



Volume 1 of 1 Project Manual

**Superstructure Replacement of CT DEEP Bridge E118 (DOT #06323)
Devil's Hopyard State Park
East Haddam, Connecticut
Project # DEPA00029000104**


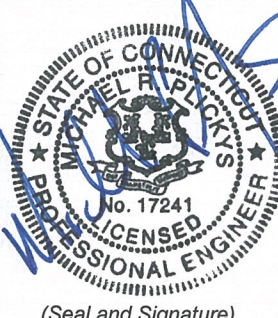
**Prepared By:
Department of Energy and Environmental Protection
Engineering & Field Support Services
Engineering Unit
and
Macchi Engineers, LLC
Hartford, CT**

**Katie S. Dykes – Commissioner
State of Connecticut
Department of Energy & Environmental Protection**

Project Manual Date: 02/24/2020

Project Title:	Superstructure Replacement of CT DEEP Bridge E118 (DOT #06323)
Project Location:	Devil's Hopyard State Park, East Haddam, CT
Project Number:	DEPA00029000104
Architect/Engineer:	Macchi Engineering, LLC, 44 Gillett St, Hartford, CT 06105

SEALS, SIGNATURES, AND DATES OF DESIGN PROFESSIONALS OF RECORD

<p align="center"><i>(Seal and Signature)</i></p>	<p>Architect Professional Certification: I hereby certify that these documents were prepared or approved by me and that I am a duly registered Architect.</p> <p>_____ <i>(Print Consultant Name)</i></p> <p>_____ License No.</p> <p>_____ Expiration Date</p>	 <p align="center"><i>(Seal and Signature)</i></p>	<p>Civil Engineer Professional Certification: I hereby certify that these documents were prepared or approved by me and that I am a duly registered Professional Engineer.</p> <p>Michael R. Plickys _____ <i>(Print Consultant Name)</i></p> <p>17241 _____ License No.</p> <p>01/31/2021 _____ Expiration Date</p>
 <p align="center"><i>(Seal and Signature)</i></p>	<p>Structural Engineer Professional Certification: I hereby certify that these documents were prepared or approved by me and that I am a duly registered Professional Engineer.</p> <p>Michael R. Plickys _____ <i>(Print Consultant Name)</i></p> <p>17241 _____ License No.</p> <p>01/31/2021 _____ Expiration Date</p>	<p align="center"><i>(Seal and Signature)</i></p>	<p>Electrical Engineer Professional Certification: I hereby certify that these documents were prepared or approved by me and that I am a duly registered Professional Engineer.</p> <p>_____ <i>(Print Consultant Name)</i></p> <p>_____ License No.</p> <p>_____ Expiration Date</p>
<p align="center"><i>(Seal and Signature)</i></p>	<p>Mechanical Engineer Professional Certification: I hereby certify that these documents were prepared or approved by me and that I am a duly registered Professional Engineer.</p> <p>_____ <i>(Print Consultant Name)</i></p> <p>_____ License No.</p> <p>_____ Expiration Date</p>	<p align="center"><i>(Seal and Signature)</i></p>	<p>Fire-Protection Engineer Professional Certification: I hereby certify that these documents were prepared or approved by me and that I am a duly registered Professional Engineer.</p> <p>_____ <i>(Print Consultant Name)</i></p> <p>_____ License No.</p> <p>_____ Expiration Date</p>

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00 01 07	Seals Page	1	<input type="checkbox"/>
00 01 10	Table of Contents	8	<input type="checkbox"/>
00 01 15	List of Drawing Sheets	1	<input type="checkbox"/>
00 11 16	Invitation to Bid	2	<input type="checkbox"/>
00 21 13	Instructions To Bidders	1	<input type="checkbox"/>
00 22 00	Notice to Bidders	10	<input type="checkbox"/>
00 25 13	Pre-Bid Meeting Agenda	1	<input type="checkbox"/>
00 26 00	Project Sign Detail	1	<input type="checkbox"/>
00 30 00	General Statements for Available Information	7	<input checked="" type="checkbox"/>
00 30 10	General Statement for Existing Conditions Information		<input checked="" type="checkbox"/>
00 30 20	General Statement for Environmental Assessment Information		<input checked="" type="checkbox"/>
00 30 30	General Statement for Hazardous Building Materials Inspection and Inventory		<input checked="" type="checkbox"/>
00 30 40	General Statement for Subsurface Geotechnical Report		<input checked="" type="checkbox"/>
00 30 50	General Statement for Elevator Agreement		<input checked="" type="checkbox"/>
00 30 60	General Statement for FM Global Checklist for Roofing Systems		<input checked="" type="checkbox"/>
00 30 70	General Statement for "Statement of Special Inspections"		<input checked="" type="checkbox"/>
00 30 80	General Statement for Other Information		<input checked="" type="checkbox"/>
00 40 14	Certificate (of Authority)	2	<input type="checkbox"/>
00 40 15	CT DAS Contract Prequalification Forms (Not Used for <\$500,000)	4	<input checked="" type="checkbox"/>
00 41 00	Bid Proposal Form	8	<input type="checkbox"/>
00 41 10	Bid Package Submittal Requirements	4	<input type="checkbox"/>
00 43 16	Standard Bid Bond	1	<input type="checkbox"/>
00 45 14	General Contractor Bidder's Qualification Statement	7	<input type="checkbox"/>
00 45 14a	Bidder Contract Compliance Monitoring Report	3	<input type="checkbox"/>
00 45 15	Objective Criteria Established for Evaluating Qualifications of Bidders	2	<input type="checkbox"/>
00 45 17	Named Subcontractor Bidder's Qualification Statement (Not Used for <\$500,000)	7	<input checked="" type="checkbox"/>
00 52 03	Project Agreement	3	<input type="checkbox"/>
00 52 73	Subcontract Agreement Form (Not Used for <\$500,000)	3	<input checked="" type="checkbox"/>
00 62 16	Certificate of Insurance	1	<input type="checkbox"/>
00 72 13	General Conditions of the Contract for Construction – For Design-Bid-Build	33	<input type="checkbox"/>
00 73 38	CHRO Contract Compliance Regulations	3	<input type="checkbox"/>
00 73 44	Prevailing Wage Rates/Contractor's Wage Certification/Payroll Certification	28	<input type="checkbox"/>

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00 81 00	Gift & Campaign Contribution Cert- OPM Ethics Form 1	2	<input type="checkbox"/>
00 82 00	Consulting Agreement Affidavit- OPM Ethics Form 5	1	<input type="checkbox"/>
00 83 00	Affirmation of Receipt of Summary of State Ethics- OPM Ethics Form 6	1	<input type="checkbox"/>
00 84 00	Iran Certification- OPM Ethics Form 7	1	<input type="checkbox"/>
00 92 10	Additional Forms To be Submitted After Bond Commission Funding Approval	7	<input checked="" type="checkbox"/>
00 92 30	Procedures Regarding Taxation for Nonresident General/Prime Contractor and Subcontractors	2	<input type="checkbox"/>

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01 20 00	Contract Considerations	6	<input type="checkbox"/>
01 23 13	Supplemental Bids	2	<input type="checkbox"/>
01 25 00	Substitution Procedures	2	<input type="checkbox"/>
01 26 00	Contract Modification Procedures	3	<input type="checkbox"/>
01 29 76	Progress Payment Procedures	5	<input type="checkbox"/>
01 31 00	Project Management and Coordination	5	<input type="checkbox"/>
01 31 19	Project Meetings	4	<input type="checkbox"/>
01 32 16	Construction Progress Schedules	3	<input type="checkbox"/>
01 32 16.13	CPM Schedules	13	<input type="checkbox"/>
01 32 33	Photographic Documentation	2	<input checked="" type="checkbox"/>
01 33 00	Submittal Procedures	8	<input type="checkbox"/>
01 35 16	Alteration Project Procedures	3	<input checked="" type="checkbox"/>
01 35 26	Government Safety Requirements	13	<input checked="" type="checkbox"/>
01 42 20	Reference Standards & Definitions	3	<input checked="" type="checkbox"/>
01 45 00	Quality Control	4	<input type="checkbox"/>
01 45 23.13	Testing for Indoor Air Quality, Baseline Indoor Air Quality, and Materials	4	<input checked="" type="checkbox"/>
01 50 00	Temporary Facilities & Controls	3	<input checked="" type="checkbox"/>
01 57 30	Indoor Environmental Control	2	<input checked="" type="checkbox"/>
01 57 40	Construction Indoor Air Quality Management Plan	2	<input checked="" type="checkbox"/>
01 60 00	Product Requirements	3	<input type="checkbox"/>
01 71 23	Field Engineering	2	<input type="checkbox"/>
01 73 29	Cutting and Patching	4	<input type="checkbox"/>
01 74 19	Construction Waste Management & Disposal	5	<input type="checkbox"/>
01 75 00	Starting & Adjusting	2	<input checked="" type="checkbox"/>
01 77 00	Closeout Procedures	5	<input type="checkbox"/>
01 78 23	Operation & Maintenance Data	3	<input checked="" type="checkbox"/>
01 78 30	Warranties & Bonds	5	<input type="checkbox"/>
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01 91 00	Commissioning	6	<input checked="" type="checkbox"/>

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DIVISION 12	FURNISHINGS	Not Used <input checked="" type="checkbox"/>
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DIVISION 14	CONVEYING SYSTEMS	Not Used <input checked="" type="checkbox"/>
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DIVISION 20	RESERVED	
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DIVISION 26	ELECTRICAL	Not Used <input checked="" type="checkbox"/>
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DIVISION 27	COMMUNICATIONS	Not Used <input checked="" type="checkbox"/>
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DIVISION 35 **WATERWAYS AND MARINE** **Not Used**

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DIVISION 40 **PROCESS INTEGRATION** **Not Used**

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DIVISION 44	POLLUTION CONTROL EQUIPMENT	Not Used <input checked="" type="checkbox"/>
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DIVISION 45	INDUSTRY SPECIFIC MANUFACTURING EQUIPMENT	Not Used <input checked="" type="checkbox"/>
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DIVISION 46	RESERVED	
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DIVISION 50	PROJECT-SPECIFIC AVAILABLE INFORMATION	Page Count	Not Used <input checked="" type="checkbox"/>
50 10 00	Existing Conditions Information		<input type="checkbox"/>
50 20 00	Environmental Assessment Information		<input type="checkbox"/>
50 30 00	Hazardous Building Materials Inspection and Inventory		<input type="checkbox"/>
50 40 00	Subsurface Geotechnical Report		<input type="checkbox"/>
50 50 00	Elevator Agreement		<input type="checkbox"/>
50 60 00	FM Global Checklist For Roofing Systems		<input type="checkbox"/>
50 70 00	Statement of Special Inspections		<input type="checkbox"/>
50 80 00	Other Information:		<input type="checkbox"/>
	50 80 00.1		<input type="checkbox"/>
	50 80 00.2		<input type="checkbox"/>
	50 80 00.3		<input type="checkbox"/>

APPENDICIES

APPENDIX A: PERMITS

APPENDIX Ai: CT DEEP Flood Management Certification- FM 201703389

APPENDIX Aii: CT DEEP General Permit for Water Resources Construction Activities- GPCST201903049

APPENDIX Aiii: US Army Corps of Engineers General Permit 19 Self-Verification- NAE-2020-00074

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STATE OF CONNECTICUT
DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION
ENGINEERING & FIELD SUPPORT SERVICES/ENGINEERING UNIT
163 GREAT HILL ROAD
PORTLAND, CT. 06480

INVITATION TO BID

SUPERSTRUCTURE REPLACEMENT OF CT DEEP BRIDGE E118 (DOT #06323)
DEVIL'S HOPYARD STATE PARK
EAST HADDAM, CONNECTICUT
PROJECT # DEPA00029000104

FOR CURRENTLY CERTIFIED SET - ASIDE CONTRACTORS ONLY

DATE OF OPENING: March 18, 2020 at 2:00pm Local Time

Plans and Specifications Ready - Electronically available through BizNet on February 21, 2020.

All potential bidders are advised to attend a pre-bid meeting at the project location, Thursday, March 5, 2020 at 10:00am Local Time

NO DEPOSIT REQUIRED

Sealed Bids will be received at the Engineering Unit Offices, 163 Great Hill Road, Portland, CT up to the date shown above and thereafter publicly opened and read aloud in the conference room. It is not necessary that the bidder attend.

As security, each bid must be accompanied by a CERTIFIED CHECK payable, to the order of TREASURER of the State of Connecticut, or the bid must be accompanied by a BID BOND in the amount of 10% of the amount of the bid. All bonds required for this Project shall be acceptable to the Department of Energy and Environmental Protection and, as a minimum, issued through a bonding company licensed to transact such business in the State of Connecticut and named on the current list of "Surety Companies Acceptable on Federal Bonds" as published in the "Treasury Department Circular 570".

Performance and Labor and Material Bonds to be furnished by the bidder awarded the contract shall be an amount not less than 100% of the contract price. The awarding authority reserves the right to reject any and all Bids, in whole or in part, to award any item, group of items, or total Bid, and to waive any informality or technical defects, if it is deemed to be in the best interests of the Department of Energy and Environmental Protection.

EXECUTIVE ORDER NOS. THREE AND SEVENTEEN: Bidders are advised that the contracts for this project shall be subject to Executive Order No. Three regarding nondiscrimination promulgated June 16, 1971, and to the Guidelines and Rules of the State Labor Commissioner implementing said Executive Order.

Bidders are further advised that contracts in connection with this project shall be subject to Executive Order No. Seventeen, promulgated February 15, 1973, requiring contractors and subcontractors to list employment openings with the Connecticut State Employment Service. Said two documents are hereby incorporated herein and made a part hereof as though fully set forth herein. Bidders may receive copies of these documents upon request.

- Completion Time Allowed: Ninety (90) Calendar Days.
- Liquidated Damages: Five Hundred Dollars (\$200.00) per calendar day.

Contract to be awarded on or about April 20, 2020 with a start date on or about June 01, 2020.

INSTRUCTIONS TO BIDDERS

- 1) A complete bid package shall consist of all the documents listed in Table 1 of Section 00 41 00, Bid Package Submittal Requirements. All required documents shall be fully complete and delivered to the DEEP Engineering Unit (as a paper copy) prior to the date and time of the Bid Opening.

- 2) If the Bidder has been notified by the DEEP Engineering Unit as the Apparent Lowest Qualified Bidder, the Bidder shall submit all completed documents listed in Table 3 of Section 00 41 00 of this Project Manual to the DEEP Engineering Unit. The documents required in Table 3 of Section 00 41 00 shall be submitted as a paper copy to the DEEP Engineering Unit, and/or sent electronically to the DEEP Project Manager.

*Bidders should note that State of Connecticut Labor Department prevailing wage rates **will** apply to this project.

NOTICE TO BIDDERS
STATE OF CONNECTICUT
DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION

ARTICLE 1 Bids And Rejection Of Bids:

- 1.1** Bids shall be for the complete work as specified and shall include the names of any subcontractors for the four classes of work specified in subsection (a) of Section 4b-93 of the General Statutes of Connecticut as revised, and for each other class of work for which the awarding authority has required a separate section pursuant to said subsection and the dollar amounts of their subcontracts, and the contractor shall be selected on the basis of such bids. It shall be presumed that the bidder intends to perform with its own employees all work in such four classes and such other classes, for which no subcontractor is named. The bidder's qualifications for performing such work shall be subject to review under Section 4b-92 of the General Statutes of Connecticut, as revised. **For projects estimated to exceed Five Hundred Thousand Dollars (\$500,000.00) in total cost, the bidder must be prequalified by the Department of Administrative Services.**
- 1.2** The awarding authority may require the contractor to replace a Named Subcontractor whenever the awarding authority determines in their sole discretion that such replacement is in the best interest of the State.
- 1.3** Every bid which is conditional or obscure, **or which is not accompanied by a Department of Administrative Services Prequalification Certificate (If applicable – See Article 1.1) and Update Statement**, or which contains any addition not called for, shall be invalid, and the awarding authority shall reject every such bid. The awarding authority shall be authorized to waive minor irregularities which he considers in the best interest of the State, provided the reasons for any such waiver are stated in writing by the awarding authority and made a part of the contract file. No such bid shall be rejected because of the failure to submit prices for, or information relating to, any item or items for which no specific space is provided in the bid form furnished by the awarding authority, but this sentence shall not be applicable to any failure to furnish prices or information required by Section 4b-95 of the General Statutes of Connecticut, as revised, to be furnished in the bid form provided by the awarding authority.
- 1.4** Bids shall be publicly opened and read by the awarding authority forthwith. The awarding authority may require in the bid form that the contractor agree to perform a stated, minimum percentage of work with its own forces. The awarding authority may also require the contractor to set aside a portion of the contract for subcontractors who are eligible for set-aside contracts. The awarding authority shall not permit substitution of a subcontractor for one named in accordance with the provisions of said Section 4b-95 or substitution of a subcontractor for any designated sub-trade work bid to be performed by the contractor's own forces, except for good cause. The term "good cause" includes but is not limited to a subcontractor's or, where appropriate, a contractor's: (1) Death or physical disability, if the listed subcontractor is an individual; (2) dissolution, if a corporation or partnership; (3) bankruptcy; (4) inability to furnish any performance and payment bond shown on the bid form; (5) inability to obtain, or loss of, a license necessary for the performance of the particular category of work; (6) failure or inability to comply with a requirement of law applicable to contractors, subcontractors, or construction, alteration, or repair projects; (7) failure to perform its agreement to execute a subcontract under Section 4b-96 of the General Statutes of Connecticut, as revised.
- 1.5** The bid price shall be the price set forth in the space provided on the bid form. No bid shall be rejected (1) because of error in setting forth the name of a subcontractor as long as the

subcontractor or subcontractors designated are clearly identifiable, or (2) because the plans and specifications do not accompany the bid or are not submitted with the bid. Failure to correctly state a subcontractor's price shall be cause for rejection of the bid.

- 1.6 Each contractor who is awarded a contract on or after October 1, 2002 shall be subject to provisions of the Connecticut General Statutes, Section 31-53 as amended by Public Act 02-69, "An Act Concerning Annual Adjustments to Prevailing Wages."
- 1.7 In determining bid price, consideration should be given to Section 31-53 of the General Statutes of Connecticut as amended by Public Act 02-69, "An Act Concerning Annual Adjustments to Prevailing Wages." Such prevailing wage adjustment will not be considered a matter for an annual contract amendment.
- 1.8 Any contractor who violates any provision of said Section 4b-95 may be disqualified from bidding on other contracts that are subject to the provisions of Chapter 60 of the General Statutes of Connecticut, as revised, for a period not to exceed twenty-four months, commencing from the date on which the violation is discovered, for each violation. The awarding authority shall periodically review the contractor's subcontracts to insure compliance with such provisions, and shall after each such review prepare a written report setting forth his findings and conclusions.
- 1.9 Bids shall be submitted only on the forms furnished for the specific project. In no event will bids or changes in bids made by telephone, telegraph, facsimile or other communication technology be considered. Any bid form omitting or adding items, altering the form, containing conditional or alternative bids, or without the original signature of the bidder or its authorized representative, will be rejected.
- 1.10 Any bid received after the scheduled closing time for the receipt of bids will be returned to the bidder unopened.
- 1.11 Any bid once deposited with the Department of Energy and Environmental Protection may only be withdrawn by letter of request, signed by the depositing bidder and presented to the Supervisor, Engineering Unit, prior to the time of opening of any bid for the project designated or identified project.
- 1.12 Ethics Law and Policy Concerning Financial Disclosure, Gifts and Campaign Contributions. It is the policy of the Department of Energy and Environmental Protection that any contract bid, with a value of over \$500,000.00 be accompanied by a Bid/Proposal Affidavit. That affidavit requires contractors to disclose all gifts that have been given by that contractor, and that contractor's employees or agents, to a state official or employee of the DEEP, or the Office Of The Governor, or the Office Of Policy and Management within the two years preceding the date of signing the affidavit.

ARTICLE 2 Bid Security:

Each bid must be accompanied by a certified check made payable to "Treasurer, State of Connecticut," or the bid must be accompanied by a bid bond, in the form required by the awarding authority, having as surety thereto such surety company or companies acceptable to the Commissioner of the Department of Energy and Environmental Protection and as are authorized to do business in this State, for an amount not less than 10 percent of the bid. All checks submitted by unsuccessful bidders shall be returned to them after the contract has been awarded.

ARTICLE 3 Forfeit Of Bid Security:

Failure of the successful bidder to execute a contract awarded as specified and bid shall result in the forfeiture of the bid bond or certified check.

ARTICLE 4 Addenda And Interpretations:

No interpretations of the meaning of the plans, specifications or other contract documents will be made orally to any bidder. Every request for such interpretation should be in writing to the awarding authority and to be given consideration must be received at least ten (10) days prior to the date fixed for the opening of bids. Any and all such interpretations and any supplemental instructions will be in the form of written addenda to the specifications which, if issued, will be mailed, or faxed with required return receipt, to all prospective bidders (at the respective addresses furnished for such purposes) not later than five (5) days prior to the date fixed for the opening of bids; failure of any bidder to receive any such addendum or interpretation shall not release any bidder from any obligations under its bid as submitted, provided notice has been sent/faxed to the address/fax number furnished by such prospective bidder for the transmittal of notices, addenda and interpretations. It shall be the bidder's responsibility to make inquiry as to, and to obtain, the addenda issued, if any.

ARTICLE 5 Executive Order No. Three:

This contract is subject to the provisions of Executive Order No. Three of Governor Thomas J. Meskill promulgated June 16, 1971 and, as such, this contract may be canceled, terminated or suspended by the State Labor Commissioner for violation of or noncompliance with said Executive Order No. Three, or any state or federal law concerning nondiscrimination, notwithstanding that the State Labor Commissioner is not a party to this contract. The parties to this contract, as part of the consideration hereof, agree that said Executive Order No. Three is incorporated herein by reference and made a part hereof. The parties agree to abide by said Executive Order and agree that the State Labor Commissioner shall have continuing jurisdiction in respect to contract performance in regard to nondiscrimination, until the contract is completed or terminated prior to completion.

The contractor agrees, as part consideration hereof, that this contract is subject to the Guidelines and Rules issued by the State Labor Commissioner to implement Executive Order No. Three, and that he will not discriminate in his employment practices or policies, will file all reports as required, and will fully cooperate with the State of Connecticut and the State Labor Commissioner.

This section is superseded by the Connecticut General Statutes 4a-60 and 4a-60a, and the Commission on Human Rights Regulations (CHRO), sections 46a-68j-2 1 through 46a-68j-43 –see section 00 73 38 of this project manual.

ARTICLE 6 Executive Order No. Seventeen:

This contract is subject to the provisions of Executive Order No. Seventeen of Governor Thomas J. Meskill promulgated February 15, 1973, and, as such, this contract may be canceled, terminated or suspended by the contracting agency or the State Labor Commissioner for violation of or noncompliance with said Executive Order No. Seventeen, notwithstanding that the Labor Commissioner may not be a party to this contract. The parties to this contract, as part of the consideration hereof, agree that Executive Order No. Seventeen is incorporated herein by reference and made a part hereof. The parties agree to abide by said Executive Order and agree that the contracting agency and the State Labor Commissioner shall have joint and several continuing jurisdiction in respect to contract performance in regard to listing all employment openings with the Connecticut State Employment Service.

ARTICLE 7 Violence In The Workplace Prevention, Executive Order No. Sixteen:

This contract is subject to the provisions of Executive Order No. Sixteen of Governor John G. Rowland promulgated August 4, 1999, and, as such, this contract may be canceled, terminated or suspended by the contracting agency or the State for violation of or noncompliance with said Executive Order No. Sixteen. The parties to this contract, as part of the consideration hereof, agree that Executive Order No. Sixteen is incorporated herein by reference and made a part hereof. The parties agree to abide by said Executive Order. In addition, the Contractor agrees to include this provision in all contracts with its contractors, subcontractors and vendors.

ARTICLE 8 Sexual Harassment Policy

This contract will be subject to the provisions of the Department of Energy and Environmental Protection Sexual Harassment Policy ("Policy") and, as such, the contract may be canceled, terminated, or suspended by the DEEP for violation of or noncompliance with said Policy.

ARTICLE 9 Foreign Corporations:

A corporation not organized under the laws of this State that is awarded the contract must comply with the laws of this State regarding the procurement of a certificate of authority to transact business in this State from the Secretary of the State.

ARTICLE 10 Security For Faithful Performance:

10.1 Performance Bond:

On or before the contract award date, the successful bidder shall substitute for the certified check or bid bond accompanying its bid an executed performance bond, in the amount not less than 100 percent of the contract price, conditioned upon the faithful performance of the contract, and having as surety thereto such surety company or companies satisfactory to the Commissioner and as are authorized to transact business in this State.

10.2 Labor and Material Bond:

At this same time, the successful bidder shall submit a labor and material bond in the amount not less than 100 percent of the contract price which shall be binding upon the award of the contract to such bidder, with surety or sureties satisfactory to the Commissioner and as are authorized to transact business in this State, for the protection of persons supplying labor or materials in the prosecution of the work provided for in the contract for the use of each such person. Any such bond furnished shall have as principal the name of the successful bidder. This bond is to be furnished pursuant to Section 49-41 of the General Statutes of Connecticut, as revised.

The following sections of the General Statutes of Connecticut, as revised, are inserted as information concerning this bond:

Sec. 49-41a. Enforcement of payment by general contractor to subcontractor and by subcontractor to his subcontractors.

- (a) When any public work is awarded by a contract for which a payment bond is required by section 49-41, the contract for the public work shall contain the following provisions: (1) A requirement that the general contractor, within thirty days after payment to the contractor by the State or a municipality, pay any amounts due any subcontractor, whether for labor

performed or materials furnished, when the labor or materials have been included in a requisition submitted by the contractor and paid by the State or a municipality; (2) a requirement that the general contractor shall include in each of its subcontracts a provision requiring each subcontractor to pay any amounts due any of its subcontractors, whether for labor performed or materials furnished, within thirty days after such subcontractor receives a payment from the general contractor which encompasses labor or materials furnished by such subcontractor.

- (b) If payment is not made by the general contractor or any of its subcontractors in accordance with such requirements, the subcontractor shall set forth his claim against the general contractor and the subcontractor of a subcontractor shall set forth its claim against the subcontractor through notice by registered or certified mail. Ten days after the receipt of that notice, the general contractor shall be liable to its subcontractor, and the subcontractor shall be liable to its subcontractor, for interest on the amount due and owing at the rate of one percent per month. In addition, the general contractor, upon written demand of its subcontractor, or the subcontractor, upon written demand of its subcontractor, shall be required to place funds in the amount of the claim, plus interest of one per cent, in an interest-bearing escrow account in a bank in this State, provided the general contractor or subcontractor may refuse to place the funds in escrow on the grounds that the subcontractor has not substantially performed the work according to the terms of his or its employment. In the event that such general contractor or subcontractor refuses to place such funds in escrow, and the party making a claim against it under this section is found to have substantially performed its work in accordance with the terms of its employment in any arbitration or litigation to determine the validity of such claim, then such general contractor or subcontractor shall pay the attorney's fees of such party.
- (c) No payment may be withheld from a subcontractor for work performed because of a dispute between the general contractor and another contractor or subcontractor.
- (d) This section shall not be construed to prohibit progress payments prior to final payment of the contract and is applicable to all subcontractors for material or labor whether they have contracted directly with the general contractor or with some other subcontractor on the work.

Sec. 49-42. Enforcement of right to payment on bond. Suit on bond, procedure and judgment.

- (a) Any person who performed work or supplied materials for which a requisition was submitted to, or for which an estimate was prepared by, the awarding authority and who does not receive full payment for such work or materials within sixty days of the applicable payment date provided for in subsection (a) of section 49-41a, or any person who supplied materials or performed subcontracting work not included on a requisition or estimate who has not received full payment for such materials or work within sixty days after the date such materials were supplied or such work was performed, may enforce his right to payment under the bond by serving a notice of claim on the surety that issued the bond and a copy of such notice to the contractor named as principal in the bond within one hundred eighty days of the applicable payment date provided for in subsection (a) of section 49-41a, or, in the case of a person supplying materials or performing subcontracting work not included on a requisition or estimate, within one hundred eighty days after the date such materials were supplied or such work was performed. The notice of claim shall state with substantial accuracy the amount claimed and the name of the party for whom the work was performed or to whom the materials were supplied, and shall provide a detailed description of the bonded project for which the work or materials were provided. If the content of a notice prepared in accordance with subsection (b) of section 49-41a complies with the requirements

of this section, a copy of such notice, served within one hundred eighty days of the payment date provided for in subsection (a) of section 49-41a upon the surety that issued the bond and upon the contractor named as principal in the bond, shall satisfy the notice requirements of this section. Within ninety days after service of the notice of claim, the surety shall make payment under the bond and satisfy the claim, or any portion of the claim which is not subject to a good faith dispute, and shall serve a notice on the claimant denying liability for any unpaid portion of the claim. The notices required under this section shall be served by registered or certified mail, postage prepaid in envelopes addressed to any office at which the surety, principal or claimant conducts his business, or in any manner in which civil process may be served. If the surety denies liability on the claim, or any portion thereof, the claimant may bring action upon the payment bond in the superior court for such sums and prosecute the action to final execution and judgment. An action to recover on a payment bond under this section shall be privileged with respect to assignment for trial. The court shall not consolidate for trial any action brought under this section with any other action brought on the same bond unless the court finds that a substantial portion of the evidence to be adduced, other than the fact that the claims sought to be consolidated arise under the same general contract, is common to such actions and that consolidation will not result in excessive delays to any claimant whose action was instituted at a time significantly prior to the motion to consolidate. In any such proceeding, the court judgment shall award the prevailing party the costs for bringing such proceeding and allow interest at the rate of interest specified in the labor or materials contract under which the claim arises or, if no such interest rate is specified, at the rate of interest as provided in section 37-3a upon the amount recovered, computed from the date of service of the notice of claim, provided, for any portion of the claim which the court finds was due and payable after the date of service of the notice of claim, such interest shall be computed from the date such portion became due and payable. The court judgment may award reasonable attorneys fees to either party if upon reviewing the entire record, it appears that either the original claim, the surety's denial of liability, or the defense interposed to the claim is without substantial basis in fact or law. Any person having direct contractual relationship with a subcontractor but no contractual relationship express or implied with the contractor furnishing the payment bond shall have a right of action upon the payment bond upon giving written notice of claim as provided in this section.

- (b) Every suit instituted under this section shall be brought in the name of the person suing, in the superior court for the judicial district where the contract was to be performed, irrespective of the amount in controversy in the suit, but no such suit may be commenced after the expiration of one year after the applicable payment date provided for in subsection (a) of section 49-41a, or, in the case of a person supplying materials or performing subcontracting work not included on a requisition or estimate, no such suit may be commenced after the expiration of one year after the date such materials were supplied or such work was performed.
- (c) The word "material" as used in section 49-41 to 49-43, inclusive, includes the rental of equipment used in the prosecution of work provided for in the contract.

ARTICLE 11 CONNECTICUT SALES AND USE TAXES:

All bidders shall familiarize themselves with the current statutes and regulations of the Department of Revenue Services. The tax on materials or supplies exempted by such statutes and regulations shall not be included as part of a bid.

Nonresident contractors must comply with the provisions of Connecticut General Statutes Section 12-430(7), *Bond requirement for nonresident contractors*, and the regulations established pursuant to that section.

ARTICLE 12 Contractor's Qualifications:

All bidders shall file with their bids a statement of qualifications on the appropriate form.

ARTICLE 13. Subcontractors:

As required by the *Bid Proposal Form*, each bidder shall furnish with its submitted bid, and in the place on the bid form provided for such purpose, the names of responsible and qualified subcontractors who are actually to perform the work required by the division or portion of the specifications listed for the base bid. Failure to so list a subcontractor for any division or portion of the specifications will result in the rejection of the entire bid.

ARTICLE 14 Working Day:

A working day is hereby defined as each consecutive day, including and following the date set for commencement of work, except Saturdays, Sundays and State legal holidays and except those days on which, in the opinion of the awarding authority, the contractor is prevented by inclement weather from proceeding with work on the major items under construction at the then current stage of the work for at least six (6) hours with the usual force employed on these major items, provided, however, that in the event the State directs or permits work to be performed on a Saturday, Sunday or a State legal holiday, then such day shall be considered a working day.

ARTICLE 15 Nondiscrimination and Affirmative Action Provisions:

This section is inserted in connection with Subsection (a) of Section 4a-60 of the General Statutes of Connecticut, as revised.

a. For the purposes of this section, "minority business enterprise" means any small contractor or supplier of materials fifty-one percent or more of capital stock, if any, or assets of which is owned by a person or persons: (1) Who are active in the daily affairs of the enterprise, (2) who have the power to direct the management and policies of the enterprise, and (3) who are members of a minority, as such term is defined in Subsection (a) of Conn. Gen. Statutes. Section 32-9n; and "good faith" means that degree of diligence, which a reasonable person would exercise in the performance of legal duties and obligations. "Good faith efforts" shall include, but not be limited to, those reasonable initial efforts necessary to comply with statutory or regulatory requirements and additional or substituted efforts when it is determined that such initial efforts will not be sufficient to comply with such requirements.

For the purposes of this section, "Commission" means the Commission on Human Rights and Opportunities.

For the purposes of this section, "public works contract" means any agreement between any individual, firm or corporation and the State or any political subdivision of the State other than a municipality for construction, rehabilitation, conversion, extension, demolition or repair of a public building, highway or other changes or improvements in real property, or which is financed in whole or in part by the State, including, but not limited to, matching expenditures, grants, loans, insurance or guarantees.

b. (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, mental retardation or

physical disability, including, but not limited to, blindness, unless it is shown by such contractor that such disability prevents performance of the work involved, in any manner prohibited by the laws of the United States or of the State of Connecticut. The contractor further agrees to take affirmative action to insure that applicants with job-related qualifications are employed and that employees are treated when employed without regard to their race, color, religious creed, age, marital status, national origin, ancestry, sex, mental retardation, or physical disability, including, but not limited to, blindness, unless it is shown by such contractor that such disability prevents performance of the work involved; (2) the contractor agrees, in all solicitations or advertisements for employees placed by or on behalf of the contractor, to state that it is an "affirmative action-equal opportunity employer" in accordance with regulations adopted by the Commission; (3) the contractor agrees to provide each labor union or representative of workers with which such contractor has a collective bargaining agreement or other contract or understanding and each vendor with which such contractor has a contract or understanding, a notice to be provided by the Commission advising the labor union or workers' representative of the contractor's commitments under this section, and to post copies of the notice in conspicuous places available to employees and applicants for employment; (4) the contractor agrees to comply with each provision of this section and Conn. Gen. Statutes. Sections 46a-68e and 46a-68f and with each regulation or relevant order issued by said Commission pursuant to Conn. Gen. Statutes. Sections 46a-56, 46a-68e and 46a-68f; (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 Conn. Gen. Statutes. Section 46a-56. If the contract is a public works contract, the contractor agrees and warrants that he will make good faith efforts to employ minority business enterprises as subcontractors and suppliers of materials on such public works project.

c. 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; affirmative advertising, recruitment and training; technical assistance activities and such other reasonable activities or efforts as the Commission may prescribe that are designed to ensure the participation of minority business enterprises in public works projects.

d. The contractor shall develop and maintain adequate documentation, in a manner prescribed by the Commission, of its good faith efforts.

e. The contractor shall include the provisions of Subsection b of this section in every subcontract or purchase order entered into in order to fulfill any obligation of a contract with the State and such provisions shall be binding on a subcontractor, vendor or manufacturer unless exempted by regulations or orders of the Commission. 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 Conn. Gen. Statutes. Section 46a-56; provided, if such contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the Commission, 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.

f. The contractor agrees to comply with the regulations referred to in this section as they exist on the date of this contract and as they may be adopted or amended from time to time during the term of this contract and any amendments thereto.

ARTICLE 16 Nondiscrimination Provisions Regarding Sexual Orientation:

This section is inserted in connection with Subsection (a) of Section 4a-60a of the General Statutes of Connecticut, as revised.

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 sexual orientation, in any manner prohibited by the laws of the United States or of the State of Connecticut, and that employees are treated when employed without regard to their sexual orientation; (2) 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; (3) the contractor agrees to comply with each provision of this section and with each regulation or relevant order issued by said commission pursuant to section 46a-56 of the general statutes; (4) 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 which relate to the provisions of this section and section 46a-56 of the general statutes.

b. The contractor shall include the provisions of Subsection a of this section in every subcontract or purchase order entered into in order to fulfill any obligation of a contract with the State and such provisions shall be binding on a subcontractor, vendor or manufacturer unless exempted by regulations or orders of the Commission. The contractor shall take such action with respect to any such subcontract or purchase order as the Commission may direct as a means of enforcing such provisions including sanctions for noncompliance in accordance with section 46a-56 of the general statutes; provided, if such contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the Commission, 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.

c. The contractor agrees to comply with the regulations referred to in this section as they exist on the date of this contract and as they may be adopted or amended from time to time during the term of this contract and any amendments thereto.

ARTICLE 17 Union Labor:

Attention is called to the fact that there may be construction work now being carried on at the site at which construction is contemplated being done by union labor. This fact must be kept in mind by all bidders.

ARTICLE 18 Labor Market Area:

All bidders shall have read Sections 31-52 and 31-52a of the General Statutes of Connecticut, as revised. These sections relate to the preference of State citizens and the preference of residents of the labor market area in which the work under the contract is to be done and the penalties for violations thereof.

In order to avoid violations by the contractor and to cooperate with and assist the State in the implementation of the statutory mandates, any bidder awarded a contract with the State shall be required to provide the State with the following information:

- 18.1 The names and addresses of employees utilized by the contractor and by its subcontractors and how long each such employee has resided in Connecticut.
- 18.2 How long each employee has resided in the labor market area, as established by the State Labor Commissioner, in which the work under the contract is to be done. Labor market areas are indicated on the end of this section.

- 18.3 Within thirty (30) days after the start of work, the contractor shall submit a signed statement setting forth the procedures the contractor and its subcontractors have taken to assure that they have sought out qualified residents of the labor market area. Also, the statement shall include information as to how many persons were considered for employment and how many were actually hired. Such procedures will include, but not be limited to, obtaining names of available persons from area Employment Security Offices.
- 18.4 In the same manner as item (18.3) above, the statement shall indicate the steps taken to assure that the contractor and its subcontractors have sought out qualified residents of this State.
- 18.5 The contractor shall cooperate with and provide information to the construction supervisor or inspector of the State assigned to collect and verify the information required. The State may request that all such information be updated during the term of the contract at reasonable times.
- 18.6 All such information gathered and compiled by the State shall be forwarded to the Labor Commissioner.

Pursuant to Section 31-52b of the General Statutes of Connecticut, as revised:

"The provisions of sections 31-52 and 31-52a shall not apply where the State or any subdivision thereof may suffer the loss of revenue granted or to be granted from any agency or department of the federal government as a result of said sections or regulative procedures pursuant thereto."

However, no exception shall be determined to be applicable unless stated in writing by the Commissioner of the Department of Public Works.

