufacturer's standard catalog pages and data sheets for conduits and fittings.
- C. Project Record Documents: Record actual routing for conduits installed underground.

1.06 QUALITY ASSURANCE

- A. Documents at Project Site: Maintain at project site one copy of manufacturer's instructions and shop drawings.
- B. Product Listing Organization Qualifications: Organization recognized by OSHA as Nationally Recognized Testing Laboratory (NRTL) and acceptable to authorities having jurisdiction.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. See Section 017419 - Construction Waste Management and Disposal for packaging waste requirements.
- B. Receive, inspect, handle, and store conduit and fittings in accordance with manufacturer's instructions.

PART 2 PRODUCTS

2.01 CONDUIT APPLICATIONS

- A. Do not use conduit and associated fittings for applications other than as permitted by NFPA 70, manufacturer's instructions, and product listing.
- B. Unless otherwise indicated and where not otherwise restricted, use conduit types indicated for specified applications. Where more than one listed application applies, comply with most restrictive requirements. Where conduit type for particular application is not specified, use galvanized steel rigid metal conduit.
- C. Underground:
 1. Exterior, Direct-Buried: Use rigid PVC conduit.
- D. Concealed Within Hollow Stud Walls: Use galvanized steel electrical metallic tubing (EMT).
- E. Concealed Above Accessible Ceilings: Use galvanized steel electrical metallic tubing (EMT).

2.02 CONDUIT - GENERAL REQUIREMENTS

- A. Comply with NFPA 70.
- B. Provide conduit, fittings, supports, and accessories required for complete raceway system.
- C. Provide products listed, classified, and labeled as suitable for purpose intended.
- D. Minimum Conduit Size, Unless Otherwise Indicated:
 1. Branch Circuits: 3/4-inch trade size.
 2. Underground, Exterior: 1-inch trade size.
- E. Where conduit size is not indicated, size to comply with NFPA 70 but not less than applicable minimum size requirements specified.

2.03 GALVANIZED STEEL RIGID METAL CONDUIT (RMC)

- A. Description: NFPA 70, Type RMC galvanized steel rigid metal conduit complying with ANSI C80.1 and listed and labeled as complying with UL 6.
- B. Fittings:
 1. Nonhazardous Locations: Use fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B or UL 6.

2. Material: Use steel or malleable iron.
3. Connectors and Couplings: Use threaded type fittings only. Threadless fittings, including set screw and compression/gland types, are not permitted.

2.04 GALVANIZED STEEL ELECTRICAL METALLIC TUBING (EMT)

- A. Description: NFPA 70, Type EMT galvanized steel electrical metallic tubing complying with ANSI C80.3 and listed and labeled as complying with UL 797.
- B. Fittings:
 1. Description: Fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B.
 2. Material: Use steel or malleable iron.
 3. Connectors and Couplings: Use compression/gland or set-screw type.
 - a. Do not use indenter type connectors and couplings.

2.05 RIGID POLYVINYL CHLORIDE (PVC) CONDUIT

- A. Description: NFPA 70, Type PVC rigid polyvinyl chloride conduit complying with NEMA TC 2 and listed and labeled as complying with UL 651; Schedule 40 unless otherwise indicated, Schedule 80 where subject to physical damage; rated for use with conductors rated 90 degrees C.
- B. Fittings:
 1. Manufacturer: Same as manufacturer of conduit to be connected.
 2. Description: Fittings complying with NEMA TC 3 and listed and labeled as complying with UL 651; material to match conduit.

2.06 LIQUIDTIGHT FLEXIBLE NONMETALLIC CONDUIT (LFNC)

- A. Description: NFPA 70, Type LFNC liquidtight flexible nonmetallic conduit listed and labeled as complying with UL 1660.
- B. Fittings:
 1. Manufacturer: Same as manufacturer of conduit to be connected.
 2. Description: Fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B; suitable for type of conduit to be connected.

2.07 ACCESSORIES

- A. Conduit Joint Compound: Corrosion-resistant, electrically conductive compound listed as complying with UL 2419; suitable for use with conduit to be installed.
- B. Solvent Cement for PVC Conduit and Fittings: As recommended by manufacturer of conduit and fittings to be installed.
- C. Pull Strings: Use nylon or polyester tape with average breaking strength of not less than 1,250 lbf.
- D. Conduit Mechanical Seals:
 1. Listed as complying with UL 514B.
 2. Specifically designed for sealing conduit openings against water, moisture, gases, and dust.
 3. Suitable for sealing around conductors/cables to be installed.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field measurements are as indicated.
- B. Verify that mounting surfaces are ready to receive conduits.
- C. Verify that conditions are satisfactory for installation prior to starting work.

3.02 INSTALLATION

- A. Install products in accordance with manufacturer's instructions.
- B. Install conduit in accordance with NECA 1.
- C. Galvanized Steel Rigid Metal Conduit (RMC): Install in accordance with NECA 101.
- D. Rigid Polyvinyl Chloride (PVC) Conduit: Install in accordance with NECA 111.
- E. Liquidtight Flexible Nonmetallic Conduit (LFNC): Install in accordance with NECA 111.
- F. Conduit Routing:
 - 1. Unless dimensioned, conduit routing indicated is diagrammatic.
 - 2. When conduit destination is indicated without specific routing, determine exact routing required.
 - 3. Conceal conduits unless specifically indicated to be exposed.
 - 4. Conduits installed underground or embedded in concrete may be routed in shortest possible manner unless otherwise indicated. Route other conduits parallel or perpendicular to building structure and surfaces, following surface contours where practical.
 - 5. Arrange conduit to maintain adequate headroom, clearances, and access.
 - 6. Arrange conduit to provide no more than equivalent of four 90-degree bends between pull points.
 - 7. Arrange conduit to provide no more than 150 feet between pull points.
 - 8. Route conduits above water and drain piping where possible.
 - 9. Arrange conduit to prevent moisture traps. Provide drain fittings at low points and at sealing fittings where moisture may collect.
 - 10. Maintain minimum clearance of 6 inches between conduits and piping for other systems.
 - 11. Maintain minimum clearance of 12 inches between conduits and hot surfaces.
 - 12. Group parallel conduits in same area on common rack.
- G. Conduit Support:
 - 1. Secure and support conduits in accordance with NFPA 70 using suitable supports and methods approved by authorities having jurisdiction; see Section 260529.
 - 2. Provide independent support from building structure. Do not provide support from piping, ductwork, or other systems.
 - 3. Installation Above Suspended Ceilings: Do not provide support from ceiling support system. Do not provide support from ceiling grid or allow conduits to lay on ceiling tiles.
 - 4. Use metal channel/strut with accessory conduit clamps to support multiple parallel surface-mounted conduits.
 - 5. Use conduit clamp to support single conduit from beam clamp or threaded rod.
- H. Connections and Terminations:
 - 1. Use approved zinc-rich paint or conduit joint compound on field-cut threads of galvanized steel conduits prior to making connections.
 - 2. Where two threaded conduits must be joined and neither can be rotated, use three-piece couplings or split couplings. Do not use running threads.
 - 3. Use suitable adapters where required to transition from one type of conduit to another.
 - 4. Provide drip loops for liquidtight flexible conduit connections to prevent drainage of liquid into connectors.
 - 5. Terminate threaded conduits in boxes and enclosures using threaded hubs or double lock nuts for dry locations and raintight hubs for wet locations.
 - 6. Provide insulating bushings, insulated throats, or listed metal fittings with smooth, rounded edges at conduit terminations to protect conductors.
 - 7. Secure joints and connections to provide mechanical strength and electrical continuity.
- I. Penetrations:

1. Do not penetrate or otherwise notch or cut structural members, including footings and grade beams, without approval of Structural Engineer.
 2. Make penetrations perpendicular to surfaces unless otherwise indicated.
 3. Provide sleeves for penetrations as indicated or as required to facilitate installation. Set sleeves flush with exposed surfaces unless otherwise indicated or required.
 4. Conceal bends for conduit risers emerging above ground.
 5. Where conduits penetrate waterproof membrane, seal as required to maintain integrity of membrane.
 6. Make penetrations for roof-mounted equipment within associated equipment openings and curbs where possible to minimize roofing system penetrations. Where penetrations are necessary, seal as indicated or as required to preserve integrity of roofing system and maintain roof warranty.
 7. Install firestopping to preserve fire resistance rating of partitions and other elements; see Section 078400.
- J. Underground Installation:
1. Minimum Cover, Unless Otherwise Indicated or Required:
 - a. Underground, Exterior: 24 inches.
 2. Provide underground warning tape along entire conduit length; see Section 260553.
- K. Conduit Movement Provisions: Where conduits are subject to movement, provide expansion and expansion/deflection fittings to prevent damage to enclosed conductors or connected equipment. This includes, but is not limited to:
1. Where conduits cross structural joints intended for expansion, contraction, or deflection.
 2. Where calculated in accordance with NFPA 70 for rigid polyvinyl chloride (PVC) conduit installed above ground to compensate for thermal expansion and contraction.
 3. Where conduits are subject to earth movement by settlement or frost.
- L. Conduit Sealing:
1. Use foam conduit sealant to prevent entry of moisture and gases. This includes, but is not limited to:
 - a. Where conduits enter building from outside.
 - b. Where service conduits enter building from underground distribution system.
 - c. Where conduits enter building from underground.
 - d. Where conduits may transport moisture to contact live parts.
 2. Where conduits cross barriers between areas of potential substantial temperature differential, use foam conduit sealant at accessible point near penetration to prevent condensation. This includes, but is not limited to:
 - a. Where conduits pass from outdoors into conditioned interior spaces.
 - b. Where conduits pass from unconditioned interior spaces into conditioned interior spaces.
- M. Provide pull string in each empty conduit and in conduits where conductors and cables are to be installed by others. Leave minimum slack of 12 inches at each end.
- N. Identify conduits; see Section 260553.

3.03 FIELD QUALITY CONTROL

- A. See Section 014000 - Quality Requirements for additional requirements.
- B. Repair cuts and abrasions in galvanized finishes using zinc-rich paint recommended by manufacturer. Replace components that exhibit signs of corrosion.
- C. Correct deficiencies and replace damaged or defective conduits.

3.04 CLEANING

- A. Clean interior of conduits to remove moisture and foreign matter.

3.05 PROTECTION

- A. Immediately after installation of conduit, use suitable manufactured plugs to provide protection from entry of moisture and foreign material and do not remove until ready for installation of conductors.

END OF SECTION 260533.13

SECTION 260533.16
BOXES FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Outlet and device boxes up to 100 cubic inches, including those used as junction and pull boxes.
- B. Cabinets and enclosures, including junction and pull boxes larger than 100 cubic inches.

1.02 RELATED REQUIREMENTS

- A. Section 260529 - Hangers and Supports for Electrical Systems.
- B. Section 260553 - Identification for Electrical Systems: Identification products and requirements.

1.03 REFERENCE STANDARDS

- A. NECA 1 - Standard for Good Workmanship in Electrical Construction; 2023.
- B. NECA 130 - Standard for Installing and Maintaining Wiring Devices; 2016.
- C. NEMA EN 10250 - Enclosures for Electrical Equipment (1000 Volts Maximum); 2024.
- D. NEMA FB 1 - Fittings, Cast Metal Boxes, and Conduit Bodies for Conduit, Electrical Metallic Tubing, and Cable; 2014.
- E. NEMA OS 1 - Sheet-Steel Outlet Boxes, Device Boxes, Covers, and Box Supports; 2013 (Reaffirmed 2020).
- F. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- G. UL 50 - Enclosures for Electrical Equipment, Non-Environmental Considerations; Current Edition, Including All Revisions.
- H. UL 50E - Enclosures for Electrical Equipment, Environmental Considerations; Current Edition, Including All Revisions.
- I. UL 508A - Industrial Control Panels; Current Edition, Including All Revisions.
- J. UL 514A - Metallic Outlet Boxes; Current Edition, Including All Revisions.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordination:
 - 1. Coordinate the work with other trades to avoid placement of ductwork, piping, equipment, or other potential obstructions within the dedicated equipment spaces and working clearances for electrical equipment required by NFPA 70.
 - 2. Coordinate arrangement of electrical equipment with the dimensions and clearance requirements of the actual equipment to be installed.
 - 3. Coordinate minimum sizes of boxes with the actual installed arrangement of conductors, clamps, support fittings, and devices, calculated according to NFPA 70.
 - 4. Coordinate minimum sizes of pull boxes with the actual installed arrangement of connected conduits, calculated according to NFPA 70.
 - 5. Coordinate the work with other trades to preserve insulation integrity.
 - 6. Notify Engineer of any conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.