END OF SECTION

PRE- BID MEETING AGENDA

Project Name: Superstructure Replacement of CT DEEP Bridge E118 (DOT #06323)

Project Location: Devil's Hopyard State Park, East Haddam, CT

Project Number: DEPA00029000104

Date of Meeting: Thursday, March 5, 2020 On-site

1. Sign-In

2. Introductions: Project Manager for DEEP, Macchi Engineers, LLC

3. Bids due March 18, 2020 by 2:00pm EST

a. Bids will be received at the DEEP Engineering Unit Offices, 163 Great Hill Road, Portland, CT 06480

4. Applicable Permits:

a. General Permit for Water Resource Construction Activities (201903049-GPCST)

b. Flood Management Certification (FM-201703389)

c. U.S. Army Corps of Engineers General Permits (NAE - 2020 - 00074)

5. Works items to be Bid on:

a. Mobilization to site

b. Clear Limits(based on Plans)

c. Install S&E measures per plans or as directed by project manager

d. Clear and Grub (tree removal) where necessary

e. Remove existing bridge superstructure

f. Install new bridge superstructure

g. Minor Substructure repair work

h. Incidental approach roadways works

i. Pavement Repair

j. Pavement Markings

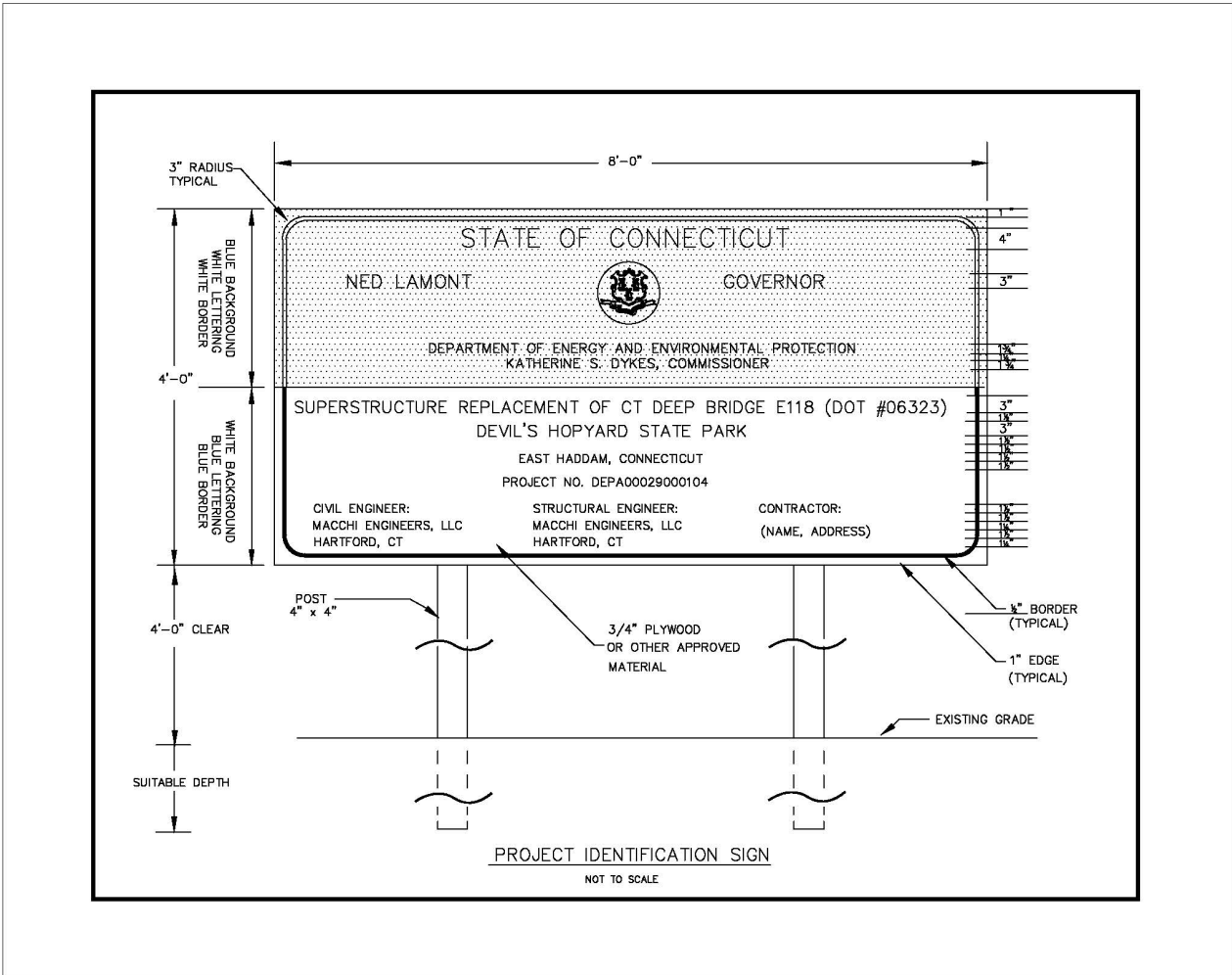
k. Re - stabilize disturbed areas

l. Remove S&E measures after site is stabilized

m. General site clean up

6. Anticipated Construction Start Date (06/01/20) approximately 90 Calendar Days and Consultant Construction Estimate (\$198, 573.00)

7. Questions



Certificate (of Authority)

DEEP Project No.:

I ,
(Signer's Name)¹ *(Signer's Title)*

of , an entity lawfully organized and existing under the laws
(Name of Entity)

of , do hereby certify that the following is a true and correct
(Name of State or Commonwealth)

copy of a resolution adopted on the day of , 20 by the governing body of
(Day)² *(Month)²* *(Year)²*

, in accordance with all of its documents of governance and
(Name Of Entity)

management and the laws of and further certify that such resolution has not
(Name of State or Commonwealth)

been modified, rescinded or revoked, and is at present in full force and effect.

RESOLVED: that ,
(Name of Signer of Contract Documents)³ *(Title of Signer of Contract Documents)³*

of is empowered and authorized, on behalf of the entity,
(Name of Entity)

to execute and deliver contracts and amendments thereto, and all documents required by the Governor, the

Connecticut Department of Energy and Environmental Protection, the Connecticut State Properties Review Board and

the Office of the Attorney General associated with such contracts and amendments.

IN WITNESS WHEREOF, the undersigned has executed this certificate this day of , 20 .
(Day)⁴ *(Month)⁴* *(Year)⁴*

(Signature)

(Print Name)

(Title)

Reference Notes:

- 1 The signer of this certificate must be someone *other than* the signer of the contract documents *except for* a sole managing member of an LLC or the sole officer or sole principal of a corporation. *If* the signer is a sole managing member of an LLC, *then* along with this certificate the signer must provide a letter on company letterhead that indicates the signer is a sole member and managing member. If the signer is the sole officer or sole principal of a corporation, then the signer must provide with the certificate a letter on company letterhead setting forth this fact.
- 2 This date must be on or before the **date of signing** of the Bid Proposal (or Contract).
- 3 This person shall sign the Contract and other required documents.
- 4 This date must be on or after the **date of signing** of the Bid Proposal (or Contract).

For Your Information:

Certificate (of Authority)

All Bidders: Complete page 1, print, sign, and scan to PDF. Deliver to the DEEP Engineering Unit as a paper copy or email to a copy to the DEEP Project Manager.

What the **Certificate** is saying is that the organization authorized the signatory to sign the pertinent **documents other than** the Certificate (of Authority) and that, as of the date of **execution** of the CERTIFICATE (i.e., the date set forth in the "In Witness Whereof" blanks) there has been no change in that authorization.

Instructions For Completing The Certificate (of Authority)

The Certificate (of Authority) to Accompany the Bid Proposal Form:

1. 1st Paragraph:

- 1.1 First, enter the name and title of the individual signing the Certificate (of Authority).
- 1.2 Second, enter the legal name of the entity (exactly as it is shown on the Secretary of State registry).
- 1.3 Third, enter the name of the state or commonwealth the entity is registered in.
- 1.4 Fourth, enter the date the resolution was adopted by the governing body. This **date** is **on** or **before** the date the **Bid Proposal** is signed.
- 1.5 Fifth, enter the name of the state or commonwealth the entity is registered in.

2. 2nd Paragraph:

- 2.1 First, enter the name and title of the individual signing bid documents for the entity.
- 2.2 Second, enter the legal name of the entity (exactly as it is shown on the Secretary of State registry).

3. Last Paragraph:

- 3.1 Enter the **Witness Date**¹. This date will likely be the date of execution of the **Bid Proposal form**.

¹ ***This Witness Date Should Not Be Before The Date Of Execution Of The Bid Proposal.***

The Certificate (of Authority) to Accompany the Contract:

1. 1st Paragraph:

- 1.1 First, enter the name and title of the individual signing the Certificate (of Authority).
- 1.2 Second, enter the legal name of the entity (exactly as it is shown on the Secretary of State registry).
- 1.3 Third, enter the name of the state or commonwealth the entity is registered in.
- 1.4 Fourth, enter the date the resolution was adopted by the governing body. This **date** is **on** or **before** the date the **Contract** is signed.
- 1.5 Fifth, enter the name of the state or commonwealth the entity is registered in.

2. 2nd Paragraph:

- 2.1 First, enter the name and title of the individual signing contract documents for the entity.
- 2.2 Second, enter the legal name of the entity (exactly as it is shown on the Secretary of State registry).

3. Last Paragraph:

- 3.1 Enter the **Witness Date**¹. This date will likely be the date of execution of the **Contract**.

¹ ***This Witness Date Should Not Be Before The Date Of Execution Of The Contract.***

End of Section 00 40 14 Certificate (of Authority)

**FOR CURRENTLY CERTIFIED SET - ASIDE CONTRACTORS ONLY
STATE OF CONNECTICUT
DEPARTMENT OF ENERGY & ENVIRONMENTAL PROTECTION
BID PROPOSAL FORM**

DATE: _____

PROPOSAL OF: _____

BIDDER'S LEGAL COMPANY NAME

BIDDER'S ADDRESS

To the Commissioner, Department of Energy & Environmental Protection

Dear Sir:

- 1.0 In accordance with Chapter 60 Part II of the Connecticut General Statutes, as amended, and pursuant to, and in compliance with your Invitation to Bid, the Notice to Bidders, the Project Agreement, including the conditions thereto, the Bid Security, I (we) propose to furnish the labor and/or materials, installed as required for the project named and numbered on this Bid Proposal Form, submitted herein, furnishing all necessary equipment, machinery, tools, labor and other means of construction, and all materials specified in the manner and at the time prescribed strictly in accordance with the provisions of the Contract including, but not limited to, the specifications and/or drawings together with all addenda issued by your authority and received prior to the scheduled closing time for the receipt of the bids, and in conformity with requirements of the Awarding Authority and any laws or Departmental regulations of the State of Connecticut or of the United States which may affect the same, for and in consideration of the price(s) stated on the said Bid Proposal Form, hereof.
- 2.0 The Lump Sum Base Bid by me (us) on the Bid Proposal Form includes all work indicated on the drawings and/or described in the specifications, except:
 - 2.1 Work covered by Supplemental Bids as may be listed on the Bid Proposal Form and General Requirements.
 - 2.2 Contingent Work covered by the Unit Prices included within the General Requirements.
 - 2.3 Contingent Work covered by the Contractor Provided Unit Prices as may be listed on the Bid Proposal Form in Section 00 41 00, Item 7.7.
- 3.0 I (we) acknowledge and agree to the following:
 - 3.1 To use and accept the Contractor Provided Unit Prices on the Bid Proposal Form, Section 00 41 00, Item 7.7, as provided by the Contractor in evaluating either additions to or deductions from the Work.
 - 3.2 To use and accept the Unit Prices in Section 01 20 00 "Contract Considerations" Division I as provided by the Owner in evaluating either additions to or deductions from the Work.

- 3.3 To use and accept the Allowances in Section 01 20 00 "Contract Considerations" Division 1, as part of the Total Contract Sum as listed in Section 7.3 of this Bid Proposal form.
- 3.4 To use and accept the Supplemental Bids in Section 01 23 13, Division 1, as provided by the Contractor, when authorized by the Owner as scheduled in Section 7.6 of this Bid proposal form.
- 3.5 To hold the bid price for up to sixty (60) calendar days and longer if mutually agreed upon.
- 3.6 To include in the bid price any additional work required while meeting all permit conditions and special conditions as noted in the Appendix if applicable.
- 4.0 This Bid Proposal Form is submitted to and in compliance with the foregoing and following conditions and/or information:
- 4.1 AWARD
- 4.1.1 All proposals shall be subject to provisions of Article 1 of the Notice to Bidders and for purpose of award, consideration shall be given only to Bid Proposals submitted by qualified and responsible bidders. FOR 100% SET-ASIDE ONLY ADD THE FOLLOWING SENTENCE: certified as eligible for the small contractors set-aside program.
- 4.1.2 The award shall be made on the lowest Lump Sum Bid as stated in Section 7.3 of this Bid Proposal Form, or the lowest Lump Sum Bid as stated in Section 7.3 of this Bid Proposal Form and any or all Supplemental Bids as stated in Section 7.6 of this Bid Proposal Form, taken sequentially, as applicable, provided funds are available.
- 4.1.3 In the event of any discrepancy between the amount written in words and the amount written in numerical figures, the amount written in words shall be controlling.
- 4.2 COMMENCEMENT AND FINAL COMPLETION OF WORK: (ARTICLE 4 GENERAL CONDITIONS)
- 4.2.1 The General Contractor shall commence Work within fourteen (14) calendar days after receiving "Notice To Begin Work" by the Commissioner or the authorized representative and continue for **ninety (90) calendar days** for completion of the project.
- 4.3 LIQUIDATED DAMAGES: (ARTICLE 8, GENERAL CONDITIONS)
- 4.3.1 The General Contractor shall be assessed **Two Hundred (\$200) Dollars in Liquidated Damages** per day for each calendar day beyond the Date given for Final Completion of the Contract according to the Contract Time.
- 4.4 CONTRACTOR'S INSURANCE REQUIRED: (ARTICLE 35, GENERAL CONDITIONS)
- 4.4.1 The limits of liability for the Insurance required for this project shall be those listed in Article 35 of the General Conditions.

- 4.4.2 SPECIAL HAZARDS INSURANCE REQUIRED:
Coverage for hazards of explosion, collapse and underground (X-C-U).
- 4.5 The General Contractor on this project shall be required to perform not less than 25% of the completed Contract Sum of the Work with its own forces.
- 4.6 The General Contractor on the project shall be required to Award not less than 25% of the total Contract Sum to Contractors who are certified and eligible to participate under the State of Connecticut Set-Aside Program for small contractors including 6.25% to certified and eligible Minority Business Enterprises, in accordance with Connecticut General Statutes Section 4a-60g.
- 4.7 BIDDER'S QUALIFICATION STATEMENT AND OBJECTIVE CRITERIA FOR EVALUATING QUALIFICATIONS OF BIDDERS:
- 4.7.1 Information in regards to the General Contractor's and the Named Subcontractor's Bidder's Qualification is submitted and is made part of this Bid Proposal Form. **Note: Individual Specification Sections may contain General Contractor and/or Subcontractor Qualification requirements that exceed those in Section 00 45 15, "Objective Criteria Established for Evaluating Qualifications of Bidders."**
- 4.7.1.1 The General Contractor is required to complete the General Contractor Bidder's Qualification Statement.
- 4.7.1.2 Any Named Subcontractor as listed in schedule 7.5.1 of this Bid Proposal Form is required to complete the Named Subcontractor Bidder's Qualification Statement in section 00 45 14. To facilitate compliance with this requirement, the three (3) apparent low bidders will have ten (10) calendar days, from notification by the Department of Energy & Environmental Protection, to submit the completed Named Subcontractor Bidder's Qualification Statement as required in section 00 45 14. This information will be considered as part of your Bid Proposal Form and failure to comply with any portion of this requirement will be cause to reject your bid.
- 4.7.2 The Objective Criteria for Evaluating Bidders that are included in Division 0, Section 00 45 15, of this Project Manual, is to assure that the State of Connecticut will secure the "lowest responsible and qualified bidder" who has the ability and capacity to successfully complete the Bid Proposal Form and the Work.
- 4.8 NONDISCRIMINATION AND LABOR RECRUITMENT:
- 4.8.1 I (we) agree that the Contract awarded for this project shall be subject to Executive Orders No. Three & Seventeen, promulgated June 16, 1971 and February 15, 1973, respectively, and to the Guidelines and Rules of the State Labor Commissioner implementing Executive Order No. Three and further agree to submit reports of Compliance Staffing on Labor Department Form E.O. 3-1, when and as requested.
- Executive Order No. Three is superseded by the Connecticut General Statutes 4a-60 and 4a-60a, and the Commission on Human Rights Regulations (CHRO), section 46a-68j-2 1 through 46a-68j-43 –see section 00 73 38 of this project manual.

4.9 FEDERAL & STATE WAGE DETERMINATIONS:

4.9.1 The U. S. Secretary of Labor's latest decision and the State of Connecticut Wage Schedule are all incorporated in the documents. The higher rate (Federal or State) for any given occupation shall prevail. At the time of bidding, the bidder agrees to accept the current prevailing wage scale, as well as the annual adjustment to the prevailing wage scale, as provided by the Connecticut Department of Labor.

4.10 CERTIFICATION OF BIDDER REGARDING EQUAL EMPLOYMENT OPPORTUNITY & NON-SEGREGATED FACILITIES:

4.10.1 The General Contractor and Subcontractors are hereby advised that upon acceptance of their bids they are obligated to fill out within seven (7) calendar days the certification required pursuant to Executive Order No. 11246, and agree to certify to the compliance of non-segregated facilities.

4.11 EQUALS AND/OR SUBSTITUTIONS:

4.11.1 All submissions requesting "Equals and/or Substitutions" shall be made by the Contractor in accordance with Article 15 of the General Conditions and Section 01631 of the General Requirements. All submissions shall contain all the information necessary for the Department of Energy & Environmental Protection to evaluate the submission and the request. Failure to submit sufficient information to make a proper evaluation, including submittal of data for the first manufacturer listed as well as the data for the "Equals and/or Substitutions" proposed, shall result in a rejection of the submission and request. Upon receipt of the submission and request the Department of Energy & Environmental Protection shall notify the Contractor the request has been received and within fourteen (14) calendar days of date received shall render a decision on such submission and request.

5.0 ACCOMPANYING THIS PROPOSAL IS:

5.1 A CERTIFIED CHECK drawn to the order of – Treasurer, State of Connecticut, in the amount of:

\$ _____

_____ DOLLARS
(Written amount)

and drawn on the _____
(A State Bank & Trust Co.) (A National Banking Assoc.)

Located at _____
Address, City & State

which it is understood shall be cashed and the proceeds thereof used so far as may be necessary to reimburse the State of Connecticut for losses and damages arising by virtue of my (our) failure to file the required Bonds and execute the required contract if this proposal is accepted by the Awarding Authority.

OR

5.2 A BID BOND having as surety thereto a Surety Company or Companies authorized to transact business in the State of Connecticut and made out in the penal sum of 10% of the bid, or in the amount of:

\$ _____

DOLLARS

(Written amount)

6.0 I (we), the undersigned, hereby declare that I am (we are) the only person(s) interested in the Bid Proposal and that it is made without any connection with any other person making any Bid Proposal for the same work. No person acting for, or employed by, the State of Connecticut is directly or indirectly interested in this Bid Proposal, or in any Contract which may be made under it, or in expected profits to arise therefrom. This Bid Proposal is made without directly or indirectly influencing or attempting to influence any other person or corporation to bid or refrain from bidding or to influence the amount of the Bid Proposal of any other person or corporation. This Bid Proposal is made in good faith without collusion or connection with any other person bidding for the same work and this proposal is made with distinct reference and relation to the plans and specifications prepared for this Contract. I (we) further declare that in regard to the conditions affecting the Work to be done and the labor and materials needed, this Bid Proposal is based solely on my (our) own investigation and research and not in reliance upon any representations of any employee, officer or agent of the State.

7.0 Each class of Work set forth in a separate section of the specifications pursuant to this Section shall be a subtrade designated in Schedule 7.5.1 of this Bid Proposal Form and shall be the matter of a subcontract made in accordance with the procedure set forth in this chapter.

7.1 The undersigned proposes to furnish all labor and materials required for

Project Number: DEPA00029000104

Project Title: Superstructure Replacement of CT DEEP Bridge E118

in accordance with the accompanying Plans and Specifications

Prepared by: DEEP Engineering & Field Support Services - Engineering Unit
Portland, CT

& Macchi Engineering, LLC, Hartford, CT

Engineer/Architect

for the Contract Sum specified in Section 7.3 subject to additions and deductions according to the terms of the specifications.

7.2 This Bid Proposal includes ___ number of **Addenda/Addendum**.

7.2.1 The **Contractor is to fill in item 7.2 above**, acknowledging the number of Addenda that the Contractor is including in the Bid Proposal Form.

7.3 THE PROPOSED CONTRACT PRICE IS AS FOLLOWS:

\$ _____

DOLLARS

(Written Amount)

7.3.1 The sub-totals noted below are a breakdown of the total bid price quoted above

1.	General Conditions	\$
2.	Erosion and Sediment Controls	\$
3.	Minor Masonry Substructure Work	\$
4.	Timber Superstructure Remoyal and Disposal	\$
5.	Steel Remoyal, Painting and Re-installation	\$
6.	New Timber Superstructure Installation	\$
7.	Concrete Approach Ramp Wall Sections	\$
8.	Site Work and Tree/Stump Work	\$
9.	Payement Work & Approach Roadway Work	\$
	TOTAL:	\$

7.3.2 In accordance with Section 4.6 not less than 25% of this total shall be awarded to Certified Set-Aside Contractors, including 6.25% to Minority Business Enterprises. Failure to meet this requirement will be cause to reject your bid.

7.4 The work to be performed by the General Contractor, with his own forces is as follows: (Do not include the value of the unnamed subcontractors.)

\$ _____

7.4.1 In accordance with Section 4.5 of this Bid Proposal Form, the amount of Work performed by the General Contractor must be at least 25% of the total Proposal Contract Sum.

7.4.2 If the contractor names himself/herself as a named subcontractor in Schedule 7.5.1 the total amount must be included in 7.4 above (i.e., the amount listed in 7.4 must be greater than or equal to the sum of any amounts shown in Schedule 7.5.1 to be performed by the G.C.).

7.5 There are no specific Subtrades for this project.

7.5.1 Schedule – Named Subcontractors –

7.6 Any Supplemental Bids listed in schedule 7.6.1, if accepted by the Owner, will be taken cumulatively and in numerical order as scheduled. No Supplemental Bid will be skipped or taken out of numerical order as scheduled. Supplemental Bids: Division 1, Section

01 23 13 of the General Requirements identify and describe the Supplemental Bids as shown in Schedule 7.6.1.

7.6.1 Schedule – Supplemental Bids – NOT APPLICABLE

7.7 The Contractor shall coordinate all unit price items with Specifications and Contract Drawings.

7.7.1 Unit Price: NOT APPLICABLE

7.8 The undersigned agrees that if selected as the General Contractor, I (we) shall, within seven (7) calendar days (legal State holidays excluded) after notification thereof by the awarding authority, execute a Contract in accordance with the terms of this Bid Proposal Form and Contract.

7.9 The undersigned agrees and warrants that they have made good faith efforts to employ minority business enterprises as Subcontractors and suppliers of materials under such Contract and shall provide the Commission on Human Rights and Opportunities with such information as is requested by the Commission concerning their employment practices and procedures as they relate to the current provisions of the Connecticut General Statutes governing Contract requirements.

7.10 This project is not a “Threshold Building.”

8.0 A duly authorized representative of the Bidder or Bidder’s partnership, firm, corporation or business organization must sign all Bid Proposals Forms.

(NO FACSIMILE SIGNATURE IS PERMITTED).
ALL INFORMATION BELOW IS TO BE FILLED IN BY THE BIDDER.

Project Number _____

Signed this _____ day of _____ 20 _____

Firm Name _____
Complete Legal Name

Address _____
Street City State Zip Code

Telephone Number _____

FAX Number _____

E-mail Address _____

Bidder's Signature _____
Duly Authorized Title

Print Name

END OF SECTION

Bid Package Submittal Requirements:
DEEP | Engineering & Support Services | Engineering Unit
163 Great Hill Rd | Portland, CT 06480

1.1	Bidding:
	Bid Package Documents shall be delivered (as a hard copy) to the DEEP Engineering Unit, 163 Great Hill Rd, Portland, CT 06480.
1.1.2	For questions, call Joseph Buyonje at 860-424-4121.

1.2	Bid Package Submittal Requirements:
	All Bidders are required to deliver Bid Package Documents to the DEEP Engineering Unit <i>prior</i> to the date and time of the Bid Opening. See Tables 1, 2, and 3 for specific submittal requirements.
1.2.1	All Bidders: See Table 1.
1.2.2	Three (3) Apparent Lowest Qualified Bidders: See Table 2.
1.2.3	Apparent Low Qualified Bidder: See Table 3.

1.3	Deadlines for Receipt of Bid Package Documents:
1.3.1	Table 1: Bid Package Documents must sent to the DEEP Engineering Unit <i>prior</i> to the date and time of the Bid Opening.
1.3.2	Tables 2 and 3: See the tables for additional deadlines. Failure to submit the documents before the stated deadlines may result in rejection of the bid at the sole discretion of the DEEP Engineering Unit.

1.4	Delays in Receipt of Supportive Documents from the Three Apparent Lowest Bidders:		
1.4.1	If there are any delays in the receipt of the supportive documents specified in Tables 2 and 3, then the Bids shall remain valid for the same additional number of days. <table border="0" style="margin-left: 20px;"> <tr> <td style="width: 20px;">.1</td> <td>For example, since the Three (3) Apparent Lowest Bidders are required to Hold The Bid Price for ninety (90) calendar days, if supportive documents are submitted four (4) calendar days later, then the bid shall remain valid for ninety-four (94) calendar days.</td> </tr> </table>	.1	For example, since the Three (3) Apparent Lowest Bidders are required to Hold The Bid Price for ninety (90) calendar days , if supportive documents are submitted four (4) calendar days later , then the bid shall remain valid for ninety-four (94) calendar days .
.1	For example, since the Three (3) Apparent Lowest Bidders are required to Hold The Bid Price for ninety (90) calendar days , if supportive documents are submitted four (4) calendar days later , then the bid shall remain valid for ninety-four (94) calendar days .		
1.4.2	Failure to submit the documents before the stated deadline may result in rejection of the bid at the sole discretion of the DEEP Project Manager.		

TABLE 1 ALL BIDDERS			
Construction Costs:		The Bid Proposal Form, Other Bid Package Documents, Affidavits, and Certifications <u>shall</u> be delivered to the DEEP Engineering Unit by <u>all</u> Bidders prior to the Date and Time of the Bid Opening.	Form Location
Less Than \$500,000	Greater Than \$500,000		
Bid Proposal Form and Other Bid Package Documents			
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Section 00 41 00 Bid Proposal Form	Project Manual
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Section 00 43 16 Standard Bid Bond or Certified Check	Project Manual
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Section 00 45 14 General Contractor Bidder's Qualification Statement	Project Manual
	<input checked="" type="checkbox"/>	DAS Prequalification Certificate	BizNet
	<input checked="" type="checkbox"/>	DAS Update (Bid) Statement	BizNet
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Section 00 40 14 Certificate (of authority)	Project Manual
<input checked="" type="checkbox"/>		DAS Set-Aside Certificate	BizNet
<input checked="" type="checkbox"/>		Bidder Contract Compliance Monitoring Report	Project Manual
Affidavits and Certifications			
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Gift and Campaign Contribution Certification – OPM Ethics Form 1	Project Manual
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Consulting Agreement Affidavit – OPM Ethics Form 5	Project Manual
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Ethics Affidavit (Regarding State Ethics) – OPM Ethics Form 6	Project Manual
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Iran Certification – OPM Ethics Form 7	Project Manual
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Nondiscrimination Certification – Form A, B, C, D, or E	BizNet

TABLE 2			
THREE (3) APPARENT LOWEST QUALIFIED BIDDERS			
Construction Costs:		WHEN APPLICABLE:	Form Location
Less Than \$500,000	Greater Than \$500,000	Submit within ten (10) Calendar Days <i>after</i> receipt of the “ Set-Aside Contractor Schedule Request ” from the DEEP Engineering Unit:	Form Location
	<input checked="" type="checkbox"/>	Set-Aside Contractor Schedule for each subcontracted SBE and/or MBE firm(s) (See Section 00 73 27 Set-Aside Contractor Schedule for a sample Request.)	Email From DEEP Engineering Unit
	<input checked="" type="checkbox"/>	DAS Set-Aside Certificate(s) for each subcontracted SBE and/or MBE firm(s) listed in the Set-Aside Contractor Schedule.	Download from BizNet
	<input checked="" type="checkbox"/>	Section 00 45 17 Named Subcontractor Bidder’s Qualification Statements for each Named Subcontractor listed in the Bid Proposal Form.	Copy from Project Manual
	<input checked="" type="checkbox"/>	DAS Prequalification Certificate(s) and Update (Bid) Statement(s) for each Named Subcontractor listed in the Bid Proposal Form with Subcontracts greater than \$500,000.	Download from BizNet

TABLE 3			
APPARENT LOW QUALIFIED BIDDER			
Construction Costs:		When Applicable, submit the following documents as noted:	Form Location
Less Than \$500,000	Greater Than \$500,000	When Applicable, submit the following documents as noted:	Form Location

Submit within fifteen (15) calendar days <i>after</i> receipt of the “ Request for the Affirmative Action Plan and Employment Information Form Letter ” from the DEEP Engineering Unit:			
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	If Contractor has 50 or more employees and/or the Project is equal to or greater than \$500,000, submit to CHRO: Affirmative Action Plan and Employment Information Form (DAS-45).	CHRO Website & BizNet
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Submit to DEEP Engineering Unit: Copy of Transmittal Letter to confirm the Affirmative Action Plan was filed with CHRO.	(copy of transmittal letter)
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Submit to CT Department of Labor: Contractors Wage Certification Form. See Section 00 73 44 Prevailing Wage Rates/Contractor’s Wage Certification/Payroll Certification.	Copy from Project Manual

TABLE 3 APPARENT LOW QUALIFIED BIDDER (continued)			
Construction Costs:		Submit within ten (10) business days <i>after</i> receipt of the “Letter of Intent” from the DEEP Engineering Unit:	Form Location
Less Than \$500,000	Greater Than \$500,000		
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Section 00 40 14 Certificate (of authority)	Project Manual
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Section 00 52 03 Project Agreement	Project Manual
	<input checked="" type="checkbox"/>	Section 00 52 73 Subcontract Agreement Form (Named & Listed)	Email From DEEP Engineering Unit
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Certificate of Liability Insurance Acord® form (See Section 00 62 16 Insurance Certificate Form for details)	Project Manual
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Certificate of Asbestos Abatement Liability Insurance (for asbestos abatement only) (See Section 00 62 16.1 Asbestos Abatement Liability Insurance for details)	Email From DEEP Engineering Unit
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Section 00 92 10: Additional Forms	Performance Bond
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Labor & Material Bond
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Surety Sheet
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Bidder’s Certification: Financial Position & Corporate Structure
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Power of Attorney from the Surety Company	Surety Company
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Nonresident (Out of State) Contractors: <u>Verified Nonresident</u> General/Prime Contractors must submit a copy of their “ Notice of Verified Status ” (Verification Letter) from the CT Department of Revenue Services (DRS). <u>Unverified Nonresident</u> General/Prime Contractors must submit a copy of Form AU-965 “Acceptance of Surety Bond” from the DRS. (See Section 00 92 30 Procedures Regarding Taxation for Nonresident General/Prime Contractor and Subcontractors for additional details.)	CT Department of Revenue Services
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<i>NEW:</i> General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities: For projects disturbing one or more total acres of land area , submit a copy of the signed Stormwater Pollution Control Plan “Contractor Certification Statement” and License Transfer Form , as directed by the DEEP Project Manager, prior to commencement of any construction activities.	DEEP Engineering Unit
	<input checked="" type="checkbox"/>	Ethics Affidavit (Regarding State Ethics) OPM Ethics Form 6 for each Named Subcontractor	BizNet
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Threshold Projects Only: Submit Major Contractor Registration License Number(s) for Subcontractors	CT Department of Consumer Protection
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	SEEC Form 10	SEEC Website
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Certificate of Legal Existence from Corporations	Secretary of the State

End of Section
 00 41 10 Bid Package Submittal Requirements

Standard Bid Bond

**STATE OF CONNECTICUT
DEPARTMENT OF ENERGY & ENVIRONMENTAL PROTECTION**

KNOW ALL MEN BY THESE PRESENTS, That we, []
[], hereinafter called the Principal,
of [], as Principal,
and [], hereinafter
called the 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 the State of
Connecticut, 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 proposal to the Obligee related to a contract for Project No.: []
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 the State of Connecticut 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 [], 20 []
[]
(Principal's Signature) [] Surety
[] by []
(Print Name) [] Its attorney in fact Signature
[]
Company Name [] (Print Name)

**General Contractor
Bidder's Qualification Statement
DEEP ● Engineering & Support Services ● Engineering Unit**

Instructions:

- All Bidders are **required** to submit this form with their Bid Package, properly completed, and deliver it to the DEEP Engineering Unit, **prior to the date and time of the Bid Opening**.
- Failure of a Bidder to answer any question or provide required information **shall** be grounds for the awarding authority to disqualify and reject the bid, pursuant to Connecticut General Statutes §4b-92.
- If a question or request for information does not pertain to your organization in any way, use the symbol "NA" (Not Applicable).
- Attach additional information on 8 ½" x 11" sheets with your letterhead as necessary and reference specific section and subsection numbers.
- **NOTE:** The Department reserves the right to request any additional or supplemental information necessary to complete its evaluation of a Bidder's qualification.

1.0 Project Information:

1.1	DEEP Project Number:	
1.2	Project Name:	
1.3	Project Location:	

2.0 Projects with Construction Costs Estimated To Be Greater than \$500,000:

- Select the applicable **Class of Work** as stated in the **00 11 16 Invitation to Bid**.
- Select **YES** if your Firm has the applicable the **DAS Prequalification Certificate and Update (Bid) Statement** or **NO** if it does not.
- If **YES**, upload the applicable **DAS Prequalification Certificate and Update (Bid) Statement** to BizNet **prior** to the date and time of the Bid Opening.

<input type="checkbox"/>	Not Applicable - Construction Costs Less than \$500,000	
	Class of Work:	Does your Firm have the applicable DAS Prequalification Certificate and Update (Bid) Statement?
2.1	<input type="checkbox"/> General Building Construction (Group A):	YES <input type="checkbox"/> NO <input type="checkbox"/>
2.2	<input type="checkbox"/> General Building Construction (Group B):	YES <input type="checkbox"/> NO <input type="checkbox"/>
2.3	<input type="checkbox"/> General Building Construction (Group C):	YES <input type="checkbox"/> NO <input type="checkbox"/>
2.4	<input type="checkbox"/> General Trades (Interior Work Only):	YES <input type="checkbox"/> NO <input type="checkbox"/>
2.5	<input type="checkbox"/> CPS Projects ONLY: Insert Class of Work	YES <input type="checkbox"/> NO <input type="checkbox"/>

3.0 Firm's Present Legal Name: (the *complete legal name exactly* as it appears with the **Secretary of State registry**. The appropriate **title** must be used throughout the documents, for example: General Partner, Member, Manager, Sole Member, etc.)

Name:

4.0 How many years has your Firm been in business under its **Present Legal Name**?

Years:

5.0 How many years has your Firm been in business as a General Contractor?

Years:

6.0 Indicate **all** other **names** by which your Firm has been known and the **length of time** known by each name:

6.1

<i>Years</i>	<i>Months</i>

6.2

<i>Years</i>	<i>Months</i>

6.3

<i>Years</i>	<i>Months</i>

7.0 This Firm's **Certification** with the CT Secretary of State:

**Check
Box**

Type of Business Entity:

**Certification
Year**

Corporation

Partnership

Sole Proprietorship

Limited Liability Company (LLC)

Other:

8.0 Attach resumes of all **supervisory personnel**, such as **Principals, Project Managers, and Superintendents**, who will be directly involved with the project on which you are now a bidder. Indicate their construction related training, certifications and licenses and the number of years of actual construction experience. Indicate the number of years of this actual construction experience which were in a Supervisory capacity.

9.0 Named Subcontractor – Bidder Intends to Self-Perform:

Check **YES** or **NO** for each “Named Subcontractor” **Class of Work** which your firm intends to perform with its own employees for this Contract; see **Section 2.7** of **Section 00 41 00 Bid Proposal Form**.

NOTE: For Projects with Construction Costs estimated to be greater than \$500,000, complete **Section 00 45 17 Named Subcontractor Bidder's Qualification Statement** for each **Named Subcontractor Class of Work** checked **YES** and submit within ten (10) calendar days *after* receipt of the “Set-Aside Contractor Schedule Request” from DEEP Engineering Unit.

<input type="checkbox"/>	Not Applicable – No Named Subcontractors &/or Not Self-Performing	
	Named Subcontractor Class of Work	Does your Firm intend to self-perform this Named Subcontractor Class of Work?
9.1	Electrical:	YES <input type="checkbox"/> NO <input type="checkbox"/>
9.2	HVAC:	YES <input type="checkbox"/> NO <input type="checkbox"/>
9.3	Masonry:	YES <input type="checkbox"/> NO <input type="checkbox"/>
9.4	Plumbing:	YES <input type="checkbox"/> NO <input type="checkbox"/>
9.5	Environmental Remediation:	YES <input type="checkbox"/> NO <input type="checkbox"/>
9.6	Hazardous Materials Abatement:	YES <input type="checkbox"/> NO <input type="checkbox"/>

10.0 Named Subcontractor - Class of Work Greater than \$500,000 and Self-Performing:

- Select the applicable **Named Subcontractor Class of Work** which your firm intends to perform with its own employees for this Contract.
- Select **YES** if your Firm has the applicable the **DAS Prequalification Certificate and Update (Bid) Statement** or **NO** if it does not.
- If **YES**, submit the applicable **DAS Prequalification Certificate and Update (Bid) Statement** within ten (10) calendar days *after* receipt of the “Set-Aside Contractor Schedule Request” from DEEP Engineering Unit.

<input type="checkbox"/>	Not Applicable – No Class of Work Greater \$500,000 &/or Not Self-Performing	
	Named Subcontractor Class of Work Greater Than \$500,000	Does your Firm have the applicable DAS Prequalification Certificate and Update (Bid) Statement?
10.1	<input type="checkbox"/> Electrical:	YES <input type="checkbox"/> NO <input type="checkbox"/>
10.2	<input type="checkbox"/> HVAC:	YES <input type="checkbox"/> NO <input type="checkbox"/>
10.3	<input type="checkbox"/> Masonry:	YES <input type="checkbox"/> NO <input type="checkbox"/>
10.4	<input type="checkbox"/> Plumbing:	YES <input type="checkbox"/> NO <input type="checkbox"/>

11.0 List all construction projects your Firm has completed in the **past five (5) years**. Provide **all** of the information listed below. DEEP *may* reject a bid as **non-responsive** if the bidder does not make **all** required pre-award submittals within the designated time period. Attach additional sheets as necessary **using the following format**:

Two (2) of the construction projects completed in the past five (5) years shall be (1) single project contracts that have reached substantial completion, not aggregate projects; (2) of commercial and/or institutional construction work (this includes compliance with general requirements); (3) within the Cost Estimate Range stated in Section 00 11 16 Invitation to Bid for this project; and (4) of the size and complexity of this Project. Failure to identify to **two** such projects **shall** result in rejection of the bid.

11.1 Project Title:		
11.2 Project Location:		
11.3 Construction Start Date:		
11.4 Construction Finish Date:		
11.5 Describe the Scope of Work your Firm performed:		
11.6 Original Contract Amount:		
11.7 Final Contract Amount:		
11.8 Original Contract Duration (Calendar Days):		
11.9 Final Contract Duration (Calendar Days):		
11.10 Owner:		
11.11 Owner's Representative:		
	<i>(Name)</i>	<i>(Phone Number)</i>
11.12 Design Firm:		
11.13 Design Firm's Representative:		
	<i>(Name)</i>	<i>(Phone Number)</i>

12.0 References:

Furnish references from **architects, engineers or owners** indicating that your Firm has satisfactorily completed in a timely manner contract work for projects within the cost estimate range, size and complexity of this project. Provide explanations where delays have occurred. This information should cover work done over the past five years.

13.0 Construction Scheduler:

For Projects greater than \$5 Million: Submit the **name, resume and references** of the **Construction Scheduler** in accordance with the requirements called for in Section **01 32 16.13 Critical Path Method Schedules** of the General Requirements.

Not Applicable – Project Less Than \$5 Million

14.0 List and explain if your Firm has ever failed to complete a contract or if any officer or partner of your Firm has ever been an officer or partner of another organization that failed to complete a contract. Indicate below the circumstances leading to the project failure and the name of the company which provided the bonding for the failed contract(s):

Not Applicable

15.0 List and explain if your Firm has ever had a contract terminated, indicating the circumstances leading to the project termination of contract(s):

Not Applicable

16.0 List and explain all legal or administrative proceedings against your Firm or any officers, principals, partners, members, or employees of the organization currently pending or concluded adversely within the last five years, and any judicial or administrative sanctions that are still in effect against such organization, and any of its officers, principals, partners, members, or employees. (Exclude Occupational Safety and Health Act [OSHA] violations which are called for elsewhere in this statement). Add attachments as necessary.