1.05 SUBMITTALS

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide manufacturer's standard catalog pages and data sheets for junction and pull boxes and cabinets and enclosures.

- C. Manufacturer's Installation Instructions: Indicate application conditions and limitations of use stipulated by product testing agency. Include instructions for storage, handling, protection, examination, preparation, and installation of product.
- D. Project Record Documents: Record actual locations for junction boxes, pull boxes, and cabinets and enclosures.

1.06 QUALITY ASSURANCE

- A. Comply with requirements of NFPA 70.
- B. Product Listing Organization Qualifications: An organization recognized by OSHA as a Nationally Recognized Testing Laboratory (NRTL) and acceptable to authorities having jurisdiction.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Receive, inspect, handle, and store products in accordance with manufacturer's instructions.

PART 2 PRODUCTS

2.01 BOXES

- A. General Requirements:
 - 1. Do not use boxes and associated accessories for applications other than as permitted by NFPA 70 and product listing.
 - 2. Provide all boxes, fittings, supports, and accessories required for a complete raceway system and to accommodate devices and equipment to be installed.
 - 3. Provide products listed, classified, and labeled as suitable for the purpose intended.
 - 4. Where box size is not indicated, size to comply with NFPA 70 but not less than applicable minimum size requirements specified.
 - 5. Provide grounding terminals within boxes where equipment grounding conductors terminate.
- B. Outlet and Device Boxes Up to 100 cubic inches, Including Those Used as Junction and Pull Boxes:
 - 1. Use sheet-steel boxes for dry locations unless otherwise indicated or required.
 - 2. Use cast iron boxes or cast aluminum boxes for damp or wet locations unless otherwise indicated or required; furnish with compatible weatherproof gasketed covers.
 - 3. Use suitable concrete type boxes where flush-mounted in concrete.
 - 4. Use suitable masonry type boxes where flush-mounted in masonry walls.
 - 5. Use raised covers suitable for the type of wall construction and device configuration where required.
 - 6. Use shallow boxes where required by the type of wall construction.
 - 7. Do not use "through-wall" boxes designed for access from both sides of wall.
 - 8. Sheet-Steel Boxes: Comply with NEMA OS 1, and list and label as complying with UL 514A.
 - 9. Cast Metal Boxes: Comply with NEMA FB 1, and list and label as complying with UL 514A; furnish with threaded hubs.
 - 10. Boxes for Supporting Luminaires and Ceiling Fans: Listed as suitable for the type and weight of load to be supported; furnished with fixture stud to accommodate mounting of luminaire where required.
- C. Cabinets and Enclosures, Including Junction and Pull Boxes Larger Than 100 cubic inches:
 - 1. Comply with NEMA EN 10250, and list and label as complying with UL 50 and UL 50E, or UL 508A.
 - 2. NEMA EN 10250 Environment Type, Unless Otherwise Indicated:
 - 3. Junction and Pull Boxes Larger Than 100 cubic inches:
 - a. Provide screw-cover or hinged-cover enclosures unless otherwise indicated.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field measurements are as indicated.
- B. Verify that mounting surfaces are ready to receive boxes.
- C. Verify that conditions are satisfactory for installation prior to starting work.

3.02 INSTALLATION

- A. Install products in accordance with manufacturer's instructions.
- B. Install boxes in accordance with NECA 1 (general workmanship) and, where applicable, NECA 130, including mounting heights specified in those standards where mounting heights are not indicated.
- C. Arrange equipment to provide minimum clearances in accordance with manufacturer's instructions and NFPA 70.
- D. Unless otherwise indicated, provide separate boxes for line voltage and low voltage systems.
- E. Box Supports:
 - 1. Secure and support boxes in accordance with NFPA 70 and Section 260529 using suitable supports and methods approved by the authority having jurisdiction.
 - 2. Provide independent support from building structure except for cast metal boxes (other than boxes used for fixture support) supported by threaded conduit connections in accordance with NFPA 70. Do not provide support from piping, ductwork, or other systems.
- F. Install boxes plumb and level.
- G. Install boxes as required to preserve insulation integrity.
- H. Install permanent barrier between ganged wiring devices when voltage between adjacent devices exceeds 300 V.
- I. Install firestopping to preserve fire resistance rating of partitions and other elements, using materials and methods specified in Section 078400.
- J. Close unused box openings.
- K. Install blank wall plates on junction boxes and on outlet boxes with no devices or equipment installed or designated for future use.
- L. Identify boxes in accordance with Section 260553.

3.03 CLEANING

- A. Clean interior of boxes to remove dirt, debris, plaster and other foreign material.

3.04 PROTECTION

- A. Immediately after installation, protect boxes from entry of moisture and foreign material until ready for installation of conductors.

END OF SECTION 260533.16

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SECTION 260553
IDENTIFICATION FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Electrical identification requirements.
- B. Identification nameplates and labels.
- C. Underground warning tape.
- D. Warning signs and labels.

1.02 RELATED REQUIREMENTS

- A. Section 260519 - Low-Voltage Electrical Power Conductors and Cables: Color coding for power conductors and cables 600 V and less; vinyl color coding electrical tape.

1.03 REFERENCE STANDARDS

- A. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- B. UL 969 - Marking and Labeling Systems; Current Edition, Including All Revisions.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordination:
 - 1. Verify final designations for equipment, systems, and components to be identified prior to fabrication of identification products.
- B. Sequencing:
 - 1. Do not conceal items to be identified, in locations such as above suspended ceilings, until identification products have been installed.
 - 2. Do not install identification products until final surface finishes and painting are complete.

1.05 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittals procedures.
- B. Product Data: Provide manufacturer's standard catalog pages and data sheets for each product.
- C. Manufacturer's Instructions: Indicate application conditions and limitations of use stipulated by product testing agency. Include instructions for storage, handling, protection, examination, preparation and installation of product.

1.06 QUALITY ASSURANCE

- A. Comply with requirements of NFPA 70.

1.07 FIELD CONDITIONS

- A. Do not install adhesive products when ambient temperature is lower than recommended by manufacturer.

PART 2 PRODUCTS

2.01 IDENTIFICATION REQUIREMENTS

- A. Identification for Equipment:
 - 1. Use identification nameplate to identify each piece of electrical distribution and control equipment and associated sections, compartments, and components.
- B. Identification for Conductors and Cables:
 - 1. Color Coding for Power Conductors 600 V and Less: Comply with Section 260519.
 - 2. Use identification nameplate or identification label to identify color code for ungrounded and grounded power conductors inside door or enclosure at each piece of feeder or

branch-circuit distribution equipment when premises has feeders or branch circuits served by more than one nominal voltage system.

2.02 IDENTIFICATION NAMEPLATES AND LABELS

- A. Identification Nameplates:
 - 1. Materials:
 - a. Indoor Clean, Dry Locations: Use plastic nameplates.
 - b. Outdoor Locations: Use plastic, stainless steel, or aluminum nameplates suitable for exterior use.
 - 2. Plastic Nameplates: Two-layer or three-layer laminated acrylic or electrically non-conductive phenolic with beveled edges; minimum thickness of 1/16 inch; engraved text.
 - 3. Stainless Steel Nameplates: Minimum thickness of 1/32 inch; engraved or laser-etched text.
 - 4. Aluminum Nameplates: Anodized; minimum thickness of 1/32 inch; engraved or laser-etched text.
 - 5. Mounting Holes for Mechanical Fasteners: Two, centered on sides for sizes up to 1 inch high; Four, located at corners for larger sizes.
- B. Identification Labels:
 - 1. Materials: Use self-adhesive laminated plastic labels; UV, chemical, water, heat, and abrasion resistant.
 - 2. Text: Use factory pre-printed or machine-printed text. Do not use handwritten text unless otherwise indicated.

2.03 UNDERGROUND WARNING TAPE

- A. Materials: Use foil-backed detectable type polyethylene tape suitable for direct burial, unless otherwise indicated.
- B. Foil-backed Detectable Type Tape: 3 inches wide, with minimum thickness of 5 mil, unless otherwise required for proper detection.
- C. Legend: Type of service, continuously repeated over full length of tape.
- D. Color:

2.04 WARNING SIGNS AND LABELS

- A. Comply with ANSI Z535.2 or ANSI Z535.4 as applicable.
- B. Warning Signs:
 - 1. Materials:
 - 2. Minimum Size: 7 by 10 inches unless otherwise indicated.
- C. Warning Labels:
 - 1. Materials: Use factory pre-printed or machine-printed self-adhesive polyester or self-adhesive vinyl labels; UV, chemical, water, heat, and abrasion resistant; produced using materials recognized to UL 969.
 - 2. Machine-Printed Labels: Use thermal transfer process printing machines and accessories recommended by label manufacturer.
 - 3. Minimum Size: 2 by 4 inches unless otherwise indicated.

PART 3 EXECUTION

3.01 PREPARATION

- A. Clean surfaces to receive adhesive products according to manufacturer's instructions.

3.02 INSTALLATION

- A. Install products in accordance with manufacturer's instructions.
- B. Install identification products to be plainly visible for examination, adjustment, servicing, and maintenance. Unless otherwise indicated, locate products as follows:

1. Surface-Mounted Equipment: Enclosure front.
 2. Flush-Mounted Equipment: Inside of equipment door.
 3. Free-Standing Equipment: Enclosure front; also enclosure rear for equipment with rear access.
 4. Elevated Equipment: Legible from the floor or working platform.
 5. Interior Components: Legible from the point of access.
 6. Conductors and Cables: Legible from the point of access.
- C. Install identification products centered, level, and parallel with lines of item being identified.
- D. Secure nameplates to exterior surfaces of enclosures using stainless steel screws and to interior surfaces using self-adhesive backing or epoxy cement.
- E. Install self-adhesive labels and markers to achieve maximum adhesion, with no bubbles or wrinkles and edges properly sealed.
- F. Install underground warning tape above buried lines with one tape per trench at 3 inches below finished grade.

3.03 FIELD QUALITY CONTROL

- A. See Section 014000 - Quality Requirements, for additional requirements.
- B. Replace self-adhesive labels and markers that exhibit bubbles, wrinkles, curling or other signs of improper adhesion.

END OF SECTION 260553

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**SECTION 262816.16
ENCLOSED SWITCHES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Enclosed safety switches.

1.02 RELATED REQUIREMENTS

- A. Section 260529 - Hangers and Supports for Electrical Systems.
- B. Section 260553 - Identification for Electrical Systems: Identification products and requirements.

1.03 REFERENCE STANDARDS

- A. NECA 1 - Standard for Good Workmanship in Electrical Construction; 2023.
- B. NEMA EN 10250 - Enclosures for Electrical Equipment (1000 Volts Maximum); 2024.
- C. NEMA BS 31047 - Heavy Duty Enclosed and Dead-Front Switches (600 Volts Maximum); 2013 (Reaffirmed 2023).
- D. NETA ATS - Standard for Acceptance Testing Specifications for Electrical Power Equipment And Systems; 2025.
- E. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- F. UL 50 - Enclosures for Electrical Equipment, Non-Environmental Considerations; Current Edition, Including All Revisions.
- G. UL 50E - Enclosures for Electrical Equipment, Environmental Considerations; Current Edition, Including All Revisions.
- H. UL 98 - Enclosed and Dead-Front Switches; Current Edition, Including All Revisions.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordination:
 - 1. Coordinate the work with other trades. Avoid placement of ductwork, piping, equipment, or other potential obstructions within the dedicated equipment spaces and within working clearances for electrical equipment required by NFPA 70.
 - 2. Coordinate arrangement of electrical equipment with the dimensions and clearance requirements of the actual equipment to be installed.
 - 3. Verify with manufacturer that conductor terminations are suitable for use with the conductors to be installed.
 - 4. Notify Engineer of any conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.

1.05 SUBMITTALS

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide manufacturer's standard catalog pages and data sheets for enclosed switches and other installed components and accessories.
- C. Manufacturer's equipment seismic qualification certification.
- D. Field Quality Control Test Reports.
- E. Manufacturer's Installation Instructions: Indicate application conditions and limitations of use stipulated by product testing agency. Include instructions for storage, handling, protection, examination, preparation, installation, and starting of product.
- F. Project Record Documents: Record actual locations of enclosed switches.
- G. Maintenance Data: Include information on replacement parts and recommended maintenance procedures and intervals.

1.06 QUALITY ASSURANCE

- A. Comply with requirements of NFPA 70.
- B. Maintain at the project site a copy of each referenced document that prescribes execution requirements.
- C. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.
- D. Product Listing Organization Qualifications: An organization recognized by OSHA as a Nationally Recognized Testing Laboratory (NRTL) and acceptable to authorities having jurisdiction.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Store in a clean, dry space. Maintain factory wrapping or provide an additional heavy canvas or heavy plastic cover to protect units from dirt, water, construction debris, and traffic.
- B. Handle carefully in accordance with manufacturer's written instructions to avoid damage to enclosed switch internal components, enclosure, and finish.

1.08 FIELD CONDITIONS

- A. Maintain ambient temperature between -22 degrees F and 104 degrees F during and after installation of enclosed switches.

PART 2 PRODUCTS

2.01 ENCLOSED SAFETY SWITCHES

- A. Description: Quick-make, quick-break enclosed safety switches listed and labeled as complying with UL 98; heavy duty; ratings, configurations, and features as indicated on the drawings.
- B. Provide products listed, classified, and labeled as suitable for the purpose intended.
- C. Unless otherwise indicated, provide products suitable for continuous operation under the following service conditions:
 - 1. Altitude: Less than 6,600 feet.
 - 2. Ambient Temperature: Between -22 degrees F and 104 degrees F.
- D. Horsepower Rating: Suitable for connected load.
- E. Voltage Rating: Suitable for circuit voltage.
- F. Provide with switch blade contact position that is visible when the cover is open.
- G. Conductor Terminations: Suitable for use with the conductors to be installed.
- H. Provide solidly bonded equipment ground bus in each enclosed safety switch, with a suitable lug for terminating each equipment grounding conductor.
- I. Enclosures: Comply with NEMA EN 10250, and list and label as complying with UL 50 and UL 50E.
 - 1. Environment Type per NEMA EN 10250: Unless otherwise indicated, as specified for the following installation locations:
 - a. Indoor Clean, Dry Locations: Type 1.
 - b. Outdoor Locations: Type 3R.
- J. Provide safety interlock to prevent opening the cover with the switch in the ON position with capability of overriding interlock for testing purposes.
- K. Heavy Duty Switches:
 - 1. Comply with NEMA BS 31047.
 - 2. Conductor Terminations:
 - a. Provide mechanical lugs unless otherwise indicated.
 - b. Lug Material: Copper, suitable for terminating copper conductors only.

3. Provide externally operable handle with means for locking in the OFF position, capable of accepting three padlocks.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field measurements are as indicated.
- B. Verify that the ratings of the enclosed switches are consistent with the indicated requirements.
- C. Verify that mounting surfaces are ready to receive enclosed safety switches.
- D. Verify that conditions are satisfactory for installation prior to starting work.

3.02 INSTALLATION

- A. Install products in accordance with manufacturer's instructions.
- B. Perform work in accordance with NECA 1 (general workmanship).
- C. Arrange equipment to provide minimum clearances in accordance with manufacturer's instructions and NFPA 70.
- D. Provide required support and attachment in accordance with Section 260529.
- E. Install enclosed switches plumb.
- F. Except where indicated to be mounted adjacent to the equipment they supply, mount enclosed switches such that the highest position of the operating handle does not exceed 79 inches above the floor or working platform.
- G. Identify enclosed switches in accordance with Section 260553.

3.03 FIELD QUALITY CONTROL

- A. See Section 014000 - Quality Requirements, for additional requirements.
- B. Inspect and test in accordance with NETA ATS, except Section 4.
- C. Perform inspections and tests listed in NETA ATS, Section 7.5.1.1.
- D. Correct deficiencies and replace damaged or defective enclosed safety switches or associated components.

3.04 ADJUSTING

- A. Adjust tightness of mechanical and electrical connections to manufacturer's recommended torque settings.

3.05 CLEANING

- A. Clean dirt and debris from switch enclosures and components according to manufacturer's instructions.
- B. Repair scratched or marred exterior surfaces to match original factory finish.

END OF SECTION 262816.16

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**SECTION 311000
SITE CLEARING**

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of contract, including General and Supplementary Conditions and Division 01 specification Sections apply to the work of this Section.

1.02 SECTION INCLUDES

- A. Clearing and grubbing.
- B. Selective removal and trimming.
- C. Earth stripping and stockpiling.
- D. Repair and restoration.
- E. Debris removal.

1.03 RELATED REQUIREMENTS

- A. Section 312300 - Earthwork:: Fill material for and filling of filling holes, pits, and excavations generated as a result of removal operations.

1.04 REFERENCE STANDARDS

- A. 29 CFR 1910.266 - Logging Operations; Current Edition.
- B. ANSI A300 Part 1 - American National Standard for Tree Care Operations - Tree, Shrub, and Other Woody Plant Management - Standard Practices (Pruning); 2017.
- C. ANSI A300 Part 6 - Tree, Shrub, and Other Woody Plant Management--Standard Practices (Planting and Transplanting); 2012 (Reapproved 2018).
- D. ANSI Z133 - American National Standard for Arboricultural Operations - Safety Requirements; 2017.

1.05 SUBMITTALS

- A. Site Plan: Showing vegetation removal limits and areas for temporary construction and field offices.
 - 1. Indicate vegetation removal limits.
 - 2. Indicate areas for temporary construction and field offices.
- B. Clearing Firm Qualification Statement: Documentation of specialized experience.
- C. Photographs: Photographic documentation of existing vegetation.

1.06 QUALITY ASSURANCE

- A. Clearing Firm: Company specializing in the type of work required.

1.07 FIELD CONDITIONS

- A. Ambient Conditions: Terminate work during hazardous environmental conditions according to 29 CFR 1910.266.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Sedimentation Barrier: See Section 015713 - Temporary Erosion and Sediment Control.
- B. Tree Wound Compound: Application capable of sealing vegetation wounds and grafts.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Identify potential runoff areas.

- B. Identify potential dust sources.
- C. Identify preexisting debris, junk, and trash on-site.
- D. Protect remaining trees and shrubs from damage and maintain vegetation. Employ a licensed arborist to repair tree and shrub damage. Restore damaged vegetation. Replace damaged trees that cannot be restored to full growth, as determined by arborist.
- E. Remove obstructions, trees, shrubs, grass, and other vegetation to permit installation of new construction. Removal includes digging out stumps and obstructions and grubbing roots.
- F. Strip topsoil. Stockpile topsoil that will be reused in the Work.
- G. Remove existing above- and below-grade improvements as indicated and as necessary to facilitate new construction.
- H. Remove slabs, paving, curbs, gutters, and aggregate base as indicated.
 - 1. Neatly saw-cut length of existing pavement to remain before removing existing pavement.
- I. In areas not to be further excavated, fill depressions resulting from site clearing. Place and compact satisfactory soil materials in 8-inch-thick layers to density of surrounding original ground.
- J. Dispose of waste materials, including trash, debris, and excess topsoil, off Owner's property. Burning waste materials on-site is not permitted.
 - 1. Separate recyclable materials produced during site clearing from other nonrecyclable materials. Store or stockpile without intermixing with other materials and transport them to recycling facilities.

3.02 PREPARATION

- A. Protect existing utilities to remain from damage.
- B. Do not disrupt public utilities without permit from authority having jurisdiction.
- C. Protect existing structures and other elements that are to remain.
- D. Install sedimentation barrier according to Section 015713 - Temporary Erosion and Sediment Control.
- E. Develop dust remediation controls and methods. Do not use water if that results in ice, flooding, sedimentation of public waterways or storm sewers, or other pollution.
- F. Remove preexisting debris, junk, and trash on-site.

3.03 CLEARING AND GRUBBING

- A. Scope: Remove trees, shrubs, brush, and stumps in areas to be covered by heating oil storage tank pad, paving, and planting beds.
- B. Clear site after relocating vegetation in accordance with ANSI A300 Part 6.
- C. Do not remove or damage vegetation beyond the limits indicated on Drawings.
- D. In areas where vegetation must be removed but no construction will occur other than pervious paving, remove vegetation with minimum subsoil disturbance.
- E. Grubbing: Remove stumps, roots, buried timber, and other vegetation minimum depth 12 inches (30 cm) from ground. Remove rocks minimum depth 6 inches (15 cm) from ground.

3.04 SELECTIVE REMOVAL AND TRIMMING

- A. Selective Removal: Individual tree and shrub identified for removal as indicated on drawings according to 29 CFR 1910.266.
- B. Selective Trimming: Individual limbs and branches cut back according to ANSI A300 Part 1 identified for removal as indicated on drawings. Follow recommendations of ANSI Z133 and best local practices for species involved.
 - 1. Prune dead branches and balance overall appearance.

3.05 EARTH STRIPPING AND STOCKPILING

- A. Stripping:
 - 1. Remove topsoil within identified area as indicated on drawings.
- B. Stockpiling:
 - 1. Place topsoil in identified areas as indicated on drawings:
 - a. Pile depth not to exceed 8 feet.

3.06 REMOVED VEGETATION PROCESSING

- A. Do not burn, bury, landfill, or leave on-site.
- B. Trees: Sell if marketable.
- C. Chip, grind, crush, or shred vegetation for mulching, composting, or other purposes; give preference to on-site uses.

3.07 REPAIR AND RESTORATION

- A. Remaining Existing Facilities, Utilities, and Site Features: If damaged due to this work, repair or replace to original condition.
- B. Vegetation: Replace damaged or destroyed vegetation identified to remain as indicated on drawings at no cost to Owner:
 - 1. Outside removal limits.
 - 2. Inside protection limits.
- C. Apply tree wound compound according to manufacturer's recommendations.

3.08 DEBRIS REMOVAL

- A. Remove debris, junk, and trash from site.
- B. Leave site in clean condition, ready for subsequent work.
- C. Clean up spillage and windblown debris from public and private lands.

3.09 CLEANING

- A. Remove unused stockpiled subsoil. Grade stockpile area to prevent standing water.
- B. Leave site clean and ready to receive work.

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**SECTION 312300
EARTHWORK**

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of contract, including General and Supplementary Conditions and Division 01 specification Sections apply to the work of this Section.

1.02 SECTION INCLUDES

- A. Rough grading the site for improvements.
- B. Excavating for slabs-on-grade, paving, and site structures.
- C. Filling, backfilling, and compacting for slabs-on-grade, paving, and site structures.
- D. Trenching for utilities outside the building to mechanical sustems.
- E. Backfilling and compacting for utilities outside the building to mechanical systems.
- F. Disposal of unsuitable material.
- G. Disposal of surplus suitable material, if required.

1.03 RELATED REQUIREMENTS

- A. Section 311000 - Site Clearing.
- B. Section 329200 - Turf and Grasses: Finish ground cover.

1.04 DEFINITIONS

- A. Backfill: Soil material or controlled low-strength material used to fill an excavation.
 - 1. Initial Backfill: Backfill placed beside and over pipe in a trench, including haunches to support sides of pipe.
 - 2. Final Backfill: Backfill placed over initial backfill to fill a trench.
- B. Base Course: Aggregate layer placed between the subbase course and pavement.
- C. Bedding Course: Aggregate layer placed over the excavated subgrade in a trench before laying pipe.
- D. Borrow Soil: Satisfactory soil imported from off-site for use as fill or backfill.
- E. Excavation: Removal of material encountered above subgrade elevations and to lines and dimensions indicated.
 - 1. Authorized Additional Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions as directed by Engineer. Authorized additional excavation and replacement material will be paid for according to Contract provisions changes in the Work.
 - 2. Bulk Excavation: Excavation more than 10 feet (3 m) in width and more than 30 feet (9 m) in length.
 - 3. Unauthorized Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions without direction by Engineer. Unauthorized excavation, as well as remedial work directed by Engineer, shall be without additional compensation.
- F. Fill: Soil materials used to raise existing grades.
- G. Finish Grade Elevations: Indicated on Drawings.
- H. Rock: Rock in definite ledge formation; boulders, or the portion of boulders; and unknown masonry or concrete structures 1 cubic yard or more in volume.
- I. Rock in Trenches: Rock in definite ledge formation; boulders, or the portion of boulders; and unknown masonry or concrete structures 1/2 cubic yard or more in volume.

- J. Structures: Buildings, footings, foundations, retaining walls, slabs, tanks, curbs, mechanical and electrical appurtenances, or other man-made stationary features constructed above or below the ground surface.
- K. Subbase Course: Aggregate layer placed between the subgrade and base course for hot-mix asphalt pavement, or aggregate layer placed between the subgrade and a cement concrete pavement or a cement concrete or hot-mix asphalt walk.
- L. Subgrade: Uppermost surface of an excavation or the top surface of a fill or backfill immediately below subbase, drainage fill, drainage course, or topsoil materials.
- M. Subgrade Elevations: Indicated on Drawings.
- N. Utilities: On-site underground pipes, conduits, ducts, and cables, as well as underground services within buildings.