Not Applicable

17.0 List and explain any disbarments or suspensions that have been imposed on your Firm in the past five years or that were still in effect during the five year period or that are still in effect. Such list must include disbarments and suspensions of officers, principals, partners, members, and employees of your Firm:

Not Applicable

18.0 List and explain any other reason(s) that precludes your Firm or any officer, principal, partner, member, or employees thereof from bidding on a contract in Connecticut or any other jurisdiction:

Not Applicable

19.0 List and explain all willful or serious violations your Firm has had of any OSHA 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 Occupational Safety and Health Act of 1970. Indicate whether these were abated within the time fixed by the citation or whether the citation was appealed. If appealed what is the status or disposition. Add attachments as necessary.

Not Applicable

20.0 List and explain any criminal convictions your Firm has had related to the injury or death of any employee in the three-year period preceding the bid: Add attachments as necessary.

Not Applicable

21.0 List and explain any changes in your Firm's financial condition or business organization, which might affect your Firm's ability to successfully complete this contract:

Not Applicable

22.0 List and explain if your Firm has ever failed to submit an Affirmative Action Plan to the Commission on Human Rights and Opportunities (CHRO). Indicate below the circumstances leading to the failure to submit the Affirmative Action Plan to CHRO:

Not Applicable

23.0 List and explain if your Firm's Affirmative Action Plan has ever been disapproved by CHRO or determined to be noncompliant. Indicate below the circumstances leading to the disapproval or finding of noncompliance of your Affirmative Action Plan by CHRO:

Not Applicable

24. Signature

Dated at

Signed this

 day of , 20

Name of Firm:

Firm Address:

Signature:

Print or Type Name:

Title:

25. Notary Statement

Mr./Mrs./Ms. being duly sworn

deposes and says that he/she is the of
(Position or Title)

, and that the answers to the foregoing
(Firm Name)

questions and all statements therein contained are true and correct.

Subscribed and sworn before me this day of , 20

Notary Public

My Commission Expires , 20

End of Section

00 45 14 General Contractor Bidder's Qualification Statement

BIDDER CONTRACT COMPLIANCE MONITORING REPORT

PART 1 – Bidder Information

Company Name: Street Address: City & State: Chief Executive:	Bidder Federal Employer Identification Number: Or Social Security Number:
Major Business Activity: (brief description)	Bidder Identification (response optional/definitions on page 1) -Bidder is a small contractor? Yes No -Bidder is a minority business enterprise? Yes No (If yes, check ownership category) Black Hispanic Asian American American Indian/Alaskan Native Iberian Peninsula Individual(s) with a Physical Disability Female -Bidder is certified as above by State of CT? Yes No
Bidder Parent Company: (If any)	
Other Locations in CT: (If any)	

PART II - Bidder Nondiscrimination Policies and Procedures

1. Does your company have a written Affirmative Action/Equal Employment Opportunity statement posted on company bulletin boards? Yes No	7. Do all of your company contracts and purchase orders contain non-discrimination statements as required by Sections 4a-60 & 4a-60a Conn. Gen. Stat.? Yes No
2. Does your company have the state-mandated sexual harassment prevention in the workplace policy posted on company bulletin boards? Yes No	8. Do you, upon request, provide reasonable accommodation to employees, or applicants for employment, who have physical or mental disability? Yes No
3. Do you notify all recruitment sources in writing of your company's Affirmative Action/Equal Employment Opportunity employment policy? Yes No	9. Does your company have a mandatory retirement age for all employees? Yes No
4. Do your company advertisements contain a written statement that you are an Affirmative Action/Equal Opportunity Employer? Yes No	10. If your company has 50 or more employees, have you provided at least two (2) hours of sexual harassment training to all of your supervisors? Yes No N/A
5. Do you notify the Ct. State Employment Service of all employment openings with your company? Yes No	11. If your company has apprenticeship programs, do they meet the Affirmative Action/Equal Employment Opportunity requirements of the apprenticeship standards of the Ct. Dept. of Labor? Yes No N/A
6. Does your company have a collective bargaining agreement with workers? Yes No 6a. If yes, do the collective bargaining agreements contain non-discrimination clauses covering all workers? Yes No 6b. Have you notified each union in writing of your commitments under the nondiscrimination requirements of contracts with the state of CT? Yes No	12. Does your company have a written affirmative action Plan? Yes No If no, please explain. 13. Is there a person in your company who is responsible for equal employment opportunity? Yes No If yes, give name and phone number:

1. Will the work of this contract include subcontractors or suppliers? Yes No

1a. If yes, please list all subcontractors and suppliers and report if they are a small contractor and/or a minority business enterprise. (defined on page 1 / use additional sheet if necessary)

1b. Will the work of this contract require additional subcontractors or suppliers other than those identified in 1a. above? Yes No

PART IV - Bidder Employment Information

Date:

JOB CATEGORY*	OVERALL TOTALS	WHITE (not of Hispanic origin)		BLACK (not of Hispanic origin)		HISPANIC		ASIAN or PACIFIC ISLANDER		AMERICAN INDIAN or ALASKAN NATIVE	
		Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Management											
Business & Financial Ops											
Marketing & Sales											
Legal Occupations											
Computer Specialists											
Architecture/Engineering											
Office & Admin Support											
Bldg/ Grounds Cleaning/Maintenance											
Construction & Extraction											
Installation , Maintenance & Repair											
Material Moving Workers											
Production Occupations											
TOTALS ABOVE											
Total One Year Ago											
FORMAL ON THE JOB TRAINEES (ENTER FIGURES FOR THE SAME CATEGORIES AS ARE SHOWN ABOVE)											
Apprentices											
Trainees											

*NOTE: JOB CATEGORIES CAN BE CHANGED OR ADDED TO (EX. SALES CAN BE ADDED OR REPLACE A CATEGORY NOT USED IN YOUR COMPANY)

1. Which of the following recruitment sources are used by you? (Check yes or no, and report percent used)				2. Check (X) any of the below listed requirements that you use as a hiring qualification (X)	3. Describe below any other practices or actions that you take which show that you hire, train, and promote employees without discrimination
SOURCE	YES	NO	% of applicants provided by source		
State Employment Service				Work Experience	
Private Employment Agencies				Ability to Speak or Write English	
Schools and Colleges				Written Tests	
Newspaper Advertisement				High School Diploma	
Walk Ins				College Degree	
Present Employees				Union Membership	
Labor Organizations				Personal Recommendation	
Minority/Community Organizations				Height or Weight	
Others (please identify)				Car Ownership	
				Arrest Record	
				Wage Garnishments	

Certification (Read this form and check your statements on it CAREFULLY before signing). I certify that the statements made by me on this BIDDER CONTRACT COMPLIANCE MONITORING REPORT are complete and true to the best of my knowledge and belief, and are made in good faith. I understand that if I knowingly make any misstatements of facts, I am subject to be declared in non-compliance with Section 4a-60, 4a-60a, and related sections of the CONN. GEN. STAT.

(Signature)	(Title)	(Date Signed)	(Telephone)
-------------	---------	---------------	-------------

**OBJECTIVE CRITERIA ESTABLISHED FOR
EVALUATING QUALIFICATIONS OF BIDDERS**

The following items are established pursuant to Sections 4b-92, 4b-94 and 4b-95a of the Connecticut General Statutes as amended.

THE BIDDER MUST:

1. Submit a valid Department of Administrative Services Prequalification Certificate and Update Statement for bids in excess of \$500,000.00. For all other bids, demonstrate (if requested) satisfactory past performance of work of a similar size, scope and comparable dollar value to that of the subject project. The bidder shall have maintained the level of performance on such similar work continuously during the past three years. The contractor shall be evaluated based on the record of his performance throughout projects and not just at the end of projects within the three-year review period.
2. Show that it customarily employs and has on its payroll supervisory personnel and trade workers qualified to perform the work called for in the bid specifications.
3. Own or possess rented or leased equipment of the type customarily required by contractors in the performance of contract work and that such equipment, if needed, is available for this project.
4. Complete at least 25% of the work called for in the bid specifications with its own forces. The bidder's own forces shall be individuals on the bidder's payroll and completing work similar to that of the bid specifications for a period of at least six months.
5. Have purchased materials over the past three years from suppliers who customarily sell such materials in quantity to contractors.
6. Be financially responsible to perform the work as bid. If requested, additional financial information shall be provided.
7. Furnish references from architects, engineers or owners indicating that it has satisfactorily completed in a timely manner contract work of the nature of this bid and provide explanations where delays have occurred. This information is to cover work done over the past three years. Review of Department of Energy and Environmental Protection files shall be included in the evaluation of the bidder's qualifications and anticipated future performance.
8. Demonstrate staff expertise on its payroll in the various types of major trades or work required for this project or maintains competent supervisory personnel on its payroll that can coordinate multiple trades.
9. Control adequate physical facilities from which the work can be performed.
10. Demonstrate that on previous State projects the bidder complied in good faith with the requirements of listing subcontractors as outlined in Sections 4b-93 and 4b-95 of the Connecticut General Statutes.
11. Demonstrate that all major subcontractors are in compliance with the provisions of Section 20-341g of the General Statutes of Connecticut, as revised, concerning licensure if they perform work on any structure that exceeds the threshold limits contained in Section 29-276b of the General Statutes of Connecticut, as revised.

12. Have demonstrated a good track record of past performance on State or other projects relative to the quantity, quality, timeliness, cost, cooperation and harmonious working relationships with subcontractors, suppliers and client agencies. Prompt payment to subcontractors and suppliers is a critical factor to be considered.

13. Prove that they have not been found to be in violation of three or more willful or serious violations of OSHA regulations in the past three years.

14. Not have received a criminal conviction related to the injury or death of any employee in the three-year period preceding the bid.

15. List all legal (court and/or arbitration) or administrative proceedings currently pending as well as any legal (court and/or arbitration) or administrative proceeding which have concluded adversely within the last three years which relate to procurement or performance of any public or private construction contracts.

16. Identify any situations where the bidder failed to complete a construction contract or situations where bonds were called during the past three years. If so, note when, where, and attach a separate sheet of explanation to this form.

17. Not have been found to be currently in major violation of tax law compliance requirements of the Department of Revenue Services.

18. Not have been found to be currently in major violation of labor laws as required through the Department of Labor including violations of prevailing wage laws in the past three years.

19. Have been found to be in compliance with all statutory and regulatory requirements.

20. Not have been found in violation of and/or is not currently in violation of the Internal Revenue Service Tax Requirements regarding classification of employees and independent contractors.

21. Not have been found to be currently in violation of Section 31-288 of the C.G.S. relating to employee classification for purposes of Workers' Compensation insurance premiums.

NOTE: The foregoing items No. 12 and 13 are meant to comport with Sec. 31-57b of the Connecticut General Statutes.

END OF SECTION

Project Agreement

DEEP | Engineering & Support Services | Engineering Unit

Project Agreement For:

Dated as of by and between the **State of Connecticut** (herein called the
(Month, Day, Year)

“State”) acting herein by the Department of Energy and Environmental Protection under the provisions of the Connecticut General Statutes (C.G.S.)

as revised, and (herein called the “Contractor”).
(Print Name of Contractor)

WITNESSETH, that the State and the Contractor in consideration of the hereinafter contained mutual promises and covenants, do hereby agree as follows:

1. PROJECT DOCUMENTS:

The **Invitation for Bids**, the enumerated **Plans**, the **Specifications** and **Amendments** thereto, the **Addenda**, the **Bid Proposal**, **Order of Award**, which Order is made a part of this **Project Agreement**, the **General Conditions**, the **General Requirements**, the **Project Agreement** and the **Bonds** shall form part of this **Project Agreement** and the **provisions** thereof shall be as binding upon the parties as if they were fully set forth herein. The tables of contents, titles, headings, running headlines and marginal notes contained herein and in said Documents, are solely to facilitate to various provisions of the Project Agreement Documents and in no way affect, limit, or cast light upon the interpretations of the provisions to which they refer. Whenever the term “Project Agreement Documents” is used, it shall mean and include this **Project Agreement**, the **Invitation for Bids**, the enumerated **Plans**, **Specifications** and **Amendments** thereto, the **Addenda**, the **Bid Proposal**, the **General Conditions**, the **General Requirements**, the **Bonds**, the **Notice to Bidders**, the **Wage Scales**, the **Supplementary Conditions**, and the **Insurance Certificates**.

2. SCOPE OF THE WORK:

The Contractor shall furnish all plant, labor, materials, supplies, equipment, and other facilities and things necessary or proper for or incidental to the work contemplated by this Project Agreement as required by and in strict accordance with applicable Plans, Specifications and Amendments thereto, and Addenda (hereinafter enumerated), and as required by and in strict accordance with such changes as are ordered and approved pursuant to this Project Agreement, and will perform all other obligations imposed on him by this Project Agreement.

3. ENUMERATION OF PLANS, SPECIFICATIONS AND ADDENDA:

The following is an enumeration of the Plans, Specifications, and Addenda:

Prepared By:	<input type="text"/> <i>(Print Name of Architect/Engineer Firm)</i>
Plans and Specifications:	<input type="text"/>
Addenda:	<input type="text"/>

4. COMPENSATION TO BE PAID THE CONTRACTOR

The State will pay and the Contractor will accept in full consideration for the performance of the Contractor's obligation hereunder the sum of:

<input type="text"/>	Dollars and 00/100 (\$	<input type="text"/>)
----------------------	------------------------	----------------------	---

5. PROVISIONS REQUIRED BY LAW DEEMED INSERTED

Each and every provision of law and clause required by law to be inserted in this Project Agreement shall be deemed to be inserted herein and the Contract shall be read and enforced as though it were included herein, and if through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon the application of either party, the Project Agreement shall forthwith be physically amended to make such insertion.

For all State Project Agreements as defined in the **C.G.S. §9-612(f)(1)(C)**, having a value in a calendar year of \$50,000 or more or a combination or series of such agreements having a value of \$100,000 or more, the authorized signatory to this Agreement expressly acknowledges receipt of the State Elections Enforcement Commission's notice advising state contractors of campaign contribution and solicitation prohibitions, and will inform its principals of the contents of the notice. See **SEEC Form 10**.

Contractor hereby irrevocably assigns to the State of Connecticut all rights, title and interest in and to all **Claims* associated with this Project Agreement** that Contractor now has or may or will have and that arise under the antitrust laws of the United States, **15 USC Section 1, et seq.** and the antitrust laws of the State of Connecticut, **C.G.S. §35-24, et seq.**, including but not limited to any and all Claims for overcharges. This assignment shall become valid and effective immediately upon the accrual of a Claim without any further action or acknowledgment by the parties.

***Definition of Claims associated with this Project Agreement:** "All actions, suits, claims, demands, investigations and proceedings of any kind, open, pending or threatened, whether mature, unmatured, contingent, known or unknown, at law or in equity, in any forum."

IN WITNESS WHEREOF, the agency representative, Department of Energy and Environmental Protection or and on behalf of the State of Connecticut, and the Contractor have executed this project agreement on the day and year first written.

Attested By:	State Of Connecticut
WITNESS: <input style="width: 100%;" type="text"/> <div style="text-align: center;"><i>(Signature)</i></div>	By: <input style="width: 100%;" type="text"/> <div style="text-align: center;"><i>(Signature)</i></div>
Print Name: <input style="width: 100%;" type="text"/>	Print Name: <input style="width: 100%;" type="text"/> Its: <input style="width: 100%;" type="text"/> <input style="width: 100%;" type="text"/>
WITNESS: <input style="width: 100%;" type="text"/> <div style="text-align: center;"><i>(Signature)</i></div>	Date Signed: <input style="width: 100%;" type="text"/>
Print Name: <input style="width: 100%;" type="text"/>	<div style="border: 1px solid black; width: 150px; height: 150px; margin: 0 auto;"></div> <p>SEAL</p>
WITNESS: <input style="width: 100%;" type="text"/> <div style="text-align: center;"><i>(Signature)</i></div>	Contractor: <input style="width: 100%;" type="text"/>
Print Name: <input style="width: 100%;" type="text"/>	By: <input style="width: 100%;" type="text"/> <div style="text-align: center;"><i>(Signature)</i></div>
WITNESS: <input style="width: 100%;" type="text"/> <div style="text-align: center;"><i>(Signature)</i></div>	Its: <input style="width: 100%;" type="text"/> , Duly Authorized
Print Name: <input style="width: 100%;" type="text"/>	Print Name: <input style="width: 100%;" type="text"/>
Print Name: <input style="width: 100%;" type="text"/>	Date Signed: <input style="width: 100%;" type="text"/>

**End of Section
00 52 03 Project Agreement**



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME:	
	PHONE (A/C, No, Ext):	FAX (A/C, No):
INSURED	E-MAIL ADDRESS:	
	INSURER(S) AFFORDING COVERAGE	
	NAIC #	
	INSURER A :	
	INSURER B :	
	INSURER C :	
INSURER D :		
INSURER E :		
INSURER F :		

COVERAGES

CERTIFICATE NUMBER:

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
	COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC OTHER:						EACH OCCURRENCE \$ DAMAGE TO RENTED PREMISES (Ea occurrence) \$ MED EXP (Any one person) \$ PERSONAL & ADV INJURY \$ GENERAL AGGREGATE \$ PRODUCTS - COMP/OP AGG \$ \$
	AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> NON-OWNED AUTOS						COMBINED SINGLE LIMIT (Ea accident) \$ BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
	UMBRELLA LIAB <input type="checkbox"/> OCCUR EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED <input type="checkbox"/> RETENTION \$						EACH OCCURRENCE \$ AGGREGATE \$ \$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below						<input type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$ E.L. DISEASE - EA EMPLOYEE \$ E.L. DISEASE - POLICY LIMIT \$

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

CERTIFICATE HOLDER**CANCELLATION**

	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
	AUTHORIZED REPRESENTATIVE

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**General Conditions of the Contract for Construction
 for Design-Bid-Build
 Connecticut Department of Energy & Environmental Protection**

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**ARTICLE 1
DEFINITIONS**

WHENEVER THE FOLLOWING TERMS, OR PRONOUNS IN PLACE OF THEM, ARE USED THE INTENT AND MEANING SHALL BE AS FOLLOWS:

1.1 ACCEPTANCE: The Owner's acknowledgement of the Work from the Contractor upon certification by the Project Manager and Architect or Engineer that all Work has been completed.

1.2 ADDITIONAL OR DELETED WORK: Work required by the Department that, in the judgment of the Commissioner, involves any addition to, deduction from, or modification of the Work required by the Contract Documents.

1.3 AGENCY: The (User) Agency of the State of Connecticut having administrative authority of the facility in which the Work is being performed.

1.4 APPLICATION FOR PAYMENT, PARTIAL PAYMENT OR REQUISITION: Contractor's certified request for payment for completed portions of the Work and, if the Contract so provides, for materials or equipment suitably stored pending their incorporation into the Work.

1.5 ARCHITECT OR ENGINEER: A sole proprietor, partnership, firm, corporation or other business organization under Contract with the Owner, commissioned to prepare Contract Drawings and Specifications, to advise the Owner and in certain cases, to perform regular inspections during construction and when authorized to perform the duties of the Construction Administrator.

1.6 AS-BUILT DRAWINGS: Construction Drawings revised by the Contractor to show all significant Modifications made during the construction process.

1.7 BASE BID: Monetary value stated in the Bid Proposal Form as the sum for which the Bidder offers to perform the Work described in the Bidding Documents, exclusive of adjustments for Supplemental Bids.

1.8 BID BOND: Form of Bid Security executed by the Bidder as Principal and by a Surety to guarantee that the Bidder will enter into a Contract within a specified time and furnish any required bond as mandated by Connecticut General Statute Section 4b-92.

1.9 BIDDER: A sole proprietor, partnership, firm, corporation or other business organization submitting a Bid on the Bid Proposal Form for the Work contemplated.

1.10 BIDDING DOCUMENTS: Collectively, the Bidding Requirements and the proposed Contract Documents, including any addenda issued prior to receipt of Bids.

1.11 BID OR BID PROPOSAL FORM: A complete and duly signed proposal to perform Work (or a designated portion thereof) for a stipulated sum submitted in accordance with the Bidding Documents.

1.12 BID SECURITY: Certified check or Bid Bond submitted with Bid Proposal Form, which provides that the Bidder, if awarded the Contract, will execute such Contract in accordance with the requirements of the Bidding Documents.

1.13 BUILDER'S RISK INSURANCE: A specialized form of property insurance which provides coverage for loss or damage to the Work pursuant to the Contract Documents.

1.14 CASH ALLOWANCE: An amount established in the Contract Documents for inclusion in the Contract Sum to cover the cost of prescribed items not specified in detail, and as shown in the Allowance Schedule.

1.15 CERTIFICATE OF ACCEPTANCE: A document issued by the Owner to the Contractor stating that all Work specified in the Certificate of Acceptance has been completed and accepted by the Owner.

1.16 CERTIFICATE OF COMPLIANCE: A document stating that for the portion of the Project completed, either the design portion or the construction portion, has been performed in substantial compliance with all applicable building codes.

1.17 CERTIFICATE OF OCCUPANCY: Document issued by the authority having jurisdiction certifying that all or a designated portion of a building is approved for its designated use.

1.18 CERTIFICATE OF SUBSTANTIAL COMPLETION: A document prepared by the Architect or Engineer and approved by the Owner on the basis of an inspection stating:

1.18.1 that the Work, or a designated portion thereof, is determined to be Substantially Complete;

1.18.2 the date of Substantial Completion;

1.18.3 the responsibilities of the Owner and the Contractor for security maintenance, heat, utilities, damage to the Work and insurance; and

1.18.4 the time within which the Contractor shall complete the remaining Work.

1.19 CHANGE ORDER: Written authorization signed by the Owner, authorizing a modification in the Work, an adjustment in the Contract Sum, or an adjustment in the Contract Time.

1.20 COMMISSIONER: The State of Connecticut, Department of Energy & Environmental Protection (CT DEEP) Commissioner acting directly or through specifically authorized CT DEEP personnel or agent(s) having authority to perform duties defined in Article 25.

1.21 COMMISSIONING AGENT (CxA): An independent entity under contract directly with the Owner or Owner's Representative responsible for performing the specified commissioning procedures.

1.22 CONSTRUCTION ADMINISTRATOR: A sole proprietor, partnership, firm, corporation or other business organization, under Contract or employed by the Owner commissioned and/or authorized to oversee the fulfillment of all requirements of the Contract Documents. The authorized Construction Administrator may be a Department of Energy & Environmental Protection Assistant Project Manager, Department of Energy & Environmental Protection Project Manager, a Clerk of the Works, an Architect, a Consulting Architect, a Consulting Construction Administrator, a Consulting Engineer etc. or any other designee as authorized and identified by the Owner.

1.23 CONSTRUCTION CHANGE DIRECTIVE: A written authorization signed by the Owner, directing a modification in the Work and stating a proposed basis for adjustment, if any, in the Contract Sum, Contract Time or both. Any Construction Change Directive effecting an adjustment to the Contract Sum or Contract Time shall result in a Change Order.

1.24 CONTRACT DOCUMENTS OR CONTRACT/ PROJECT AGREEMENT: The Agreement between Owner and Contractor, Conditions of the Contract (General Conditions, Supplementary Conditions, General Requirements and other Conditions), Drawings, Specifications, and Addenda issued prior to execution of the Contract, other documents listed in the Agreement and Modifications issued after execution of the Contract, all of which shall constitute the Contract.

1.25 CONTRACTOR OR GENERAL CONTRACTOR: A sole proprietor, partnership, firm or Corporation, under direct Contract with the Department of Energy & Environmental Protection, responsible for performing the Work under the Contract Documents. Whenever the words "Contractor" or "General Contractor" are used it shall be understood to mean Contractor.

1.26 CONTRACTOR'S LIABILITY INSURANCE: Insurance purchased and maintained by the Contractor that insures the Contractor for claims for property damage, bodily injury or death.

1.27 CONTRACT START DATE OR DATE OF COMMENCEMENT OF THE WORK: The date, specified by the Owner in the Notice to Proceed, on which the Contractor is required to start the Work.

1.28 CONTRACT SUM: The sum stated in the Contract, which is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

1.29 CONTRACT TIME: The period of time allotted in the Contract Documents for Substantial Completion of the Work, including authorized adjustments thereto. The Contract Time is the sum of all Working Days and Non-Working Days as further defined herein and specified in the Contract Documents.

1.30 DAY: Whenever the word Day is used it shall be understood to mean calendar day stated on the Bidding Documents, unless stated otherwise.

1.31 DEPARTMENT OF ENERGY & ENVIRONMENTAL PROTECTION (CT DEEP) PROJECT MANAGER: The individual employed by the Owner, designated and authorized by the Commissioner, to be responsible for the overall management and oversight of the Project, and to represent the (User) Agency.

1.32 DIESEL VEHICLE EMISSIONS CONTROL: The reduction of air pollution emissions from diesel powered vehicles through the use of diesel engine emission control technologies.

1.33 EQUAL(S): Any deviation from the Specification which is defined as follows: A replacement for the specified material, device, procedure, equipment, etc., which is recognized and accepted as substantially equal to the first listed manufacturer or first listed procedure specified after review by the Architect/Engineer, and may be rejected or approved at the sole discretion of the Owner. All equals must be substantially equivalent to the first manufacturer or first procedure listed in the Specifications with reference to all of the following areas: the substance and function considering quality, workmanship, economy of operation, durability, and suitability for purposes intended; size, rating, and cost. The equal does not constitute a modification in the scope of Work, the Schedule, or Architect/Engineer's design intent of the specified material, device, procedure, equipment, etc.

1.34 FINAL INSPECTION: Review of the Work by the Architect or Engineer and Owner to determine whether Acceptance has been achieved.

1.35 FINAL PAYMENT: The last payment made by the Owner to the Contractor, made after notice of the Acceptance. Payment shall include the entire unpaid balance of the Contract Sum as adjusted by modifications.

1.36 GENERAL CONDITIONS: The General Conditions of the Contract for Construction, part of Division 00 of the Specifications.

1.37 GENERAL REQUIREMENTS: That part of the Contract Documents entitled General Requirements, which is Division 01 of the Specifications.

1.38 GUARANTEE: See Warranty.

1.39 LIQUIDATED DAMAGES: A sum established in a Contract, usually as a fixed sum per Day, as the predetermined measure of damages to be paid to the Owner due to the Contractor's failure to complete the Work within the Contract Time.

1.40 LUMP SUM: An item or category priced as a whole rather than broken down into its elements.

1.41 MOBILE SOURCE: A source designed or constructed to move from one location to another during normal operation except portable equipment and includes, but is not limited to, automobiles, buses, trucks, tractors, earth moving equipment, hoists, cranes, aircraft, locomotives operating on rails, vessels for transportation on water, lawnmowers, and other small home appliances.

1.42 NON-WORKING DAYS: All Saturdays, Sundays, Legal State Holidays (12), and any other Days identified in the Contract Documents that the Contractor is not permitted to execute the Work. The restriction of Non-Working Days may be suspended upon the approval or direction of the Commissioner.

1.43 NOTICE TO BIDDER: A notice contained in the Bidding Document informing prospective Bidders of the opportunity to submit Bids on a Project.

1.44 NOTICE TO PROCEED: Written notice, issued by the Commissioner or the Commissioner's authorized representative, to the Contractor authorizing the Contractor to proceed with the Work and establishing the date for commencement of the Contract Time.

1.45 OWNER OR DEPARTMENT: The State of Connecticut, Department of Energy & Environmental Protection acting through its Commissioner or specifically authorized Department personnel or agent.

1.46 OVERHEAD: Indirect costs including: supervision (any position over the foreman), field and home office expense, insurance, and small tools and consumables.

1.47 PAYMENT, BOND, LABOR BOND OR MATERIAL BOND: A bond in which the Contractor and the Contractor's surety guarantee to the Owner that the Contractor will pay for labor and materials furnished for use in the performance of the Contract, as required by Connecticut General Statutes Section 49-41.

1.48 PERFORMANCE BOND OR SURETY BOND: A bond in which the Contractor and the Contractor's surety guarantee to the Owner that the Work will be performed in accordance with the Contract Documents, as required by Connecticut General Statutes Section 49-41.

1.49 PERFORMANCE SPECIFICATION: A description of the desired results or performance of a product, material, assembly, procedure, or a piece of equipment with criteria for identifying the standard.

1.50 PLANS OR DRAWINGS: All Drawings or reproductions of Drawings pertaining to the construction of the Work contemplated and its appurtenances.

1.51 PROJECT: The total construction of which the Work performed under the Contract Documents may be the whole or a part.

1.52 PROJECT MANUAL: The set of documents assembled for the Work which includes, but is not limited to, Contract Documents, Bidding Requirements, Sample Forms, General Conditions of the Contract for Construction, General Requirements, and the Specifications.

1.53 PROPRIETARY SPECIFICATION: A specification that describes a product, procedure, function, material, assembly, or piece of equipment by trade name and/or by naming the manufacturer(s) or manufacturer's procedure, exact model number, item, etc., of those products acceptable to the Owner.

1.54 RETAINAGE: A percentage of each Application for Payment and a percentage of the total Contract Sum retained by the Owner.

1.55 SCHEDULE: A Critical Path Method (CPM) or Construction Schedule as required by the Contract Documents which shall be a diagram, graph or other pictorial or written Schedule showing all events expected to occur and operations to be performed and indicating the Contract Time, start dates, durations and finish dates as well as Substantial Completion and Acceptance of the Work, rendered in a form permitting determination of the optimum sequence and duration of each operation.

1.56 SCHEDULE OF VALUES: A document furnished by the Contractor to the Architect or Engineer and Owner stating the portions of the Contract Sum allocated to the various portions of the Work, which is to be used for reviewing the Contractor's Applications for Payment.

1.57 SECONDARY SUBCONTRACTOR: A sole proprietor, partnership, firm or Corporation under direct Contract with the Subcontractor to the General Contractor.

1.58 SENSITIVE RECEPTOR SITES: Areas where concentrations of diesel emissions may be harmful to sensitive populations, including, but not limited to, hospitals, school and university buildings being occupied during a student semester, residential structures, daycare facilities, elderly housing, and convalescent facilities.

1.59 SHOP DRAWINGS: Drawings provided to Architect or Engineer and Owner by a Contractor that illustrate construction, materials, dimensions, installation, and other pertinent information for the incorporation of an element or item into the construction as detailed Contract Documents.

1.60 SPECIFICATIONS: The description, provisions and other requirements pertaining to the method and manner of performing the Work and/or to the quantities and quality of materials to be furnished under the Contract.

1.61 SUBCONTRACTOR: A sole proprietor, partnership, corporation or other business organization under direct Contract with the Contractor supplying labor and/or materials for the Work at the site of the Project.

1.62 SUBMITTALS: Documents including, but not limited to, samples, manufacturer's data, Shop Drawing, or other such items submitted to the Owner and Architect or Engineer by the Contractor for the purpose of approval or other action, as required by the Contract Documents.

1.63 SUBSTANTIAL COMPLETION: The stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents.

1.64 SUBSTITUTION: Any deviation from the specified requirements, which is defined as follows: A replacement for the specified material, device, procedure, equipment, etc., which is not recognized or accepted as equal to the first manufacturer or procedure listed in the Specification after review by the Architect/Engineer, and may be rejected or approved by the Owner. The Substitution is not equal to the specified requirement in comparison to the first manufacturer or first procedure listed in the Specifications in one or more of the following areas: the substance and function considering quality, workmanship, economy of operation, durability, and suitability for purposes intended; size, cost, and rating. The Substitution constitutes a modification in the scope of Work, the Schedule, or the Architect/Engineer's design intent of the specified material, device, procedure, equipment, etc.

1.65 SUPERINTENDENT: The Contractor's representative at the site who is responsible for continuous field supervision, coordination, in, completion of the Work, and, unless another person is designated in writing by the Contractor to the Owner and the Construction Administrator, for the prevention of accidents.

1.66 SUPPLEMENTAL BID: The monetary value stated in the Bid to be added to the amount of the Base Bid if the corresponding Work, as described in the Bidding Documents, is accepted.

1.67 SUPPLEMENTARY CONDITIONS: An extension in the Bid to be added to the amount of the Base Bid if the corresponding Work, as described in the Bidding Documents, is accepted.

1.68 THRESHOLD LIMIT BUILDING: Any proposed (new) structures or additions as defined by the Connecticut General Statutes Section 29-276b.

1.69 UNIT PRICE: The monetary value stated by the Owner or the Contractor, as a price per unit of measurement for materials or services as described in the Contract Documents and/or Bidding Documents.

1.70 WARRANTY: A written, legally enforceable assurance of specified quality or performance of a product or Work or of the duration of satisfactory performance.

1.71 WORK: The construction and services required by the Contract Documents, and including all labor, materials, equipment and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project and "Work Phase".

1.72 WORK PHASE: Construction of the Project by sequence or time intervals, which may include but not be limited to separate Construction Start Dates, Substantial Completion Dates, Application for Payments, Change Orders, Liquidated Damages, Retainage, and Subcontractors for each Work Phase.

ARTICLE 2 **CONDITIONS OF WORK**

2.1 The Contractor shall carefully examine and study the conditions under which the Work is to be performed and the site of the Work, and compare the Contract Documents with each other and to information furnished by the Owner including but not limited to the Plans and Specifications, the form of the Contract, General Conditions, Supplementary Conditions, General Requirements, Bonds and all other Contract Documents associated with the Work.

2.2 The Contractor shall report to the Construction Administrator all errors, inconsistencies or omissions discovered. The Contractor shall not be liable to the Owner for damage resulting from errors, inconsistencies or omissions in the Contract Documents unless the Contractor recognized such errors, inconsistencies or omission and failed to report it to the Construction Administrator. If the Contractor performs any actions or construction activity knowing it involves an error, inconsistency or omission in the Contract Documents without notice to the Construction Administrator, the Contractor shall assume responsibility for such performance and related costs for the correction and shall not be allowed to submit any claim related to error, inconsistencies or omission.

2.3 The Contractor shall take field measurements and verify field conditions and shall carefully compare such field measurements and conditions and other information known to the Contractor with the Contract Documents before commencing activities. Errors, inconsistencies or omissions discovered shall be reported to the Construction Administrator at once; and it will be assumed that the Contractor has been satisfied as to all requirements of the Contract Documents. Any deterrent conditions at the site of the Work which are obvious and apparent upon examination of the site but are not indicated on the Plans shall be corrected by the Contractor without additional compensation.

2.4 In performing the Work, the Contractor must employ such methods or means as will not cause any interruption of or interference with the Work of any other Contractor, nor any inordinate disruption with the normal routine of the Owner, institution or Agency operating at the site.

2.5 No claims for additional compensation will be considered when additional costs result from conditions made known to, discovered by, or which should have been discovered by, the Contractor prior to Contract signing.

2.6 All Communications from the Contractor concerning proposed changes to the Contract Sum, Contract Time, or Work shall be in writing.

2.7 The Contractor shall perform the Work in accordance with the Contract Documents and approved Submittals pursuant to Article 5.

ARTICLE 3 **CORRELATION OF CONTRACT DOCUMENTS**

3.1 The Contract Documents are complementary, and what is called for by any one shall be as binding as if called for by all. Where discrepancies or conflict occur in the Contract Documents the following order of precedence shall be utilized:

3.1.1 Amendments and addenda shall take precedence over previously issued Contract Documents.

3.1.2 The Supplementary Conditions take precedence over the General Conditions.

3.1.3 The General Conditions take precedence over the General Requirements.

3.1.4 The Specifications shall take precedence over the Plans.

3.1.5 Stated dimensions shall take precedence over scaled dimensions.

3.1.6 Large-scale detail Drawings shall take precedence over small-scale Drawings.

3.1.7 The Schedules contained in the Contract Documents shall take precedence over other data on the Plans.

3.2 Neither party to the Contract shall take advantage of any obvious error or apparent discrepancy in the Contract Documents. The Contractor shall give immediate written notification of any error or discrepancy discovered to the Construction Administrator, who shall take the necessary actions to obtain such corrections and interpretations as may be deemed necessary for the completion of the Work in a satisfactory and acceptable manner. The Contractor shall then promptly proceed under the direction of the Owner and the provisions of Article 13. The Contractor's failure to provide immediate notice shall mean the Contractor will not be entitled to any additional compensation, either monetary or Contract Time adjustment, with respect to any discrepancy.

3.3 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become familiar with local conditions under which the Work is to be performed, and correlated personal observations with requirements of the Contract Documents.

3.4 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.

3.5 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.

ARTICLE 4 COMMENCEMENT AND PROGRESS OF WORK

4.1 The Work shall start upon the date given in the Notice to Proceed. The Contractor shall complete all the Work necessary for Final Payment, including but not limited to Substantial Completion, Contract close-out, testing and demonstration of all systems as required for Acceptance, punchlist Work, training and submission of Record Documents, manuals, Guarantees and Warranties as stated in the Contract Document.

4.2 Time is of the essence with respect to the Contract Time. By executing the Contract, the Contractor confirms and agrees that the Contract Time is a reasonable period to perform the Work. The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time. The Contractor may, at his discretion, plan to complete the Work and achieve Substantial Completion in less time than the Contract Time.

4.3 The Contractor's early completion Schedule notwithstanding, the Owner reserves the right to order Modifications to the Work in accordance with Article 13 at any time during the Contract Time.

4.4 The Contractor shall not be entitled to costs for delay due to Owner ordered Modifications or any other circumstances for the period of time between the Contractor's elected early completion and the end of the Contract Time. Such costs include, but are not limited to, extended home office costs, field office costs, or supervisory and management costs incurred in performance of the Work. Early completion of the Work shall not merit additional compensation.

4.5 If the Contractor is delayed at any time in the progress of Work by acts of God, such as fire or flood or any action, injunction or stop order issued by any court, judge or officer of the court or any other court action beyond the Owner's control, then the Contract Time may be extended by Change Order for such reasonable time as demonstrated by the Contractor's Schedule and as the Owner may determine that such event has delayed the Work. In any event, the granting of an extension of time shall be solely within the discretion of the Owner.

4.6 Except as otherwise may be provided herein, extensions of time shall be the Contractor's sole remedy for such delay. No payment or compensation of any kind shall be made to the Contractor for damages because of hindrance in the orderly progress of Work caused by the aforesaid causes.

4.7 The Contractor acknowledges that the Contract amount includes and anticipates any and all delays, whether avoidable or unavoidable, from said orders, which may issue from any court, judge, court officer, or act of God, and that such delays shall not, under any circumstances, be construed as compensable delays.

4.8 Any extension of the Contract Time shall be by Change Order pursuant to Article 13.

4.9 The Contractor shall employ a competent project manager who shall represent the Contractor. Communications given to the project manager shall be binding as if given to the Contractor. The project manager will be employed full time on the Project and be located and assigned to the Project site during and for the duration of the Work.

4.10 The Contractor shall employ a competent Superintendent and necessary assistants who will be in attendance at the project site during the performance of the Work.

4.11 Upon execution of the Contract, materials may be purchased. No material escalation costs will be valid or compensable unless the Owner directs, in writing, a delay in the procurement.

ARTICLE 5
SUBMITTALS, PRODUCT DATA, SHOP DRAWINGS AND SAMPLES

5.1 Contractor shall review, approve, and submit to the Construction Administrator all Submittals including but not limited to, product data, Shop Drawings, and samples, with such promptness as to cause no delay in the Work.

5.2 Correction or approval of such Submittals, Shop Drawings, product data and samples will be made with reasonable promptness by the Architect or Engineer. Approval will be general only and shall not relieve the Contractor from responsibility for errors in dimensions, for construction and field coordination of the Work or for any departure from the Contract Documents, unless such departure has received the Owner's written approval.

5.3 No Work governed by such Shop Drawings, Schedules or samples shall be fabricated, delivered or installed until approved by the Architect or Engineer.

5.4 No damages for delays or time extensions will be granted, even if approvals deviate from the approved Schedule.

ARTICLE 6
SEPARATE CONTRACTS

6.1 The Owner reserves the right to perform Work in connection with the Contract with the Owner's own forces, or to let separate contracts relating to the Contract (Project) site or in connection with Work on adjoining sites. In such cases, the Contractor shall afford such parties reasonable opportunity for storage of materials and equipment and coordinate and connect the Work with the work on adjoining sites or other Projects, and shall fully cooperate with such parties in the matter required under Article 7 herein.

6.2 Contractors working in the same vicinity shall cooperate with one another and, in case of dispute, decision of the Owner shall be final and binding to all Contractors involved, including Contractors under separate Contracts.

6.3 The Contractor shall assume all liability, financial or otherwise, in connection with this Contract and shall protect and hold harmless the Owner from any and all damages or claims that may arise because of inconvenience or delay which the Contractor may cause other Contractors. If the Contractor experiences a loss because of the presence and operations of other Contractors working adjacent to or within the limits of the same Project, then as between the Owner and the Contractor, the Contractor shall bear such loss.

6.4 Insofar as possible, the Contractor shall arrange the Work and shall place and dispose of the materials being used so as not to interfere with the operations of other Contractors adjacent to or within the limits of the same Project. The Contractor shall join its Work with that of others in an acceptable manner, and perform the Work in proper accordance with that of the others.

6.5 In no event shall the Owner be responsible for any claim or damages that are the result of the Contractor's failure to coordinate the Work with any other Contractor or Subcontractor.

**ARTICLE 7
COOPERATION OF TRADES**

7.1 The Contractor shall be responsible for and shall control all activities of their Subcontractors. The Subcontractors shall consult and cooperate with one another. Each Subcontractor shall furnish all necessary information to other Subcontractors and shall lay out and install their own Work so as to avoid any delays or interference with the Work of others.

7.2 Any cost or changes, cutting and/or repairing, made necessary by the failure to observe the above requirements shall be borne by the party or parties responsible for such failure or neglect or their faulty Work installed.

**ARTICLE 8
DAMAGES**

8.1 The Liquidated Damages, provided in the Bidding Documents, will be assessed at two distinct times, as follows:

8.1.1 Liquidated Damages – Substantial Completion:

If the Contractor fails to achieve Substantial Completion of the Work by the Substantial Completion Date, and such delay is not otherwise excused under this Contract, then the Contractor agrees to pay to the Owner Liquidated Damages for the dollar amount specified in the Bid Proposal Form for this Project, for each Day beyond Substantial Completion that the Contractor fails to achieve Substantial Completion. The parties to this Contract acknowledge and agree that the actual damages that are to be anticipated as a result of the neglect, failure, or refusal of the Contractor to substantially complete the Project by the established Substantial Completion Date are uncertain in amount or extremely difficult to determine. Accordingly, the parties to this Contract do intend and in fact now agree to liquidate damages in advance and stipulate that the amount set forth in this subparagraph is reasonable and an appropriate remedy and is intended to constitute compensatory damages and does not constitute a penalty of any kind. The parties understand and agree that, by including a provision for Liquidated Damages in this Contract, or in pursuing any relief pursuant to such provision:

- .1 the parties do not intend to set a price for the privilege not to perform;
- .2 the availability of Liquidated Damages may not be relied upon as a basis for argument that the Owner has an adequate remedy at law; and
- .3 the remedies available to the Owner under this Agreement are cumulative and not exclusive.

8.1.2 Liquidated Damages – Acceptance:

If the Contractor fails to complete all of the Work required for Acceptance of the Work within ninety (90) Days of Substantial Completion then the Contractor agrees to pay to the Owner Liquidated Damages for the dollar amount specified in the Bid Proposal Form for each Day in excess of ninety (90) Days beyond the Substantial Completion Date that the Contractor fails achieve Acceptance. The parties to this Contract acknowledge and agree that the actual damages that are to be anticipated as a result of the failure of the Contractor to complete all of the Work required for Acceptance within ninety (90) Days of the established Substantial Completion Date are uncertain in amount or extremely difficult to determine. Accordingly, the parties to this Contract do intend and in fact now agree to liquidate damages in advance and stipulate that the amount set forth in this subparagraph is reasonable and an appropriate remedy and is intended to constitute compensatory damages and does not constitute a penalty of any kind. The parties understand and agree that, by including a provision for Liquidated Damages in this Contract, or in pursuing any relief pursuant to such provision:

- .1 the parties do not intend to set a price for the privilege not to perform;
- .2 the availability of Liquidated Damages may not be relied upon as a basis for argument that the Owner has an adequate remedy at law; and
- .3 the remedies available to the Owner under this Agreement are cumulative and not exclusive.

8.2 The Liquidated Damages or any portion thereof may be waived at the sole discretion of the Commissioner.

8.3 No payment by the Owner, either partial or final, shall be construed to waive the Owner's right to seek Liquidated Damages.

8.4 In the event a court determines that the Contract herein is null and void for any reason, Contractor agrees that Contractor will not seek or pursue any lawsuit or claim for damages, including, but not limited to, claims for loss of Overhead or anticipated profits, against the Owner and the Owner shall not be liable for any damages which Contractor may incur as a result of such decision. In addition, if the court enjoins the Owner from entering into or proceeding with the Contract herein, the Owner shall not be liable for any damages arising out of or relating to the award of such Contract which Contractor may have incurred as a result of the injunction.

ARTICLE 9
MINIMUM WAGE RATES

9.1 In accordance with the provisions of the Connecticut General Statutes Section 31-53, the following applies:

"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 (h) of this section, 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 in which such public works project is being constructed. 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 payday."

9.2 Each Contractor who is awarded a Contract on or after October 1, 2002 shall be subject to provisions of the Connecticut General Statutes, Section 31-53 as amended by Public Act 02-69, "An Act Concerning Annual Adjustments to Prevailing Wages." No wage adjustment will be made to the Contract for any wage increase under this Article.

ARTICLE 10
POSTING MINIMUM WAGE RATES

10.1 The Contractor shall post at conspicuous points on the site of the Contract a Schedule showing all determined wage rates for all trades and all authorized deductions, if any, from wages to be paid.

10.2 The Contractor shall provide weekly certified payrolls to the Owner for all persons working on the site.

ARTICLE 11
CONSTRUCTION SCHEDULES

11.1 Unless otherwise specified in the Contract Documents, within twenty-one (21) Days from the Contract Start Date, the Contractor shall submit the following to the Owner for approval:

11.1.1 A comprehensive Schedule of Submittals required by the Specifications. Said Schedule shall include Submittal dates, required approval dates and date material must be on site.

11.1.2 The Contractor shall allow a minimum of 14 Days for the Owner and its agents' review of Submittals. No extension of the Contract Time shall be granted for revisions and resubmission. Further, the Contractor shall allow a minimum of eight weeks for testing and Acceptance of the Work by the Owner.

11.1.3 When the Contract Documents specify a "CPM Schedule" a detailed Critical Path Method Schedule is required using software approved by the Owner and/or Construction Administrator with as many activities as necessary to make the Schedule an effective tool for planning and monitoring the progress of the Work. The Contractor shall show all pertinent activities requiring coordination between trades.

11.1.4 When the Contract Documents specify a "Construction Schedule" a detailed Construction Schedule is required using software approved by the Owner as a horizontal bar chart with a separate bar for each major portion of the Work or operation to make the Schedule an effective tool for planning and monitoring the progress of the Work.

11.2 Unless otherwise specified under the Contract Documents, the Contractor shall provide a monthly update of the CPM Schedule or Construction Schedule in the format required by the Owner as well as a disk of the updated Schedule and program. If, in the opinion of the Owner, the Work is falling behind Schedule, the Contractor shall submit a revised Schedule demonstrating a recovery plan to ensure Substantial Completion of the Work within the Contract Time.

11.3 Overtime, increased manpower, and additional shifts: If ordered by the Owner in writing, the Contractor shall work overtime, and/or add additional manpower and/or shifts:

11.3.1 If the Contractor is not behind Schedule, the Owner will pay the Contractor the actual additional premium portion of the wages for overtime or additional shift work not included in the Contract price, but the Contractor shall not be entitled to Overhead and Profit.

11.3.2 If the Contractor, through its sole or partial fault or neglect is behind Schedule, the Owner may order the Contractor, at the Contractor's expense, to increase its manpower or to work any overtime or additional shifts or take other action necessary to expedite the Work to meet the Project Schedule.

11.3.3 If the Schedule is shown to be more than 21 Days behind in any critical activity, overtime, increase manpower and/or additional shifts shall be implemented immediately regardless of who is at fault. A disagreement over the cause of the impact will not relieve the Contractor from the obligation of complying with this Article. Once liability for the impact is determined, compensation will be determined in accordance with 11.3.1 or 11.3.2.

11.3.4 The Owner reserves the right to suspend activity under Paragraph 11.3. Suspension shall be in writing and at the sole discretion of the Commissioner.

11.4 Requisitions for partial payment will not be processed until the Contractor has complied with this requirement.

ARTICLE 12 **PREFERENCE IN EMPLOYMENT**

12.1 Should this Contract be for the construction or repair of any building, then in the employment of labor to perform the Work specified herein, preference shall be given to citizens of the United States, who are, and continuously for at least three (3) months prior to the date hereof, have been residents of the labor market area, as established by the State of Connecticut Labor Commissioner, in which such Work is to be done, and if no such qualified person is available, then to citizens who have continuously resided in the county in which the Work is to be performed for at least three (3) months prior to the date hereof, and then to citizens of the state who have continuously resided in the State at least three months prior to the date hereof.

12.2 Should this Contract be for a public works project other than for the construction, remodeling or repairing of public buildings covered by Connecticut General Statutes 31-52, then in the employment of mechanics, laborers or workmen to perform the Work specified herein, preference will be given to residents of the state who are, and continuously for at least six (6) months prior to the date hereof have been residents of this State, and if no such person is available then to residents of other states.

12.3 The provisions of this Article shall not apply where the state or any subdivision thereof may suffer the loss of revenue granted or to be granted from any Agency or Department of the federal government as a result of this Article or regulations related thereto.

ARTICLE 13 **COMPENSATION FOR CHANGES IN THE WORK**

13.1 At any time, without invalidating the Contract and by a written order and without notice to the sureties, the Owner, through the Construction Administrator, may order modifications in the Work consisting of additions, deletions or other revisions. Upon request, the Contractor shall supply the Construction Administrator promptly with a detailed proposal for the same, showing quantities of and Unit Prices for the Work and that of any Subcontractor involved.

13.2 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 as provided for in Article 25. 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.

13.3 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 Article 13.

13.4 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.

13.5 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.

13.6 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:

13.6.1 AMOUNT OF COMPENSATION FOR CHANGE ORDER COSTS: LABOR, EQUIPMENT, BENEFITS AND MATERIAL:

13.6.1.1 Unit Price: As stated in the Contract Documents.

13.6.1.2 Unit Price: As subsequently agreed upon by the Contractor and Owner

13.6.1.3 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. The Lump Sum must be based upon the following itemized costs:

13.6.1.3.1 Labor: (Contractor's or Subcontractor's own forces) No Change Order Proposal shall be negotiated if the request is solely for the increased labor rate over those originally carried by the Contractor in its original bid. Additional foreman hours shall not be included unless additional crews are added and/or a compensable time extension is granted. Project Executive time shall not be included as a direct cost as it is part of the overhead mark-up allowed. Project manager hours shall not be included unless a compensable time extension is granted.

13.6.1.3.2 Material: (Actual cost to the Contractor or Subcontractor) Cost shall not be based upon list pricing unless it reflects the actual prices being paid and no discounts or other offsets are being received by the Contractor or Subcontractor. No Change Order Proposal shall be negotiated if the request is solely for the escalation of material prices over those originally carried by the Contractor in its original bid.

13.6.1.3.3 Benefits: (The established rates of the following benefit costs inherent to the particular labor involved):

13.6.1.3.3.1 Workers Compensation.

13.6.1.3.3.2 Federal Social Security.

13.6.1.3.3.3 Connecticut Unemployment Compensation.

13.6.1.3.3.4 Fringe Benefits.

13.6.1.4 Rented Equipment: (Used directly on the Work and by the Contractor's or Subcontractor's own forces).

13.6.1.5 Owned Equipment: (Used directly on the Work and by the Contractor's or Subcontractor's own forces). Daily rate is not to exceed 3% of the monthly rental rate as identified by a nationally recognized construction cost estimating guide or service.

13.6.1.6 Small Tools:

Include items such as shovels, picks, rakes, ladders, and power tools which are expected to be utilized on a project. Trade related equipment, hand tools, and power tools normally supplied with the labor or are normally expected to be owned in the performance of the typical work for a trade are not compensable. These costs shall not be approved as part of the Direct Cost of a Change Order as they are included in the Contractor's overhead mark-up percentage.

13.6.2 OVERHEAD AND PROFIT PERCENTAGES: (Maximum allowable percentages applied to labor, equipment, and material)

13.6.2.1 Contractor's mark-up for Work performed by its own forces:

Change Order Amount	Overhead and Profit
\$0 to \$5,000	20%
\$5,001 to \$15,000	17%
\$15,001 to \$25,000	15%
\$25,000 and greater	12%

13.6.3 OVERHEAD AND PROFIT PERCENTAGES: (Maximum allowable percentages applied to labor, equipment, benefits and material)

13.6.3.1 Contractor's mark-up 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	6%

13.6.4 OVERHEAD AND PROFIT PERCENTAGES: (Maximum allowable percentages applied to labor, equipment, benefits and material) Subcontractor's mark-up for Work performed by its own forces:

Change Order Amount	Overhead and Profit
\$0 to \$5,000	20%
\$5,001 to \$15,000	17%
\$15,001 to \$25,000	15%
\$25,000 and greater	12%

13.6.5 OVERHEAD AND PROFIT PERCENTAGES: (Maximum allowable percentages applied to labor, equipment, benefits and material)

13.6.5.1 Subcontractor's mark-up for Work performed by its Secondary Subcontractor's forces. Limited to one level (tier) below the Subcontractor and not allowable for any subsidiary in which the Subcontractor has a majority ownership.

Change Order Amount	Overhead and Profit
\$0 and greater	6%

13.7 BOND COSTS

13.7.1 Actual additional bonding costs associated with the value of the Change Order will be compensable only when supported by written documentation by the bonding company that the Change Order requires an increase to the original Performance, Payment, Labor or Material Bond.

13.7.2 The Contractor shall notify the bonding company at each \$500,000 increase to the contract value as the cumulative result of change orders. A copy of the Consent of Surety must be provided to the Owner prior to the execution of any change order which exceeds each cumulative \$500,000.

13.8 Trade discounts, rebates, and amounts received from the sales by the Contractor of surplus materials and equipment shall accrue to the Owner.

13.9 If the parties cannot agree upon a Lump Sum, then the Commissioner, through the Project Manager, may at the option of the Commissioner take the following action(s):

13.9.1 Issue a Construction Change Directive for the Additional or Deleted Work. The amount of compensation shall be computed by the actual net costs to the Contractor determined by time and material or Unit Prices based upon the same information required in Subparagraphs 13.6.1.3.3.1 through 13.6.1.5:

13.9.1.1 Labor: (Contractor's or Subcontractor's own forces).

13.9.1.2 Material: (Used by Contractor's or Sub-contractor's own forces).

13.9.1.3 Benefits: (The established rates of the following benefit costs inherent to the particular labor involved):

13.9.1.3.1 Workers Compensation.

13.9.1.3.2 Federal Social Security.

13.9.1.3.3 Connecticut Unemployment Compensation.

13.9.1.3.4 Fringe Benefits.

13.9.1.4 Rented Equipment: (Used directly on the Work and by the Contractor's or Subcontractor's own forces).

13.9.1.5 Owned Equipment: (Used directly on the Work and by the Contractor's or Subcontractor's own forces). Daily rate is not to exceed 3% of the monthly rental rate that can be identified by a nationally recognized construction cost estimating guide or service.

13.9.2 Issue a Change Order adjusting the Contract Sum in the amount as determined by the Commissioner.

13.10 For any Change Order or Construction Change Directive the Contractor shall, when requested, promptly furnish in a form satisfactory to the Construction Administrator and the Owner a complete detailed accounting of all costs relating to the Additional Work, including but not limited to certified payrolls and copies of accounts, bills and vouchers to substantiate actual costs. Further, the Owner reserves the right to access and make copies of the Contractor's records at any time upon written request from the Commissioner.

13.11 Failure of the Contractor to negotiate in good faith issues of time and costs or failure to provide requested documentation within fourteen (14) Days, or a time period accepted by the Commissioner, shall constitute a waiver by the Contractor of any claim. In such cases the Owner may elect to issue a unilateral Change Order in an amount deemed to be fair and equitable by the Commissioner. The provisions hereof shall not affect the power of the Contractor to act in case of emergency, threatened injury to persons, or damage to Work on any adjoining property. In this case the Commissioner, through the Project Manager, shall issue a Change Order for such amount as the Commissioner finds to be reasonable cost of such Work.

ARTICLE 14 **DELETED WORK**

14.1 Without invalidating any of the terms of the Contract, the Commissioner may order deleted from the Contract any items or portions of the Work deemed necessary by the Commissioner.

14.2 The compensation to be deducted from the Contract Sum for such deletions shall be determined in the manner provided for under the provisions of Article 13 or in the event none of the provisions of Article 13 are applicable then by the value as estimated by the Owner.

ARTICLE 15 **MATERIALS: STANDARDS**

15.1 Unless otherwise specifically provided for in the Specifications, all equipment, materials and articles incorporated in the Work are to be new and of the best grade of their respective kinds for the purposes. Wherever in the Contract Documents a particular brand, make of material, device, or equipment is shown or specified, the first manufacturer listed in the specification section is to be regarded as the standard. When the specification is proprietary and only one manufacturer is listed, the Contractor shall use the named manufacturer and no Substitutions or Equals will be allowed.

15.2 Any other brand, make of material, device, equipment, procedure, etc. which is a deviation from the specified requirement is prohibited from use, but may be considered by the Owner for approval as an Equal or Substitution. The Contractor is to adhere to the specific requirements of the Contract Documents. Substitutions are discouraged and are only approved by the Commissioner as an exception.

15.3 Submittals – Equals and Substitution Requests:

15.3.1 Substitution of Materials and Equipment before Bid Opening. The Owner will consider requests for Equals or Substitutions, if made prior to the receipt of the Bid. The information on all materials shall be consistent with the information herein.

15.3.1.1 Statement of Variances – a statement of variances must list all features of the proposed Substitution which differ from the Drawings, Specifications and/or product(s) specified and must further certify that the Substitution has no other variant features. A request will be denied if submitted without sufficient evidence.

15.3.1.2 Substitution Denial – any Substitution request not complying with the above requirements will be denied. Substitution request sent after the deadline established in the Notice to Bidder will be denied.

15.3.1.3 An addendum shall be issued to inform all prospective Bidders of any accepted Substitution in accordance with Owner's addenda procedures.

15.3.2 Substitution of Materials and Equipment After Bid Opening: Subject to the Architect or Engineer's determination, if the material or equipment is Equal to the one specified or pre-qualified and the CT DEEP Project Manager's approval of such determination, Substitution of Material or Equipment may be allowed after the Letter of Award is issued only:

15.3.2.1 If the specified or pre-qualified item is delayed by unforeseeable contingencies beyond the control of the Contractor which would cause a delay in the Project completion;

15.3.2.2 If any specified or pre-qualified item is found to be unusable or unavailable due to a change by the manufacturer or other circumstances; or

15.3.2.3 If the Contractor desires to provide a more recently developed material, equipment, or manufactured model from the same named manufacturer than the one specified or pre-qualified; or

15.3.2.4 If the specified material and/or equipment inadvertently lists only a single manufacturer.

15.4 Contractor shall submit each request for Equal or Substitution to the Architect or Engineer who shall review each request and make the following recommendations to the Owner:

15.4.1 Acceptance or non-acceptance of the adequacy of the submission and required back-up,

15.4.2 Determination of the category of the request for Substitution or Equal, and

15.4.3 Overall recommendation for approval or rejection of the Substitution or Equal. The determination of the category as a Substitution may be grounds for an immediate rejection by the Owner.

15.5 Approval of the Owner for each Equal or Substitution shall be obtained before the Contractor proceeds with the Work. The decision of the Commissioner, in this regard, shall be final and binding on the Contractor.

15.6 No extension of time will be allowed for the time period required for consideration of any Substitution or Equal. No extension of time will be allowed and no responsibility will be assumed by the Owner when a Contractor submits a request for Substitution or Equal, whether such request be approved or denied, and the Contractor shall not be entitled to any claim for damages for delay.

15.7 If the Contractor submits any request for an Equal or a Substitution, he shall bear the burden of proof that such requested Equal or Substitution meets the requirements of the Plans and Specifications.

15.8 The Contractor shall purchase no materials or supplies for the Work which is subject to any chattel mortgage or which are under a conditional sale or other agreement by which an interest is retained by the seller. The Contractor warrants that the Contractor has good title to all materials and supplies used by him in the Work.

15.9 All products and systems supplied to the State as a result of a purchase by a Contractor shall be certified that, to the best of the supplier's knowledge, there are no materials that are classified as hazardous materials being used within the assembly. Hazardous materials include, but are not limited to, products such as asbestos, lead, and other materials that have proven to cause a health risk by their presence.

ARTICLE 16 INSPECTION AND TESTS

16.1 The purpose of the inspections will be to assure that the Work is performed in accordance with the Contract Documents. These inspections shall include, but not be limited to, all inspections and testing as required by the Owner, and any authorities have jurisdiction.

16.2 All material and workmanship, if not otherwise designated by the Specifications, shall be subject to inspection, examination and test by the Commissioner at any and all times during manufacture and/or construction and at any and all places where such manufacture and/or construction is carried on. The Contract Documents additionally identify the parties responsible for performing and paying for the required testing and inspections. All required tests performed in a laboratory will be obtained and paid for by the Owner, except when the tests show the Work to be defective. The Contractor shall pay for all the costs associated with re-tests and re-inspections for all tests and inspections which fail. The Owner will issue a deduct Change Order to recover said retesting costs from the Contractor. All other tests, unless otherwise specified, shall be made at the Contractor's expense. Notice of the time of all tests to be made at the site shall be given to all interested parties, including the Owner.

16.3 Without additional cost to the Owner, the Contractor shall promptly furnish facilities, labor and materials necessary to coordinate and perform operational tests and checkout of the Work. The Contractor shall furnish promptly all reasonable facilities, labor, and materials necessary to make all such testing safe and convenient.

16.4 If, at any time before final payment and Acceptance of the Work, the Commissioner considers it necessary or advisable to examine of any portion of the Work already completed by removing or tearing out the same, the Contractor shall, upon request, furnish promptly all necessary facilities, labor, and materials. If such Work is found to be defective in any material respect, as determined by the Owner, because of a fault of the Contractor or any of the Contractor's Subcontractors, or if any Work shall have been covered without the approval or consent of the Commissioner (whether or not it is found to be defective), the Contractor shall be liable for testing costs and all costs of correction, including removal and/or demolition of the defective Work, including labor, material, and testing, including labor, material, re-testing or re-inspecting, services of required consultants, additional supervision, the Commissioner's and the Construction Administrator's administrative costs, and other costs for services of other consultants.

16.5 Cost of Systems Commissioning Retesting: The cost to retest a pre-functional or functional test, if the Contractor is responsible for the deficiency, shall be the Contractor's. If the Contractor is not responsible, any cost recovery for retesting costs shall be negotiated with the Contractor.

16.5.1 For a deficiency identified, not related to any pre-functional checklist or start-up fault, the following shall apply: The Commissioning Agent (CxA) and Construction Administrator will direct the retesting of the equipment once at no "charge" to the Contractor for their time. However, the Commissioning Agent's and Construction Administrator's time for additional testing will be charged to the Contractor.

16.5.2 The time for the Systems Commissioning Agent and Construction Administrator to direct any retesting required because a specific pre-functional checklist or start-up test item, reported to have been successfully completed, but determined during functional testing to be faulty, will be back charged to the Contractor.

16.5.3 Any required retesting by any Subcontractor shall not be considered a justified reason for a claim of delay or for a time extension by the Contractor.

ARTICLE 17 ROYALTIES AND PATENTS

17.1 If the Contractor desires to use any design, device, material or process covered by a patent or copyright, the Contractor shall provide for such use by suitable legal agreement with the holder of said patent or copyright. The Contractor shall furnish a copy of this legal agreement to the Owner.

17.2 The Contractor shall indemnify and hold harmless the Owner and Construction Administrator for any costs, expenses and damage which it may be obliged to pay by reason of any infringement of a patent or a copyright, at any time during the prosecution or after the Final payment of the Work.

ARTICLE 18
SURVEYS, PERMITS AND REGULATIONS

18.1 Unless otherwise provided for, the Contractor shall furnish surveys necessary for the execution of the Work. The Owner will furnish the Contractor with two base lines and a benchmark.

18.2 The Contractor shall obtain and pay for permits and licenses necessary for the execution of the Work and the occupancy and use of the completed Work.

18.3 The Contractor shall give all notices and comply with all laws, ordinances, rules and regulations including building and fire safety codes relating to the performance of the Work.

18.4 If underground utilities may be involved in part of the Work the Contractor is required to request "Call-Before-You-Dig" to verify the location of underground utilities at least (3) Working Days, as further defined under Paragraph 1.71 herein, prior to the start of any excavation. The Contractor shall also notify the Owner and Agency at least (3) Working Days prior to the start of any excavation. If "Call-Before-You-Dig" fails or refuses to respond to the Contractor's request, then the Contractor shall obtain the services of a qualified underground utility locating firm, at no additional cost to the Owner, to verify locations of underground utilities prior to the start of any excavation. The Contractor shall be held responsible for providing safety, protecting the Work and protecting workmen as necessary to perform the Work. The Contractor shall be responsible for maintaining and protecting all original utility mark-out at no additional cost to the Owner.

ARTICLE 19
PROTECTION OF THE WORK, PERSONS AND PROPERTY

19.1 The Contractor shall continuously and adequately protect the Work against damage from any cause, and shall protect materials and supplies furnished by the Contractor or Subcontractors, whether or not incorporated in the Work, and shall make good any damage unless it be due directly to errors in the Contract Documents or is caused by agents or employees of the Owner.

19.2 To the extent required by law, by public authority, or made necessary in order to safeguard the health and welfare of the personnel or occupants of any of the state institutions, the Contractor shall adequately protect adjacent property and persons, and provide and maintain all facilities, including but not limited, to passageways, guard fences, lights, and barricades necessary for such protection.

19.3 The Contractor shall take all necessary precautions for the safety of employees on the Work and shall comply with applicable provisions of federal and state safety laws and building codes to prevent accidents or injury to persons on, about, or adjacent to the premises where the Work is being performed. The Contractor shall also comply with the applicable provisions of the Associated General Contractors' "Manual of Accident Prevention in Construction", the standards of the Connecticut Labor Department and Occupational Safety and Hazard Association (OSHA).

19.4 The Contractor shall erect and properly maintain at all times, as required by the conditions and progress of the Work, all necessary safeguards for the protection of employees of the State and the public, and shall post danger signs warning against any dangerous condition or hazard created by such things as protruding nails, well holes, elevator hatchways, scaffolding, window openings, excavations, tripping hazards or slipping, stairways and falling materials.

19.5 The Contractor shall designate a qualified and responsible on-site staff person, whose duty shall be the prevention of accidents. The name and position of the designated person shall be reported to the Owner by the Contractor at the commencement of the Contract.

19.6 The Contractor shall at all times protect excavations, trenches, buildings, and all items of Work from damage by rain, water from melted snow or ice, surface water run off and subsurface water usual for the vicinity at the time of operations; and provide all pumps and equipment and enclosures to insure such protection.

19.7 The Contractor shall construct and maintain all necessary temporary drainage and provide all pumping necessary to keep excavation, basements, footings and foundations free of water.

19.8 The Contractor shall remove all snow and ice as may be required for access to the site and proper protection and prosecution of the Work.

19.9 The Contractor shall install bracing, shoring, sheathing, sheet piling, caissons and any other underground facilities as required for safety and proper execution of the Work, and shall remove this portion of the Work when no longer necessary.

19.10 During cold weather the Contractor shall protect all Work from damage. If low temperature makes it impossible to continue operations safely in spite of cold weather precautions, the Contractor may cease Work upon the written approval of the Commissioner.

**ARTICLE 20
TEMPORARY UTILITIES**

20.1 Unless expressly provided for otherwise in the Contract Documents, the Contractor shall include in the proposed contract bid price as stated on the Bid Proposal Form, the costs of all temporary utilities required for Project completion and protection of the Work. Said temporary utilities include, but are not limited to, lighting, heating, cooling, electrical power, water, telephone, sanitary facilities, and potable water.

**ARTICLE 21
CORRECTION OF WORK**

21.1 The Contractor shall promptly and without expense to the Owner remove from the premises all materials rejected by or unacceptable to the Commissioner as failing to conform to the Contract Documents, whether incorporated in the Work or not.

21.2 The Contractor shall promptly and without expense to the Owner replace any such materials, which do not conform to the Contract Documents, and shall bear the expense of making good all Work of other Contractors or Subcontractors destroyed or damaged by such removal or replacement.

21.3 If the Contractor, after receipt of notice from the Owner, shall fail to remove such rejected or unacceptable materials within a reasonable time as fixed in said notice, the Owner may remove and store such materials at the expense of the Contractor.

21.4 Such action shall not affect the obligation of the Contractor to replace and complete assembly and installation of the Work and to bear the expenses referred to above. Prior to the correction of rejected or unacceptable Work or if the Commissioner deems it inexpedient or undesirable to correct any portion of the Work which was rejected, deemed unacceptable, or not done in accordance with the Contract Documents, the Contract Sum shall be reduced by such amount as, in the judgment of the Commissioner, shall be equitable.

21.5 No extension of time will be given to the Contractor for correction of rejected or unacceptable Work. All significant punchlist Work shall be completed before Substantial Completion is determined. The remaining minor punchlist Work, as determined by the Commissioner, shall be completed within **ninety (90) Days** of established Substantial Completion date.

21.6 Final Payment shall not relieve the Contractor of responsibility for the defects in material or workmanship.

21.7 Unless expressly provided for otherwise in the Contract Documents, the Contractor shall remedy any rejected or unacceptable Work, and any Work found to be not conforming to the Contract Documents which is discovered within 18 Months after the date of Substantial Completion. The Contractor shall pay for any damage to other Work caused by such nonconforming Work or any damage created in correcting the nonconforming Work.

**ARTICLE 22
GUARANTEES and WARRANTIES**

22.1 Unless expressly provided for otherwise in the Contract Documents, the Contractor shall provide a Warranty on the Work for an **18-Month** period from the date of Substantial Completion. The Contractor shall warrant that the equipment, materials and workmanship are of good quality and new, unless permitted elsewhere by the Contract Documents, and that the Work shall be free from defects not inherent in the quality required or permitted and that the Work conforms to the Contract Documents.

22.2 Disclaimers and limitations from manufactures, Subcontractors, suppliers or installers to the Contractor shall not relieve the Contractor of the Warranty on the Work. The Contract Documents detail the related damages, reinstatement of Warranty, replacement cost and Owner's recourse.

**ARTICLE 23
CUTTING, FITTING, PATCHING, AND DIGGING**

23.1 The Contractor will perform or will cause the Subcontractors to perform all cutting, fitting, or patching of the portion(s) of the Work that may be required to make the several parts thereof joined and coordinated in a manner satisfactory to the Commissioner and in accordance with the Plans and Specifications.

23.2 The responsibility for defective or ill-timed Work shall be with the Contractor, but such responsibility shall not in any way relieve the Subcontractor who performed such Work. Except with the consent of the Commissioner, neither the Contractor nor any of its Subcontractors shall cut or alter the Work of any other Contractor or Subcontractor.

ARTICLE 24
CLEANING UP

24.1 The Contractor shall, on a daily basis, keep the premises free from accumulations of waste material or rubbish.

24.2 Prior to Acceptance of the Work, the Contractor shall remove from and about the site of the Work, all rubbish, all temporary structures, tools, scaffolding, and surplus materials, supplies, and equipment which may have been used in the performance of the Work. If the Commissioner in his sole discretion determines that the Contractor has failed to clean the work site, the Owner may remove the rubbish and charge the cost of such removal to the Contractor. A deduct Change Order will be issued by the Owner to recover such cost.

ARTICLE 25
ALL WORK SUBJECT TO CONTROL OF THE COMMISSIONER

25.1 The Commissioner hereby declares that the CT DEEP Project Manager is the Commissioner's only authorized representative to act in matters involving the Owner's, and/or Architect's or Engineer's, ability to revoke, alter, enlarge or relax any requirement of the Contract Documents; to settle disputes between the Contractor and the Construction Administrator; and act on behalf of the Commissioner. In all such matters, the provisions of Articles 13 and 14 herein shall guide the CT DEEP Project Manager.

25.2 In no event may the Contractor act on any instruction of the Agency without written consent of the Owner. In the event the Contractor acts without such consent, he does so at his own risk and at his own expense, not only for the Work performed, but for the removal of such Work as determined necessary by the Commissioner.

25.3 In the performance of the Work, The Contractor shall abide by all orders, directions, and requirements of the Commissioner at such time and places and by such methods and in such manner and sequence as the Commissioner may require.

25.4 The Commissioner shall determine the amount, quality, acceptability and fitness of all parts of the Work, shall interpret the plans, Specifications, Contract Documents and extra work orders and shall decide all other questions in connection with the Work.

25.5 The Contractor shall employ no plant, equipment, materials, methods, or persons to which the Commissioner objects and shall remove no plant materials, equipment, or other facilities from the site of the Work without the permission of the Commissioner. Upon request, the Commissioner shall confirm in writing any oral order, direction, requirement or determination.

25.6 In accordance with Section 4b-24 of the Connecticut General Statutes, the public auditors of the State of Connecticut and the auditors or accountants of the Commissioner of the Department of Energy & Environmental Protection shall have the right to audit and make copies of the books of any Contractor employed by the Commissioner.

ARTICLE 26
AUTHORITY OF THE CONSTRUCTION ADMINISTRATOR

26.1 The Construction Administrator employed by the Commissioner is authorized to inspect all Work for conformance to the Contract Documents. The Construction Administrator is authorized to reject all Work found to be defective, unacceptable and nonconforming to the Contract Documents. Such inspections and rejections may extend to all or any part of the Work, and to the preparation or manufacture of the material to be used.

26.2 The Construction Administrator is not empowered to revoke, alter, enlarge, or relax any requirements of the Contract Documents, or to issue instructions contrary to the Contract Documents. The Construction Administrator shall in no case act as foreman or perform other duties for the Contractor, nor shall the Construction Administrator interfere with the management of the Work by the Contractor. Any advice, which the Construction Administrator may give the Contractor, shall in no way be construed as binding the Commissioner or Owner in any way, nor releasing the Contractor from the fulfillment of the terms of the Contract.

26.3 In any dispute arising between the Contractor and the Construction Administrator with reference to inspection and rejection of the Work, the Construction Administrator may suspend Work on the non-compliant portion of the Work until the dispute can be referred to and decided by the Commissioner.

ARTICLE 27
SCHEDULE OF VALUES, APPLICATION FOR PAYMENT

27.1 Immediately after the signing of the Contract, the Contractor shall furnish for the use of the Commissioner, as a basis for estimating partial payments, a certified Schedule of Values, totaling the Contract Sum and broken down into quantities and unit costs, as outlined in the Contract Documents and as directed by the Owner. The Schedule of Values must reflect true costs and be in sufficient detail to be an effective tool for monitoring the progress of the Work. Upon request of the Commissioner; the Contractor shall supply copies of signed Contracts, vendor quotations, etc. as back up to the Schedule of Values.

27.2 Approval of the Schedule of Values by the Commissioner is required prior to any payment by the Owner.

27.3 The Schedule of Values shall include a breakdown of the Contractor's general condition costs.

27.3.1 Non-recurring costs, (i.e. Mobilization costs, utility hook-ups, temporary heat) will be paid at the time of occurrence.

27.3.2 Reoccurring costs will be paid in proportion to the percent of completion of the Project.

27.3.3 Further detail can be found in the General Requirements 01.29.76; paragraphs 1.3.B.4 for this project.

27.4 The Schedule of Values shall include a breakdown of Contract closeout costs including systems certification testing and acceptance, training, Warranties, Guarantees, As-Built Drawings and attic stock.

27.5 The Contractor shall make periodic applications for payment, which shall be subdivided into categories corresponding with the approved Schedule of Values and shall be in such numbers of copies as may be designated by the Commissioner.

ARTICLE 28
PARTIAL PAYMENTS

28.1 Commissioner will examine the Contractor's Applications For Payments to determine, in the opinion of the Commissioner, the amounts that properly represent the value of the Work completed and the materials suitably stored on the site.

28.2 In making such Application For Payment for the Work, there shall not be more than **seven and five-tenths percent (7.5%)** deducted from the amount of each Application for Payment to be retained by the Owner as Retainage until Acceptance of the Work.

28.2.1 The following criteria shall be utilized in the reduction of Retainage withheld: At fifty percent (50%) completion of the Work the Retainage shall be reduced to **five percent (5%)**. All subsequent Applications for Payment shall be subject to **five percent (5%)** Retainage. Upon Substantial Completion, and in the Commissioner's sole discretion and based upon the factors set forth in **Section 28.3**, the Retainage may be reduced upon the request of the Contractor and recommendation of the DEEP Project Manager. In the event of a reduction in Retainage to **below five percent (5%)**, the minimum Retainage withheld shall not be less than the DEEP Project Manager's estimate of the remaining Work or **two and five-tenths percent (2.5%)**, whichever is greater.

28.2.2 Subsequent to Substantial Completion, in limited circumstances, at the sole discretion of the Commissioner and based upon factors set forth in Section 28.3, a reduction of Retainage below **two and five-tenths percent (2.5%)** may be considered.

28.2.3 A "Good" Contractor's Performance Evaluation score shall be defined as a minimum total score of sixty percent (60%).

28.3 The decision of the Commissioner to reduce the Retainage rate will be based upon the **Contractor's Performance Evaluation** score for completed portions of the Work as set out above and other factors that the Commissioner may find appropriate as follows:

28.3.1 The Contractor's timely submission of an appropriate and complete CPM Schedule or Construction Schedule and Schedule of Values, in compliance with the Contract requirements and the prompt resolution of the Owner's and/or Architect's or Engineer's comments on the submitted material resulting in an appropriate basis for progress of the Work.

28.3.2 The Contractor's timely and proper submission of all Contract Document required submissions: including, but not limited to, Shop Drawings, material certificates and material samples and the prompt resolution of the Owners and/or Architect's or Engineer's comments on the submitted material, resulting in an appropriate progress of the Work.

28.3.3 The Contractor's provision of proper and adequate supervision and home office support of the Project.

28.3.4 The Work completed to date has been installed or finished in a manner acceptable to the Owner.

28.3.5 The progress of the Work is consistent with the approved CPM Schedule or Construction Schedule.

28.3.6 All approved credit change orders have been invoiced.

28.3.7 All Change Order requests for pricing are current.

28.3.8 The Contractor has and is maintaining a clean worksite in accordance with the Contract Documents.

28.3.9 All Subcontractor payments are current at the time of reduction request.

28.3.10 Contractor is compliant with set-aside provisions of the contract.

28.4 No payments will be made for improperly stored or protected materials or unacceptable Work.

28.5 At his or her sole discretion, the Commissioner may allow to be included in the monthly requisitions payment requests for materials and equipment stored off the site.

28.5.1 In the event the Commissioner allows the Contractor to include in its requisitions payment requests for materials and equipment stored off the site, the Contractor shall also submit any additional bonds and/or insurance certificates relating to off-site stored materials and equipment, and follow such other procedures as may be required by the State to obtain the Commissioner's approval of such requests.

28.5.2 The Architect or Engineer, or Construction Administrator shall have inspected said materials and equipment and recommended payment therefore. The Contractor shall pay for the cost of the Architect's or Engineer's, or Construction Administrator's time and expense in performing these inspection services.

ARTICLE 29
DELIVERY OF STATEMENT SHOWING
AMOUNTS DUE FOR WAGES, MATERIALS, AND SUPPLIES

29.1 For each Application for Payment under this Contract, the Owner reserves the right to require the Contractor and every Subcontractor to submit a written verified statement, in a form satisfactory to the Owner, showing in detail all amounts then due and unpaid by such Contractor or Subcontractor for daily or weekly wages to all laborers employed by it for the performance of the Work or to other persons for materials, equipment or supplies delivered at the site.

29.2 The term "laborers" as used herein shall include workmen, workwomen, and mechanics.

29.3 Failure to comply with this requirement may result in the Owner withholding the Application for Payment pursuant to Article 28.

ARTICLE 30
SUBSTANTIAL COMPLETION AND ACCEPTANCE

30.1 Substantial Completion:

30.1.1 When the Contractor considers that the Work or a portion thereof is Substantially Complete, the Contractor shall request an inspection of said Work in writing to the Construction Administrator. The request shall certify that the Contractor has completed its own inspection prior to the request and that the Contractor is compliant with all requirements of Section 01 77 00 of the General Requirements. The request must also include a statement that a principal or senior executive of the Contractor is ready, willing and able to attend a walk through inspection with the Architect or Engineer.