1.05 REFERENCE STANDARDS

- A. ASTM D1556/D1556M - Standard Test Method for Density and Unit Weight of Soil in Place by Sand-Cone Method; 2024.
- B. ASTM D1557 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³ (2,700 kN-m/m³)); 2012 (Reapproved 2021).
- C. ASTM D2167 - Standard Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method; 2015.
- D. ASTM D2487 - Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System); 2017, with Editorial Revision (2020).
- E. ASTM D4491/D4491M - Standard Test Methods for Water Permeability of Geotextiles by Permittivity; 2022.
- F. ASTM D4533/D4533M - Standard Test Method for Trapezoid Tearing Strength of Geotextiles; 2015 (Reapproved 2023).
- G. ASTM D4632/D4632M - Standard Test Method for Grab Breaking Load and Elongation of Geotextiles; 2015a (Reapproved 2023).
- H. ASTM D4751 - Standard Test Methods for Determining Apparent Opening Size of a Geotextile; 2021a.
- I. ASTM D4759 - Standard Practice for Determining the Specification Conformance of Geosynthetics; 2002.
- J. ASTM D4833/D4833M - Standard Test Method for Index Puncture Resistance of Geomembranes and Related Products; 2007 (Reapproved 2020).
- K. ASTM D6938 - Standard Test Methods for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth); 2023.
- L. Standard Specifications - Form 819 - State of Connecticut Department of Transportation Standard Specifications for Roads, Bridges, Facilities and Incidental Construction; 2024.

1.06 SUBMITTALS

- A. Material Test Reports - Physical: From a qualified testing agency indicating and interpreting test results for compliance of the following with requirements indicated. Prepare separate reports for each type and application of material.
 - 1. Classification according to ASTM D2487.
 - 2. Laboratory compaction curve according to ASTM D1557.
 - 3. Sieve analysis according to ASTM C136 for the gradation of coarse aggregates.
 - 4. Washed sieved analysis according to ASTM C117 and ASTM C136 for soil and processed materials.
 - 5. Classification, sieve analysis and laboratory compaction curve for on-site material, in accordance with the above requirements, when requested by the Engineer.

- B. Material Test Reports - Chemical Analysis:
1. Obtain one composite sample for every 500 cu yd of soil/material with at least three samples for each soil/material type from each borrow source location. Analyze each for pesticides (EPA Method 8081), Chlorinated Herbicides (EPA Method 8151), Polyaromatic Hydrocarbons (EPA Method 8270), Total Petroleum Hydrocarbons (CTETPH method), Total RCRA 8 Metals (EPA Method 6010 / 7421 / 7470), Volatile Organic Compounds (EPA Method 8260), and Polychlorinated Biphenyls (EPA Method 8082). Based on the results of this testing, additional Synthetic Precipitation Leaching Procedure (SPLP) or Toxicity Characteristic Leaching Procedure (TCLP) testing may be required at the discretion of the Engineer. Owner reserves the right to reject material based on the results of this testing.
 2. Satisfactory Soil/Material:
 - a. Not to exceed laboratory detection limits for concentrations of Pesticides, Chlorinated Herbicides, Polyaromatic Hydrocarbons, Total Petroleum Hydrocarbons, Volatile Organic Compounds, and Polychlorinated Biphenyls.
 - b. Not to exceed naturally occurring background levels for concentrations of RCRA-8 Metals in native soils on site.
 - c. In no case to exceed any GA pollutant mobility criteria (GA PMC) or residential direct exposure criteria (RES DEC) established in Sections 22a-133k-1 through 22a-133k-3 of the regulations of Connecticut state agencies.
- C. Soil/Material Origin: Provide a description for each originating off-site location or project from which imported soil/material is obtained, including known historical activities occurring on the site, and any possible releases that have occurred.
1. The following are not acceptable:
 - a. Soils/materials originating from sites subject to any Federal or State remediation program.
 - b. Soils/materials that have undergone any treatment process for one or more chemical constituents listed within the CT RSRs.
- D. Product Data: For each type of the following manufactured products required:
1. Geotextiles.
 2. Detectable warning tapes.
- E. Project Record Documents: Accurately record actual locations of utilities remaining by horizontal dimensions, elevations or inverts, and slope gradients.
- F. Preexcavation Photographs or Videotape: Show existing conditions of adjoining construction and site improvements, including finish surfaces, that might be misconstrued as damage caused by earth moving operations. Submit before earth moving begins.

1.07 QUALITY ASSURANCE

- A. Geotechnical Testing Agency Qualifications: Qualified according to ASTM E329 and ASTM D3740 for testing indicated.

1.08 PROJECT CONDITIONS

- A. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during earth moving operations.
1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
 2. Provide alternate routes around closed or obstructed traffic ways if required by Owner or authorities having jurisdiction.
- B. Improvements on Adjoining Property: Authority for performing earth moving indicated on property adjoining Owner's property will be obtained by Owner before award of Contract.
1. Do not proceed with work on adjoining property until directed by Engineer.

- C. Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted in writing by Engineer and then only after arranging to provide temporary utility services according to requirements indicated:
 - 1. Notify Engineer not less than two days in advance of proposed utility interruptions.
 - 2. Do not proceed with utility interruptions without Engineer's written permission.
 - 3. Contact "Call Before You Dig" at 1-800-922-4455 before excavating. Proceed with excavation only after utility locator service completes marking of utility locations.
- D. Demolish and completely remove from site existing underground utilities indicated to be removed. Coordinate with utility companies to shut off services if lines are active.
- E. Do not commence earth moving operations until temporary erosion and sedimentation control measures are in place.

1.09 DELIVERY, STORAGE, AND HANDLING

- A. When necessary, store materials on site in advance of need.
- B. Locate stockpiles where designated.
 - 1. Separate differing materials with dividers or stockpile separately to prevent intermixing.
 - 2. Prevent contamination.
 - 3. Protect stockpiles from erosion and deterioration of materials.

PART 2 PRODUCTS

2.01 SOIL MATERIALS - GENERAL

- A. Soil materials, whether from sources on or off site must be approved by Owner's geotechnical engineer as suitable for intended use.

2.02 SOIL MATERIALS

- A. General: Provide borrow soil materials when sufficient satisfactory soil materials are not available from excavations free from foreign or recycled materials (glass, clinker, asphalt, and concrete), and not from a hydraulically dredged borrow source.
- B. Satisfactory Soils: Soil Classification Groups GW, GP, GM, SW, SP, and SM according to ASTM D2487 or a combination of these groups; free of rock or gravel larger than 3 inches in any dimension, debris, waste, frozen materials, vegetation, and other deleterious matter.
- C. Unsatisfactory Soils: Soil Classification Groups GC, SC, CL, ML, OL, CH, MH, OH, and PT according to ASTM D2487, or a combination of these groups.
- D. Backfill and Fill: Satisfactory soil materials.
- E. Granular Fill: Broken or crushed stone gravel, bank or crushed gravel or a mixture thereof; Standard Specifications - Form 819, Sections M.02.01 and M.02.06, Grading "A".
- F. Processed Aggregate Base: Standard Specifications - Form 819, Section M.05.01.
- G. Stone Materials: Refer to Standard Specifications - Form 819, Sections M.01.01, M.01.02 and M.01.03:
 - 1. 1-1/4 inch Stone: Standard Specifications - Form 819, Section M.01.02, No. 4.
 - 2. 3/4 inch Stone: Standard Specifications - Form 819, Section M.01.02, No. 6.
 - 3. 3/8 inch Stone: Standard Specifications - Form 819, Section M.01.02, No. 8.
- H. Pipe Bedding:
 - 1. Sand: Standard Specifications - Form 819, Section M.08.03-1.

2.03 GEOTEXTILES

- A. Filter Fabric: Nonwoven geotextile, specifically manufactured as a drainage geotextile; made from polyolefins, polyesters, or polyamides; and with the following minimum properties determined according to ASTM D4759 and referenced standard test methods:
 - 1. Minimum Grab Tensile Strength: 120 lbf; ASTM D4632/D4632M.

2. Minimum Tear Strength: 50 lbf; ASTM D4533/D4533M.
3. Minimum Puncture Resistance: 100 lbf; ASTM D4833/D4833M.
4. Minimum Water Flow Rate: 75 gpm per sq. ft.; ASTM D4491/D4491M.
5. Maximum Apparent Opening Size: No. 70; ASTM D4751.

2.04 ACCESSORIES

- A. Detectable Warning Tape: Acid- and alkali-resistant polyethylene film warning tape manufactured for marking and identifying underground utilities, minimum 6 inches wide and 4 mils thick, continuously in-scribed with a description of utility, with metallic core encased in a protective jacket for corrosion protection, detectable by metal detector when tape is buried up to 30 inches deep.
 1. Identifying Colors for Utilities:
 - a. Red: Electric.
 - b. Yellow: Gas, oil, steam, and dangerous materials.

2.05 SOURCE QUALITY CONTROL

- A. Where fill materials are specified by reference to a specific standard, test and analyze samples for compliance .
- B. If tests indicate materials do not meet specified requirements, change material and retest.
- C. Provide materials of each type from same source throughout the work.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that survey bench marks and intended elevations for the work are as indicated.

3.02 PREPARATION

- A. Identify required lines, levels, contours, and datum locations.
- B. Protect and maintain erosion and sediment controls during earth moving operations.
- C. Locate, identify, and protect from damage above- and below-grade utilities that remain.
- D. Protect site features to remain, including but not limited to bench marks, survey control points, existing structures, fences, sidewalks, paving, and curbs, from damage by grading equipment and vehicular traffic.
- E. Protect trees to remain by providing substantial fencing around entire tree at the outer tips of its branches; no grading is to be performed inside this line.
- F. Protect plants, lawns, rock outcroppings, and other features to remain as a portion of final landscaping.
- G. Protect subgrades and foundation soils from freezing temperatures and frost. Remove temporary protection before placing subsequent materials.

3.03 DEWATERING

- A. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding Project site and surrounding area.
- B. Protect subgrades from softening, undermining, washout, and damage by rain or water accumulation.
 1. Reroute surface water runoff away from excavated areas. Do not allow water to accumulate in excavations. Do not use excavated trenches as temporary drainage ditches.

3.04 ROUGH GRADING

- A. Do not remove wet subsoil, unless it is subsequently processed to obtain optimum moisture content.

- B. Benching Slopes: Horizontally bench existing slopes greater than 5:1 to key fill material to slope for firm bearing.
- C. Stability: Replace damaged or displaced subsoil to same requirements as for specified fill.

3.05 SOIL REMOVAL AND STOCKPILING

- A. Remove excavated material that is unsuitable for re-use from site.
- B. Stockpile excavated topsoil to be re-used on site; remove remainder from site.
- C. Stockpile excavated subsoil to be re-used on site; remove remainder from site.
- D. Stockpiles: Use areas designated on site; pile depth not to exceed 6 feet; protect from erosion.

3.06 EXPLOSIVES

- A. Use of explosives is not permitted.

3.07 EXCAVATING

- A. Classified Excavation: Excavate to subgrade elevations and classify material as earth and rock. Wherever rock to be excavated is encountered, expose the rock to such an extent that in the Owner's opinion the necessary measurements can be taken. Complete a survey, by a licensed land surveyor, indicating top of rock elevations at points of intersection on a rectilinear grid with lines spaced sufficiently close to show accurately the rock surface contours. At the Owner's option, an additional survey may be carried out by the Owner from a licensed surveyor. The Contract Sum will be adjusted for rock excavation according to unit prices included in the Contract Documents or negotiated in accordance with the General Conditions. Changes in the Contract Time may be authorized for rock excavation.
 - 1. Earth excavation includes excavating pavements and obstructions visible on surface; underground structures, utilities, and other items indicated to be removed; together with soil, boulders, and other materials not classified as rock or unauthorized excavation.
 - a. Intermittent drilling; blasting, if permitted; ram hammering; or ripping of material not classified as rock excavation is earth excavation.
 - 2. Rock excavation includes removal and disposal of rock. Remove rock to lines and subgrade elevations indicated to permit installation of permanent construction without exceeding the following dimensions:
 - a. 24 inches outside of concrete forms other than at footings.
 - b. 12 inches outside of concrete forms at footings.
 - c. 6 inches outside of minimum required dimensions of concrete cast against grade.
 - d. Outside dimensions of concrete walls indicated to be cast against rock without forms or exterior waterproofing treatments.
 - e. 6 inches beneath bottom of concrete slabs-on-grade.
 - f. 12 inches beneath pipe in trenches, and the greater of 24 inches wider than pipe or 42 inches wide.
- B. Excavate to accommodate construction operations.
- C. Do not interfere with 45 degree bearing splay of foundations.
- D. Hand trim excavations. Remove loose matter.
- E. Grade top perimeter of excavation to prevent surface water from draining into excavation.
- F. Excavate surfaces under walks and pavement to indicated lines, cross sections, elevations, and subgrades.
- G. Prepare excavated pavement areas prior to backfilling; scarify and proof roll subgrade surfaces to a depth of 6 inches to identify soft spots.
 - 1. Cut out soft areas of subgrade not capable of compaction in place. Backfill with granular fill.
 - 2. Moisture condition and re-compact subgrade to density equal to or greater than requirements for subsequent fill material, unless otherwise specified.

3. Until ready to fill, maintain excavations and prevent loose soil from falling into excavation.

3.08 TRENCHING

- A. Excavate trenches to indicated gradients, lines, depths, and elevations.
 1. Do not interfere with 45 degree bearing splay of foundations.
- B. Excavate trenches to uniform widths to provide the following clearance on each side of pipe or conduit. Excavate trench walls vertically from trench bottom to 12 inches higher than top of pipe or conduit unless otherwise indicated.
 1. Clearance: As indicated on Drawings.
- C. Trench Bottoms: Excavate trenches deeper than bottom of pipe and conduit elevations as indicated on the Drawings to allow for bedding course. Hand-excavate deeper for bells of pipe.
 1. Excavate trenches 6 inches deeper than elevation required in rock or other unyielding bearing material to allow for bedding course.
 2. Cut out soft areas of subgrade not capable of compaction in place. Backfill with pipe bedding.
- D. Compact subgrade to density equal to or greater than requirements for subsequent fill material.
- E. Until ready to backfill, maintain excavations and prevent loose soil from falling into excavation.
- F. Remove large stones and other hard matter that could damage piping or impede consistent backfilling or compaction.

3.09 BACKFILLING

- A. Backfill to contours and elevations indicated using satisfactory soils on subgrades free of mud, frost, snow, or ice.
- B. Employ a placement method that does not disturb or damage other work.
- C. Systematically fill to allow maximum time for natural settlement. Do not fill over porous, wet, frozen or spongy subgrade surfaces.
- D. Moisture Content: Maintain moisture content of fill and backfill materials, expressed as a percentage in relation to optimum moisture content, to attain required compaction density.
 1. Moisture content of backfill prior to and during compaction to be within plus or minus 2 percentage points dry of optimum and uniform throughout each layer.
- E. Fill Lift Thickness:
 1. Heavy, Self-Propelled Equipment: Place and compact materials in equal continuous layers not exceeding 9 to 12 inches loose depth.
 2. Hand-Guided Equipment: Place and compact material in equal continuous layers not exceeding 4 to 6 inches loose depth.
- F. Correct areas that are over-excavated.
 1. All Areas: Use granular fill, flush to required elevation, compacted to minimum 95 percent of maximum dry density.
- G. Compaction Density Unless Otherwise Specified or Indicated:
 1. Density measured according to ASTM D1557.
 2. Under Paving, Slabs-on-Grade, Underground Utilities, and Similar Construction: 95 percent of maximum dry density.
 3. At Other Locations: 90 percent of maximum dry density.
- H. Reshape and re-compact fills subjected to vehicular traffic.

3.10 BEDDING AND FILL AT SPECIFIC LOCATIONS

- A. General: Comply with local jurisdiction requirements for earthwork bedding and fill work in public rights-of-way.

3.11 FINISH GRADING

- A. Before Finish Grading:
 - 1. Verify building and trench backfilling have been inspected.
 - 2. Verify subgrade has been contoured and compacted.
- B. Remove debris, roots, branches, stones, in excess of 1 inch in size. Remove soil contaminated with petroleum products.
- C. In areas where vehicles or equipment have compacted soil, scarify surface to depth of 6 inches.
- D. Complete finish grading to elevations and slopes indicated. Uniformly grade areas to a smooth surface, free of irregular surface changes. Comply with compaction requirements.

3.12 REPAIR AND RESTORATION

- A. Existing Facilities, Utilities, and Site Features to Remain: If damaged due to this work, repair or replace to original condition.
- B. Trees to Remain: If damaged due to this work, trim broken branches and repair bark wounds; if root damage has occurred, obtain instructions from Engineer as to remedy.
- C. Other Existing Vegetation to Remain: If damaged due to this work, replace with vegetation of equivalent species and size.

3.13 FIELD QUALITY CONTROL

- A. Provide for visual inspection of load-bearing excavated surfaces before placement of foundations.
- B. Perform compaction density testing on compacted fill in accordance with ASTM D1556, ASTM D2167, or ASTM D6938.
- C. Evaluate results in relation to compaction curve determined by testing uncompacted material in accordance with ASTM D1557 ("modified Proctor").
- D. If tests indicate work does not meet specified requirements, remove work, replace and retest.
- E. Frequency of Tests:
 - 1. Conduct at least one test for each strata of soil on which site improvements will be placed, to verify required design bearing capacities.
 - 2. Conduct at least one field density test for each 200 cubic yard of backfill for trenches at each compacted backfill lift, and not less than one test for each 150 lineal feet of trench.
 - 3. Pavement Areas: At subgrade and at each compacted fill and backfill layer, at least one test for every 2000 sq. ft. (186 sq. m.) or less of paved area or building slab, but in no case fewer than three tests.
- F. Proof roll compacted fill at surfaces that will be under slabs-on-grade.

3.14 PROTECTION

- A. Prevent displacement of banks and keep loose soil from falling into excavation; maintain soil stability.
- B. Protect bottom of excavations and soil adjacent to and beneath foundation from freezing.

3.15 MAINTENANCE

- A. Protect newly graded areas from traffic and erosion. Keep free of trash and debris.
- B. Repair and re-establish grades in settled, eroded, and rutted areas to specified tolerance.
 - 1. Where completed compacted areas are disturbed by subsequent construction operations or adverse weather, scarify surface, re-shape, and compact to required density prior to further construction.
 - 2. Where settling is measurable or observable at excavated areas during general project warranty period, remove surface (pavement, lawn, or other finish), add backfill material,

compact, and replace surface treatment. Restore appearance, quality, and condition of surface or finish to match adjacent work, and eliminate evidence of restoration to greatest extent possible.

3.16 TOLERANCES

- A. Top Surface of Subgrade: Plus or minus 0.10 foot (1-3/16 inches) from required elevation.
- B. Base Course Thickness: Plus or minus 0.04 foot (1/2 inch).
- C. Top Surface of Base Course: Plus or minus 0.04 foot (1/2 inch).
- D. Top Surface of Finish Grade: Plus or minus 0.04 foot (1/2 inch).

3.17 CLEANING

- A. Remove surplus satisfactory soil and waste materials, including unsatisfactory soil, trash, and debris, and legally dispose of them off Owner's property.
- B. Leave site clean and raked, ready to receive landscaping.

END OF SECTION 312300

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**SECTION 321216
ASPHALT PAVING**

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of contract, including General and Supplementary Conditions and Division 01 specification Sections apply to the work of this Section.

1.02 SECTION INCLUDES

- A. Bituminous concrete paving.

1.03 RELATED REQUIREMENTS

- A. Section 312300 - Earthwork: Aggregate base course.
- B. Section 321313 - Concrete Paving: Concrete substrate.
- C. Section 321723.13 - Painted Pavement Markings: Pavement markings.

1.04 REFERENCE STANDARDS

- A. AASHTO M 140 - Standard Specification for Emulsified Asphalt.
- B. AASHTO M 208 - Standard Specification for Cationic Emulsified Asphalt.
- C. AI MS-2 - Asphalt Mix Design Methods; 2015.
- D. ASTM D2950/D2950M - Standard Test Method for Density of Bituminous Concrete in Place by Nuclear Methods; 2014.
- E. Standard Specifications - Form 819 - State of Connecticut Department of Transportation Standard Specifications for Roads, Bridges, Facilities and Incidental Construction; 2024.

1.05 SUBMITTALS

- A. Mix Design: Submit proposed mix design of each class of mix for review prior to commencement of work.
- B. Certificates: Submit two copies of material certificates signed by the material producer and Contractor, certifying that each material item complies with specified requirements.
 - 1. If requested, submit independent testing laboratory reports on aggregates and asphalt for sieve analysis, wear abrasion and other specified characteristics.
- C. Project Record Documents: Maintain record of time and date of placement, temperature and weather conditions at time of placement.

1.06 QUALITY ASSURANCE

- A. Manufacturer Qualifications: A paving-mix manufacturer registered with and approved by CT DOT.
- B. Obtain materials from same source throughout.

1.07 DELIVERY, STORAGE, AND PROTECTION

- A. Transport mixtures from mixing plant in trucks with tight, clean, non-sticking compartments. Provide covers to protect from weather and to prevent loss of heat when ambient temperature is below 50 degrees F.

1.08 FIELD CONDITIONS

- A. Do not place asphalt when ambient air or base surface temperature is less than 40 degrees F, or surface is wet or frozen.
 - 1. Exception: Ambient temperature must be above 50 degrees F for the final asphalt wearing surface.
- B. Place bitumen mixture when temperature is not more than 15 degrees F below bitumen supplier's bill of lading and not more than maximum specified temperature.

PART 2 PRODUCTS

2.01 PAVING ASSEMBLIES

- A. Provide pavement sections as indicated on Drawings.

2.02 MATERIALS

- A. Materials - General: Comply with Standard Specifications - Form 819, Sections M.04.
- B. Tack Coat:
 - 1. AASHTO M 140 grade RS-1 or RS-1H, anionic emulsified asphalt not diluted or AASHTO M 208 grade CRS-1, cationic emulsified asphalt, not diluted
 - 2. If ambient temperatures are 80 degrees Fahrenheit and rising, the following may be substituted: AASHTO M 140 grade SS-1 or SS-1H, anionic emulsified asphalt, not diluted or AASHTO M 208 grade CSS-1 or CSS-1H, cationic emulsified asphalt, not diluted
- C. Reclaimed Asphalt Pavement (RAP): Standard Specifications - Form 819, Section M.04.01-6

2.03 ASPHALT PAVING MIXES AND MIX DESIGN

- A. Use dry material to avoid foaming. Mix uniformly.
- B. Standard Bituminous Concrete Pavement: Dense, hot-laid, bituminous concrete plant mixes approved by authorities having jurisdiction and complying with the following requirements:
 - 1. Provide mixes with a history of satisfactory performance in geographical area where Project is located.
 - 2. Course Depth and Class: As indicated on Drawings.
 - 3. Minimum RAP content: 15%.
 - 4. Maximum RAP content: 20%.
- C. Submit proposed mix design of each class of mix for review prior to beginning of work.

2.04 SOURCE QUALITY CONTROL

- A. Test mix design and samples in accordance with AI MS-2.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that compacted base is dry and ready to support paving and imposed loads.
- B. Verify gradients and elevations of base are correct.

3.02 PREPARATION - BASE SOILS

- A. Coordinate compaction of soil base with Section 312300 - Earthwork.
- B. Proof roll areas to be paved with pneumatic tired equipment with a minimum axle load of 18 kips per axle. Where soft areas occur, remove loose materials and replace with base course aggregate compacted to level of subgrade.
- C. Verify accuracy of site grading will result in minimum specified base course and asphalt thicknesses. Identify necessary refinements and modifications which may be necessary for proper drainage.

3.03 PREPARATION - BASE COURSE

- A. Place and compact base course as specified.

3.04 PREPARATION - PAVEMENT

- A. Tack Coat:
 - 1. Immediately before application, pavement shall be cleaned by sweeping or another means acceptable to the Engineer.
 - 2. Apply tack coat on all existing underlying pavement surfaces and new pavement surfaces, where indicated on the Drawings, by a non-gravity pressurized spray system that results

in uniform overlapping coverage. Material shall not be heated in excess of 160 degrees Fahrenheit and shall not be further diluted.

- a. Non-milled surface: Application rate of 0.03 to 0.05 gal/sq yd
 - b. Milled surface: Application rate of 0.05 to 0.07 gal/sq yd
 - c. Areas where both milled and un-milled surfaces occur: Application rate of 0.03 to 0.05 gal/sq yd
- B. Coat surfaces of manhole and catch basin frames with oil to prevent bond with asphalt pavement. Do not tack coat these surfaces.

3.05 PLACING ASPHALT PAVEMENT

- A. Install Work in accordance with State of Connecticut Highways standards.
- B. Place asphalt within 24 hours of applying primer or tack coat.
- C. Do not locate seams on vehicle wheel lines parallel to the direction of traffic.
- D. Compact pavement by rolling to specified density. Do not displace or extrude pavement from position. Hand compact in areas inaccessible to rolling equipment.
- E. Perform rolling with consecutive passes to achieve even and smooth finish without roller marks.