30.1.2 Upon receipt of the request, the Architect or Engineer, Construction Administrator and Owner, will make an inspection to determine if the Work or designated portion thereof is Substantially Complete. A principal or senior executive of the Contractor shall accompany the Architect or Engineer during each inspection/re-inspection. If the inspection discloses any item, whether or not included on the inspection list, which is not in accordance with the requirements of the Contract Documents, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item.

30.1.3 The Contractor shall then submit a request for another inspection. The determination of Substantial Completion is solely within the discretion of the Owner. Any costs for re-inspection beyond one, shall be at the expense of the Contractor and such costs will be recovered by issuance of a credit Change Order. When the Work or designated portion thereof is determined to be Substantially Complete, the Contractor will be provided a Certificate of Substantial Completion from the Owner. The Certificate of Substantial Completion shall establish the date when the responsibilities of the Contractor for security, maintenance, heat, utilities, damage to the Work, and insurance, are transferred to the Owner and shall fix the time within which the Contractor shall finish all items on the inspection list accompanying the Certificate. If the punch list is not complete in **90 Days**, the Owner reserves the right to complete the outstanding punch list items with their own forces or by awarding separate contracts and to deduct the cost thereof from the amounts remaining due to the Contractor.

30.1.4 The Certificate of Substantial Completion shall be signed by the Construction Administrator, Owner, and Architect or Engineer. Upon Substantial Completion of the Work or designated portion thereof and upon application by the Contractor and certification by the Construction Administrator and Architect or Engineer, the Owner shall make payment reflecting adjustment in Retainage, if any, for such Work or portion thereof as provided in the Contract Documents.

30.2 Acceptance:

30.2.1 Upon completion of the Work, the Contractor shall forward to the Construction Administrator a written notice that the Work is ready for inspection and Acceptance.

30.2.2 When the Work has been completed in accordance with terms and conditions of the Contract Documents as determined by the Owner a Certificate of Acceptance shall be issued by the Owner.

**ARTICLE 31
FINAL PAYMENT**

31.1 The Owner reserves the right to retain for a period of thirty (30) Days after filing of the Certificate of Acceptance the amount therein stated less all prior payments and advances whatsoever to or for the account of the Contractor.

31.2 All prior estimates and payments, including those relating to extra or additional Work, shall be subject to correction by the Final Payment.

31.3 No Application for Payment, Final or Partial, shall act as a release to the Contractor or the Contractor's sureties from any obligations under this Contract.

31.4 The Architect or Engineer and Construction Administrator will promptly issue the Certificate for Payment, stating that to the best of their knowledge, information and belief, and on the basis of their observations and inspections, the Work has been completed in accordance with terms and conditions of the Contract Documents and that the entire balance found to be due the Contractor and noted in said Final Payment is due and payable.

31.5 Final Payment shall not be released until a Certificate of Acceptance and a Certificate of Compliance have been issued.

31.6 Neither Final Payment nor any Retainage shall become due until the Contractor submits to the Owner the following:

31.6.1 An affidavit 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.

31.6.2 A certificate evidencing that insurance required by the Contract Documents to remain in force after Final Payment is currently in effect and will not be canceled or allowed to expire without at least 30 Days prior written notice to the Owner.

31.6.3 A written statement that the Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents.

31.6.4 Written consent of surety, if any, to Final Payment.

31.6.5 If required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts, releases and waivers of liens, claims, security interests or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor 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. If such lien remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging such lien, including all costs and reasonable attorney's fees.

ARTICLE 32
OWNER'S RIGHT TO WITHHOLD PAYMENTS

32.1 The Commissioner may withhold a portion of any Payment due the Contractor that may, in the judgment of the Commissioner, be necessary:

32.1.1 To assure the payment of just claims then due and unpaid to any persons supplying labor or materials for the Work.

32.1.2 To protect Owner from loss due to defective, unacceptable or non-conforming Work not remedied by the Contractor.

32.1.3 To protect the Owner from loss due to injury to persons or damage to the Work or property of other Contractors, Subcontractors, or others caused by the act or neglect of the Contractor or any of its Subcontractors.

32.2 The Owner shall have the right to apply any amount withheld under this Article as the Owner may deem proper to satisfy protection from claims. The amount withheld shall be considered a payment to the Contractor.

32.3 The Owner has the right to withhold payment if the Contractor fails to provide accurate submissions of Submittals, up date the status including but not limited to the following: As-Built Drawings, request for information (RFI) log, Schedule, submittal log, Change Order log, certified payrolls and daily reports and all other requirement of the Contract Documents.

32.4 If a Subcontractor 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. If such lien remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging such lien, including all costs and reasonable attorney's fees.

ARTICLE 33
OWNER'S RIGHT TO STOP WORK OR TERMINATE CONTRACT

33.1 The Commissioner shall have the authority to suspend the Work wholly or in part, for such period or periods as the Commissioner considers being in the best interests of the State, or in the interests of public necessity, convenience or safety. During such periods the Contractor shall store all materials and equipment, in such a manner to prevent the materials and equipment from being damaged in any way, and the Contractor shall take precautions to protect the Work from damage.

33.1.1 If the Commissioner, in writing, orders the performance of all or any portion of the Work to be suspended or delayed for an unreasonable period of time (i.e. not originally anticipated, customary, or inherent in the construction industry) and the Contractor believes that additional compensation and/or Contract Time is due as a result of such suspension or delay, the Contractor shall submit to the Commissioner in writing a request for a Contract adjustment within 7 Days of receipt of the notice to resume Work. The request shall set forth the specific reasons and support for said adjustment.

33.1.2 The Commissioner shall evaluate any such requests received. If the Commissioner agrees that the cost and/or time required for the performance of the Contract has increased as a result of such suspension and that the suspension was caused by conditions beyond the control of and not the fault of the Contractor, its suppliers, or Subcontractors, and was not caused by weather, then the Commissioner will make a reasonable adjustment, excluding profit, of the Contract terms. The Commissioner will notify the Contractor of the determination as to what adjustments of the Contract, if any, that the Commissioner deems warranted.

33.1.3 No Contract adjustment will be made unless the Contractor has submitted the request for adjustment within the time prescribed.

33.1.4 No Contract adjustment will be made under this Article to the extent that performance would have been suspended or delayed by any other cause within the Contractor's control or by any factor for which the Contractor is responsible under the Contract; or that such an adjustment is provided for or excluded under other term or condition of this Contract.

33.2 Termination for Convenience: Notwithstanding any provision or language in the Contract to the contrary, the State may terminate the Contract for convenience whenever the Commissioner determines at his sole discretion that such termination is in the best interests of the State. Any such termination shall be effected by delivery to the Contractor of a written Notice of Termination for Convenience specifying the extent to which performance of Work under the Contract is terminated, and the date upon which such termination shall be effective.

33.2.1 In the event of such termination, the Contractor shall be entitled to reasonable compensation as determined by the Commissioner, however, no claim for lost Overhead or Profits shall be allowed.

33.2.2 All Work and materials obtained by the Contractor for the Work, that have been incorporated into the Work, inspected, tested as required, accepted by the Commissioner, and paid for by the State, shall become the property of the State.

33.2.3 Materials obtained by the Contractor for the Work that have been inspected, tested as required, and accepted by the Commissioner, and that are not incorporated into the Work, shall, at the option of the Commissioner, be purchased from the Contractor at actual cost as shown by receipted bills. To this cost shall be added all actual costs for delivery at such points of delivery as may be designated by the Commissioner, as shown by actual cost records.

33.2.4 Termination of the Contract for convenience shall not relieve the Contractor or its surety of their responsibilities for the completed Work, nor shall it relieve the Contractor's surety of its obligations to ensure completion of the Work and to pay legitimate claims arising out of the Work.

33.3 Termination for Cause:

33.3.1 The Commissioner may give notice in writing to the Contractor and its surety of any particular delay, neglect, or default of the Contractor due to one or more of the following:

33.3.1.1 Failure to begin the Work within the time specified for same in the Contract Documents.

33.3.1.2 Failure to perform the Work with sufficient workmen, equipment or materials to ensure the prompt completion of the Work within the time specified in the Contract.

33.3.1.3 Unsuitable performance of the Work or failure to remedy or redo such work as DEEP Project Manager shall reject as defective, unsuitable, or noncompliant with Contract requirements.

33.3.1.4 Failure or refusal to remove material rejected as defective, unsuitable, or noncompliant with Contract requirements.

33.3.1.5 Discontinuance of the suitable prosecution of the Work for a period of seventy-two (72) hours, excluding Saturdays, Sundays and holidays, without written authorization to do so from the DEEP Project Manager.

33.3.1.6 Failure to recommence discontinued Work within forty-eight (48) hours (excluding Saturdays, Sundays and holidays) after being ordered to do so by the DEEP Project Manager.

33.3.1.7 Insolvency, filing for bankruptcy or any act or occurrence that may render the Contractor financially incapable of completing the Work.

33.3.1.8 Failure to satisfy any final judgment against it for a period of thirty (30) days.

33.3.1.9 Making of any assignment for the benefit of creditors.

33.3.1.10 Violation of any provisions of the Contract Documents.

33.3.2 If the Contractor or its surety within a period of ten (10) days after the issuance of such notice does not proceed in conformance with the directions set forth therein, or fails to present a remedial plan of operation, satisfactory to the Commissioner, for remedying the acts or failures complained of in the notice, then the Commissioner may, at his discretion, order the surety to complete the Work or, without violating the Contract, take the right to control and prosecute the Work out of the hands of said Contractor and surety, terminating the Contract.

33.3.3 The Commissioner may appropriate or use any or all stockpiled materials and any and all equipment required by the Contract as may be suitable and necessary for completion of the Work and may enter into an agreement, either by negotiation or public letting, for the completion of said Contract by a party other than the Contractor, according to the terms and provisions thereof, or use such other methods or combinations thereof as in his or her opinion shall be required or desirable for the completion of the Work.

33.3.4 All costs and charges incurred by the Owner in connection with completing the Work, or as a result of the Contractor's default, shall be deducted from any monies due to or which may become due to the Contractor. In case such expense exceeds the sum that would have been payable under the Contract, then the Contractor and the surety shall be liable for, and shall pay to the State, the amount of the excess. Termination of the Contract shall not relieve the Contractor or its surety of their responsibilities for the completed Work, nor shall it relieve the Contractor's surety of its obligations to ensure completion of the Work and to pay legitimate claims arising out of the Work.

ARTICLE 34
SUBLETTING OR ASSIGNING OF CONTRACT

34.1 The Contract or any portion thereof, or the Work provided for therein, or the right, title, or interest of the Contractor therein may not be sublet, sold, transferred, assigned, or otherwise disposed of to any person, firm, or corporation without the written consent of the Commissioner.

34.2 No person, firm, or corporation other than the Contractor to whom the Contract was awarded shall be permitted to commence Work at the site of the Contract until such consent has been granted.

ARTICLE 35
CONTRACTOR'S INSURANCE

35.1 The Contractor shall not start Work under the Contract until they have obtained insurance as stated in SECTIONS 00 62 16 CERTIFICATE OF INSURANCE and 00 41 00 BID PROPOSAL FORM of the Project Manual and until the insurance has been approved by the Owner. The Contractor shall not allow any Subcontractor to start Work until the same insurance has been obtained by the Subcontractor and approved by the Owner or the Contractor's insurance provides coverage on behalf of the Subcontractor. The Contractor shall send Certificates of Liability Insurance to the Connecticut Department of Energy and Environmental Protection, Engineering and Field Support Services Division, 163 Great Hill Rd, Portland, CT 06480, unless otherwise directed in writing. For insurance definitions see Article 1 herein. Presented below is a narrative summary of the insurance required.

35.1.1 Commercial General Liability Insurance: Insurance including contractual liability, products/completed operations, broad form property damage and independent Contractors. The limits shall be no less than \$1,000,000 each occurrence and \$2,000,000 annual aggregate. Coverage for hazards of explosion, collapse and underground (X-C-U) and for asbestos abatement when applicable to this Contract, must also be included when applicable to the Work to be performed. The State of Connecticut, the Department of Energy & Environmental Protection, and their respective officers, agents, and employees shall be named as an Additional Insured. This coverage shall be provided on a primary basis.

35.1.2 Owner's and Contractor's Protective Liability Insurance: Insurance providing a total limit of \$1,000,000 for all damages arising out of bodily injury or death of persons in any one accident or occurrence and for all damages arising out of injury or destruction of property in any one accident or occurrence and subject to a total (aggregate) limit of \$2,000,000 for all damages arising out of bodily injury to or death of persons in all accidents or occurrences and out of injury to or destruction of property during the policy period. This coverage shall be for and in the name of the State of Connecticut.

35.1.3 Automobile Liability Insurance: The operation of all motor vehicles including those owned, non-owned and hired or used in connection with the Contract shall be covered by Automobile Liability Insurance providing for a total limit of \$1,000,000 for all damages arising out of bodily injuries to or death of all persons in any one accident or occurrence and for all damages arising out of injury to or destruction of property in any one accident or occurrence. In cases where an insurance policy shows an aggregate limit as part of the automobile liability coverage, the aggregate limit must be at least \$2,000,000. This coverage shall be provided on a primary basis. Should the Contractor not own any automobiles, the automobile & liability requirement shall be amended to allow the Contractor to maintain only hired and non-owned liability coverage.

35.1.4 Umbrella Liability Insurance: Umbrella Liability Insurance, including a drop down provision covering any exhausted underlying aggregate limits in the specified amount shown below of combined single limit each occurrence in excess of the coverages described in subsections 35.1.1 Commercial General Liability Insurance, 35.1.3 Automobile Liability, and 35.1.5 Workers' Compensation and Employer's Liability. The State of Connecticut shall be named as an additional insured. The Umbrella Liability Insurance Limits for the Contractor are based on the Contract Value as specified in the following table.

Umbrella Liability Insurance Table:			
Contract Value			Umbrella Limit
\$1.00	to	\$500,000.00	\$1,000,000.00
\$500,000.01	to	\$1,000,000.00	\$2,000,000.00
\$1,000,000.01	to	\$10,000,000	\$5,000,000.00
\$10,000,000.01	to	\$30,000,000	\$10,000,000.00
\$30,000,000.01	to	\$80,000,000	\$15,000,000.00
\$80,000,000.01	to	\$150,000,000	\$20,000,000.00
\$150,000,000.01	to	\$300,000,000	\$25,000,000.00

35.1.5 Workers' Compensation and Employer's Liability: As required by Connecticut Law and **Employers' Liability** with a limit of not less than \$100,000 per occurrence, \$500,000 disease policy limit and \$100,000 disease each employee. When Work is on or contiguous to navigable bodies of waterways and ways adjoining, the Contractor shall include the Federal Act endorsement for the U.S. Longshoremen's and Harbor Workers Act.

35.1.6 Special Hazards Insurance: If required, will be stated in the BID PROPOSAL FORM of this Project Manual. This includes coverage for explosion, collapse or underground damage and for asbestos abatement when applicable to this Contract and shall be no less than \$1,000,000 each occurrence.

35.1.7 Builder's Risk Insurance: If required, will be stated in the BID PROPOSAL FORM of this Project Manual.

35.1.8 Inland Marine/Transit Insurance: With respect to property with values in excess of \$100,000 which is rigged, hauled or situated at the site pending installation, the Contractor shall maintain inland marine/transit insurance provided the coverage is not afforded by a Builder's Risk policy.

35.1.9 When required to be maintained, the Builder's Risk and/or Inland Marine/Transit Insurance policy shall endorse the State of Connecticut as a Loss Payee and the policy shall state it is for the benefit of and payable to the State of Connecticut.

35.2 Satisfying Limits Under an Umbrella Policy: If necessary, the Contractor may satisfy the minimum limits required above for either Commercial General Liability, Automobile Liability, and Employer's Liability coverage under an Umbrella or Excess Liability policy. The underlying limits may be set at the minimum amounts required by the Umbrella or Excess Liability policy provided the combined limits meet at least the minimum limit for each required policy. The Umbrella or Excess Liability policy shall have an Annual Aggregate at a limit not less than two (2) times the highest per occurrence minimum limit required above for any of the required coverages. The State of Connecticut shall be specifically endorsed as an Additional Insured on the Umbrella or Excess Liability policy, unless the Umbrella or Excess Liability policy provides continuous coverage to the underlying policies on a complete "Follow-Form" basis.

35.3 The Contractor shall, at its sole expense, maintain in full force and effect at all times during the life of the Contract or the performance of Work hereunder, insurance coverage as described herein. Certificates shall include a minimum thirty (30)-day endeavor to notify requirement to the Owner prior to any cancellation or non-renewal.

35.4 The Contractor shall be fully and solely responsible for any costs or expenses as a result of a coverage deductible, coinsurance penalty, or self-insured retention, including any loss not covered because of the operation of such deductible, coinsurance penalty, or self-insured retention.

35.5 The requirement contained herein as to types and limits of insurance coverage to be maintained by the Contractor are not intended to and shall not in any manner limit or qualify the liabilities and obligations assumed by the Contractor.

35.6 Indemnification and Hold Harmless Provisions:

35.6.1 The Contractor shall indemnify, defend and hold harmless the State and its officers, representatives, agents, servants, employees, successors and assigns from and against any and all (1) Claims arising, directly or indirectly, in connection with the Contract, including the acts of commission or omission (collectively, the "Acts") of the Contractor or Contractor Parties; and (2) liabilities, damages, losses, costs and expenses, including but not limited to, attorneys' and other professionals' fees, arising, directly or indirectly, in connection with Claims, Acts or the Contract. The Contractor shall use counsel reasonably acceptable to the State in carrying out its obligations under this section. The Contractor's obligations under this section to indemnify, defend and hold harmless against Claims includes Claims concerning confidentiality of any part of or all of the Contractor's bid, proposal or any Records, any intellectual property rights, other proprietary rights of any person or entity, copyrighted or uncopyrighted compositions, secret processes, patented or unpatented inventions, articles or appliances furnished or used in the Performance.

35.6.2 The Contractor shall not be responsible for indemnifying or holding the State harmless from any liability arising due to the negligence of the State or any third party acting under the direct control or supervision of the State.

35.6.3 The Contractor shall reimburse the State for any and all damages to the real or personal property of the State caused by the Acts of the Contractor or any Contractor Parties. The State shall give the Contractor reasonable notice of any such Claims.

35.6.4 The Contractor's duties under this section shall remain fully in effect and binding in accordance with the terms and conditions of the Contract, without being lessened or compromised in any way, even where the Contractor is alleged or is found to have merely contributed in part to the Acts giving rise to the Claims and/or where the State is alleged or is found to have contributed to the Acts giving rise to the Claims.

35.6.5 The Contractor shall carry and maintain at all times during the term of the Contract, and during the time that any provisions survive the term of the Contract, sufficient general liability insurance to satisfy its obligations under this Contract. The Contractor shall name the State as an additional insured on the policy and shall provide a copy of the policy to the Agency prior to the effective date of the Contract. The Contractor shall not begin Performance until the delivery of the policy to the Agency. The Agency shall be entitled to recover under the insurance policy even if a body of competent jurisdiction determines that the Agency or the State is contributorily negligent.

35.6.6 Such obligations shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity which would otherwise exist as to any party or person described in General Conditions Article 35.

35.6.7 This section shall survive the Termination of the Contract and shall not be limited by reason of any insurance coverage.

ARTICLE 36
FOREIGN MATERIALS

36.1 Preference shall be given to articles or materials manufactured or produced in the United States, Canada, and Mexico, (the members of the North American Free Trade Agreement (NAFTA)); and the products shall meet all of the referenced standards and Specifications for conditions of performance, quality, and price with duty being equal.

36.2 Only articles or materials manufactured or produced in the United States, Canada, and Mexico, (the members of the North American Free Trade Agreement (NAFTA)), will be allowed. The foregoing provisions shall not apply to foreign articles or materials required by the Contract Documents.

36.3 Buy American Act (BAA): Any "public building" or "public work" project funded by the American Recovery and Reinvestment Act of 2009 ("ARRA") requires that "all of the iron, steel, and manufactured goods used in the project" must be "produced in the United States" in accordance with the requirements of the Buy American Act (BAA).

ARTICLE 37
HOURS OF WORK

37.1 No person shall be employed to work or be permitted to work more than eight (8) hours in any Day or more than forty (40) hours in any week for any Work provided in the Contract, in accordance with Connecticut General Statute Section 31-57.

37.2 The operation of such limitation of hours of work may be suspended during an emergency, upon the approval of the Commissioner, in accordance with Connecticut General Statute Section 31-57.

ARTICLE 38
CLAIMS

38.1 General: When filing a formal claim under Section 4-61 (referred to as "Section 4-61" below) of the Connecticut General Statutes (as revised), either as a lawsuit in the Superior Court or as a demand for arbitration, the Contractor must follow the procedures and comply with the requirements set forth in this Article. This Section does not, unless so specified, govern informal claims for additional compensation which the Contractor may bring before the Department. The Contractor should understand, however, that the Department may need, before the Department can resolve such a claim, the same kinds of documentation and other substantiation that it requires under this Article. It is the intent of the Department to compensate the Contractor for actual increased costs caused by or arising from acts or omissions on the part of the Department that violate legal or contractual duties owed to the Contractor by the Department.

38.2 Notice of Claim: Whenever the Contractor intends to file a formal claim against the Department under Section 4-61, seeking compensation for additional costs, the Contractor shall notify the Commissioner in writing (in strict compliance with Section 4-61) of the details of said claim. Such written notice shall contain all pertinent information described in Paragraph 38.5 below. Once formal notice of a claim under Section 4-61(b) (as revised) has been given to the Commissioner, the claimant may not change the claim in any way, in either concept or monetary amount, (1) without filing a new notice of claim and demand for arbitration to reflect any such change, and (2) without the minimum period of six months after filing of the new demand commencing again and running before any hearing on the merits of the claim may be held. The only exception to this limitation will be for damages that continue to accrue after submission of the notice, in ways described and anticipated in the notice.

38.3 Record Keeping: The Contractor shall keep daily records of all costs incurred in connection with its Work on behalf of the Department. The daily records shall identify each aspect of the Project affected by matters related to any claim for additional compensation that the Contractor has filed, intends to file, or has reason to believe that it may file against the Department; the specific Project locations where Project work has been so affected; the number of people working on the affected aspects of the Project at the pertinent time(s); and the types and number of pieces of equipment on the Project site at the pertinent time(s). Any potential or anticipated effect on the Project's progress or Schedule which may result in a claim by the Contractor shall be noted contemporaneously with the cause of the effect, or as soon thereafter as possible.

38.4 Claim Compensation: The payment of any claim, or any portion thereof, that is deemed valid by the Department shall be made in accordance with the following provisions of this Article:

38.4.1 Compensable Items: The liability of the Department for claims will be limited to the following specifically identified items of cost, insofar as they have not otherwise been paid for by the Department, and insofar as they were caused solely by the actions or omissions of the Department or its agents (except that with regard to payment for extra work, the Department will pay to the Contractor the Overhead and profit percentages provided for in Article 13.):

38.4.1.1 Additional Project-site labor expenses.

38.4.1.2 Additional costs for materials.

38.4.1.3 Additional, unabsorbed Project-site Overhead (e.g., for mobilization and demobilization).

38.4.1.4 Additional costs for active equipment.

38.4.1.5 For each Day of Project delay or suspension caused solely by actions or omissions of the Department either:

38.4.1.5.1 an additional ten percent (10%) of the total amount of the costs identified in Subparagraphs 38.4.1.1 through 38.4.1.4 above; except that if the delay or suspension period prevented the Contractor from incurring enough Project costs under Subparagraphs 38.4.1.1 through 38.4.1.4 during that period to require a payment by the Department that would be greater than the payment described in Subparagraph 38.4.1.5.2 below, then the payment for affected home office Overhead and profit shall instead be made in the following *per diem* amount:

38.4.1.5.2 six percent (6%) of the original total Contract amount divided by the original number of Days of Contract Time. Payment under either 38.4.1.5.1 or 38.4.1.5.2 hereof shall be deemed to be complete and mutually satisfactory compensation for any unabsorbed home office overhead and any profit related to the period of delay or suspension.

38.4.1.6 Additional equipment costs. Only actual equipment costs shall be used in the calculation of any compensation to be made in response to claims for additional Project compensation. Actual equipment costs shall be based upon records kept in the normal course of business and in accordance with generally accepted accounting principles. Under no circumstances shall Blue Book or other guide or rental rates be used for this purpose (unless the Contractor had to rent the equipment from an unrelated party, in which case the actual rental charges paid by the Contractor, so long as they are reasonable, shall be used). Idle equipment, for instance, shall be paid for based only on its actual cost to the Contractor.

38.4.1.7 Subcontractor costs limited to, and determined in accordance with, Subparagraphs 38.4.1.1 through 38.4.1.5 above and applicable statutory and case law. Such Subcontractor costs may be paid for by the Department only: (a) in the context of an informal claims settlement; or (b) if the Contractor has itself paid or legally assumed, present unconditional liability for those Subcontractor costs.

38.4.2 Excusable But Not Compensable Items: The Contractor may be allowed Days but the Department will have no liability for the following non-compensable items:

38.4.2.1 Abnormal or unusually severe weather

38.4.2.2 Acts of God

38.4.2.3 Force Majeure

38.4.2.4 Concurrent Delay

38.4.3 Non-Compensable Items: The Department will have no liability for the following specifically-identified non-compensable items:

38.4.3.1 Profit, in excess of that provided for herein.

38.4.3.2 Loss of anticipated profit.

38.4.3.3 Loss of bidding opportunities.

38.4.3.4 Reduction of bidding capacity.

38.4.3.5 Home office overhead in excess of that provided for in Subparagraph 38.4.1.5 hereof.

38.4.3.6 Attorneys fees, claims preparation expenses, or other costs of claims proceedings or resolution.

38.4.3.7 Subcontractor failure to perform

38.4.3.8 Any other consequential or indirect expenses or costs, such as tort damages, or any other form of expense or damages not provided for in these specifications or elsewhere in the Contract.

38.5 Required Claim Documentation: All claims shall be submitted in writing to the Commissioner, and shall be sufficient in detail to enable the Department to ascertain the basis and the amount of each claim, and to investigate and evaluate each claim in detail. As a minimum, the Contractor must provide the following information for each and every claim and sub-claim asserted:

38.5.1 A detailed factual statement of the claim, with all dates, locations and items of Work pertinent to the claim.

38.5.2 A statement of whether each requested additional amount of compensation or extension of time is based on provisions of the Contract or on an alleged breach of the Contract. Each supporting or breached Contract provision and a statement of the reasons why each such provision supports the claim must be specifically identified or explained.

38.5.3 Excerpts from manuals or other texts which are standard in the industry, if available, that support the Contractor's claim.

38.5.4 The details of the circumstances that gave rise to the claim.

38.5.5 The date(s) on which any and all events resulting in the claim occurred, and the date(s) on which conditions resulting in the claim first became evident to the Contractor.

38.5.6 Specific identification of any pertinent document, and detailed description of the substance of any material oral communication, relating to the substance of such claim.

38.5.7 If an extension of time is sought, the specific dates and number of Days for which it is sought, and the basis or bases for the extension sought. A critical path method, bar chart, or other type of graphical schedule that supports the extension must be submitted.

38.5.8 When submitting any claim over \$50,000, the Contractor shall certify in writing, under oath and in accordance with the formalities required by the contract, as to the following:

38.5.8.1 That supporting data is accurate and complete to the Contractor's best knowledge and belief;

38.5.8.2 That the amount of the dispute and the dispute itself accurately reflects what the Contractor in good faith believes to be the Department's liability;

38.5.8.3 The certification shall be executed by:

38.5.8.3.1 If the Contractor is an individual, the certification shall be executed by that individual.

38.5.8.3.2 If the Contractor is not an individual, the certification shall be executed by a senior company official in charge at the Contractor's plant or location involved or an officer or general partner of the Contractor having overall responsibility for the conduct of the Contractor's affairs.

38.6 Auditing of Claims: All claims filed against the Department shall be subject to audit by the Department or its agents at any time following the filing of such claim. The Contractor and its Subcontractors and suppliers shall cooperate fully with the Department's auditors. Failure of the Contractor, its Subcontractors, or its suppliers to maintain and retain sufficient records to allow the Department or its agents to fully evaluate the claim shall constitute a waiver of any portion of such claim that cannot be verified by specific, adequate, contemporaneous records, and shall bar recovery on any claim or any portion of a claim for which such verification is not produced. Without limiting the foregoing requirements, and as a minimum, the Contractor shall make available to the Department and its agents the following documents in connection with any claim that the Contractor submits:

38.6.1 Daily time sheets and foreman's daily reports.

38.6.2 Union agreements, if any.

38.6.3 Insurance, welfare, and benefits records.

38.6.4 Payroll register.

38.6.5 Earnings records.

38.6.6 Payroll tax returns.

38.6.7 Records of property tax payments.

38.6.8 Material invoices, purchase orders, and all material and supply acquisition contracts.

38.6.9 Materials cost distribution worksheets.

38.6.10 Equipment records (list of company equipment, rates, etc.).

38.6.11 Vendor rental agreements.

38.6.12 Subcontractor invoices to the Contractor, and the Contractor's certificates of payments to Subcontractors.

38.6.13 Subcontractor payment certificates.

38.6.14 Canceled checks (payroll and vendors).

38.6.15 Job cost reports.

38.6.16 Job payroll ledger.

38.6.17 General ledger, general journal (if used), and all subsidiary ledgers and journals, together with all supporting documentation pertinent to entries made in these ledgers and journals.

38.6.18 Cash disbursements journals.

38.6.19 Financial statements for all years reflecting the operations on the Project.

38.6.20 Income tax returns for all years reflecting the operations on the Project.

38.6.21 Depreciation records on all company equipment, whether such records are maintained by the company involved, its accountant, or others.

38.6.22 If a source other than depreciation records is used to develop costs for the Contractor's internal purposes in establishing the actual cost of owning and operating equipment, all such other source documents.

38.6.23 All documents which reflect the Contractor's actual profit and overhead during the years that the Project was being performed, and for each of the five years prior to the commencement of the Project.

38.6.24 All documents related to the preparation of the Contractor's bid, including the final calculations on which the total proposed Contract bid price as stated in the Bid Proposal Form was based.

38.6.25 All documents which relate to the claim or to any sub-claim, together with all documents that support the amount of damages as to each claim or sub-claim.

38.6.26 Worksheets used to prepare the claim, which indicate the cost components of each item of the claim, including but not limited to the pertinent costs of labor, benefits and insurance, materials, equipment, and Subcontractors' damages, as well as all documents which establish the relevant time periods, individuals involved, and the Project hours and the rates for the individuals.

38.6.27 The name, function, and pertinent activity of each Contractor's or Subcontractor's official, or employee, involved in or knowledgeable about events that give rise to, or facts that relate to, the claim.

38.6.28 The amount(s) of additional compensation sought and a break-down of the amount(s) into the categories specified as payable under Paragraph 38.4 above.

38.6.29 The name, function, and pertinent activity of each Department official, employee, or agent involved in or knowledgeable about events that give rise to, or facts that relate to, the claim.

ARTICLE 39 **DIESEL VEHICLE EMISSIONS CONTROL**

39.1 The Contractor shall be responsible for compliance with the following provisions:

39.1.1 All Contractor and Subcontractor diesel powered non-road construction equipment with engine horsepower (HP) ratings of 60 HP and above, that are on the Project or are assigned to the Contract for a period in excess of 30 consecutive Days, shall be retrofitted with emission control devices in order to reduce diesel emissions. In addition, all motor vehicles and/or construction equipment (both on-highway and non-road) shall comply with all pertinent State and Federal regulations relative to exhaust emission controls and safety.

39.1.2 Retrofit emission control devices shall consist of oxidation catalysts, or similar retrofit equipment control technology that is:

39.1.2.1 Included on the U.S. Environmental Protection Agency (EPA) "Verified Technology List," as may be amended from time to time <http://www.epa.gov/otaq/retrofit/retroverifiedlist.htm> and

39.1.2.2 Verified by EPA to provide a minimum emissions reduction of 20% particulate matter (PM₁₀), 40% carbon monoxide (CO), and 50% hydrocarbons (HC).

39.1.3 Construction shall not proceed until all diesel powered non-road construction equipment meeting the criteria in provision 39.1.1 have been retrofitted, unless the Commissioner grants a waiver under provision 39.2.

39.1.4 The Contractor shall at least monthly, assess which diesel powered non-road construction equipment are subject to these provisions. The Contractor shall notify the CT DEEP Project Manager of any violations of these provisions.

39.1.5 Idling of delivery and/or dump trucks, or other diesel powered equipment shall be limited to three (3) minutes during non-active use in accordance with the Regulations of Connecticut State Agencies Section 22a-74-18(b)(3)(C), which states, in part:

"[N]o person shall cause or allow a Mobile Source to operate for more than three (3) consecutive minutes when such Mobile Source is not in motion, except as follows:

- *When a Mobile Source is forced to remain motionless because of traffic conditions or mechanical difficulties over which the operator has no control,*
- *When it is necessary to operate defrosting, heating or cooling equipment to ensure the safety or health of the driver or passengers,*
- *When it is necessary to operate auxiliary equipment that is located in or on the Mobile Source to accomplish the intended use of the Mobile Source, (To bring the Mobile Source to the manufacturer's recommended)*
- *When a Mobile Source is in queue to be inspected by U.S. military personnel prior to gaining access to a U.S. military installation."*

39.1.6 All Work shall be conducted to ensure that no harmful effects are caused to adjacent Sensitive Receptor Sites. Diesel powered engines shall be located away from fresh air intakes, air conditioners, and windows.

39.1.7 If any diesel powered non-road construction equipment is found to be in non-compliance with these provisions by the CT DEEP Project Manager, the Contractor will be issued a Non-Conformance Notice and given a 24 hour period in which to bring the equipment into compliance or remove it from the Project. The Contractor's failure to comply with these provisions shall be reason to withhold payment as described in Article 33.

39.1.8 Any costs associated with these provisions shall be included in the general cost of the contract. In addition, there shall be no time granted to the Contractor for compliance with these provisions. The Contractor's compliance with these provisions and any associated regulations shall not be grounds for a Change Order.

39.2 The Commissioner reserves the right to waive all or portions of these provisions at his/her discretion. The Contractor may request a waiver to all or portions of these provisions with written justification to the Commissioner as to why the Contractor cannot comply with these provisions. A waiver, to be effective, must be granted in writing by the Commissioner.

ARTICLE 40 **DISCLOSURE OF RECORDS**

40.1 This Contract may be subject to the provisions of C.G.S. Section 1-218. In accordance with this statute, each contract in excess of two million five hundred thousand dollars (\$2,500,000.00) between a public agency and a person for the performance of a governmental function shall (a) provide that the public agency is entitled to receive a copy of records and files related to the performance of the governmental function, and (b) indicate that such records and files are subject to the Freedom of Information Act (FOIA) and may be disclosed by the public agency pursuant to FOIA. No request to inspect or copy such records or files shall be valid unless the request is made to the public agency in accordance with FOIA. Any complaint by a person who is denied the right to inspect or copy such records or files shall be brought to the Freedom of Information Commission in accordance with the provisions of C.G.S. Sections 1-205 and 1-206.

ARTICLE 41 **AUDIT AND INSPECTION OF PLANTS, PLACES OF BUSINESS, AND RECORDS**

41.1 The State and its agents, including, but not limited to, the Connecticut Auditors of Public Accounts, Attorney General and State's Attorney and their respective agents, may, at reasonable hours, inspect and examine all of the parts of the Contractor's and Contractor Parties' plants and places of business which, in any way, are related to, or involved in, the performance of this Contract.

41.2 The Contractor shall maintain, and shall require each of the Contractor Parties to maintain, accurate and complete Records. The Contractor shall make all of its and the Contractor Parties' Records available at all reasonable hours for audit and inspection by the State and its agents.

41.3 The State shall make all requests for any audit or inspection in writing and shall provide the Contractor with at least twenty-four (24) hours' notice prior to the requested audit and inspection date. If the State suspects fraud or other abuse, or in the event of an emergency, the State is not obligated to provide any prior notice.

41.4 All audits and inspections shall be at the State's expense.

41.5 The Contractor shall keep and preserve or cause to be kept and preserved all of its and Contractor Parties' Records until three (3) years after the latter of (i) final payment under this Agreement, or (ii) the expiration or earlier termination of this Agreement, as the same may be modified for any reason. The State may request an audit or inspection at any time during this period. If any Claim or audit is started before the expiration of this period, the Contractor shall retain or cause to be retained all Records until all Claims or audit findings have been resolved.

41.6 The Contractor shall cooperate fully with the State and its agents in connection with an audit or inspection. Following any audit or inspection, the State may conduct and the Contractor shall cooperate with an exit conference.

41.7 The Contractor shall incorporate this entire Section verbatim into any contract or other agreement that it enters into with any Contractor Party.

END

**COMMISSION ON HUMAN RIGHTS AND OPPORTUNITIES
CONTRACT COMPLIANCE REGULATIONS
NOTIFICATION TO BIDDERS**

(Revised 09/3/15)

The contract to be awarded is subject to contract compliance requirements mandated by [Sections 4a-60](#) and [4a-60a](#) of the Connecticut General Statutes; and, when the awarding agency is the State, [Sections 46a-71\(d\)](#) and [46a-81i\(d\)](#) of the Connecticut General Statutes. There are Contract Compliance Regulations codified at [Section 46a-68j-21 through 43](#) of the Regulations of Connecticut State Agencies, which establish a procedure for awarding all contracts covered by [Sections 4a-60](#) and [46a-71\(d\)](#) of the Connecticut General Statutes.

According to [Section 46a-68j-30\(9\)](#) of the Contract Compliance Regulations, every agency awarding a contract subject to the contract compliance requirements has an obligation to “aggressively solicit the participation of legitimate minority business enterprises as bidders, contractors, subcontractors and suppliers of materials.” “Minority business enterprise” is defined in [Section 4a-60](#) of the Connecticut General Statutes as a business wherein fifty-one percent or more of the capital stock, or assets belong to a person or persons: “(1) Who are active in daily affairs of the enterprise; (2) who have the power to direct the management and policies of the enterprise; and (3) who are members of a minority, as such term is defined in subsection (a) of [Section 32-9n](#).” “Minority” groups are defined in [Section 32-9n](#) of the Connecticut General Statutes as “(1) Black Americans . . . (2) Hispanic Americans . . . (3) persons who have origins in the Iberian Peninsula . . . (4) Women . . . (5) Asian Pacific Americans and Pacific Islanders; (6) American Indians . . .” An individual with a disability is also a minority business enterprise as provided by [Section 4a-60g](#) of the Connecticut General Statutes. The above definitions apply to the contract compliance requirements by virtue of [Section 46a-68j-21\(11\)](#) of the Contract Compliance Regulations.

The awarding agency will consider the following factors when reviewing the bidder’s qualifications under the contract compliance requirements:

- (a) the bidder’s success in implementing an affirmative action plan;
- (b) the bidder’s success in developing an apprenticeship program complying with [Sections 46a-68-1 to 46a-68-17](#) of the Administrative Regulations of Connecticut State Agencies, inclusive;
- (c) the bidder’s promise to develop and implement a successful affirmative action plan;
- (d) the bidder’s submission of employment statistics contained in the “Employment Information Form”, indicating that the composition of its workforce is at or near parity when compared to the racial and sexual composition of the workforce in the relevant labor market area; and
- (e) the bidder’s promise to set aside a portion of the contract for legitimate minority business enterprises. [See Section 46a-68j-30\(10\)\(E\)](#) of the Contract Compliance Regulations.

INSTRUCTIONS AND OTHER INFORMATION

The following **BIDDER CONTRACT COMPLIANCE MONITORING REPORT** must be completed in full, signed, and submitted with the bid for this contract. The contract awarding agency and the Commission on Human Rights and Opportunities will use the information contained thereon to determine the bidders compliance to [Sections 4a-60](#) and [4a-60a](#) CONN. GEN. STAT., and [Sections 46a-68j-23](#) of the Regulations of Connecticut State Agencies regarding equal employment opportunity, and the bidder’s good faith efforts to include minority business enterprises as subcontractors and suppliers for the work of the contract.