3.06 CURBS

- A. Install extruded asphalt curbs of profile as shown on the Drawings.

3.07 PAVEMENT PATCHING

- A. Cut and fill with fresh, hot asphaltic concrete. Remove deficient areas for full depth of surface and base course.
- B. Cut sides vertically, perpendicular and parallel to direction of traffic for extent of failure.
- C. Compact and finish as specified.
- D. Patch test holes full depth of section and finish flush with adjoining work.
- E. Where patching is required in rights-of-way or on public property, patch as required by local jurisdiction, but not less than minimum requirements of this Section.

3.08 INSTALLATION - ACCESSORIES

- A. Pavement Marking Paint: Apply according to Section 321723.13 - Painted Pavement Markings.

3.09 TOLERANCES

- A. Flatness: Maximum variation of 1/4 inch measured with 10 foot straight edge.
- B. Compacted Thickness: Within 1/4 inch of specified or indicated thickness.
- C. Variation from True Elevation: Within 1/2 inch.

3.10 FIELD QUALITY CONTROL

- A. Include tests for compaction and thickness of entire pavement section and each course as installation progresses.
 - 1. Provide free access to concrete operations at project site and cooperate with appointed firm.
 - 2. In-Place Density: Perform in-place compacted pavement density testing according to ASTM D2950/D2950M.
 - 3. Complete one test for every 250 square yards or less of installed pavement, with no fewer than three test performed.
- B. Remove and replace or install additional hot-mix asphalt where test results or measurements indicate that it does not comply with specified requirements.

3.11 PROTECTION

- A. Immediately after placement, protect pavement from mechanical injury for 7 days or until surface temperature is less than 140 degrees F.

END OF SECTION 321216

**SECTION 321313
CONCRETE PAVING**

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of contract, including General and Supplementary Conditions and Division 01 specification Sections apply to the work of this Section.

1.02 SECTION INCLUDES

- A. Paving assemblies.
- B. Form materials.
- C. Reinforcement.
- D. Concrete materials.
- E. Concrete monitoring well manhole, utility bollard bases, and chain link fence posts.

1.03 RELATED REQUIREMENTS

- A. Section 312300 - Earthwork

1.04 REFERENCE STANDARDS

- A. ACI PRC-305 - Guide to Hot Weather Concreting; 2020.
- B. ACI PRC-306 - Guide to Cold Weather Concreting; 2016.
- C. ASTM C94/C94M - Standard Specification for Ready-Mixed Concrete; 2024.
- D. Standard Specifications - Form 819 - State of Connecticut Department of Transportation Standard Specifications for Roads, Bridges, Facilities and Incidental Construction; 2024.

1.05 SUBMITTALS

- A. Product Data: Provide data on joint filler, admixtures, and curing compound.
- B. Mix Designs: Submit proposed mix design for each class of concrete specified. Include proportions of ingredients, aggregate analysis, cement brand and type, slump, water/cement ratio, and strength test reports for 7 and 28 day strengths.
 - 1. Prepare in accordance with ACI 301.
 - 2. Provide specific aggregate analysis for recycled aggregates proposed for use in concrete mixes.
 - 3. Fly-Ash Content Submittal: If any fly ash or ground granulated blast furnace slag is used in mix designs to replace Portland cement, submit the total volume of concrete cast in place, mix design(s) used showing the quantity of portland cement replaced, reports showing successful cylinder testing, and temperature on day of pour if cold weather mix is used.

1.06 QUALITY ASSURANCE

- A. Installer Qualifications: Company specializing in performing work of the type specified and with minimum five years of documented experience.

1.07 FIELD CONDITIONS

- A. Maintain ambient temperature of 50 degrees F minimum.

PART 2 PRODUCTS

2.01 PAVING ASSEMBLIES

- A. Provide pavement sections as indicated on Drawings.

2.02 FORM MATERIALS

- A. Form Materials: Plywood, metal, metal-framed plywood, or other approved panel-type materials to provide full-depth, continuous, straight, and smooth exposed surfaces.
 - 1. Use flexible or uniformly curved forms for curves with a radius of 100 feet or less. Do not use notched and bent forms.
- B. Form-Release Agent: Commercially formulated form-release agent that will not bond with, stain, or adversely affect concrete surfaces and that will not impair subsequent treatments of concrete surfaces.

2.03 REINFORCEMENT

- A. Plain-Steel Welded Wire Reinforcement: Standard Specifications - Form 819, Section M.06.01.
- B. Reinforcing Bars (All Types): Standard Specifications - Form 819, Section M.06.01.
- C. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars, welded wire reinforcement, and dowels in place. Manufacture bar supports according to CRSI's "Manual of Standard Practice" from steel wire, plastic, or precast concrete of greater compressive strength than concrete specified, and as follows:
 - 1. Equip wire bar supports with sand plates or horizontal runners where base material will not support chair legs.

2.04 CONCRETE MATERIALS

- A. Obtain cementitious materials from same source throughout.
- B. Portland Cement: Standard Specifications - Form 819, Section M.03.01-3.
- C. Normal-Weight Aggregates:
 - 1. Coarse-Aggregate: Standard Specifications - Form 819, Section M.03.01-1.
 - 2. Fine Aggregate: Standard Specifications - Form 819, Section M.03.01-2.
- D. Water: Standard Specifications - Form 819, Section M.03.01-4.
- E. Air-Entraining Admixture: Standard Specifications - Form 819, Section M.03.01-5(a).
- F. Chemical Admixtures: Standard Specifications - Form 819, Section M.03.01-5(b).

2.05 ACCESSORIES

- A. Mats: Standard Specifications - Form 819, Section M.03.04-2.
- B. Liquid Membrane-Forming Compound: Standard Specifications - Form 819, Section M.03.04-3.
- C. White Polyethylene Sheeting: Standard Specifications - Form 819, Section M.03.04-4.
- D. Preformed Expansion Joint Fillers: Standard Specifications - Form 819, Section M.03.08.
- E. Pavement Marking Paint: Specified in Section 321723.13 - Painted Pavement Markings.

2.06 CONCRETE MIX DESIGN

- A. Concrete mixtures shall conform to Standard Specifications - Form 819, Section M.03.02.
- B. Prepare design mixtures, proportioned according to Standard Specifications - Form 819, Section M.03.02, for each type and strength of normal-weight concrete, and as determined by either laboratory trial mixtures or field experience.
 - 1. Use a qualified independent testing agency for preparing and reporting proposed concrete design mixtures for the trial batch method.
- C. Proportion mixtures to conform with Standard Specifications - Form 819, Section M.03.02-1 and as follows:
 - 1. 4,000 psi concrete: Standard Specifications - Form 819, Section M.03.02-1, Class "PCC04460".

2.07 MIXING

- A. Transit Mixers: Comply with ASTM C94/C94M.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify compacted subgrade is acceptable and ready to support paving and imposed loads.
- B. Verify gradients and elevations of base are correct.

3.02 SUBBASE

3.03 PREPARATION

- A. Moisten base to minimize absorption of water from fresh concrete.
- B. Coat surfaces of manhole and catch basin frames with oil to prevent bond with concrete pavement.

3.04 FORMING

- A. Place and secure forms to correct location, dimension, profile, and gradient.
- B. Assemble formwork to permit easy stripping and dismantling without damaging concrete.
- C. Place joint filler vertical in position, in straight lines. Secure to formwork during concrete placement.

3.05 REINFORCEMENT

- A. Place reinforcement as indicated.
- B. Interrupt reinforcement at expansion joints.

3.06 COLD AND HOT WEATHER CONCRETING

- A. Follow recommendations of ACI PRC-305 when concreting during hot weather.
- B. Follow recommendations of ACI PRC-306 when concreting during cold weather.
- C. Do not place concrete when base surface temperature is less than 40 degrees F, or surface is wet or frozen.

3.07 PLACING CONCRETE

- A. Place concrete in accordance with:
 - 1. Concrete Driveway Ramp: Standard Specifications - Form 819, Section 9.24.
- B. Do not place concrete when base surface is wet.
- C. Ensure reinforcement, inserts, embedded parts, formed joints and similar items are not disturbed during concrete placement.
- D. Place concrete continuously over the full width of the panel and between predetermined construction joints. Do not break or interrupt successive pours such that cold joints occur.
- E. Place concrete to pattern indicated.

3.08 JOINTS

- A. Place 1/2 inch wide expansion joints at maximum 30 foot intervals and to separate paving from vertical surfaces and other components and in pattern indicated.
 - 1. Form joints with joint filler extending from bottom of pavement to within 3/4 inch of finished surface.
 - 2. Secure to resist movement by wet concrete.
- B. Install joint sealant in all expansion joints in accordance with manufacturer's installation instructions.
- C. Provide sawn and tooled joints where indicated on Drawings.
 - 1. At spacing and layout indicated on Drawings.

- D. Saw cut contraction joints 3/16 inch wide at an optimum time after finishing. Cut 1/3 into depth of slab.
- E. Provide full control joints where indicated on Drawings.

3.09 FINISHING

- A. Vehicular Paving: Light broom, texture perpendicular to direction of travel.
- B. Place curing compound on exposed concrete surfaces immediately after finishing. Apply in accordance with manufacturer's instructions.

3.10 TOLERANCES

- A. Maximum Variation of Surface Flatness: 1/4 inch in 10 ft.
- B. Maximum Variation From True Position: 1/4 inch.

3.11 PROTECTION

- A. Immediately after placement, protect pavement from premature drying, excessive hot or cold temperatures, and mechanical injury.
- B. Do not permit pedestrian or vehicular traffic over pavement for 7 days minimum after finishing.

END OF SECTION 321313

**SECTION 321723.13
PAINTED PAVEMENT MARKINGS**

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SECTION INCLUDES

- A. Parking lot markings, including parking bays and no parking striping pattern.

1.03 RELATED REQUIREMENTS

- A. Section 321216 - Asphalt Paving.
- B. Section 321313 - Concrete Paving.

1.04 REFERENCE STANDARDS

- A. FHWA MUTCD - Manual on Uniform Traffic Control Devices; 2023.
- B. Standard Specifications - Form 819 - State of Connecticut Department of Transportation Standard Specifications for Roads, Bridges, Facilities and Incidental Construction; 2024.

1.05 SUBMITTALS

- A. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.
- B. Certificates: Submit for each batch of paint stating compliance with specified requirements.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.
- B. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

1.07 FIELD CONDITIONS

- A. Do not install products under environmental conditions outside manufacturer's absolute limits.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Waterborne Pavement Marking Paint:
 - 1. Standard Specifications - Form 819, Section M.07.20, drying time for no-pick-up of 15 minutes or less.
 - 2. Color: As indicated on Drawings or for roadway repair, match existing conditions.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify Engineer of unsatisfactory preparation before proceeding.

3.02 PREPARATION

- A. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- B. Clean surfaces thoroughly prior to installation.

1. Remove dust, dirt, and other granular surface deposits by sweeping, blowing with compressed air, rinsing with water, or a combination of these methods.
- C. Where oil or grease are present, scrub affected areas with several applications of trisodium phosphate solution or other approved detergent or degreaser, and rinse thoroughly after each application; after cleaning, seal oil-soaked areas with cut shellac to prevent bleeding through the new paint.
- D. Establish survey control points to determine locations and dimensions of markings; provide templates to control paint application by type and color at necessary intervals.

3.03 INSTALLATION

- A. Comply with the following:
 1. Standard Specifications - Form 819, Section 12.09, Painted Pavement Markings.
- B. Comply with FHWA MUTCD manual (<http://mutcd.fhwa.dot.gov>) for details not shown.
- C. Parking Lots: Apply parking space lines, entrance and exit arrows, painted curbs, and other markings indicated on drawings.
 1. Use hand application by pneumatic spray for application of paint in areas where a mobile paint applicator cannot be used.
- D. Symbols: Use a suitable template that will provide a pavement marking with true, sharp edges and ends, of the design and size indicated.

3.04 DRYING, PROTECTION, AND REPLACEMENT

- A. Protect newly painted markings so that paint is not picked up by tires, smeared, or tracked.
- B. Provide barricades, warning signs, and flags as necessary to prevent traffic crossing newly painted markings.
- C. Allow paint to dry at least the minimum time specified by the applicable paint standard and not less than that recommended by the manufacturer.
- D. Remove and replace markings that are applied at less than minimum material rates; deviate from true alignment; exceed length and width tolerances; or show light spots, smears, or other deficiencies or irregularities.
- E. Remove markings in manner to avoid damage to the surface to which the marking was applied, using carefully controlled sand blasting, approved grinding equipment, or other approved method.
- F. Replace removed markings at no additional cost to Owner.

END OF SECTION 321723.13

SECTION 323113
CHAIN LINK FENCES AND GATES

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SECTION INCLUDES

- A. Posts, rails, and frames.
- B. Wire fabric.
- C. Concrete.
- D. Manual gates with related hardware.
- E. Accessories.

1.03 RELATED REQUIREMENTS

- A. Section 321313 - Concrete Paving: Concrete anchorage for posts.

1.04 REFERENCE STANDARDS

- A. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products; 2017.
- B. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2023.
- C. ASTM A392 - Standard Specification for Zinc-Coated Steel Chain-Link Fence Fabric; 2011a (Reapproved 2022).
- D. ASTM F567 - Standard Practice for Installation of Chain-Link Fence; 2023.
- E. CLFMI CLF-FIG0111 - Field Inspection Guide; 2014.
- F. CLFMI CLF-SFR0111 - Security Fencing Recommendations; 2014.
- G. FS RR-F-191/1D - Fencing, Wire and Post Metal (Chain-Link Fence Fabric); 1990.

1.05 SUBMITTALS

- A. Product Data: Provide data on fabric, posts, accessories, fittings and hardware.
- B. Shop Drawings: Indicate plan layout, spacing of components, post foundation dimensions, hardware anchorage, and schedule of components. See CLFMI CLF-SFR0111 for planning and design recommendations.
- C. Manufacturer's Installation Instructions.
- D. Manufacturer's Qualification Statement.
- E. Fence Installer Qualification Statement.
- F. Project Record Documents: Accurately record actual locations of property perimeter posts relative to property lines.
- G. Field Inspection Records: Provide installation inspection records that include post settings, framework, fabric, barbed wire, fittings and accessories, gates, and workmanship.

1.06 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with not less than three years of documented experience.
- B. Fence Installer: Company with demonstrated successful experience installing similar projects and products, with not less than five years of documented experience.

PART 2 PRODUCTS

2.01 COMPONENTS

- A. Line Posts: 1.9 inch diameter.
- B. Corner and Terminal Posts: 2.38 inch diameter.
- C. Gate Posts: 3-1/2 inch diameter.
- D. Top and Brace Rail: 1.66 inch diameter, plain end, sleeve coupled.
- E. Fabric: 2 inch diamond mesh interwoven wire, 9 gauge, 0.1483 inch thick, top selvage knuckle end closed, bottom selvage knuckle end closed.
- F. Tension Wire: 6 gauge, 0.1920 inch thick steel, single strand.
- G. Tie Wire: Aluminum alloy steel wire.
- H. Gate Leaves: For gate leaves, more than 8 feet (2.44 m) wide, provide intermediate members to provide rigid construction, free from sag or twist. Attach fabric to the gate frame by method standard with the manufacturer except that welding will not be permitted.
- I. Gate Hardware and Accessories: Submit manufacturer's catalog data. Provide latches, hinges, stops, keepers, rollers, and other hardware items as required for the operation of the gate. Arrange latches for padlocking so that the padlock will be accessible from both sides of the gate. Provide stops for holding the gates in the open position.

2.02 MATERIALS

- A. Posts, Rails, and Frames:
 - 1. Line Posts: Type I round in accordance with FS RR-F-191/1D.
 - 2. Terminal, Corner, Rail, Brace, and Gate Posts: Type I round in accordance with FS RR-F-191/1D.
- B. Wire Fabric:
 - 1. ASTM A392 zinc coated steel chain link fabric.
- C. Concrete:
 - 1. Type specified in Section 321313 - Concrete Paving.

2.03 MANUAL GATES AND RELATED HARDWARE

- A. Hardware for Double Swinging Gates: 180 degree hinges, 2 for gates up to 60 inches high, 3 for taller gates; drop bolt on inactive leaf engaging socket stop set in concrete, active leaf latched to inactive leaf preventing raising of drop bolt, padlock hasp; keepers to hold gate in fully open position.
- B. Hinges: Finished to match fence components.
- C. Latches: Finished to match fence components.

2.04 ACCESSORIES

- A. Caps: Cast steel galvanized; sized to post diameter, set screw retainer.
- B. Fittings: Sleeves, bands, clips, rail ends, tension bars, fasteners and fittings; steel.

2.05 FINISHES

- A. Components (Other than Fabric): Galvanized in accordance with ASTM A123/A123M, at 1.9 ounces per square foot.
- B. Hardware: Hot-dip galvanized to weight required by ASTM A153/A153M.
- C. Accessories: Same finish as framing.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install framework, fabric, accessories and gates in accordance with ASTM F567.

- B. Place fabric on outside of posts and rails.
- C. Set intermediate, terminal, and gate posts plumb . Slope top of concrete for water runoff.
- D. Provide top rail through line post tops and splice with 6 inch long rail sleeves.
- E. Do not stretch fabric until concrete foundation has cured 28 days.
- F. Stretch fabric between terminal posts or at intervals of 100 feet maximum, whichever is less.
- G. Position bottom of fabric 2 inches above finished grade.
- H. Fasten fabric to top rail, line posts, braces, and bottom tension wire with tie wire at maximum 15 inches on centers.
- I. Attach fabric to end, corner, and gate posts with tension bars and tension bar clips.
- J. Install bottom tension wire stretched taut between terminal posts.
- K. Do not attach the hinged side of gate to building wall; provide gate posts.
- L. Install hardware and gate with fabric to match fence.
- M. Provide concrete center drop to footing depth and drop rod retainers at center of double gate openings.
- N. Perform three random field inspections confirming proper installation.

3.02 TOLERANCES

- A. Maximum Variation From Plumb: 1/4 inch.
- B. Maximum Offset From True Position: 1 inch.
- C. Do not infringe on adjacent property lines.

3.03 FIELD QUALITY CONTROL

- A. Layout: Verify that fence installation markings are accurate to design, paying attention to gate locations, underground utilities, and property lines.
- B. Post Settings: Randomly inspect three locations against design for:
 - 1. Hole diameter.
 - 2. Hole depth.
 - 3. Hole spacing.
- C. Fence Height: Randomly measure fence height at three locations or at areas that appear out of compliance with design.
- D. Gates: Inspect for level, plumb, and alignment.
- E. Workmanship: Verify neat installation free of defects. See CLFMI CLF-FIG0111 for field inspection guidance.

3.04 CLEANING

- A. Clean jobsite of excess materials; scatter excess material from post hole excavations uniformly away from posts. Remove excess material if required.
- B. Clean fence with mild household detergent and clean water rinse well.
- C. Remove mortar from exposed posts and other fencing material using a 10 percent solution of muriatic acid followed immediately by several rinses with clean water.
- D. Touch up scratched surfaces using materials recommended by manufacturer. Match touched-up paint color to factory-applied finish.

3.05 CLOSEOUT ACTIVITIES

- A. Demonstration: Demonstrate operation of system to Owner's personnel.
 - 1. Use operation and maintenance data as reference during demonstration.
 - 2. Conduct walking tour of project.

3. Briefly describe function, operation, and maintenance of each component.

END OF SECTION 323113

**SECTION 329200
TURF AND GRASSES**

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SECTION INCLUDES

- A. Seeding.
- B. Hydroseeding.
- C. Turf renovation.

1.03 RELATED REQUIREMENTS

- A. Section 311000 - Site Clearing: Topsoil stripping and stockpiling.
- B. Section 312300 - Earthwork: Excavation, filling, backfilling and rough grading.

1.04 DEFINITIONS

- A. Duff Layer: The surface layer of native topsoil that is composed of mostly decayed leaves, twigs, and detritus.
- B. Finish Grade: Elevation of finished surface of planting soil.
- C. Pesticide: A substance or mixture intended for preventing, destroying, repelling, or mitigating a pest. Pesticides include insecticides, miticides, herbicides, fungicides, rodenticides, and molluscicides. They also includes substances or mixtures intended for use as a plant regulator, defoliant, or desiccant.
- D. Pests: Living organisms that occur where they are not desired or that cause damage to plants, animals, or people. Pests include insects, mites, grubs, mollusks (snails and slugs), rodents (gophers, moles, and mice), unwanted plants (weeds), fungi, bacteria, and viruses.
- E. Planting Soil: Existing, on-site topsoil; imported topsoil; or manufactured topsoil that has been modified with soil amendments and perhaps fertilizers to produce a soil mixture best for plant growth.
- F. Subgrade: The surface or elevation of subsoil remaining after excavation is complete, or the top surface of a fill or backfill before planting soil is placed.
- G. Subsoil: All soil beneath the topsoil layer of the soil profile, and typified by the lack of organic matter and soil organisms.
- H. Surface Soil: Soil that is present at the top layer of the existing soil profile at the Project site. In undisturbed areas, the surface soil is typically topsoil, but in disturbed areas such as urban environments, the surface soil can be subsoil.

1.05 REFERENCE STANDARDS

- A. Standard Specifications - Form 818, Standard Specifications for Roads, Bridges and Incidental Construction, State of Connecticut, Department of Transportation and supplements.
- B. Connecticut Guidelines for Soil Erosion and Sediment Control by The Connecticut Council on Soil and Water Conservation.

1.06 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.

1.07 SUBMITTALS

- A. Qualification Data: For landscape Installer.

- B. Certification of Grass Seed: From seed vendor for each grass-seed monostand or mixture, stating the botanical and common name, percentage by weight of each species and variety, and percentage of purity, germination, and weed seed. Include the year of production and date of packaging.
 - 1. Certification of each seed mixture for turfgrass sod. Include identification of source and name and telephone number of supplier.
- C. Product Certificates: For fertilizers, from manufacturer.
- D. Pesticides and Herbicides: Product label and manufacturer's application instructions specific to Project.
- E. Maintenance Instructions: Recommended procedures to be established by Owner for maintenance of turf during a calendar year. Submit before expiration of required maintenance periods.
- F. Material Test Reports: For existing native surface topsoil, and imported or manufactured topsoil including the following:
 - 1. Sieve analysis
 - 2. Organic constituent analysis
 - 3. Acidity-alkalinity test (pH)
 - 4. Soluble salts
 - 5. Percentage tests for the following:
 - a. Nitrogen (N)
 - b. Phosphoric Acid (P₂O₅)
 - c. Potash (K₂O)
 - 6. Percentages by volume for sand, silt, and clay.
- G. Material Test Reports - Chemical Analysis: As specified in Section 312300 - Earthwork.
- H. Soil/Material Origin: As specified in Section 312300 - Earthwork.

1.08 QUALITY ASSURANCE

- A. Installer Qualifications: A qualified landscape installer whose work has resulted in successful turf establishment.
 - 1. Pesticide Applicator: State licensed, commercial.

1.09 DELIVERY, STORAGE, AND HANDLING

- A. Seed and Other Packaged Materials: Deliver packaged materials in original, unopened containers showing weight, certified analysis, name and address of manufacturer, and indication of compliance with state and Federal laws, as applicable.
- B. Bulk Materials:
 - 1. Do not dump or store bulk materials near structures, utilities, walkways and pavements, or on existing turf areas or plants.
 - 2. Provide erosion-control measures to prevent erosion or displacement of bulk materials; discharge of soil-bearing water runoff; and airborne dust reaching adjacent properties, water conveyance systems, or walkways.
 - 3. Accompany each delivery of bulk materials with appropriate certificates.

1.10 FIELD CONDITIONS

- A. Planting Restrictions: Plant during one of the following periods. Coordinate planting periods with initial maintenance periods to provide required maintenance from date of Substantial Completion.
 - 1. Spring Planting: April 1 to June 15.
 - 2. Fall Planting: August 15 to October 1.
- B. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit planting to be performed when beneficial and optimum results may be

obtained. Apply products during favorable weather conditions according to manufacturer's written instructions.

1.11 MAINTENANCE SERVICE

- A. Turf Maintenance Service: Provide full maintenance by skilled employees of landscape Installer. Maintain as required in "Turf Maintenance" Article. Begin maintenance immediately after each area is planted and continue until acceptable turf is established, but for not less than the following periods:
 - 1. Seeded Turf: 60 days from date of Substantial Completion.
 - a. When initial maintenance period has not elapsed before end of planting season, or if turf is not fully established, continue maintenance during next planting season.

PART 2 PRODUCTS

2.01 SEED

- A. Grass Seed: Fresh, clean, dry, new-crop seed complying with AOSA's "Rules for Testing Seeds" for purity and germination tolerances.
- B. Seed Species:
 - 1. Quality: Seed of grass species as listed below for solar exposure, with not less than 85 percent germination, not less than 95 percent pure seed, and not more than 0.5 percent weed seed:
 - 2. Shade: Proportioned by weight as follows:
 - a. 50 percent chewings red fescue (*Festuca rubra* variety).
 - b. 35 percent rough bluegrass (*Poa trivialis*).
 - c. 15 percent redtop (*Agrostis alba*).