1) **Definition of Small Contractor**

[Section 4a-60g](#) CONN. GEN. STAT. defines a small contractor as a company that has been doing business under the same management and control and has maintained its principal place of business in Connecticut for a one year period immediately prior to its application for certification under this section, had gross revenues not exceeding fifteen million dollars in the most recently completed fiscal year, and at least fifty-one percent of the ownership of which is held by a person or persons who are active in the daily affairs of the company, and have the power to direct the management and policies of the company, except that a nonprofit corporation shall be construed to be a small contractor if such nonprofit corporation meets the requirements of subparagraphs (A) and (B) of subdivision [4a-60g](#) CONN. GEN. STAT.

2) Description of Job Categories (as used in Part IV Bidder Employment Information)

MANAGEMENT: Managers plan, organize, direct, and control the major functions of an organization through subordinates who are at the managerial or supervisory level. They make policy decisions and set objectives for the company or departments. They are not usually directly involved in production or providing services. Examples include top executives, public relations managers, managers of operations specialties (such as financial, human resources, or purchasing managers), and construction and engineering managers.

BUSINESS AND FINANCIAL OPERATIONS: These occupations include managers and professionals who work with the financial aspects of the business. These occupations include accountants and auditors, purchasing agents, management analysts, labor relations specialists, and budget, credit, and financial analysts.

MARKETING AND SALES: Occupations related to the act or process of buying and selling products and/or services such as sales engineer, retail sales workers and sales representatives including wholesale.

LEGAL OCCUPATIONS: In-House Counsel who is charged with providing legal advice and services in regards to legal issues that may arise during the course of standard business practices. This category also includes assistive legal occupations such as paralegals, legal assistants.

COMPUTER SPECIALISTS: Professionals responsible for the computer operations within a company are grouped in this category. Examples of job titles in this category include computer programmers, software engineers, database administrators, computer scientists, systems analysts, and computer support specialists

ARCHITECTURE AND ENGINEERING: Occupations related to architecture, surveying, engineering, and drafting are included in this category. Some of the job titles in this category include electrical and electronic engineers, surveyors, architects, drafters, mechanical engineers, materials engineers, mapping technicians, and civil engineers.

OFFICE AND ADMINISTRATIVE SUPPORT: All clerical-type work is included in this category. These jobs involve the preparing, transcribing, and preserving of written communications and records; collecting accounts; gathering and distributing information; operating office machines and electronic data processing equipment; and distributing mail. Job titles listed in this category include telephone operators, bill and account collectors, customer service representatives, dispatchers, secretaries and administrative assistants, computer operators and clerks (such as payroll, shipping, stock, mail and file).

BUILDING AND GROUNDS CLEANING AND MAINTENANCE: This category includes occupations involving landscaping, housekeeping, and janitorial services. Job titles found in this category include supervisors of landscaping or housekeeping, janitors, maids, grounds maintenance workers, and pest control workers.

CONSTRUCTION AND EXTRACTION: This category includes construction trades and related occupations. Job titles found in this category include boilermakers, masons (all types), carpenters, construction laborers, electricians, plumbers (and related trades), roofers, sheet metal workers, elevator installers, hazardous materials removal workers, paperhangers, and painters. Paving, surfacing, and tamping equipment operators; drywall and ceiling tile installers; and carpet, floor and tile installers and finishers are also included in this category. First line supervisors, foremen, and helpers in these trades are also grouped in this category.

INSTALLATION, MAINTENANCE AND REPAIR: Occupations involving the installation, maintenance, and repair of equipment are included in this group. Examples of job titles found here are heating, ac, and refrigeration mechanics and installers; telecommunication line installers and repairers; heavy vehicle and mobile equipment service technicians and mechanics; small engine mechanics; security and fire alarm systems installers; electric/electronic repair, industrial, utility and transportation equipment; millwrights; riggers; and manufactured building and mobile home installers. First line supervisors, foremen, and helpers for these jobs are also included in the category.

MATERIAL MOVING WORKERS: The job titles included in this group are Crane and tower operators; dredge, excavating, and lading machine operators; hoist and winch operators; industrial truck and tractor operators; cleaners of vehicles and equipment; laborers and freight, stock, and material movers, hand; machine feeders and offbearers; packers and packagers, hand; pumping station operators; refuse and recyclable material collectors; and miscellaneous material moving workers.

PRODUCTION WORKERS: The job titles included in this category are chemical production machine setters, operators and tenders; crushing/grinding workers; cutting workers; inspectors, testers sorters, samplers, weighers; precious stone/metal workers; painting workers; cementing/gluing machine operators and tenders; etchers/engravers; molders, shapers and casters except for metal and plastic; and production workers.

3) Definition of Racial and Ethnic Terms (as used in Part IV Bidder Employment Information)

White (not of Hispanic Origin)-All persons having origins in any of the original peoples of Europe, North Africa, or the Middle East.

Black (not of Hispanic Origin)-All persons having origins in any of the Black racial groups of Africa.

Hispanic- All persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.

Asian or Pacific Islander- All persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands. This area includes China, India, Japan, Korea, the Philippine Islands, and Samoa.

American Indian or Alaskan Native- All persons having origins in any of the original peoples of North America, and who maintain cultural identification through tribal affiliation or community recognition.

**Minimum Rates and
 Classifications for Heavy/Highway**

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

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

Project Number:	DEPA00029000104	Project Town:	EAST HADDAM
Project: SUPERSTRUCTURE REPLACEMENT OF CT DEEP BRIDGE E118 (DOT # 06323)			

The following pages contain:

Prevailing Wage Law Poster	1 page
CT General Statute 31-53b	2 page
CT General Statute 31-55a	1 pages
Prevailing Wage Rates	8 pages
Informational Bulletin – The 10-Hour OSHA Construction Safety and Health	2 pages
Notice to all Mason Contractors reference Section 31-53 of C.G.S. (Prevailing Wages)	1 pages
Contractors Wage Certification Form	1 pages
Informational Bulletin - Occupational Classifications	6 page
Weekly Payroll Certification Form (WWS-CP1)	1 page
Fringe Benefits Explanation (P)	1 page
Weekly Payroll Certification Form (WWS-CP2)	1 page
CT DOL Wage and Workplace Standards Division Footnotes	2 page



Opportunity * Guidance * Support



THIS IS A PUBLIC WORKS PROJECT

Covered by the

PREVAILING WAGE LAW

CT General Statutes Section 31-53

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

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

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

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

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

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

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

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

STATUTE 31-55a

- SPECIAL NOTICE -

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

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

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

- The prevailing wage rates applicable to any contract or subcontract awarded on or after October 1, 2002 are subject to annual adjustments each July 1st for the duration of any project which was originally advertised for bids on or after October 1, 2002.
- Each contractor affected by the above requirement shall pay the annual adjusted prevailing wage rate that is in effect each July 1st, as posted by the Department of Labor.
- It is the **contractor's** responsibility to obtain the annual adjusted prevailing wage rate increases directly from the Department of Labor's Web Site. The annual adjustments will be posted on the Department of Labor Web page: www.ctdol.state.ct.us. For those without internet access, please contact the division listed below.
- The Department of Labor will continue to issue the initial prevailing wage rate schedule to the Contracting Agency for the project. All subsequent annual adjustments will be posted on our Web Site for contractor access.

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

Minimum Rates and Classifications for

ID# 20-9851

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

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

Project #: DEPA00029000104

Project Town: East Haddam

State#: CONNECTICUT

FAP#: DEPA000290001

Project: SUPERSTRUCTURE REPLACEMENT OF CT DEEP BRIDGE E118 (DOT #06323)

CLASSIFICATION	Hourly	Benefits
1) Boilermaker	33.79	34% + 8.96
1a) Bricklayer, Cement Masons, Cement Finishers, Plasterers, Stone Masons	35.72	33.16
2) Carpenters, Piledrivermen	33.53	25.66
2a) Diver Tenders	33.53	25.66
3) Divers	41.99	25.66
03a) Millwrights	34.94	26.19
4) Painters: (Bridge Construction) Brush, Roller, Blasting (Sand, Water, etc.), Spray	51.0	21.80
4a) Painters: Brush and Roller	34.62	21.80
4b) Painters: Spray Only	36.62	21.80
4c) Painters: Steel Only	35.62	21.80
4d) Painters: Blast and Spray	37.62	21.80
4e) Painters: Tanks, Tower and Swing	36.62	21.80

Project: DEEP Bridge E-118

5) Electrician (Trade License required: E-1,2 L-5,6 C-5,6 T-1,2 L-1,2 V-1,2,7,8,9)	38.5	28.61+3% of gross wage
6) Ironworkers: Ornamental, Reinforcing, Structural, and Precast Concrete Erection	36.67	35.77 + a
7) Plumbers (Trade License required: (P-1,2,6,7,8,9 J-1,2,3,4 SP-1,2) and Pipefitters (Including HVAC Work) (Trade License required: S-1,2,3,4,5,6,7,8 B-1,2,3,4 D-1,2,3,4 G-1, G-2, G-8, G-9)	43.62	32.06
-----LABORERS-----		
8) Group 1: Laborer (Unskilled), Common or General, acetylene burner, concrete specialist	30.75	20.84
9) Group 2: Chain saw operators, fence and guard rail erectors, pneumatic tool operators, powdermen	31.0	20.84
10) Group 3: Pipelayers	31.25	20.84
11) Group 4: Jackhammer/Pavement breaker (handheld); mason tenders (cement/concrete), catch basin builders, asphalt rakers, air track operators, block paver, curb setter and forklift operators	31.25	20.84
12) Group 5: Toxic waste removal (non-mechanical systems)	32.75	20.84
13) Group 6: Blasters	32.5	20.84
Group 7: Asbestos/lead removal, non-mechanical systems (does not include leaded joint pipe)	31.75	20.84
Group 8: Traffic control signalmen	18.0	20.84
Group 9: Hydraulic Drills	29.3	18.90
-----LABORERS (TUNNEL CONSTRUCTION, FREE AIR). Shield Drive and Liner Plate Tunnels in Free Air.-----		
13a) Miners, Motormen, Mucking Machine Operators, Nozzle Men, Grout Men, Shaft & Tunnel Steel & Rodmen, Shield & Erector, Arm Operator, Cable Tenders	32.98	20.84 + a
13b) Brakemen, Trackmen	32.01	20.84 + a
-----CLEANING, CONCRETE AND CAULKING TUNNEL-----		

As of: February 10, 2020

14) Concrete Workers, Form Movers, and Strippers	32.01	20.84 + a
15) Form Erectors	32.34	20.84 + a
----ROCK SHAFT LINING, CONCRETE, LINING OF SAME AND TUNNEL IN FREE AIR:----		
16) Brakemen, Trackmen, Tunnel Laborers, Shaft Laborers	32.01	20.84 + a
17) Laborers Topside, Cage Tenders, Bellman	31.9	20.84 + a
18) Miners	32.98	20.84 + a
----TUNNELS, CAISSON AND CYLINDER WORK IN COMPRESSED AIR: ----		
18a) Blaster	39.47	20.84 + a
19) Brakemen, Trackmen, Groutman, Laborers, Outside Lock Tender, Gauge Tenders	39.27	20.84 + a
20) Change House Attendants, Powder Watchmen, Top on Iron Bolts	37.29	20.84 + a
21) Mucking Machine Operator	40.06	20.84 + a
----TRUCK DRIVERS----(*see note below)		
Two axle trucks	29.51	24.52 + a
Three axle trucks; two axle ready mix	29.62	24.52 + a
Three axle ready mix	29.67	24.52 + a
Four axle trucks, heavy duty trailer (up to 40 tons)	29.72	24.52 + a
Four axle ready-mix	29.77	24.52 + a
Heavy duty trailer (40 tons and over)	29.98	24.52 + a

Specialized earth moving equipment other than conventional type on-the road trucks and semi-trailer (including Euclids)	29.77	24.52 + a
----POWER EQUIPMENT OPERATORS----		
Group 1: Crane handling or erecting structural steel or stone, hoisting engineer (2 drums or over), front end loader (7 cubic yards or over), Work Boat 26 ft. & Over, Tunnel Boring Machines. (Trade License Required)	40.97	24.80 + a
Group 2: Cranes (100 ton rate capacity and over); Excavator over 2 cubic yards; Piledriver (\$3.00 premium when operator controls hammer); Bauer Drill/Caisson. (Trade License Required)	40.64	24.80 + a
Group 3: Excavator/Backhoe under 2 cubic yards; Cranes (under 100 ton rated capacity), Gradall; Master Mechanic; Hoisting Engineer (all types of equipment where a drum and cable are used to hoist or drag material regardless of motive power of operation), Rubber Tire Excavator (Drott-1085 or similar); Grader Operator; Bulldozer Fine Grade (slopes, shaping, laser or GPS, etc.). (Trade License Required)	39.88	24.80 + a
Group 4: Trenching Machines; Lighter Derrick; Concrete Finishing Machine; CMI Machine or Similar; Koehring Loader (Skooper)	39.48	24.80 + a
Group 5: Specialty Railroad Equipment; Asphalt Paver; Asphalt Spreader; Asphalt Reclaiming Machine; Line Grinder; Concrete Pumps; Drills with Self Contained Power Units; Boring Machine; Post Hole Digger; Auger; Pounder; Well Digger; Milling Machine (over 24	38.87	24.80 + a
Group 5 continued: Side Boom; Combination Hoe and Loader; Directional Driller.	38.87	24.80 + a
Group 6: Front End Loader (3 up to 7 cubic yards); Bulldozer (rough grade dozer).	38.55	24.80 + a
Group 7: Asphalt Roller; Concrete Saws and Cutters (ride on types); Vermeer Concrete Cutter; Stump Grinder; Scraper; Snooper; Skidder; Milling Machine (24	38.2	24.80 + a
Group 8: Mechanic, Grease Truck Operator, Hydroblaster, Barrier Mover, Power Stone Spreader; Welder; Work Boat under 26 ft.; Transfer Machine.	37.79	24.80 + a
Group 9: Front End Loader (under 3 cubic yards), Skid Steer Loader regardless of attachments (Bobcat or Similar); Fork Lift, Power Chipper; Landscape Equipment (including hydroseeder).	37.34	24.80 + a
Group 10: Vibratory Hammer, Ice Machine, Diesel and Air Hammer, etc.	35.24	24.80 + a
Group 11: Conveyor, Earth Roller; Power Pavement Breaker (whiphammer), Robot Demolition Equipment.	35.24	24.80 + a

Project: DEEP Bridge E-118

Group 12: Wellpoint Operator.	35.18	24.80 + a
Group 13: Compressor Battery Operator.	34.58	24.80 + a
Group 14: Elevator Operator; Tow Motor Operator (Solid Tire No Rough Terrain).	33.41	24.80 + a
Group 15: Generator Operator; Compressor Operator; Pump Operator; Welding Machine Operator; Heater Operator.	32.99	24.80 + a
Group 16: Maintenance Engineer/Oiler	32.32	24.80 + a
Group 17: Portable asphalt plant operator; portable crusher plant operator; portable concrete plant operator.	36.76	24.80 + a
Group 18: Power Safety Boat; Vacuum Truck; Zim Mixer; Sweeper; (minimum for any job requiring CDL license).	34.26	24.80 + a

**NOTE: SEE BELOW

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

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20) Lineman, Cable Splicer, Technician	48.19	6.5% + 22.00
21) Heavy Equipment Operator	42.26	6.5% + 19.88
22) Equipment Operator, Tractor Trailer Driver, Material Men	40.96	6.5% + 19.21
23) Driver Groundmen	26.5	6.5% + 9.00
23a) Truck Driver	40.96	6.5% + 17.76

----LINE CONSTRUCTION----

24) Driver Groundmen	30.92	6.5% + 9.70
25) Groundmen	22.67	6.5% + 6.20
26) Heavy Equipment Operators	37.1	6.5% + 10.70

As of: February 10, 2020

Project: DEEP Bridge E-118

27) Linemen, Cable Splicers, Dynamite Men	41.22	6.5% + 12.20
<hr/>		
28) Material Men, Tractor Trailer Drivers, Equipment Operators	35.04	6.5% + 10.45
<hr/>		

As of: February 10, 2020

Project: DEEP Bridge E-118

Welders: Rate for craft to which welding is incidental.

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

ALL Cranes: When crane operator is operating equipment that requires a fully licensed crane operator to operate he receives an extra \$4.00 premium in addition to the hourly wage rate and benefit contributions:

- 1) Crane handling or erecting structural steel or stone; hoisting engineer (2 drums or over)**
- 2) Cranes (100 ton rate capacity and over) Bauer Drill/Caisson**

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

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

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

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

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

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

Apprentices duly registered under the Commissioner of Labor's regulations on "Work Training Standards for Apprenticeship and Training Programs" Section 31-51-d-1 to 12, are allowed to be paid the appropriate percentage of the prevailing journeymen hourly base and the full fringe benefit rate, providing the work

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

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

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

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

The annual adjustments will be posted on the Department of Labor's Web page: www.ct.gov/dol. For those without internet access, please contact the division listed below.

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

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

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

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

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

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

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

As of: February 10, 2020

Project: DEEP Bridge E-118

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

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

As of: February 10, 2020

Informational Bulletin

THE 10-HOUR OSHA CONSTRUCTION SAFETY AND HEALTH COURSE

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

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

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

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

November 29, 2006

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

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

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

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

Forklift Operator:

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

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

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

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

CONNECTICUT DEPARTMENT OF LABOR
WAGE AND WORKPLACE STANDARDS DIVISION

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

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

do hereby certify that the _____
Company Name

Street

City

and all of its subcontractors will pay all workers on the

Project Name and Number

Street and City

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

Signed

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

Notary Public

Return to:

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

Rate Schedule Issued (Date): _____

Information Bulletin ***Occupational Classifications***

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

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

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

- **ASBESTOS WORKERS**

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

- **ASBESTOS INSULATOR**

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

- **BOILERMAKERS**

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

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

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

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

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

- **LABORER, CLEANING**

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

- **DELIVERY PERSONNEL**

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

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

- **ELECTRICIANS**

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

- **ELEVATOR CONSTRUCTORS**

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

- **FORK LIFT OPERATOR**

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

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

- **GLAZIERS**

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

- **IRONWORKERS**

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

- **INSULATOR**

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

- **LABORERS**

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

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

- **PAINTERS**

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

- **LEAD PAINT REMOVAL**

- Painter's Rate

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

- Laborer's Rate

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

- **PLUMBERS AND PIPEFITTERS**

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

- **POWER EQUIPMENT OPERATORS**

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

- **ROOFERS**

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

- **SHEETMETAL WORKERS**

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

- **SPRINKLER FITTERS**

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

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

- **TILE MARBLE AND TERRAZZO FINISHERS**

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

- **TRUCK DRIVERS**

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

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

For example:

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

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

[New] In accordance with Section 31-53b (a) of the C.G.S. each contractor shall provide a copy of the OSHA 10 Hour Construction Safety and Health Card for each employee, to be attached to the first certified payroll on the project.

PAYROLL CERTIFICATION FOR PUBLIC WORKS PROJECTS																			
In accordance with Connecticut General Statutes, 31-53 Certified Payrolls with a statement of compliance shall be submitted monthly to the contracting agency.						Connecticut Department of Labor Wage and Workplace Standards Division 200 Folly Brook Blvd. Wethersfield, CT 06109													
WEEKLY PAYROLL																			
CONTRACTOR NAME AND ADDRESS:			SUBCONTRACTOR NAME & ADDRESS						WORKER'S COMPENSATION INSURANCE CARRIER										
PAYROLL NUMBER			PROJECT NAME & ADDRESS						POLICY #										
PERSON/WORKER ADDRESS and SECTION			Week-Ending Date			APPR RATE %			MALE/FEMALE AND RACE*										
WORK CLASSIFICATION			DAY AND DATE			HOURS WORKED EACH DAY			TOTAL DEDUCTIONS										
Trade License Type & Number - OSHA 10 Certification Number			S	M	T	W	TH	F	S	Total ST Hours	TYPE OF FRINGE BENEFITS Per Hour 1 through 6 (see back)		GROSS PAY FOR ALL WORK PERFORMED THIS WEEK		GROSS PAY FOR THIS PREVAILING RATE JOB		CHECK # AND NET PAY		
10 Certification Number			HOURS WORKED EACH DAY						Total O/T Hours		FICA		FEDERAL STATE WITH-HOLDING		LIST OTHER				
												1. \$							
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												6. \$							

12/9/2013 *IF REQUIRED

*SEE REVERSE SIDE

PAGE NUMBER ____ OF ____

OSHA 10 ~ ATTACH CARD TO 1ST CERTIFIED PAYROLL

***FRINGE BENEFITS EXPLANATION (P):**

Bona fide benefits paid to approved plans, funds or programs, except those required by Federal or State Law (unemployment tax, worker's compensation, income taxes, etc.).

Please specify the type of benefits provided:

- 1) Medical or hospital care _____
- 2) Pension or retirement _____
- 3) Life Insurance _____
- 4) Disability _____
- 5) Vacation, holiday _____
- 6) Other (please specify) _____

CERTIFIED STATEMENT OF COMPLIANCE

For the week ending date of _____,

I, _____ of _____, (hereafter known as

Employer) in my capacity as _____ (title) do hereby certify and state:

Section A:

1. All persons employed on said project have been paid the full weekly wages earned by them during the week in accordance with Connecticut General Statutes, section 31-53, as amended. Further, I hereby certify and state the following:

- a) The records submitted are true and accurate;
- b) The rate of wages paid to each mechanic, laborer or workman and the amount of payment or contributions paid or payable on behalf of each such person to any employee welfare fund, as defined in Connecticut General Statutes, section 31-53 (h), are not less than the prevailing rate of wages and the amount of payment or contributions paid or payable on behalf of each such person to any employee welfare fund, as determined by the Labor Commissioner pursuant to subsection Connecticut General Statutes, section 31-53 (d), and said wages and benefits are not less than those which may also be required by contract;
- c) The Employer has complied with all of the provisions in Connecticut General Statutes, section 31-53 (and Section 31-54 if applicable for state highway construction);
- d) Each such person is covered by a worker's compensation insurance policy for the duration of his employment which proof of coverage has been provided to the contracting agency;
- e) The Employer does not receive kickbacks, which means any money, fee, commission, credit, gift, gratuity, thing of value, or compensation of any kind which is provided directly or indirectly, to any prime contractor, prime contractor employee, subcontractor, or subcontractor employee for the purpose of improperly obtaining or rewarding favorable treatment in connection with a prime contract or in connection with a prime contractor in connection with a subcontractor relating to a prime contractor; and
- f) The Employer is aware that filing a certified payroll which he knows to be false is a class D felony for which the employer may be fined up to five thousand dollars, imprisoned for up to five years or both.

2. OSHA~The employer shall affix a copy of the construction safety course, program or training completion document to the certified payroll required to be submitted to the contracting agency for this project on which such persons name first appears.

 (Signature) (Title) Submitted on (Date)

Weekly Payroll Certification For
Public Works Projects (Continued)

PAYROLL CERTIFICATION FOR PUBLIC WORKS PROJECTS

Week-Ending Date:
Contractor or Subcontractor Business Name:

WEEKLY PAYROLL

PERSON/WORKER, ADDRESS and SECTION	APPR RATE %	MALE/ FEMALE AND RACE*	WORK CLASSIFICATION Trade License Type & Number - OSHA 10 Certification Number	DAY AND DATE							Total ST Hours	Total Fringe Benefit Plan CASH	TYPE OF FRINGE BENEFITS Per Hour 1 through 6 (see back)	GROSS PAY FOR ALL WORK PERFORMED THIS WEEK	TOTAL DEDUCTIONS			GROSS PAY FOR THIS PREVAILING RATE JOB	CHECK # AND NET PAY	
				S	M	T	W	TH	F	S					FICA WITH- HOLDING	STATE WITH- HOLDING	LIST OTHER			
				HOURS WORKED EACH DAY																Total OT Hours
				OT Hours	OT Hours	OT Hours	OT Hours	OT Hours	OT Hours	OT Hours										
											1. \$									
											\$	2. \$								
											Base Rate	3. \$								
											\$	4. \$								
											Cash Fringe	5. \$								
											CASH	6. \$								
											\$	1. \$								
											Base Rate	2. \$								
											\$	3. \$								
											Base Rate	4. \$								
											\$	5. \$								
											Cash Fringe	6. \$								
											CASH	1. \$								
											\$	2. \$								
											Base Rate	3. \$								
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											Cash Fringe	5. \$								
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											Base Rate	2. \$								
											\$	3. \$								
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											Cash Fringe	6. \$								

*IF REQUIRED

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

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

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

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

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

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

Elevator Constructors: Mechanics

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

Glaziers

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

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

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

Ironworkers

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

Laborers (Tunnel Construction)

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

Roofers

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

Sprinkler Fitters

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

Truck Drivers

(Heavy and Highway Construction & Building Construction)

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

Bid / Proposal Affidavit

I, Type/Print Name, Title and Name of Firm or Corporation, hereby swear that during the two-year period preceding the submission of this bid or proposal that neither myself nor any principals or key personnel of the submitting firm or corporation who participated directly, extensively and substantially in the preparation of this bid or proposal nor any agent of the above gave a gift, as defined in Conn. Gen. Stat. §1-79(e), including a life event gift as defined in Conn. Gen. Stat. §1-79(e)(12), to (1) any public official or state employee of the state agency or quasi-public agency soliciting the bids or proposals who participated directly, extensively, and substantially in the preparation of the bid solicitation or preparation of request for proposal or (2) to any public official or state employee who has supervisory or appointing authority over the state agency or quasi-public agency soliciting the bid or proposal, except the gifts listed below:

Please check here if no such gifts were given:

<u>Name of Benefactor</u>	<u>Name of recipient</u>	<u>Gift Description</u>	<u>Value</u>	<u>Date of Gift</u>
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Further, neither I nor any principals or key personnel of the submitting firm or corporation who participated directly, extensively and substantially in the preparation of this bid or proposal know of any action to circumvent this gift/campaign contribution affidavit.

Further, during the two-year period preceding the submission of this bid or proposal, neither I nor any principals or key personnel of the submitting firm or corporation who participated directly, extensively and substantially in the preparation of this bid or proposal nor any agent of the above gave a contribution to a candidate for statewide public office or the General Assembly, as defined in Conn. Gen. Stat. §9-333b, except as listed below:

Please check here if no such contributions were given:

<u>Contributor</u>	<u>Recipient</u>	<u>Amount/Value</u>	<u>Date of Contribution</u>	<u>Contribution Description</u>
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Sworn as true to the best of my knowledge and belief, subject to the penalties of false statement.

_____	_____
Signature	Date

Sworn and subscribed before me on this ____ day of _____, 20 ____

Commissioner of the Superior Court
Notary Public

OPM Ethics Form 1

Rev. 10-01-11



STATE OF CONNECTICUT GIFT AND CAMPAIGN CONTRIBUTION CERTIFICATION

Written or electronic certification to accompany a State contract with a value of \$50,000 or more in a calendar or fiscal year, pursuant to C.G.S. §§ 4-250 and 4-252(c); Governor M. Jodi Rell's Executive Orders No. 1, Para. 8, and No. 7C, Para. 10; and C.G.S. §9-612(g)(2)

INSTRUCTIONS:

Complete all sections of the form. Attach additional pages, if necessary, to provide full disclosure about any lawful campaign contributions made to campaigns of candidates for statewide public office or the General Assembly, as described herein. Sign and date the form, under oath, in the presence of a Commissioner of the Superior Court or Notary Public. Submit the completed form to the awarding State agency at the time of initial contract execution and if there is a change in the information contained in the most recently filed certification, such person shall submit an updated certification either (i) not later than thirty (30) days after the effective date of such change or (ii) upon the submittal of any new bid or proposal for a contract, whichever is earlier. Such person shall also submit an accurate, updated certification not later than fourteen days after the twelve-month anniversary of the most recently filed certification or updated certification.

- CHECK ONE:** Initial Certification 12 Month Anniversary Update (Multi-year contracts only.)
 Updated Certification because of change of information contained in the most recently filed certification or twelve-month anniversary update.

GIFT CERTIFICATION:

As used in this certification, the following terms have the meaning set forth below:

- 1) "Contract" means that contract between the State of Connecticut (and/or one or more of its agencies or instrumentalities) and the Contractor, attached hereto, or as otherwise described by the awarding State agency below;
- 2) If this is an Initial Certification, "Execution Date" means the date the Contract is fully executed by, and becomes effective between, the parties; if this is a twelve-month anniversary update, "Execution Date" means the date this certification is signed by the Contractor;
- 3) "Contractor" means the person, firm or corporation named as the contractor below;
- 4) "Applicable Public Official or State Employee" means any public official or state employee described in C.G.S. §4-252(c)(1)(i) or (ii);
- 5) "Gift" has the same meaning given that term in C.G.S. § 4-250(1);
- 6) "Principals or Key Personnel" means and refers to those principals and key personnel of the Contractor, and its or their agents, as described in C.G.S. §§ 4-250(5) and 4-252(c)(1)(B) and (C).

I, the undersigned, am the official authorized to execute the Contract on behalf of the Contractor. I hereby certify that, no gifts were made by (A) such person, firm, corporation, (B) any principals and key personnel of the person firm or corporation who participate substantially in preparing bids, proposals or negotiating state contracts or (C) any agent of such, firm, corporation, or principals or key personnel who participates substantially in preparing bids, proposals or negotiating state contracts, to (i) any public official or state employee of the state agency or quasi-public agency soliciting bids or proposals for state contracts who participates substantially in the preparation of bid solicitations or request for proposals for state contracts or the negotiation or award of state contracts or (ii) any public official or state employee of any other state agency, who has supervisory or appointing authority over such state agency or quasi-public agency.

I further certify that no Principals or Key Personnel know of any action by the Contractor to circumvent (or which would result in the circumvention of) the above certification regarding **Gifts** by providing for any other principals, key personnel, officials, or employees of the Contractor, or its or their agents, to make a **Gift** to any Applicable Public Official or State Employee. I further certify that the Contractor made the bid or proposal for the Contract without fraud or collusion with any person.

OPM Ethics Form 1

Rev. 10-01-11

CAMPAIGN CONTRIBUTION CERTIFICATION:

I further certify that, on or after December 31, 2006, neither the Contractor nor any of its principals, as defined in C.G.S. § 9-612(g)(1), has made any **campaign contributions** to, or solicited any contributions on behalf of, any exploratory committee, candidate committee, political committee, or party committee established by, or supporting or authorized to support, any candidate for statewide public office, in violation of C.G.S. § 9-612(g)(2)(A). I further certify that **all lawful campaign contributions** that have been made on or after December 31, 2006 by the Contractor or any of its principals, as defined in C.G.S. § 9-612(g)(1), to, or solicited on behalf of, any exploratory committee, candidate committee, political committee, or party committee established by, or supporting or authorized to support any candidates for statewide public office or the General Assembly, are listed below:

Lawful Campaign Contributions to Candidates for Statewide Public Office:

<u>Contribution Date</u>	<u>Name of Contributor</u>	<u>Recipient</u>	<u>Value</u>	<u>Description</u>

Lawful Campaign Contributions to Candidates for the General Assembly:

<u>Contribution Date</u>	<u>Name of Contributor</u>	<u>Recipient</u>	<u>Value</u>	<u>Description</u>

Sworn as true to the best of my knowledge and belief, subject to the penalties of false statement.

Printed Contractor Name

Printed Name of Authorized Official

Signature of Authorized Official

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

Commissioner of the Superior Court (or Notary Public)





STATE OF CONNECTICUT
CONSULTING AGREEMENT AFFIDAVIT

Rev. 10-01-11

Affidavit to accompany a bid or proposal for the purchase of goods and services with a value of \$50,000 or more in a calendar or fiscal year, pursuant to Connecticut General Statutes §§ 4a-81(a) and 4a-81(b). For sole source or no bid contracts the form is submitted at time of contract execution.

INSTRUCTIONS:

If the bidder or vendor has entered into a consulting agreement, as defined by Connecticut General Statutes § 4a-81(b)(1): Complete all sections of the form. If the bidder or contractor has entered into more than one such consulting agreement, use a separate form for each agreement. Sign and date the form in the presence of a Commissioner of the Superior Court or Notary Public. **If the bidder or contractor has not entered into a consulting agreement, as defined by Connecticut General Statutes § 4a-81(b)(1):** Complete only the shaded section of the form. Sign and date the form in the presence of a Commissioner of the Superior Court or Notary Public.

Submit completed form to the awarding State agency with bid or proposal. For a sole source award, submit completed form to the awarding State agency at the time of contract execution.

This affidavit must be amended if there is any change in the information contained in the most recently filed affidavit not later than (i) thirty days after the effective date of any such change or (ii) upon the submittal of any new bid or proposal, whichever is earlier.

AFFIDAVIT: [Number of Affidavits Sworn and Subscribed On This Day: _____]

I, the undersigned, hereby swear that I am a principal or key personnel of the bidder or contractor awarded a contract, as described in Connecticut General Statutes § 4a-81(b), or that I am the individual awarded such a contract who is authorized to execute such contract. I further swear that I have not entered into any consulting agreement in connection with such contract, **except for the agreement listed below:**

_____		_____
Consultant's Name and Title		Name of Firm (if applicable)
_____	_____	_____
Start Date	End Date	Cost
Description of Services Provided: _____		

Is the consultant a former State employee or former public official? YES NO

If YES: _____
Name of Former State Agency Termination Date of Employment

Sworn as true to the best of my knowledge and belief, subject to the penalties of false statement.

_____	_____	_____
Printed Name of Bidder or Contractor	Signature of Principal or Key Personnel	Date
_____	_____	_____
Printed Name (of above)	Awarding State Agency	

Sworn and subscribed before me on this _____ day of _____, 20____.

Commissioner of the Superior Court
or Notary Public



STATE OF CONNECTICUT
AFFIRMATION OF RECEIPT OF STATE ETHICS LAWS SUMMARY

Rev. 10-01-11

Written or electronic affirmation to accompany a large State construction or procurement contract, having a cost of more than \$500,000, pursuant to Connecticut General Statutes §§ 1-101mm and 1-101qq

INSTRUCTIONS:

Complete all sections of the form. Submit completed form to the awarding State agency or contractor, as directed below.

CHECK ONE:

- I am a person seeking a large State construction or procurement contract. I am submitting this affirmation to the awarding State agency with my bid or proposal. [Check this box if the contract will be awarded through a competitive process.]
- I am a contractor who has been awarded a large State construction or procurement contract. I am submitting this affirmation to the awarding State agency at the time of contract execution. [Check this box if the contract was a sole source award.]
- I am a subcontractor or consultant of a contractor who has been awarded a large State construction or procurement contract. I am submitting this affirmation to the contractor.
- I am a contractor who has already filed an affirmation, but I am updating such affirmation either (i) no later than thirty (30) days after the effective date of any such change or (ii) upon the submittal of any new bid or proposal, whichever is earlier.

IMPORTANT NOTE:

Within fifteen (15) days after the request of such agency, institution or quasi-public agency for such affirmation contractors shall submit the affirmations of their subcontractors and consultants to the awarding State agency. Failure to submit such affirmations in a timely manner shall be cause for termination of the large State construction or procurement contract.

AFFIRMATION:

I, the undersigned person, contractor, subcontractor, consultant, or the duly authorized representative thereof, affirm (1) receipt of the summary of State ethics laws* developed by the Office of State Ethics pursuant to Connecticut General Statutes § 1-81b and (2) that key employees of such person, contractor, subcontractor, or consultant have read and understand the summary and agree to comply with its provisions.

* The summary of State ethics laws is available on the State of Connecticut's Office of State Ethics website.

_____ Signature	_____ Date
_____ Printed Name	_____ Title
_____ Firm or Corporation (if applicable)	
_____ Street Address	_____ City
	State Zip
	_____ Awarding State Agency



STATE OF CONNECTICUT

Written or electronic PDF copy of the written certification to accompany a large state contract pursuant to P.A. No. 13-162 (Prohibiting State Contracts With Entities Making Certain Investments In Iran)

Respondent Name: _____

INSTRUCTIONS:

CHECK ONE: Initial Certification.
 Amendment or renewal.

A. Who must complete and submit this form. Effective October 1, 2013, this form must be submitted for any large state contract, as defined in section 4-250 of the Connecticut General Statutes. This form must always be submitted with the bid or proposal, or if there was no bid process, with the resulting contract, regardless of where the principal place of business is located.

Pursuant to P.A. No. 13-162, upon submission of a bid or prior to executing a large state contract, **the certification portion of this form must be completed** by any corporation, general partnership, limited partnership, limited liability partnership, joint venture, nonprofit organization or other business organization **whose principal place of business is located outside of the United States**. United States subsidiaries of foreign corporations are exempt. For purposes of this form, a "foreign corporation" is one that is organized and incorporated outside the United States of America.

Check applicable box:

- Respondent's principal place of business is within the United States or Respondent is a United States subsidiary of a foreign corporation. Respondents who check this box **are not required to complete the certification portion of this form**, but must submit this form with its Invitation to Bid ("ITB"), Request for Proposal ("RFP") or contract package if there was no bid process.
- Respondent's principal place of business is outside the United States and it is not a United States subsidiary of a foreign corporation. **CERTIFICATION required.** Please complete the certification portion of this form and submit it with the ITB or RFP response or contract package if there was no bid process.

B. Additional definitions.

- 1) "Large state contract" has the same meaning as defined in section 4-250 of the Connecticut General Statutes;
- 2) "Respondent" means the person whose name is set forth at the beginning of this form; and
- 3) "State agency" and "quasi-public agency" have the same meanings as provided in section 1-79 of the Connecticut General Statutes.

C. Certification requirements.

No state agency or quasi-public agency shall enter into any large state contract, or amend or renew any such contract with any Respondent whose principal place of business is located outside the United States and is not a United States subsidiary of a foreign corporation unless the Respondent has submitted this certification.

Complete all sections of this certification and sign and date it, under oath, in the presence of a Commissioner of the Superior Court, a Notary Public or a person authorized to take an oath in another state.

CERTIFICATION:

I, the undersigned, am the official authorized to execute contracts on behalf of the Respondent. I certify that:

- Respondent has made no direct investments of twenty million dollars or more in the energy sector of Iran on or after October 1, 2013, as described in Section 202 of the Comprehensive Iran Sanctions, Accountability and Divestment Act of 2010.
- Respondent has either made direct investments of twenty million dollars or more in the energy sector of Iran on or after October 1, 2013, as described in Section 202 of the Comprehensive Iran Sanctions, Accountability and Divestment Act of 2010, or Respondent made such an investment prior to October 1, 2013 and has now increased or renewed such an investment on or after said date, or both.

Sworn as true to the best of my knowledge and belief, subject to the penalties of false statement.

Printed Respondent Name

Printed Name of Authorized Official

Signature of Authorized Official

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

Commissioner of the Superior Court (or Notary Public)

My Commission Expires

Procedures Regarding Taxation For Nonresident General / Prime Contractor and Subcontractors

DEEP | Engineering & Support Services | Engineering Unit

According to [Connecticut General Statutes § 12-430\(7\)](#), there are two types of Nonresident Contractors and Subcontractors (*Verified* or *Unverified*) who are required to furnish security for Connecticut taxes arising from jobs performed in Connecticut.

Detailed information can be found by visiting the Connecticut Department of Revenue Services (DRS) website at www.ct.gov/drs:

- Under the “**For Businesses**” title, click on “**Withholding Tax**”;
- Click on “**Registering**”;
- Click on “**5. What tax types do I need to register for with DRS**”;
- Read the information for “**Out-of-State**” contractors.
- Click on “[SN 2012\(2\)](#)” for the “Procedure Governing Nonresident Contractors”.

Forms can be downloaded from the DRS website (www.ct.gov/drs) as follows:

- Click on “**Forms**” at the top of the page;
- Under “**Current Year Forms**”:
 - Click on “**Miscellaneous Tax Forms**”;
 - Click on “**Bond Forms**”
- Download the appropriate form.

For questions regarding the nonresident contractor bond law, call **DRS** at **860-541-7538**.

1.0 Verified Nonresident Contractors and Subcontractors

Verified Nonresident Contractors are treated just like Resident Contractors. A Verified Nonresident General or Prime Contractor is not required to file a surety bond with DRS. A Verified Nonresident Subcontractor is not required for the General or Prime Contractor to hold back a portion of the amount owed the Subcontractor under the contract.

1.1 Verification Procedure for General/Prime Contractors and Subcontractors:

- | | |
|-------|---|
| 1.1.1 | Register with DRS via REG-1 for all appropriate taxes. |
| 1.1.2 | Submit Form AU-960 “Nonresident Contractor Request for Verified Contractor Status” to DRS. If you have a 3 year filing history with DRS and no delinquencies, then just complete Part I & Part I, otherwise go to Part III. |
| 1.1.3 | Submit Form AU-961 “Verification Bond” to DRS. |
| 1.1.4 | If Verified by DRS, submit “Notice of Verified Status” (Verification Letter issued by DRS) to the Connecticut Department of Administrative Services / Construction Services (DAS/CS) Office of Legal Affairs, Policy, and Procurement as specified in Section 00 41 00 Bid Proposal Form. |

**2.0 Unverified Nonresident Contractors and Subcontractors
(for Contracts Greater Than \$250,000):**

The requirements for Unverified Nonresident Contractors and Unverified Nonresident Subcontractors (for Contracts greater than \$250,000) are different for General/Prime Contractors and their Subcontractors:

2.1 Unverified Nonresident General or Prime Contractors:

- 2.1.1** Submit **Form AU-964 “Surety Bond and Release” to DRS**. The Unverified Nonresident General/Prime Contractor is required to file a good and valid surety bond with DRS using Form AU-964 “Surety Bond and Release” for 5% of the contract price to secure payment of required taxes by both the General/Prime Contractor and its Subcontractors.
- 2.1.2** The General/Prime Contractor must provide proof to DAS/CS that they have posted a good and valid surety bond with DRS by providing a copy of **Form AU-965 “Acceptance of Surety Bond”** that verifies acceptance of the bond by DRS*.

2.2 Unverified Nonresident Subcontractors:

- 2.2.1** The Resident or Verified or Unverified Nonresident General/Prime Contractor is required to hold back 5% of its payments to the Unverified Nonresident Subcontractor. The General/Prime Contractor must keep the hold-backs in a special fund in trust for the state.
- 2.2.2** The Unverified Nonresident Subcontractor can request that the money be released from the General/Prime Contractor by submitting **Form AU-967 “Request for Certificate of Compliance” to DRS**. It must be signed by the General/Prime Contractor and the Nonresident Subcontractor and submitted **to DRS within 90 days of the completion date**.
- 2.2.3** If **Form AU-968 “Certificate of Compliance”** is issued by DRS, DRS will instruct the General/Prime Contractor holding back the 5% to release the withheld amount to the Nonresident Subcontractor. If the “Certificate of Compliance” is denied or not requested within **90 days of the completion date of the contract**, the General/Prime Contractor holding back the 5% will remit the withheld amount on their own Sales & Use tax returns.
- 2.2.4** The 5% holdback does not take the place of any tax returns due from the Unverified Nonresident Contractor.
- 2.2.5** The General/Prime Contractor must give the Unverified Nonresident Subcontractor written notice of the hold-back requirements by the time the Subcontractor begins work under the contract.

*Document(s) must be submitted to the Commissioner, Department of Energy & Environmental Protection as specified in Section 00 41 00 “Bid Proposal Form”.

End of Section

**00 92 30 Procedures Regarding Taxation
For Nonresident General/Prime Contractor & Subcontractors**

PART 1 – GENERAL

1.1 DEFINITIONS

A. Contractor:

Whenever the term "**Contractor**" is used in these Division 01 General Requirements and the Contract Documents, it may be understood to mean either the **Design-Bid-Build (D-B-B) "General Contractor"** or the **Construction Manager at Risk ("CMR")** as applicable to the specific Project.

B. Subcontractor:

Whenever the term "**Subcontractor**" is used, it may be understood to mean either a **Subcontractor** or a **Supplier**, as applicable to the specific Project.

C. Contract:

Whenever the term "**Contract**" is used in these Division 01 General Requirements and the Contract Documents, it may be understood to mean either the **D-B-B General Contractor's Contract Sum** as stated in their Contract or the **CMR's Contract Sum** as stated in their CMR Agreement, as applicable to the specific Project.

1.2 RELATED DOCUMENTS

- A. The Contract Documents are defined in the D-B-B and CMR Division 00 General Conditions, as applicable to the specific Project.
- B. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.3 WORK COVERED BY CONTRACT DOCUMENTS

A. Project Delivery Method:

- 1. Design-Bid-Build (DBB);
- 2. Construction Manager at Risk (CMR)

B. Project Number: DEPA00029000104.

C. Project Title: Superstructure Replacement of CT DEEP Bridge E118 (DOT #06323).

D. Project Location: Devil's Hopyard State Park, East Haddam, Connecticut.

E. The Project Description:

- 1. The project involves replacing the Existing Superstructure of the Devil's Hopyard Wooden Covered Bridge, and Minor Site Improvements.
- 2. Specific work includes the demolition of the existing superstructure, restoration of existing W8 steel beams and base plates and replacement of the wooden covered bridge superstructure. Work also includes clearing in designated areas, protecting existing planting to remain, stripping and stockpiling of topsoil, site landscaping, site grading and installation of all erosion and sediment control measures.

F. Owner:

- 1. **Owner's Name:** The Owner is the State of Connecticut, Department of Energy and Environmental Protection.
- 2. **Authorized Representative for the Owner: DEEP Project Manager Name:** Joseph Buyonje, PE
 - a. **DEEP Project Manager's Location:** The DEEP Project Manager is located at 163 Great Hill Rd, Portland, CT, 06480.
 - b. **Phone:** 860 424 4121;
 - c. **Fax:** 860 344 2560;
 - d. **Email(s):** joseph.buyonje@ct.gov
- 3. **Authority:** The DEEP Project Manager is the only authorized representative for the Department of Energy and Environmental Protection Commissioner to act in matters involving revoking, altering, enlarging or relaxing any requirement of the Contract Documents.

- a. **Related Section: Article 25, All Work Subject To Control of the Commissioner,** Division 00 General Conditions of the Contract for Construction.

G. Agency:

1. **Agency Name:** The Connecticut State (User) Agency is Connecticut Department of Energy and Environmental Protection.
2. **Agency Representative Name and Title:** Joseph Buyonje, PE. The Agency Representative's Title is Civil Engineer 2/Project Manager.
 - a. **Agency Representative Location:** The Agency Representative is located at 163 Great Hill Road, Portland, CT 06480.
 - b. **Phone:** 860 424 4121;
 - c. **Fax:** 860 344 2560;
 - d. **Email(s):** joseph.buyonje@ct.gov
3. **Authority:** The Agency Representative has the administrative authority for the facility and or site where the work is being performed and has the authority to change the Contract Documents or direct the Contractor.

H. Architect and Engineer (A/E):

1. **Engineer's Name:** Macchi Engineers, LLC.
 - a. **Engineer's Location:** The Engineer is located at 44 Gillett Street, Hartford, CT 06105-2694.
 - b. **Phone:** 860 549 6190;
 - c. **Fax:** 860 524 5088;
 - d. **Email(s):** hmay@macchiengineers.com
2. The Architect and Engineer (A/E) or their accredited representative is referred to in the Contract Documents as "Architect" or "Architects" or "Engineer" or "Engineers" or by pronouns which imply them. As information for the Contractor, the Architect's or Engineer's status is defined as follows:
 - a. The Architect and Engineer will not make interpretations or decisions directly to the Contractor. All interpretations or decisions will be conveyed through the DEEP Project Manager.
 - b. As the authorized representative of the Department of Energy and Environmental Protection Commissioner, the Architect and Engineer is responsible for review of shop drawings, materials, and equipment intended for the work, in accordance with the Division 00 "General Conditions" and "Supplementary Conditions".
3. Wherever the Architect or Engineer is mentioned in the documents in connection with an administrative function, it shall include the Project Manager in that function except for shop drawings.

I. Construction Administrator (CA):

1. **Construction Administrator Name:** Joseph Buyonje, PE
 - a. **Construction Administrator Location:** The Construction Administrator is located at 163 Great Hill Rd, Portland, CT 06480
 - b. **Phone:** 860 424 4121;
 - c. **Fax:** 860 344 2560;
 - d. **Email(s):** joseph.buyonje@ct.gov
2. **Authority:** As information to the Contractor, the Construction Administrator's status is defined as follows:
 - a. The Construction Administrator (CA) is referred to in the Contract Documents as "Construction Administrator" or by pronouns which imply it. All communications concerning the project will be directed through the Construction Administrator or a designated representative(s).
 - b. The Construction Administrator is the Owner's Agent who will, among other things, monitor and analyze the Contractor's performance, scheduling and construction, process shop drawings, material, and equipment submittals, review and process periodic billings, review, analyze, and recommend cost changes.
 - c. **Related Section: Article 26 "Authority of the Construction Administrator"** of Division 00 "General Conditions of the Contract for Construction".

3. The Construction Administrator will process all requests for information, interpretations and decisions regarding the meaning and intent of the Contract Documents, consulting with appropriate parties prior to rendering the interpretations or decisions for the Project Manager to the Contractor. All such requests and replies shall be in writing.
- J. Construction Manager (CMR):**
1. **Construction Manager's Name (CMR):** Not Applicable (N/A).
 - a. **Construction Manager's Firm's Location:** The Construction Manager is located at N/A.
 - b. **Phone:** N/A;
 - c. **Fax:** N/A;
 - d. **Email(s):** N/A.
 2. **Authority:** Construction Manager is under direct Contract with the Department of Energy and Environmental Protection, responsible for performing the Work under the Contract Documents. Whenever the words "Contractor" or "General Contractor" are used it shall be understood to mean Construction Manager.
 3. **Related Sections:**
 - a. **Article 1 "Definitions"** of Division 00 "General Conditions of the Contract for Construction for Construction Manager at Risk (CMR)"; and
 - b. **Section 2.3 "Construction Phase"** of Article 2 "Construction Manager At Risk Responsibilities", in Section 00 52 23 "Standard Form of Agreement Between Owner and Construction Manager-At-Risk (CMR) For Guaranteed Maximum Price (GMP)".
- K. Work:** The Work Includes but is not limited to the following:
- 1 **Site Construction, Landscaping;**
 - 2 **Cast-in-Place Concrete;**
 - 3 **White Oak Timber;**
 - 4 **Structural Steel;**
 - 5 **Painting**
 - 6 **Rough Carpentry; and**
 - 7 **Metal Roofing;**
- L.** The Contractor will include in their bid, all items required in order to carry out the intent of the Work as described, shown and implied in the Contract Documents.
- M.** It shall be the Contractor's responsibility upon discovery to immediately notify the Project Manager, in writing, of errors, omissions, discrepancies, and instances of noncompliance with applicable codes and regulations within the documents, and of any work which will not fit or properly function if installed as indicated on the Contract Documents. Any additional costs arising from the Contractor's failure to provide such notification shall be borne by the Contractor.
- N.** The Work will be constructed under the Contractor's Contract as applicable to this Project.
- O.** The Work will be performed in accordance with the Connecticut Department of Energy & Environmental Protection's (DEEP) "**General Permit for Water Resource Construction Activities**" (201903049-GPCST), DEEP "**Flood Management Certification**" (FM-201703389) and the "**U.S. Army Corps of Engineers General Permit**" (NAE – 2020 – 00074), including, but not limited to, performing regular inspections, conducting and reporting stormwater monitoring activities, retaining records for the required period of time, and performing all post-construction measures and inspections. See **Section 01 50 00 "Temporary Facilities and Controls"** and **Section 31 20 05 "Sedimentation and Erosion Control"** for additional information.
- 1.4 CONTRACTOR'S USE OF PREMISES**
- A. General:** During the construction period the Contractor shall have full use of the newly constructed premises for construction operations, including use of the site. The Contractor's use of the premises is limited only by the Owner's right to perform work or to retain other contractors on portions of the Project.
 - B. Use of the Site:** Limit use of the premises to work in areas indicated. Confine operations to areas within contract limits indicated. Do not disturb portions of the site beyond the areas in which the Work is indicated.
 1. **Owner Occupancy:** Allow for Owner occupancy and use by the public of the existing facility.

2. The Contractor shall confine his operations including storage of materials, supplies, equipment, and apparatus to the areas bounded by the contract limits indicated and as directed in the Contract Documents.
3. Existing roads, drives, walks, and parking areas which are not within the contract limit line are to be kept free and clear at all times. The Contractor shall check all roadways for accessibility and clearances for deliveries of all large material and equipment. The Contractor shall inform the Project Manager at least **seventy-two (72)** hours in advance of these deliveries so they can be coordinated with the Agency so appropriate traffic control, etc. can be provided. Do not use these areas for parking or storage of materials. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
4. The Contractor shall be responsible for keeping the premises clean and shall pick up rubbish and debris and promptly remove from site.
5. Parking for the Contractor's employees will be limited to an area designated by the Project Manager, and the Contractor may be required to provide identification stickers for all employees' cars.
6. Special precautions shall be taken to protect all wetland areas designated to remain. Prevent any and all sediment, debris, or other materials from getting into these areas. Should any sediment, debris, or other materials get into these areas or if any damage occurs to the vegetation therein, the Contractor shall immediately contact the Project Manager for direction.
7. The Contractor shall comply with local working hour restrictions, unless specifically approved otherwise in writing by the Owner.
8. No signs, other than those approved by the Project Manager, will be visible on the premises.

1.11 MISCELLANEOUS PROVISIONS

A. Examination of Site:

1. It is not the intent of the Documents to show all existing conditions. All Contractors and Subcontractors are advised to attend the Pre-Bid Meeting prior to submitting their Bid Proposals. This is the only official opportunity to visit and examine the site with the Owner, Agency, Architect, Engineer and Construction Administrator.
2. The Contractor should investigate and satisfy himself as to the conditions affecting the work, including but not restricted to those bearing upon transportation, disposal, handling and storage of materials, availability of labor, water, electric power, uncertainties of weather, roads or similar physical conditions of the ground, the character of equipment, and facilities needed preliminary to and during the prosecution of the Work. The Contractor should further satisfy himself as to the character, quality, and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site, as well as from information presented by the Contract Documents. Any failure by the Contractor to acquaint himself with the available information shall not relieve him from the responsibility for estimating properly the difficulty and cost of successfully performing the Work.
3. If tests have been done for Asbestos Containing Material (ACM), Lead-Based Paint (LBP) Containing Material, Polychlorinated Biphenyls (PCBs) in Building Materials and/or Mold, then the results are referenced in **Section 00 30 00 Available Information and provided in Division 50 00 00 Project-Specific Available Information**. See **Section 01 35 16 "Alteration Project Procedures"** for **removal responsibility** and additional information.
4. If tests have been done for Contaminated Soils and/or Contaminated Groundwater, then the results are referenced in **Section 00 30 00 Available Information and provided in Division 50 00 00 Project-Specific Available Information**. See **Section 01 35 16 "Alteration Project Procedures"** for **removal responsibility** and additional information.
5. If tests have been done for Work Involving Hazardous Materials, Wastes, and Items and Universal Wastes (Including Products Containing Persistent Bioaccumulative Toxic Chemicals" [PBTs] such as PCBs, Di-2-ethylhexyl Phthalate [DEHP], and Mercury), the results are referenced in **Section 00 30 00 Available Information and provided in Division 50 00 00 Project-Specific Available Information**. See **Section 01 35 16 "Alteration Project Procedures"** for **exposure limits and removal responsibility**.
6. **Subsurface Geotechnical Investigations:**
 - a. If Boring logs have been prepared for the site of this work they are in the Contract Documents.

- b. If Geotechnical Reports(s) have been prepared for this project they are referenced in **Section 00 30 00 Available Information and provided in Division 50 00 00 Project-Specific Available Information.**
 - 1) The Contractor must interpret the Geotechnical Report (s) according to his own judgement and acknowledges that he is not relying upon the data as accurately describing the subsurface conditions which may be found to exist.
 - 2) The Contractor further acknowledges that he assumes all risk contingents upon the nature of the subsurface conditions, which shall be actually encountered by him in performing the Work of this Contract.
 - 3) The Contractor should visit the site and become acquainted with all existing conditions and may make their own subsurface investigations to satisfy themselves as to the subsurface conditions. Such investigations shall be conducted only under time schedules and arrangements approved in advance by the Owner.
 7. No attempt has been made to locate hazardous material associated with existing site utilities, though it is presumed that at least some asbestos may be discovered associated with underground piping during the course of site and site utilities work. If and when such materials appear, the Contractor shall notify the Owner, who shall direct additional work outside of this Contract to assist in cutting up and disposing of same. The Contractor shall assist the hazardous materials contractor(s) with excavating, heavy lifting, and the like at no additional cost to the Owner.
- B. Pre-Bid Meeting:**
1. A Pre-Bid Meeting and tour of the site will be conducted as scheduled in Division 00 Section 00 11 16 "Invitation to Bid". This scheduled meeting is the only official opportunity for the bidders to tour the site with the Owner, Engineer, Construction Administrator, and Agency.
- C. Project Documents:**
1. The Specifications and Drawings are intended to describe and illustrate the materials and labor necessary for the work of this Project.
 2. Throughout the Technical Specifications, the Connecticut Department of Transportation Standard Specifications for Roads, Bridges, and Incidental Construction Form 817, current edition including any interim and supplemental specifications are referenced. Where so referenced the requirements set forth therein are applicable and made a part hereof. Copies of Form 817 are available from the Connecticut Department of Transportation at a nominal charge.
- D. Site Logistics Plan(s):** Site Logistics Plan(s) for this Project are in the Contract Documents. The Site Logistics Plan(s) describe in detail the proposed use of the Site, both inside and outside the Contract Limit Area.
1. **Related Section:** Section 01 31 00 "Project Management and Coordination", 1.5 Submittals, A, (4).
 2. The **Site Logistics Plan(s)** include, but are not be limited to the following information:
 - a. **proposed vehicle and equipment access routes;**
 - b. **locations of proposed staging/lay-down and storage areas, utility connections;**
 - c. **delivery access of materials, handicap access;**
 - d. **temporary access-ways;**
 - e. **office trailer and dumpster locations;**
 - f. **location of perimeter construction fencing and gates;**
 - g. **other protection measures;**
 - h. **proposed protection measures for trees, shrubs and plantings, interior access-ways;**
- E. Scope Review:**
1. Prior to signing a Contract with the State, DEEP will conduct a full scope review with the apparent Low Bidder to ensure that all of the requirements have been included within the bid. This scope review will highlight all of the specific requirements of the project, a review of the DEEP procedures and all of the Technical sections of the contract documents.
 2. This process will ensure that all of the scope of work included in the contract documents has indeed been included.
- F. Specifications, Drawings, and Electronic Data Storage Devices Furnished:**

1. The Contractor shall receive **one (1) set of Portable Document Format (PDF, latest version) Conformed Bid Documents** (incorporating all Addendum changes made to the Contract Documents during the official Bid Period) on Electronic Data Storage Devices on or about the time of execution of the Contract, free of charge from the Owner. If additional copies are wanted, they will be available at the direct additional cost of their reproduction, to the Contractor.
- G. Construction Responsibility:**
1. The Contractor shall be responsible for his construction means, methods, techniques, sequences, and procedures employed in the performance of his work and shall have full responsibility for his failure to carry out any part of his work in accordance with the Contract Documents.
- H. Overtime Requests:**
1. The Contractor shall request approval from the Owner to work overtime. Said request shall be made **forty eight (48) hours** in advance. All costs for overtime are included in the Contract Sum as stated in Division 00 Section 00 41 00 "Bid Proposal Form."
- J. Subcontractor Performance Evaluations:**
1. Pursuant to C.G.S. Sec. 4a-101, the Contractor shall compile evaluation information during the performance of the contract on each of its subcontractors who are performing work with a value in excess of five hundred thousand dollars (\$500,000.00). The Contractor shall complete and submit to DEEP evaluations of each such subcontractor upon fifty percent (50%) completion of the project and upon Substantial Completion of the project. The Contractor acknowledges that its failure to complete and submit these evaluations in a timely manner may, by statute, result in a delay in project funding and, consequently, payment to the Contractor. The Contractor agrees to indemnify and hold the State harmless from any loss, damage, or expense that results from or is caused by the Contractor's failure to complete and submit the evaluations to DEEP in accordance with this provision.
- K. Reporting and Contracting Requirements for Contractor and Subcontractor Payments:**
1. For compliance with **C.G.S. Sec. 4b-95 and 49-41**, DEEP requires every Contractor (and its Subcontractors) who has been awarded a DEEP construction contract to log on to the State of Connecticut web-based platform, BizNet, **each month** and **enter payments** they have received from the state, from the Contractor, or from a higher tier Subcontractor (as applicable).
 2. The process is described as follows: The state will pay the Contractor on a monthly basis for work performed (and purchases made) by it and its Subcontractors. The Contractor will input the payment date and amount they receive from the state on a monthly basis. The Contractor's first-level Subcontractor (Tier 1 Subcontractor) will input the payment they receive from the Contractor. The second-level Subcontractor (Tier 2 Subcontractor) will input the payment they receive from the Tier 1 Subcontractor. And so on.
 3. Contractors awarded a DEEP construction contract shall contain a **provision in their subcontract agreements** requiring their Subcontractors to enter payment receipt from the Contractor in the State of Connecticut web-based platform, BizNet, for work performed or purchases made in relation to state projects.
 4. Detailed instructions can be found in the DAS publication, "**6002 Instructions to Contractors/Subcontractors for Entering Payments in BizNet**", available for download by going to the DAS Homepage (www.ct.gov/DAS) and selecting Doing Business with The State > State Building Construction > Publications and Forms > DAS Construction Services Library > 6000 Series.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01 11 00

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Contract Documents and general provisions of the Contract, including General and Supplementary Conditions, other Division 01 Specification Sections, and Section 00 41 00 "Bid Proposal Form" apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Allowances.
 - 2. Unit Prices.
- B. **Related Sections:** The following Sections contain requirements that relate to this Section:
 - Section 01 23 13 Supplemental Bids
 - Section 01 26 00 Contract Modification Procedures
 - Section 01 29 76 Progress Payment Procedures
 - Section 01 35 16 Alteration Project Procedures
 - Section 01 35 26 Government Safety Requirements
 - Section 01 50 00 Temporary Facilities and Controls
 - Section 01 77 00 Closeout Procedures
 - Section 02 41 16 Structure Demolition
 - Section 02 41 19 Selective Demolition
 - Section 02 50 00 Demolition and Alterations
 - Section 02 61 13 Handling of Regulated Soil
 - Section 02 61 23 Removal and Disposal of PCB Contaminated Soils
 - Section 02 80 00 Contaminated Materials Excavation, Staging, Loading, Transportation, and Disposal
 - Section 02 81 00 Transportation and Disposal of Regulated Soil
 - Section 02 82 00 Asbestos Remediation
 - Section 02 82 13 Asbestos Abatement
 - Section 02 82 13.33 Asbestos Containing Roofing Material Abatement
 - Section 02 83 00 Lead Remediation Specifications
 - Section 02 83 13 Lead Paint Activity
 - Section 02 84 16 Removal and Handling of Regulated Material
 - Section 02 84 33 Removal and Disposal of PCBs.
 - Section 02 85 00 Mold and Other Hazardous Materials Remediation Specifications
 - Section 23 07 00 Thermal Insulation Specifications
 - Section 23 33 00 Flexible Connections Specifications
 - Section 31 10 00 Site Clearing
 - Section 31 20 00 Site Earth Moving
 - Section 31 20 01 Building Excavation and Backfill
 - Section 31 20 05 Sedimentation and Erosion Control
 - Section 31 23 19 Wastewater Treatment Systems

1.3 ALLOWANCES

- A. This Section includes administrative and procedural requirements for Allowances.

- B. Related Sections:** The following Sections contain requirements that relate to this Section:
1. Division 01 Section 01 26 00 "Contract Modification Procedures" for procedures for submitting and handling Change Orders.
- C. Cash Allowances:**
1. The Contractor's costs for unloading and handling, labor, installation costs, storage, insurance, overhead and profit and other expense related to the Allowance item shall be included in the Contractor's Lump Sum Base Bid Amount and not in the Allowance unless stated otherwise in the Allowance Schedule of this section.
 2. **Architect/Engineer Responsibilities:**
 - a. Consult with Contractor for consideration of Products, suppliers and installers.
 - b. Select Products in consultation with the DEEP Project Manager and Agency Representatives and transmit decision to Construction Administrator.
 - c. Prepare Change Order.
 3. **Construction Administrator Responsibilities:**
 - a. Consult with Architect/Engineer, Contractor, DEEP Project Manager and Agency Representatives for consideration of Products, suppliers and installers.
 - b. Select Products in consultation with Architect/Engineer, DEEP Project Manager and Agency Representatives and transmit decision to Contractor.
 - c. Prepare Change Order.
 4. **Contractor Responsibilities:**
 - a. Assist Engineer and Project Manager in selection of Products and Suppliers.
 - b. Obtain proposals from Suppliers and offer recommendations.
 - c. On notification of selection by Project Manager execute purchase agreement with designated supplier.
 - d. Arrange for and process shop drawings, product data, and samples. Arrange for delivery.
 - e. If the actual cost of an Allowance item is more or less than the given amount, the Contract Sum will be adjusted by Change Order.

1.4 DEFINED UNIT PRICES - GENERAL

- A.** This Section includes administrative and procedural requirements for unit prices.
- B. Related Sections:** The following Sections contain requirements that relate to this Section:
1. Division 01 Section 01 26 00 "Contract Modification Procedures" for procedures for submitting and handling Change Orders.
 2. Division 01 Section 01 29 76 "Progress Payment Procedures" for procedures for submitting Application for Payments.
- C. Definition - Unit Price:** Amount the Contractor acknowledges in the Bid Proposal Form as a price per unit of measurement for materials or services as described in the Contract Documents.
- D. Procedures:**
1. Unit Prices included in the Contract Documents are to be used for determining compensation to the Contractor or Owner for changes to the scope of the work indicated in the Contract Documents, and included in the Lump Sum Contract Price. Special Unit Prices are for items complete, in place, and shall be inclusive of furnishing and installing of all material, labor, trucking, overhead, profit, equipment, hoisting, excavation, stockpiling, loading, engineering, scaffolding, power hookups, protection, shop drawings, taxes, permits, appliances, delivery, disposal, insurance, supervision, cost of bond, etc. and shall remain in effect until completion of the Contract.
 2. **Unit Price:** Is identified by the Owner as a price per unit of measurement for materials or services added to or deducted from the Contract Sum by appropriate modification, if the estimated quantities of Work required by the Contract Documents are increased or decreased.
 3. **Increases or Decreases:** Should the amount of the Work required be increased or decreased because of changes in the work ordered in writing by the DEEP Project Manager, the Contractor agrees that the following supplemental UNIT PRICES will be decreased 10% for a reduction of work. Each Unit Price

shall include all equipment, tools, labor, permits, fees, etc., incidental to the completion of the work involved. All items marked with an asterisk (*) in the unit price schedules 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 Plans and Specifications or as directed by the Project Manager.

4. The Owner reserves the right to reject the Contractor's measurement of work-in-place that involves use of established unit prices, and to have this work measured, at the Owner's expense, by an independent surveyor acceptable to the Contractor.
5. **Defect Assessment:** Replace the Work, or portions of the Work, not conforming to the specified requirements. If, in the opinion of the Architect/Engineer, it is not practical to remove and replace the work the Architect/Engineer will direct an appropriate remedy or adjust the payment.
6. **Unit Price Schedules:** "Unit Price Schedules" are included in this Section. Specification Sections referenced in the Schedule sections contain requirements for materials described under each unit price.

1.5 UNIT PRICE SCHEDULE – EARTH AND ROCK EXCAVATION

This Section includes administrative and procedural requirements for the following unit prices and provisions that are to be included in and become part of this Contract to be used in evaluating additions to or deductions from the work called for in the specifications and/or plans.

A. Earth and Rock Excavation:

1. Unless otherwise specified elsewhere in these documents, Contractors are to assume that all excavation is earth; however, if unspecified rock is encountered, it will be paid for at the given unit prices listed in Paragraph "C". Rock prices are net in that allowances for reduced quantities of earth are also included in the unit prices. The prices given include all costs for overhead, profit and rock surveys.
2. Wherever rock to be excavated is encountered, the Contractor shall strip or expose the rock to such an extent that in the Owner's opinion the necessary measurements can be taken. The Contractor shall provide the Owner with 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 furnished by the Owner from a licensed surveyor.
3. If the conditions of the excavation work indicated are clearly of a special nature, the Contractor may ask the Owner for reconsideration of the established unit prices and if granted, the unit prices will not apply, and prices will be negotiated in accordance with Article 13 of the General Conditions.

B. Definitions:

1. **"EARTH"** - is defined as excavation and shall include removal of all materials other than 'water' and 'rock'.
2. **"ROCK"** - is defined as a boulder of one cubic yard or more in volume (1/2 cubic yard for a boulder in trenches), rock in definite ledge formation, and masonry structures of one cubic yard or more in volume, the removal of which requires the use of mechanical equipment or the use of explosives. Rock removed by scarification or ripping method is considered as a separate classification under Paragraph 4.c.1.0.
3. **"ORIGINAL GRADE"** - is defined as being the grade which exists at the time of Contract Award.
4. **"ROUGH GRADE"** - is defined as being the completed surface of required excavations greater than 13' in width.
5. **"MASS"** - excavation is to be considered as an open area whose minimum horizontal dimensions exceed 13'.
6. **"TRENCH"** - is defined as excavation is defined as the removal of material from areas 13 feet or less in its minimal horizontal dimensions and below the elevation of rough grade or original grade, whichever is lower.

C. Procedures:

1. **Rock Excavation in Trenches: Basis for Horizontal Measurement:**
 - a. **Horizontal Measurements:** Will be taken between the vertical planes as defined below.
 - b. **The Minimum Width of Trenches in Rock:** Will be taken as 3' 0".

- c. **Excavation For Walls Or Piers With Footings:** The measurements will be taken parallel to and one foot outside of the edges of the concrete footings as called for in the plans (i.e. for 4' 0" footing, rock will be taken as 6' 0" in width).
 - d. **Excavation For Walls Or Piers Without Footings:** The limits of the excavation will be 1' 6" outside of the line of concrete at bottom as shown or called for in the plans (i.e. for a wall with a bottom thickness of 1' 0", the width of the trench will be considered to be 4' 0"). (Caissons are excluded from these measurements).
 - e. **Excavation for Pipe Lines:** Will be measured at 2' 0" more than the nominal inside diameter of the pipe but in no case less than 3' 0" wide
 - f. **Excavation For Tanks, Vaults, Manholes, Pits, Etc.:** Will be measured as 2' 0" greater in both length and width or diameter than the actual exterior dimensions of the structures and this excavation is considered to be trench only if any measured horizontal dimensions is 13' or less.
 - g. No allowance will be made for rock removed beyond the above limits.
2. **Rock Excavation in Trenches - Basis for Vertical Measurement:**
- a. To determine depth of trench, vertical measurements will be taken from original grade or rough grade, (whichever is applicable), to the bottom of required excavation. These measurements will define the maximum depths for payments.
 - b. To determine quantity of rock in trench, vertical measurements will be taken from the top of rock as encountered in the trench to 12" below the bottom of required rock excavation. Any over excavation below the required elevation shall be filled with concrete or other material as specified at no cost to the Owner.
 - c. No allowance will be made for rock removed beyond the above limits.
3. **Earth Excavation in Trenches - Basis of Measurement: (Horizontal & Vertical):** The basis of measurements and allowance limit for earth excavation in trenches is identical to that indicated for rock excavation in trenches, except that there will be no allowance for 12" below the required elevation. In addition the following will prevail:

a. **Maximum allowable widths for earth excavation in trenches without shoring:**

Trench Depth - Classification	Add To Nominal ID Of Pipe Or To Footing Width
0 ft. - 6 ft.	3 ft.
Over 6 ft. - 10 ft.	5 ft.
Over 10 ft. - 15 ft.	7 ft.
Below 15 ft. deep the width of the trench shall be based on the individual case. The final depth of trench will determine the actual width for payment.	

- b. If shoring is required the measurement shall be taken between the exterior walls of the shoring not to exceed 4' plus the I.D. of the pipe (for all depths).
 - c. To determine quantity of earth in trench, vertical measurements will be taken from the original or rough grade to actual bottom of earth excavation required.
4. **Unit Prices - Earth and Rock Excavation (Basis for Payment):** Prices include backfill with excavated material if it is suitable. Prices also include all excavation and disposal of all surplus or unsuitable material. Where replacement with the excavated material is prohibited or a particular backfill material is specified, the cost of the delivered replacement material in a volume equal to the above excavation pay limits minus the volume of the items installed in the trench shall be paid for at a prior negotiated price. Prices do not include costs of shoring and de-watering but do include sloping for sides of excavation. Payment and credit amounts shall be determined in the following manner: Widths and depths of trench excavation as indicated. The total quantity of earth or rock excavation encountered in each depth payment category shall be paid for at its respective unit price as shown below. For example, in a 15' trench excavated by machine, the first 6' will be paid for at the 0' - 6' price; the next 4' will be paid for at the over 6' - 10' price and the next 5' will be paid for at the over 10' - 15' price. Thus three different price brackets will prevail.

1.5 Unit Price Schedule – Earth and Rock Excavation						
a.	EARTH EXCAVATION - HAND			UNIT	\$ ADD	\$ DEDUCT
1.0	In Trenches (0' - 6' deep)			C.Y.	36.00	28.80
2.0	In Trenches (below 6' deep)			Prices Must Be Negotiated Before Work Is Started.		
b.	EARTH EXCAVATION - MACHINE			UNIT	\$ ADD	\$ DEDUCT
1.0	Open Area (All Depths)			C.Y.	18.81	15.05
2.0	In Trenches:					
2.1	2.1	In trenches (0' - 6' deep)		C.Y.	14.27	11.40
2.2	2.2	In trenches (6' - 10' deep)		C.Y.	19.71	15.75
2.3	2.3	In trenches (10' - 15' deep)		C.Y.	35.00	28.00
2.4	2.4	In trenches (15' - 20' deep)		C.Y.	75.00	60.00
c.	ROCK EXCAVATION			UNIT	\$ ADD	\$ DEDUCT
1.0	Open Areas, Rock Removed By Ripping (Any Amount) – Net Rock			C.Y.	103.50	82.80
2.0	Open Areas, With Explosives:					
2.1	2.1	Net Rock (Total Quantity Up To 100)		C.Y.	126.00	100.80
2.2	2.2	Net Rock (Total Quantity Up To 1,000)		C.Y.	60.00	48.00
2.3	2.3	Net Rock (Total Quantity More Than 1,000)		C.Y.	28.00	22.40
3.0	In Trenches, Boulders, Remove By Machine			C.Y.	45.00	36.00
4.0	In Trenches, Ripping Of Rock By Machine			C.Y.	105.00	84.00
5.0	In Trenches, With Explosives:					
5.1	5.1	Net Rock (0' - 4' Deep)		C.Y.	95.60	76.50
5.2	5.2	Net Rock (4' - 10' Deep)		C.Y.	125.00	100.00
5.3	5.3	Net Rock (10' - 15' Deep)		C.Y.	150.00	120.00
5.4	5.4	Net Rock (15' - 20' Deep)		C.Y.	200.00	160.00
5.5	5.5	Net Rock (Over 20' Deep)		Prices Must Be Negotiated Before Work Is Started.		
6.0	Jack Holes (For Hydraulic Lift/Elevators)			L.F.	95.00	76.00
7.0	Open Or Mass Areas (If Explosives Are Prohibited): Net Rock			C.Y.	125.00	100.00
8.0	Trench Excavation With Rock Splitters and Jack Hammer or Hoe Ram (If Explosives Are Prohibited): Net Rock			C.Y.	150.00	120.00

1.6 UNIT PRICE SCHEDULE – MISCELLANEOUS ITEMS

This Section includes administrative and procedural requirements for the following unit prices and provisions that are to be included in and become part of this Contract to be used in evaluating additions to or deductions from the work called for in the specifications and/or plans.

A. Related Documents: Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

B. Unit Price Schedule – Miscellaneous Items:

1.6 Unit Price Schedule – Miscellaneous Items					
Section Number &/or Drawing Number	Item Description	Base Bid Quantity	Unit of Measurement	\$ Add Unit Price	\$ Deduct Unit Price
				\$	\$
				\$	\$
				\$	\$
				\$	\$
				\$	\$
				\$	\$
				\$	\$
				\$	\$
				\$	\$

			\$		\$
			\$		\$
			\$		\$

- C. The **\$Add** 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 **if the Base Bid Quantities** of the Work listed in the above Schedule and described in the corresponding Section and/or Drawing are **increased or decreased**.
- D. The **Base Bid Quantities** for each type of Work listed in the above Schedule and described in the corresponding Section shall be included in the Contractor's **Lump Sum Base Bid**.
- E. Unit Prices shall be negotiated if there is a change in scope of work.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01 20 00

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements governing Supplemental Bids.
- B. Related Sections: The following Sections contain requirements that relate to this Section:
 - 1. Division 00 Section 00 41 00 Bid Proposal Form
 - 2. Division 01 Section 01 20 00 Contract Considerations
 - 3. Division 01 Section 01 33 00 Submittal Procedures
 - 4. Division 01 Section 01 60 00 Product Requirements

1.3 DEFINITIONS

- A. **Definition:** "The monetary value stated in the Bid to be added to the amount of the Base Bid if the corresponding Work, as described in the Bidding Documents, is accepted." A Supplemental Bid is an amount proposed by bidders and stated on the Bid Proposal Form for certain work defined in the Bidding Documents that may be added to the Base Bid amount if the Owner decides to accept a corresponding change in either the amount of construction to be completed, or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.
 - 1. The cost for each supplemental bid is the net addition to the Contract Sum to incorporate the Supplemental Bid into the Work. Supplemental Bids are only accepted in the numerical order that they are listed on the Bid Proposal Form and never accepted out of numerical sequence. No other adjustments are made to the Contract Sum.

1.4 PROCEDURES

- A. **Coordination:** Modify or adjust affected adjacent Work as necessary to completely and fully integrate that Work into the Project.
 - 1. Include as part of each Supplemental Bid, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not mentioned as part of the Supplemental Bid.
 - 2. Consider all work that must be accomplished for complete incorporation of the Supplemental Bids including modifications to Base Bid items.
 - 3. Include in lump sum prices for Supplemental Bids all costs of labor, materials, equipment, permits, fees, insurance, bonds, overhead, and profit.
 - 4. Immediately after award of Contract, advise all necessary subcontractors, vendors, and suppliers as to which Supplemental Bids have been selected by Owner. Use all means necessary to alert those subcontractors, vendors, and suppliers involved as to all changes in the work caused by Owner's selection or rejection of Supplemental Bids.
 - 5. Coordinate related work and modify surrounding work to integrate work of each Supplemental Bid.
- B. Execute accepted Supplemental Bids under the same conditions as other Work of this Contract.
- C. **Schedule:** A "Schedule of Supplemental Bids" is included at the end of this Section. It contains all of Specification Sections, and applicable portions of Drawings and Details that govern the scope, quality, and execution of work that is referenced in the Schedule and contain all of the requirements necessary to achieve the Work described under each Supplemental Bid.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 SCHEDULE OF SUPPLEMENTAL BIDS

A. Supplemental Bid No. 1: See Proposal Form 00020-7(PF) for Schedule of Supplemental Bids

END OF SECTION 01 23 13

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for handling requests for equals and substitutions made after award of the Contract.
- B. Related Sections: The following Sections contain requirements that relate to this Section:
 - 1. Division 01 Section 01 33 00 "Submittal Procedures" specifies requirements for submitting the Contractor's Construction Schedule and the Submittal Schedule.
 - 2. Division 01 Section 01 42 20 "Reference Standards and Definitions" specifies the applicability of industry standards to products specified.
 - 3. Division 01 Section 01 60 00 "Product Requirements" specifies requirements governing the Contractor's selection of products and product options.

1.3 DEFINITIONS

- A. Definitions in this Article do not change or modify the meaning of other terms used in the Contract Documents.
- B. **Equals or Substitutions General:** Changes in products, materials, equipment, and methods of construction required by the Contract Documents proposed by the Contractor after award of the Contract.