2.02 TOPSOIL

- A. Topsoil: ASTM D5268, pH range of 5.5 to 7, a minimum of 6 percent organic material content; free of stones 1 inch or larger in any dimension and other extraneous materials harmful to plant growth.
 - 1. Topsoil Source: Reuse surface soil stockpiled on-site. Verify suitability of stockpiled surface soil to produce topsoil. Clean surface soil of roots, plants, sod, stones, clay lumps, and other extraneous materials harmful to plant growth.
 - a. Supplement with imported or manufactured topsoil from off-site sources when quantities are insufficient. Obtain topsoil displaced from naturally well-drained construction or mining sites where topsoil occurs at least 4 inches deep; do not obtain from agricultural land, bogs or marshes.
 - 2. Topsoil Source: Import topsoil or manufactured topsoil from off-site sources. Obtain topsoil displaced from naturally well-drained construction or mining sites where topsoil occurs at least 4 inches deep; do not obtain from agricultural land, bogs or marshes.
 - 3. Comply with chemical analysis and soil/material origin requirements specified in Section 312300 - Earthwork.

2.03 FERTILIZERS

- A. Commercial Fertilizer: Commercial-grade complete fertilizer of neutral character, consisting of fast- and slow-release nitrogen, 50 percent derived from natural organic sources of urea formaldehyde, phosphorous, and potassium in the following composition:
 - 1. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified soil-testing laboratory.
- B. Slow-Release Fertilizer: Granular or pelleted fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorus, and potassium in the following composition:
 - 1. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified soil-testing laboratory.

2.04 MULCHES

- A. Straw Mulch: Provide air-dry, clean, mildew- and seed-free, salt hay or threshed straw of wheat, rye, oats, or barley.
- B. Compost Mulch: Well-composted, stable, and weed-free organic matter, pH range of 5.5 to 8; moisture content 35 to 55 percent by weight; 100 percent passing through 1-inch (25-mm) sieve; soluble salt content of 2 to 5 decisiemens/m; not exceeding 0.5 percent inert contaminants and free of substances toxic to plantings; and as follows:
 - 1. Organic Matter Content: 50 to 60 percent of dry weight.
 - 2. Feedstock: Agricultural, food, or industrial residuals; biosolids; yard trimmings; or source-separated or compostable mixed solid waste.
- C. Fiber Mulch: Biodegradable, dyed-wood, cellulose-fiber mulch; nontoxic and free of plant-growth or germination inhibitors; with a maximum moisture content of 15 percent and a pH range of 4.5 to 6.5.
- D. Nonasphaltic Tackifier: Colloidal tackifier recommended by fiber-mulch manufacturer for slurry application; nontoxic and free of plant-growth or germination inhibitors.

2.05 PESTICIDES

- A. General: Pesticide, registered and approved by the EPA, acceptable to authorities having jurisdiction, and of type recommended by manufacturer for each specific problem and as required for Project conditions and application. Do not use restricted pesticides unless authorized in writing by authorities having jurisdiction.
- B. Pre-Emergent Herbicide (Selective and Nonselective): Effective for controlling the germination or growth of weeds within planted areas at the soil level directly below the mulch layer.
- C. Post-Emergent Herbicide (Selective and Nonselective): Effective for controlling weed growth that has already germinated.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine areas to be planted for compliance with requirements and other conditions affecting installation and performance of the Work.
 - 1. Verify that no foreign or deleterious material or liquid such as paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, or acid has been deposited in soil within a planting area.
 - 2. Suspend planting operations during periods of excessive soil moisture until the moisture content reaches acceptable levels to attain the required results.
 - 3. Uniformly moisten excessively dry soil that is not workable or which is dusty.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.
- C. If contamination by foreign or deleterious material or liquid is present in soil within a planting area, remove the soil and contamination as directed by Engineer and replace with new planting soil.

3.02 PREPARATION

- A. Protect structures; utilities; sidewalks; pavements; and other facilities, trees, shrubs, and plantings from damage caused by planting operations.
 - 1. Protect adjacent and adjoining areas from hydroseeding and hydromulching overspray.
 - 2. Protect grade stakes set by others until directed to remove them.
- B. Install erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.

3.03 TURF AREA PREPARATION

- A. Limit turf subgrade preparation to areas to be planted.
- B. Newly Graded Subgrades: Loosen subgrade to a minimum depth of 6 inches. Remove stones larger than 1 inch in any dimension and sticks, roots, rubbish, and other extraneous matter and legally dispose of them off Owner's property.
 - 1. Spread planting soil to a depth of 6 inches but not less than required to meet finish grades after light rolling and natural settlement. Do not spread if planting soil or subgrade is frozen, muddy, or excessively wet.
 - a. Spread approximately 1/2 the thickness of planting soil over loosened subgrade. Mix thoroughly into top 2 inches of subgrade. Spread remainder of planting soil.
- C. Unchanged Subgrades: If turf is to be planted in areas unaltered or undisturbed by excavating, grading, or surface-soil stripping operations, prepare surface soil as follows:
 - 1. Remove existing grass, vegetation, and turf. Do not mix into surface soil.
 - 2. Loosen surface soil to a depth of at least 6 inches. Apply soil amendments and fertilizers according to planting soil mix proportions and mix thoroughly into top 4 inches of soil. Till soil to a homogeneous mixture of fine texture.
 - 3. Remove stones larger than 1 inch in any dimension and sticks, roots, trash, and other extraneous matter.
 - 4. Legally dispose of waste material, including grass, vegetation, and turf, off Owner's property.
- D. Finish Grading: Grade planting areas to a smooth, uniform surface plane with loose, uniformly fine texture. Grade to within plus or minus 1/2 inch of finish elevation. Roll and rake, remove ridges, and fill depressions to meet finish grades. Limit finish grading to areas that can be planted in the immediate future.
- E. Moisten prepared area before planting if soil is dry. Water thoroughly and allow surface to dry before planting. Do not create muddy soil.
- F. Before planting, obtain Engineer's acceptance of finish grading; restore planting areas if eroded or otherwise disturbed after finish grading.

3.04 SEEDING

- A. Sow seed with spreader or seeding machine. Do not broadcast or drop seed when wind velocity exceeds 5 mph (8 km/h).
 - 1. Evenly distribute seed by sowing equal quantities in two directions at right angles to each other.
 - 2. Do not use wet seed or seed that is moldy or otherwise damaged.
 - 3. Do not seed against existing trees. Limit extent of seed to outside edge of planting saucer.
- B. Sow seed at a total rate of 5 to 8 lb/1000 sq. ft..
- C. Rake seed lightly into top 1/8 inch (3 mm) of soil, roll lightly, and water with fine spray.
- D. Protect seeded areas with slopes exceeding 1:6 and where indicated on Drawings with erosion-control blankets installed and stapled according to manufacturer's written instructions.
- E. Protect seeded areas with slopes not exceeding 1:6 by spreading straw mulch. Spread uniformly at a minimum rate of 2 tons/acre (42 kg/92.9 sq. m) to form a continuous blanket 1-1/2 inches (38 mm) in loose thickness over seeded areas. Spread by hand, blower, or other suitable equipment.
 - 1. Anchor straw mulch by crimping into soil with suitable mechanical equipment.

3.05 HYDROSEEDING

- A. Hydroseeding: Mix specified seed, fertilizer, and fiber mulch in water, using equipment specifically designed for hydroseed application. Continue mixing until uniformly blended into homogeneous slurry suitable for hydraulic application.
 - 1. Mix slurry with nonasphaltic tackifier.
 - 2. Spray-apply slurry uniformly to all areas to be seeded in a one-step process. Apply slurry at a rate so that mulch component is deposited at not less than 1500-lb/acre (15.6-kb/92.9 sq. m) dry weight, and seed component is deposited at not less than the specified seed-sowing rate.

3.06 TURF RENOVATION

- A. Renovate existing turf where indicated.
- B. Renovate turf damaged by Contractor's operations, such as storage of materials or equipment and movement of vehicles.
 - 1. Reestablish turf where settlement or washouts occur or where minor regrading is required.
 - 2. Install new planting soil as required.
- C. Remove sod and vegetation from diseased or unsatisfactory turf areas; do not bury in soil.
- D. Remove topsoil containing foreign materials, such as oil drippings, fuel spills, stones, gravel, and other construction materials resulting from Contractor's operations, and replace with new planting soil.
- E. Mow, dethatch, core aerate, and rake existing turf.
- F. Remove weeds before seeding. Where weeds are extensive, apply selective herbicides as required. Do not use pre-emergence herbicides.
- G. Remove waste and foreign materials, including weeds, soil cores, grass, vegetation, and turf, and legally dispose of them off Owner's property.
- H. Till stripped, bare, and compacted areas thoroughly to a soil depth of 6 inches (150 mm).
- I. Apply soil amendments and initial fertilizer required for establishing new turf and mix thoroughly into top 4 inches (100 mm) of existing soil. Install new planting soil to fill low spots and meet finish grades.
- J. Apply seed and protect with straw mulch as required for new turf.
- K. Water newly planted areas and keep moist until new turf is established.

3.07 TURF MAINTENANCE

- A. General: Maintain and establish turf by watering, fertilizing, weeding, mowing, trimming, replanting, and performing other operations as required to establish healthy, viable turf. Roll, regrade, and replant bare or eroded areas and remulch to produce a uniformly smooth turf. Provide materials and installation the same as those used in the original installation.
 - 1. Fill in as necessary soil subsidence that may occur because of settling or other processes. Replace materials and turf damaged or lost in areas of subsidence.
 - 2. In areas where mulch has been disturbed by wind or maintenance operations, add new mulch and anchor as required to prevent displacement.
 - 3. Apply treatments as required to keep turf and soil free of pests and pathogens or disease. Use integrated pest management practices whenever possible to minimize the use of pesticides and reduce hazards.
- B. Watering: Install and maintain temporary piping, hoses, and turf-watering equipment to convey water from sources and to keep turf uniformly moist to a depth of 4 inches (100 mm).
 - 1. Schedule watering to prevent wilting, puddling, erosion, and displacement of seed or mulch. Lay out temporary watering system to avoid walking over muddy or newly planted areas.
 - 2. Water turf with fine spray at a minimum rate of 1 inch (25 mm) per week unless rainfall precipitation is adequate.

- C. Mow turf as soon as top growth is tall enough to cut. Repeat mowing to maintain specified height without cutting more than one-third of grass height. Remove no more than one-third of grass-leaf growth in initial or subsequent mowings. Do not delay mowing until grass blades bend over and become matted. Do not mow when grass is wet. Schedule initial and subsequent mowings to maintain the following grass height:
 - 1. Mow to a height of 3 inches.
- D. Turf Postfertilization: Apply fertilizer after initial mowing and when grass is dry.
 - 1. Use fertilizer that provides actual nitrogen of at least 1 lb/1000 sq. ft. (0.45 kg/92.9 sq. m) to turf area.

3.08 SATISFACTORY TURF

- A. Turf installations shall meet the following criteria as determined by Engineer:
 - 1. Satisfactory Seeded Turf: At end of maintenance period, a healthy, uniform, close stand of grass has been established, free of weeds and surface irregularities, with coverage exceeding 90 percent over any 10 sq. ft. (0.92 sq. m) and bare spots not exceeding 3 by 3 inches (125 by 125 mm).
- B. Use specified materials to reestablish turf that does not comply with requirements, and continue maintenance until turf is satisfactory.

3.09 PESTICIDE APPLICATION

- A. Apply pesticides and other chemical products and biological control agents according to requirements of authorities having jurisdiction and manufacturer's written recommendations. Coordinate applications with Owner's operations and others in proximity to the Work. Notify Owner before each application is performed.
- B. Post-Emergent Herbicides (Selective and Nonselective): Apply only as necessary to treat already-germinated weeds and according to manufacturer's written recommendations.

3.10 CLEANUP AND PROTECTION

- A. Promptly remove soil and debris created by turf work from paved areas. Clean wheels of vehicles before leaving site to avoid tracking soil onto roads, walks, or other paved areas.
- B. Remove surplus soil and waste material, including excess subsoil, unsuitable soil, trash, and debris, and legally dispose of them off Owner's property.
- C. Erect temporary fencing or barricades and warning signs as required to protect newly planted areas from traffic. Maintain fencing and barricades throughout initial maintenance period and remove after plantings are established.
- D. Remove nondegradable erosion-control measures after grass establishment period.

END OF SECTION 329200