1.4 SUBMITTALS

- A. **Equals and Substitution Request Submittals:** The Owner will consider requests for equals or substitutions if made prior to the Receipt of the Competitive Bid. The information on all materials shall be consistent with the information herein. After the contract award, substitutions will be considered for materials or systems specified that are no longer available. It will not be considered if the product was not purchased in a reasonable time after award. The Contractor shall submit all equal and substitutions requests to the Project Manager. See Article 15 in the General Conditions for further refinement and information.
- B. The Contractor is required to prepare and submit three (3) copies of the required data for the first manufacturer listed or procedure listed in the specifications section with reference to all of the following areas: the substance and function considering quality, workmanship, economy of operation, durability and suitability for purposes intended including the size, rating performance, LEED® compliance, and cost. All submissions must include all the required data for the first listed manufacturer or procedure as specified, as well as the required data for the proposed Equal or Substitution. This will enable the Owner and Architect/Engineer to determine that the proposed Equal or Substitution is or is not substantially equal to the first listed manufacturer or procedure.
 - 1. Identify the product or the fabrication or installation method to be replaced in each request. Include related Specification Section and Drawing numbers.
 - 2. Provide complete documentation showing compliance with the requirements for equals or substitutions, and the following information, as appropriate:
 - a. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by the Owner and separate contractors that will be necessary to accommodate the proposed Equal or Substitution.
 - b. A detailed comparison chart of significant qualities of the proposed substitution with those of the Work specified. Significant qualities may include elements, such as performance, weight, size, durability, and visual effect.
 - c. Product Data, including Shop Drawings and descriptions of products and fabrication and installation procedures.
 - d. Samples, where applicable or requested.
 - e. A statement indicating the effect on the Contractor's Construction Schedule or CPM Schedule compared to the schedule without approval of the Equal or Substitution. Indicate the effect on overall Contract Time.
 - f. Cost information, broken down, including a proposal of the net change, if any in the Contract Sum.

- g. The Contractor's certification that the proposed Equal or Substitution conforms to requirements in the Contract Documents in every respect and is appropriate for the applications indicated.
 - h. The Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of the failure of the Equal or Substitution to perform adequately.
3. **Architect/Engineer's Action:** If necessary, the Architect/Engineer will request additional information or documentation for evaluation within **seven (7) days** of receipt of the original request for equal or substitution request. The Architect/Engineer will notify the Project Manager who will notify the Owner of recommended acceptance or rejection of the proposed equal or substitution, within **fourteen (14) days** of receipt of the request, or **seven (7) days** of receipt of additional information or documentation, whichever is later. The Project Manager will give final acceptance or rejection by the Owner not less than **seven (7) days** after notification.
- a. Any request deemed an "Equal" and accepted by the Project Manager, Architect/Engineer, Owner, and Agency will result in written notification to the Contractor and will not be in the form of a change order for an "Equal".
 - b. Any request deemed a "Substitution" and rejected or approved by Project Manager, Architect/Engineer, and Owner may result in written notification to the Contractor and may be in the form of a change order if the "Substitution" is approved.

PART 2 - PRODUCTS

2.1 EQUAL OR SUBSTITUTIONS

- A. **Conditions:** The Architect/Engineer will consider the Contractor's request for Equal or Substitution of a product or method of construction when one or more of the following conditions are satisfied, as determined by the Architect/Engineer. If the following conditions are not satisfied, the Architect/Engineer will return the requests to the Project Manager without action except to record noncompliance with these requirements.
- 1. The proposed request does not require extensive revisions to the Contract Documents.
 - 2. The proposed request is in accordance with the general intent of the Contract Documents.
 - 3. The proposed request is timely, fully documented, and/or properly submitted.
 - 4. The proposed request can be provided within the Contract Time. However, the Architect/Engineer will not consider the proposed request if it is a result of the Contractor's failure to pursue the Work promptly or coordinate activities properly.
 - 5. The proposed request will offer the Owner a substantial advantage, in cost, time, energy conservation, or other considerations, after deducting additional responsibilities the Owner must assume. However, if the proposed request requires the Owner to incur additional responsibilities, including but not limited to, additional compensation to the Architect/Engineer for redesign and evaluation services, increased cost of other construction by the Owner or similar considerations, then the Owner will have just cause to reject the request for Equal or Substitution.
 - 6. The proposed request can receive the necessary approvals, in a timely manner, required by governing authorities having jurisdiction.
 - 7. The proposed request can be provided in a manner that is compatible with the Work as certified by the Contractor.
 - 8. The proposed request can be coordinated with the Work as certified by the Contractor.
 - 9. The proposed request can uphold the warranties required by the Contract Documents as certified by the Contractor.
- B. The Contractor's submission and the Architect/Engineer's review of Submittals, including but not limited to, Samples, Manufacturer's Data, Shop Drawings, or other such items, which are not clearly identified as a request for an Equal or Substitution, will not be considered or accepted as a valid request for an Equal or Substitution, nor does it constitute an approval.

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01 25 00

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements for handling and processing contract modifications.
- B. Related Sections: The following Sections contain requirements that relate to this Section:
 - 1. Division 01 Section 01 20 00 "Contract Considerations" for administrative requirements governing use of Unit Prices.
 - 2. Division 01 Section 01 25 00 "Substitution Procedures" for administrative procedures for handling requests for substitutions made after award of the Contract.
 - 3. Division 01 Section 01 29 76 "Progress Payment Procedures" for administrative procedures governing Applications for Payment.
 - 4. Division 01 Section 01 32 16 "Construction Progress Schedules" for requirements for construction scheduling and reporting progress of work.

OR

- 4. Division 01 Section 01 32 16.13 "CPM Schedules" for requirements for CPM scheduling and reporting progress of work.
- 5. Division 01 Section 01 33 00 "Submittal Procedures" for requirements for submittal of the Construction Progress Schedule or CPM Schedule.
- 6. General Conditions "Article 13 - Compensation for Changes in the Work".

1.3 REQUESTS FOR INFORMATION

- A. In the event that the Contractor or subcontractor, at any tier, determines that some portion of the drawings, specifications, or other contract documents requires clarification or interpretation by the Architect/Engineer, the Contractor shall submit a "Request for Information" in writing to the Architect/Engineer via the Project Manager. "Requests for Information" may only be submitted by the Contractor and shall only be submitted on the "Request for Information" forms as required by the Owner.
 - 1. In the "Request for Information", the Contractor shall clearly and concisely set forth the issue for which clarification or interpretation is sought and why a response is needed from the Architect/Engineer.
 - 2. In the "Request for Information", the Contractor shall set forth an interpretation or understanding of the requirement along with reasons why such an understanding was reached.
 - 3. The Owner acknowledges that this is a complex project. Based upon the owner's past experience with projects of similar complexity, the Owner anticipates that there will probably be some "Requests for Information" on this project.
 - 4. The Architect/Engineer will review all "Requests for Information" to determine whether they are valid "Requests for Information". If it is determined that the document is not a valid "Request for Information", it will be returned to the Contractor, unreviewed as to content, for resubmittal on the proper form and in the proper manner.
 - 5. A "Request for Information Response" shall be issued within seven (7) days of receipt of the request from the Contractor unless the Owner determines that a longer time is necessary to provide an adequate response. If a longer time is determined necessary by the Owner, the Owner will, within seven (7) days of receipt of the request, notify the Contractor of the anticipated response time. If the Contractor submits a "Request for Information" on an activity with seven (7) days or less of float on the current project schedule, the Contractor shall not be entitled to any time extension due to the time it takes the

Architect/Engineer to respond to the request provided that the Architect/Engineer responds within the seven (7) days set forth above.

6. A "Request for Information Response" from Architect/Engineer will not change any requirement of the Contract Documents. In the event the Contractor believes that the "Request for Information Response" will cause a change to the requirements of the Contract Documents, the Contractor shall within five (5) days give written notice to the Project Manager stating that the Contractor believes the "Request for Information Response" will result in a "Change Order" and the Contractor intends to submit a "Change Order Proposal" request. Failure to give such written notice within five (5) days shall waive the Contractor's right to seek additional time or cost under the requirement these Requirements.

1.4 MINOR CHANGES IN THE WORK

- A. The Architect/Engineer, through the Project Manager, will issue supplemental instructions authorizing minor changes in the Work, not involving adjustment to the Contract Sum or Contract Time, on the "Supplemental Instructions" form as required by the Owner.

1.5 PROPOSAL REQUEST

- A. Architect/Engineer/Owner-Initiated Requests for Proposals: The Architect/Engineer or Owner will issue a detailed description of proposed changes in the Work via the Project Manager that will require adjustment to the Contract Sum or Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications. Such requests shall be on a "Proposal Request" form as required by the Owner.
 1. "Proposal Request" is issued for information only. Do not consider them as an instruction either to stop work in progress or to execute the proposed change.
 2. Within **(14) days** of receipt of a "Proposal Request", submit a "Change Order Proposal" with the required information necessary to execute the change to the Project Manager for the Architect/Engineer's/Owner's review.
 - a. Include a list of quantities of products required and unit costs, with the total amount of purchases to be made. Where requested, furnish survey data to substantiate quantities.
 - b. Indicate applicable delivery charges, equipment rental, and amounts of trade discounts.
 - c. Include a statement indicating the effect the proposed change in the Work will have on the Contract Time.
 - d. The Agency is tax exempt. All Contractor and Subcontractor services provided under your Contract with the State of Connecticut may not be exempt from taxes. The Department of Revenue Services can guide you as to which services are exempt and which are not. Please contact the State of Connecticut, Department of Revenue Services at 1-800-382-9463 or 860-541-3280.
 - e. Dollar values shown on the Schedule of Values shall not be the governing (or deciding) final amounts for change orders involving either additional charges or deletions.

1.6 CHANGE ORDER PROPOSAL

- A. When either a "Request for Information" from the Contractor or a "Proposal Request" from the Architect/Engineer or Owner results in conditions that may require modifications to the Contract, the Contractor may propose changes by submitting a request for a "Change Order Proposal" to the Architect/Engineer via the Project Manager on forms as required by the Owner. These forms shall also include "Change Order Proposal Workbook(s)" as required by the Owner.
 1. Include statements outlining the reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and Contract Time.
 2. Include a list of quantities of products required and unit costs, with the total amount of purchases to be made. Where requested, furnish survey data to substantiate quantities as directed by Article 13 of the General Conditions of the Contract for Construction.
 3. Indicate applicable delivery charges, equipment rental, and amounts of trade discounts.
 4. Comply with requirements in Division 01 Section 01 25 00 "Substitution Procedures" if the proposed change requires an equal or substitution of one product or system for a product or system specified.
 5. The State of Connecticut construction contract has the following tax exemptions:

- a. Purchasing of materials which will be physically incorporated and become a permanent part of the project.
 - b. Tools, supplies and equipment used in fulfilling the construction contract are not exempt.
 - c. Services that are resold by the Contractor are exempt, i.e. if a Contractor hires a plumber, carpenter or electrician, a resale certificate may be issued to the subcontractor because these services are considered to be integral and inseparable component parts of the building contract
- C. "Change Order Request" Forms: Use "Change Order Proposal" and "Change Order Proposal Worksheets" forms as required by Owner.
- D. A "Change Order Proposal" cannot be submitted without either prior submission of a "Request for Information" from the Contractor or as a response to a "Proposal Request" submitted by the Architect/Engineer or Owner.
- E. Any "Change Order Request" submitted without a prior submittal of a "Request for Information" or as a response to a "Proposal Request" will be immediately rejected and returned to the Contractor.

1.7 CONSTRUCTION CHANGE DIRECTIVE

A. "Construction Change Directive":

When the Owner and the Contractor disagree on the terms of a "Change Order Proposal" resulting from either a "Request for Information" or "Proposal Request", then the Architect/Engineer through the Project Manager may issue a "Construction Change Directive" on a "Construction Change Directive" form as authorized by the Owner. The "Construction Change Directive" instructs the Contractor to proceed with a change in the Work, for subsequent inclusion in a "Change Order".

- 1. The "Construction Change Directive" contains a complete description of the change in the Work. It also designates the method to be followed to determine change in the Contract Sum or Contract Time.
 - 2. Contractor must proceed with the Work once a "Construction Change Directive" is issued.
 - 3. The change in the Contract Sum and Contract Time resulting from the issuance of a "Construction Change Directive" will be based on "Time & Material" or "Unit Prices".
 - 4. Issuance of "Construction Change Directive" does not guarantee payment for the Work described in the "Construction Change Directive".
- B. Documentation: The Contractor shall maintain detailed records on a time and material basis of work required by the "Construction Change Directive".
- 1. After completion of the change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.
 - 2. The final value shall be negotiated based on the supporting data to determine the value of the work.

1.8 CHANGE ORDER PROCEDURES

- A. Upon the Owner's approval of a Contractor's "Change Order Proposal", the Project Manager will issue a "Change Order" for signatures of the Architect/Engineer, Owner and the Contractor on a "Change Order" form as required by the Owner.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01 26 00

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section specifies procedures for preparation and submittal of the Contractor's Applications for Payment.
- B. Related Sections: The following Sections contain requirements that relate to this Section.

- 1. Notice to Bidders: Article 10
- 2. General Conditions: Articles: 27 "Schedule of Values, Application for Payment"; 28 "Partial Payments"; 31 "Final Payment"; and 32 "Owner's Right to Withhold Payments".
- 3. Division 01 Section 01 32 16 "Construction Progress Schedules" for requirements for construction scheduling and reporting progress of work.

OR

- 3. Division 01 Section 01 32 16.13 "CPM Schedules" for requirements for CPM scheduling and reporting progress of work.
- 4. Division 01 Section 01 33 00 "Submittal Procedures".
- 5. Division 01 Section 01 77 00 "Closeout Procedures" for requirements for Final Payment.

1.3 SCHEDULE OF VALUES

- A. **Coordination:** Coordinate preparation of the "Schedule of Values" with preparation of the CPM Schedule or Construction Schedule. Use "Schedule of Values" form as required by the Owner
 - 1. Submit the "Schedule of Values" to the Project Manager at the earliest possible date but no later than **twenty-one (21)** days after Contract Start Date.
 - 2. **Sub-schedules:** Where Work is separated into phases requiring separately phased payments, provide sub-schedules showing values correlated with each phase of payment.
- B. **Format and Content:** Use the Project Manual Table of Contents as a guide to establish the format for the "Schedule of Values". Provide at least one line item for each Specification Section on electronic media printout.
 - 1. **Identification:** Project identification on the Schedule of Values shall include, but not be limited to, the following:
 - a. **Owner**
 - b. **Project Number**
 - c. **Project Name**
 - d. **Project Location**
 - e. **Contractor's name and address.**
 - 2. Arrange the "Schedule of Values" in tabular format as required by the Owner, containing separate columns including, but not limited to, the following Items:
 - a. **Item Number.**
 - b. **Description of Work with Related Specification Section or Division Number.**
 - c. **Scheduled Values broken down by description number, type material, units of each material.**
 - 1) **Include break down of General Condition requirements, i.e. bonds, insurance premiums, taxes, job mobilization, temporary facilities, field supervision and layout, operation and maintenance manuals, punch list activities, project record documents, demonstration and training, overhead, and profit as separate line items.**
 - d. **Name of subcontractor.**
 - e. **Name of manufacturer or fabricator.**

- f. **Name of supplier.**
 - g. **Retainage.**
 - h. **Contract sum in sufficient detail.**
3. Percentage of Contract Sum to nearest one-hundredth percent, adjusted to total 100 percent.
4. Provide a breakdown of the Contract Sum in sufficient detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with the Project Manual Table of Contents. Break principal subcontract amounts down into several line items. In addition, the following items listed below must be included.
- a. **Site Logistics Plan (01 31 00):** a lump sum at 1/20 of one percent of the base bid total project cost at the time of submission of this plan.
 - b. **Coordination Drawings (01 31 00):** a lump sum of this cost for payment at the submittal of this product a minimum cost of 1/10th of one percent of the base bid total project cost or \$5,000 whichever is greater.
 - c. **Photographic Documentation (01 32 33):** a monthly cost of \$1,000 per month to be paid each month upon receipt of the photographs or forfeit of that month's payment.
 - d. **Submittal Schedule (01 33 00):** a lump sum payment calculated at 1/20th of 1% of the base bid total project cost upon receipt of the schedule
 - e. **Waste Collection & Cleaning (01 50 00):** a monthly cost. A minimum payment of \$1,000 to \$3,000 (based on size & complexity of the project) with forfeit of that monthly payment if not done.
 - f. **As-Built Updates (01 31 00):** a monthly cost, a minimum payment of \$1,000 with forfeit of that monthly payment if not done.
 - g. **Start-up and Adjusting (01 75 00):** a lump sum cost upon completion. (to be determined by the DEEP Project Manager (PM) with Architect/Engineer and Construction Administrator (CA) advice)
 - h. **Schedule (01 32 16):** For the Base Schedule a lump sum payment or 40% of the total schedule budget, with the remainder paid on an even payment over the duration of the project.

OR

- h. **Schedule (01 32 16.13):** a lump sum payment upon receipt of the base line schedule. A payment of 40% of the total amount of the total cost which is to be calculated at 1/8th of one percent of the base bid total project cost. Monthly updates using the remainder of the cost divided evenly over the accepted schedule duration with a forfeit of the monthly payment of the update is not received on time.
- Any forfeited amounts being withheld by the CA for non-performance will be adjusted at the final payment by a credit change order to the owner.
5. Round amounts to nearest whole dollar; the total shall equal the Contract Sum.
6. **Unit-Cost Allowances:** Show the line-item value of unit-cost allowances, as a product of the unit cost, multiplied by the measured quantity. Estimate quantities from the best indication in the Contract Documents.
7. **General Conditions:** Show line items for indirect costs and margins on actual costs only when such items are listed individually in Applications for Payment. Each item in the Schedule of Values and Applications for Payment shall be complete. Include the total cost and proportionate share of general overhead and profit margin for each item.
- a. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the Schedule of Values or distributed as general overhead expense, at the Contractor's option.

1.4 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment shall be consistent with previous applications and payments as certified by the Architect/Engineer and Project Manager and paid for by the Owner.
 - 1. The initial "Application for Payment", the "Application for Payment" at time of "Substantial Completion", and the final "Application for Payment", involve additional requirements.
- B. **Payment-Application Terms:** The Owner will process monthly progress payments. The Contractor may submit applications for payment on a monthly basis.

- C. **Payment-Application Forms:** Use the "Application for Payment" form as required by the Owner. Present the required information on electronic media printout or Owner approved form; multiple pages should be used if required.
1. For each item, provide a column including but not limited to the following items:
 - a. Item Number.
 - b. Description of Work and Related Specification Section or Division.
 - c. Scheduled Value, break down by units of material and units of labor.
 - d. Work Completed from previous application.
 - e. Work Completed this period.
 - f. Materials presently stored.
 - g. Total Completed and stored to date of application.
 - h. Percentage of Completion.
 - i. Balance to Finish.
 - j. Retainage.
- D. **Application Preparation:** Complete every entry on the Application form. At the time of Final Payment only, include an executed Application form by a person authorized to sign legal documents on behalf of the Contractor. The Project Manager will return incomplete Applications without action.
1. Entries shall match data on the "Schedule of Values".
 2. Include amounts of Change Orders issued prior to the last day of the construction period covered by the application.
- E. **Transmittal:** Except for final payment, submit to the Project Manager by a method ensuring receipt within **forty-eight (48)** hours. **One (1)** complete, signed and notarized original of each Application for Payment, including lien waivers and similar attachments when required, along with **six (6)** copies. For Final Payment, **nine (9)** complete, signed and notarized copies shall be submitted.
1. Transmit each copy with a transmittal form listing attachments and recording appropriate information related to the application, in a manner acceptable to the Architect/Engineer.
- F. **Applications for Payment:** Administrative actions and submittals, that must precede or coincide with submittal of the first Application for Payment and all subsequent Application for Payments including, but not limited to, the following items:
1. List of subcontractors and suppliers' name, FEIN/Social Security numbers, and Connecticut Tax Registration Numbers.
 2. List of principal suppliers and fabricators.
 3. Schedule of Values.
 4. Contractor's Construction Schedule (preliminary if not final).
 5. Schedule of principal products.
 6. Submittal Schedule (preliminary if not final).
 7. List of Contractor's staff assignments.
 8. List of Contractor's principal consultants.
 9. Copies of all applicable permits.
 10. Copies of authorizations and licenses from governing authorities for performance of the Work.
 11. Proof that subcontractors have been paid amounts included on the Contractor's Application for Payment within thirty (30) days after the Owner has paid the Contractor for the particular Application for Payment in accordance with Connecticut General Statute § 49-41a (a)(1).
 12. Releases of Lien from subcontractors with amounts included on the Contractor's Application for Payment when Contractor has been paid by the Owner for the particular Application for Payment but the subcontractors have not been paid.
 13. Proof that as-built documents are updated as required by Section 01 77 00 "Closeout Procedures.
 14. Initial as-built survey and damage report, if required.

15. Update the "Contractor's Master Subcontract Agreement List" and submit copies all recently executed Subcontract Agreements in accordance with CGS § 4b-96.
- 15.1. The "Contractor's Master Subcontract Agreement List" shall list all Subcontract Agreements in order of Contract Sum magnitude (from high to low) in the following format:

Contractor's Master Subcontract Agreement List				
Subcontractor Name	Minority Or Small Business Designation	Trade	Address	Contract Sum

16. In accordance with CGS § 42-158j (b):
 Each payment requisition submitted shall include a statement showing the status of all pending construction change orders, other pending change directives and approved changes to the original contract or subcontract. Such statement shall identify the pending construction 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. As used in this section, "pending construction change order" or "other pending change directive" **means an authorized directive for extra work that has been issued to a contractor or a subcontractor and identified by an official Change Order Number or Construction Change Directive Number assigned by the State of Connecticut.**

G. Application for Payment at Substantial Completion: Following issuance of the Certificate of Substantial Completion submit an Application for Payment form; use the form as required by the Owner. Present the required information on electronic media printout as applicable that include, but are not limited, to the following:

1. This application shall reflect Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
2. Administrative actions and submittals that shall precede or coincide with this application include, but are not limited to, the following:
 - 2.1 Occupancy permits and similar approvals.
 - 2.2 Warranties (guarantees) and maintenance agreements.
 - 2.3 Test/adjust/balance records.
 - 2.4 Maintenance instructions.
 - 2.5 Meter readings.
 - 2.6 Startup performance reports.
 - 2.7 Changeover information related to Owner's occupancy, use, operation, and maintenance.
 - 2.8 Final cleaning.
 - 2.9 Application for reduction of retainage and consent of surety.
 - 2.10 Advice on shifting insurance coverage.
 - 2.11 Final progress photographs.
 - 2.12 List of incomplete Work, recognized as exceptions to Architect/Engineer's Certificate of Substantial Completion.

H. Final Payment Application: Administrative actions and submittals that must precede or coincide with submittal of the final Application for Payment include, but are not limited, to the following:

1. Completion of Project Closeout requirements.
2. Completion of list of items remaining to be completed as indicated on the attachment to the Certificate of Substantial Completion.
3. Ensure that unsettled claims will be settled.
4. Ensure that incomplete Work is not accepted and will be completed in accordance with a schedule prepared by the Contractor which is acceptable to the Owner.
5. Transmittal of required Project construction records to the Owner (including as-built documents specified in Section 01 77 00 "Closeout Procedures").
6. Certified property survey.

7. Proof that taxes, fees, and similar obligations were paid.
8. Removal of temporary facilities and services.
9. Removal of surplus materials, rubbish, and similar elements (Reference Section 01 74 19 "Construction Waste Management & Disposal").
10. Change of door locks to Owner's access.
11. The requirements of the General Conditions and Supplementary Conditions for Final Acceptance, Final Completion, Final Inspection, and Final Payment.
12. Asbestos, lead or other hazardous material manifests.
13. Completion of "Building Contractor Reporting Form" as supplied by Department of Energy and Environmental Protection, for all Contractors, Subcontractors, Vendors, Suppliers, etc. who work on the Contract. The form includes the following information:
 - a. Contractor/Subcontractor name.
 - b. FEIN/Social Security Numbers
 - c. Connecticut Tax Registration Numbers
 - d. Type of work
 - e. Name of business and address
 - f. Remittance address.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01 29 76

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and supervisory requirements necessary for coordinating construction operations including, but not necessarily limited to, the following:
 - 1. General project coordination procedures.
 - 2. Conservation.
 - 3. Coordination Drawings, including Site Logistics Plans.
 - 4. Administrative and supervisory personnel.
 - 5. Cleaning and protection.
- B. **Related Sections:** The following Sections contain requirements that relate to this Section:
 - 1. Division 01 Section 01 29 76 "Progress Payment Procedures" for Schedule of Values items
 - 2. Division 01 Section 01 31 19 "Project Meetings" for progress meetings, coordination meetings, and pre-installation conferences.
 - 3. Division 01 Section 01 32 16 "Construction Progress Schedules" for requirements for construction scheduling and reporting progress of work.

OR

- 3. Division 01 Section 01 32 16.13 "CPM Schedules" for requirements for CPM scheduling and reporting progress of work.
- 4. Division 01 Section 01 50 00 "Temporary Facilities and Controls".
- 5. Division 01 Section 01 60 00 "Product Requirements" for coordinating general installation.
- 6. Division 01 Section 01 71 23 "Field Engineering" specifies procedures for field engineering services, including establishment of benchmarks and control points.
- 7. Division 01 Section 01 77 00 "Closeout Procedures" for coordinating contract closeout.
- 8. Division 01 Section 01 91 00 "Commissioning" defines the commissioning process.

1.3 CONSTRUCTION ADMINISTRATOR

A. Construction Administrator:

- 1. The Construction Administrator is identified in Division 01 Section 01 11 00 "Summary of Work".
- 2. **Construction Mobilization:**
 - a. Cooperate with the Project Manager in the allocation of mobilization areas of the site, for field offices and sheds, for agency facility access, traffic, and parking facilities.
 - b. During Construction, coordinate use of site and facilities through the Project Manager.
 - c. Comply with Project Manager's procedures for intra-project communications; submittals, reports and records, schedules, coordination drawings, and recommendations; and resolution of ambiguities and conflicts.
 - d. Comply with instructions of the Project Manager for use of temporary utilities and construction facilities.
 - e. Coordinate field engineering layout as specified in Division 01 Section 01 71 23 "Field Engineering" for work under the instructions of the Project Manager.

1.4 COORDINATION

- A. Coordinate construction operations included in various Sections of these Specifications to assure efficient and orderly installation of each part of the Work. Coordinate construction operations included under different Sections that depend on each other for proper installation, connection, and operation.

1. Schedule construction operations in the sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
2. Coordinate installation of different components to assure maximum accessibility for required maintenance, service, and repair.
3. Make provisions to accommodate items scheduled for later installation.
- B. Where necessary, prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and attendance at meetings.
 1. Prepare similar memoranda for the Project Manager, Construction Administrator, Owner and separate contractors where coordination of their work is required.
- C. **Administrative Procedures:** Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and assure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
 1. Preparation of schedules.
 2. Installation and removal of temporary facilities.
 3. Delivery and processing of submittals.
 4. Progress meetings.
 5. Project closeout activities.
 6. As-Built - coordinate monthly meetings to assure up-dates being performed.

1.5 SUBMITTALS

- A. **Coordination Drawings:** Prepare coordination drawings to complete detailed coordination of systems and components and to integrate information about fabrication and installation.
 1. Thoroughly prepare coordination drawings, as further stipulated in Part 3 "Execution", reviewing all contract documents and consulting with all entities contributing to or involved with each portion of the work under consideration.
 - a. Show the relationship of all components shown on any separate Shop Drawings.
 - b. Indicate required desired installation sequences.
 - c. Comply with requirements contained in Division 01 Section 01 33 00 "Submittal Procedures".
 2. Prepare coordination drawings for installation of all products and materials fabricated by separate entities.
 3. Prepare coordination drawings where limited space availability necessitates maximum utilization of space for efficient installation of different components, including but not limited to: all site-utility entry points; all ceiling and roof cavities in all areas; all electrical, telecommunications and mechanical rooms; all stage-boundary interface areas; all laboratories, animal-handling rooms and data rooms; all classrooms and seminar rooms; all lecture halls and their support spaces; all video studios, broadcast classrooms and their support facilities; and all such other conditions required to coordinate the work.
 4. **Prepare a Site Logistics Plan(s) showing:** The entire project area and limits; all routes into and out of site; all staging and stockpiling and lay-down areas; all aspects of phasing/staging; all parking, paving and fencing; and all specific provisions to satisfy requirements of Division 01 Sections, including but not limited to Field Engineering and Temporary Facilities and Controls. The Site Logistics Plan shall coincide with and complement the general staging plans and site plans outlined in the contract bidding documents. It is intended that the Contractor shall present this refined plan for approval by the Project Manager. The fencing shown on this plan is required for all phases. Exact placement and timing of installations and removals will be reviewed and approved by the Project Manager prior to implementation. An additional allotment of various fencing is specified in Division 32, which the Contractor shall provide, install, and relocate at various intervals, for installation and removal by the Contractor per the direction of the project's Project Manager. This staging and logistics plan will require refinement and change for each phase/stage of the project. The Site Logistics Plan(s) shall be drawn at a scale no smaller than 1"=40' and shall be submitted as stipulated in Division 01 Section 01 29 76 "Progress Payment Procedures", but in no case later than (30) days after Notice to Proceed.
 5. Prepare coordination drawings showing locations of surface recesses and voids, as well as offsets and breaks, requiring filling and/or feathering, both those initially visible and those discovered during the course of work. Review with Owner and Architect/Engineer to obtain direction for filling and feathering. Revise drawing(s) to record directions for same for field and record purposes.

- B. Staff Names:** Prior to the contract start date, submit a list of the Contractor's principal staff assignments, including the superintendent, project safety officer, and other personnel in attendance at the Project Site. Identify individuals and their duties and responsibilities. List their addresses and telephone numbers.
1. Post copies of the list in the Project meeting room, the temporary field office, and at each temporary telephone.
 2. Provide resumes of each staff member proposed for the Project. This shall include the Project Manager, Project Superintendent and Safety Officer.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 GENERAL COORDINATION PROVISIONS

- A. Inspection of Conditions:** The Contractor shall require the Installer of each major component to inspect both the substrate and conditions under which Work is to be performed and coordinate such inspections with the Project Manager and authorities having jurisdictions. If unsatisfactory conditions exist notify the Project Manager immediately. Do not proceed until unsatisfactory conditions have been corrected in an acceptable manner.
- B.** The Contractor shall coordinate temporary enclosures with required inspections and tests to minimize the necessity of uncovering completed construction for that purpose.
- C. Coordination Drawings:** Before construction work can begin, the Contractor shall submit to the Architect/Engineer coordination drawings in the form of (a) reproducible (vellum) transparencies at not less than 1/4-inch scale and (b) CAD files of the coordination drawings on CDROM. Such drawings will be required throughout all areas for trades as described below. These drawings shall show resolutions of trade conflicts in congested areas. The Architect/Engineer will supply base drawings (with the title blocks removed), including floor plans, reflected ceiling plans, and structural framing plans, in the form of electronic CAD files on CDROM, using the AutoCAD release edition specified with the files, to the Contractor for distribution to the trades for use in developing the coordination drawings. Each trade contractor shall create separate layers within the CAD files to show the work of their trade. Prepare coordination drawings as follows:
1. The HVAC subcontractor shall initiate 1/4-inch scale drawings done on AutoCAD (latest version) showing ducts and piping in plan and section. Sheet metal shop drawings must be approved prior to starting coordination drawings.
 2. The Sprinkler subcontractor shall then add layers to superimpose his piping layout on the coordination drawings.
 3. The Electrical subcontractor shall then add layers to superimpose all the electrical information on the coordination drawings. Said information is to include but not necessarily be limited to cable trays, equipment, lighting, conduits, bus duct, etc. Show space allowances reserved for work under other contracts, such as audio-visual wiring and equipment.
 4. The Plumbing subcontractor shall then add layers to complete the coordination drawing by drawing his piping (including pitch) on the coordination drawings.
 5. Subcontractors for specialties, furnishings, equipment and special construction shall add layers to show their work to assure full coordination of all systems.
 6. The Project Manager shall review the completed coordination drawings for general compliance and then submit them to the Architect/Engineer for his review. All subcontractors shall rework the drawings until all systems are properly coordinated.
 7. The Ceiling subcontractor shall utilize the drawings to prepare acoustic panel ceiling drawings and any other suspended ceiling drawings, and shall indicate areas of conflict with the work of other trades by drafting the location of grids, panels and tiles.
 8. The Contractor shall indicate Architectural/Structural conflicts or obstacles and coordinate to suit the overall construction schedule. The Contractor shall locate all precut and prefabricated holes and openings in structural steel on the CAD coordination drawing files as required for HVAC, plumbing, fire protection and electrical work. The Contractor shall coordinate these holes and openings with the structural steel fabricator during the structural steel shop drawing development phase. Coordination to take place on schedule so as to permit shop fabrication of all structural steel holes and openings. The

Owner will not be held responsible for the costs associated with field fabrication of structural openings resulting from the lack of timely and thorough coordination.

9. The Contractor shall expedite all drawing work and coordinate to suit the construction schedule. The Contractor shall then review these drawings and compare them with the Architectural, Structural, Equipment, and other drawings and determine that all of the work can be installed without undue interference. Prior to the submittal to the Architect/Engineer, areas of potential conflict shall be brought to the attention of the Contractor who shall convene a coordination meeting of all parties involved, for the purpose of resolving all utility conflicts. The Contractor shall supervise and direct corrective measures and have all trades sign acceptance of the drawings. Submit four (4) hard copies of each drawing to the Architect/Engineer and two (2) copies to the Project Manager for the record, and only after all conflicts have been accommodated.
 10. If the coordination meeting fails to resolve coordination conflicts, the Contractor shall indicate the nature of such conflicts in a detailed RFI, proposing the most economical solution.
 11. The Contractor shall not permit work by trades to proceed in a given bay or area until all trade foremen agree on the exact arrangements for each room or area. If a given trade proceeds prior to trades approval, then if necessary, that trade shall revise their work, if necessary, at no extra cost, in order to permit other trades to proceed.
 12. Submit all coordination drawings on CD-ROM, in addition to hard copy.
- D. The Project Manager will meet with the Contractor on all major items of coordination.

3.2 CLEANING AND PROTECTION

- A. Clean and protect construction in progress and adjoining materials in place, during handling and installation. Apply protective covering, where required, to assure protection from damage or deterioration.
- B. Clean and provide maintenance on completed construction as construction per manufacturers requirements through the remainder of the construction period. Adjust and lubricate operable components to assure operability without damaging effects.
- C. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period. Where applicable, such exposures include, but are not limited to, the following:
 1. Excessive static or dynamic loading.
 2. Excessive internal or external pressures.
 3. Excessively high or low temperatures.
 4. Thermal shock.
 5. Excessively high or low humidity.
 6. Air contamination or pollution.
 7. Water or ice.
 8. Solvents.
 9. Chemicals.
 10. Light.
 11. Radiation.
 12. Puncture.
 13. Abrasion.
 14. Heavy traffic.
 15. Soiling, staining, and corrosion.
 16. Bacteria.
 17. Rodent and insect infestation.
 18. Combustion.
 19. Electrical current.
 20. High-speed operation.
 21. Improper lubrication.

- 22. Unusual wear or other misuse.
- 23. Contact between incompatible materials.
- 24. Destructive testing.
- 25. Misalignment.
- 26. Excessive weathering.
- 27. Unprotected storage.
- 28. Improper shipping or handling.
- 29. Theft.
- 30. Vandalism.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01 31 00

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements for project meetings, including, but not limited to, the following:
 - 1. **Start Date meeting (establishes start date)**
 - 2. **Pre-construction conferences.**
 - 3. **Pre-installation conferences.**
 - 4. **Progress meetings.**
 - 5. **Safety**
 - 6. **Coordination**
 - 7. **As-built drawings review**
 - 8. **And as required**
- B. **Related Sections:** The following Sections contain requirements that relate to this Section:
 - 1. Division 01 Section 01 31 00 "Project Management and Coordination" for procedures for coordinating project meetings with other construction activities.
 - 2. Division 01 Section 01 32 16 "Construction Progress Schedules" for requirements for construction scheduling and reporting progress of work.

OR

- 2. Division 01 Section 01 32 16.13 "CPM Schedules" for requirements for CPM scheduling and reporting progress of work.
- 3. Division 01 Section 01 33 00 "Submittal Procedures" for submitting the Construction Schedule or CPM Schedule.
- 4. Division 01 Section 01 35 26 "Government Safety Requirements specifies the requirements for safety plans, reports, and investigation submittals.
- 5. Division 03 Section 03 45 00 "Precast Architectural Concrete" for pre-installation/erection conferences.
- 6. Division 07 Section 07 50 00 "Membrane Roofing" for pre-construction conferences.

1.3 PRE-CONSTRUCTION CONFERENCE

- A. The Contractor will attend a pre-construction conference before starting construction, as scheduled by the Project Manager convenient to the Owner, the Construction Administrator, Architect/Engineer, and Contractor. This meeting will take place at least **fourteen (14)** days prior to official Start Date. Hold the conference at the Project Site or another convenient location as directed by the Project Manager. The Project Manager shall conduct the Pre-construction Conference to review the Contractor and Subcontractor responsibilities and personnel assignments.
- B. **Attendees:** Authorized representatives of the Construction Administrator, Owner, Architect/Engineer, and their consultants; the Contractor and its superintendent; major subcontractors; agency; and other concerned parties shall attend the conference. All participants at the conference shall be familiar with the Project and authorized to conclude matters relating to the Work.
- C. **Agenda:** Discuss items of significance that could affect progress, including the following:
 - 1. **Tentative construction schedule.**
 - 2. **Critical work sequencing.**

3. Progress meeting schedule.
4. Designation of responsible personnel.
5. Procedures for processing field decisions and Change Orders.
6. Procedures for processing Applications for Payment.
7. Distribution of Contract Documents.
8. Submittal of Shop Drawings, Product Data, and Samples.
9. Preparation of record documents.
10. Use of the premises.
11. Parking availability.
12. Office, work, and storage areas.
13. Equipment deliveries and priorities.
14. Safety procedures.
15. First aid.
16. Security.
17. Housekeeping.
18. Working hours.

1.4 PRE-INSTALLATION/CONSTRUCTION CONFERENCES

- A. The Contractor will schedule a pre-installation conference(s) at the Project Site before each construction activity that requires coordination with other construction. The Contractor shall be responsible to notify in writing the Project Manager and the appropriate Subcontractor(s), etc., of the date and time of all Pre-installation/Construction Conferences. Notification shall be at least seven (7) days, prior to the Conference. The Contractor shall be responsible for coordination and attendance of all Subcontractors, etc., involved in or affected by the installation for all Pre-installation/Construction Conferences.
- B. **Attendees:** The Project Manager, The Construction Administrator, Contractor, Subcontractors, Owner and Architect/Engineer, the installer and representatives of manufacturers and fabricators involved in or affected by the installation, and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. The Contractor shall advise all attendees of the scheduled Pre-installation/Construction Conferences dates.
- C. **Agenda:** Review the progress of other construction activities and preparations for the particular activity under consideration at each Pre-installation/Construction Conference, including but not limited to the following requirements:
 1. Contract Documents.
 2. Options.
 3. Related Change Orders.
 4. Purchases.
 5. Deliveries.
 6. Shop Drawings, Product Data, and quality-control samples.
 7. Review of mockups.
 8. Possible conflicts.
 9. Compatibility problems.
 10. Time schedules.
 11. Weather limitations.
 12. Manufacturer's recommendations.
 13. Warranty requirements.

14. **Compatibility of materials.**
 15. **Acceptability of substrates.**
 16. **Temporary facilities.**
 17. **Space and access limitations.**
 18. **Governing regulations.**
 19. **Safety.**
 20. **Inspecting and testing requirements.**
 21. **Required performance results.**
 22. **Recording requirements.**
 23. **Protection.**
- D. The Project Manager will record significant discussions and agreements and disagreements of each Pre-installation/Construction Conference, and the approved schedule. The Project Manager will promptly distribute the record of the Pre-installation/Construction Conference to all attendees.
- E. The Contractor shall not proceed with the installation/construction if the conference cannot be successfully concluded. The Contractor shall be responsible to initiate whatever actions are necessary to resolve impediments to performance of Work and schedule and reconvene another Pre-installation/Construction Conference at the earliest feasible date. Failure of the contractor to resolve impediments to the performance of the work will not result in an extension of days.

1.5 PROGRESS MEETINGS

- A. The Project Manager will conduct progress meetings, weekly, at the Project Site or at regular intervals as agreed upon at the Pre-construction Conference. The Project Manager will notify the Construction Administrator, the Architect/Engineer, and the Contractor of the scheduled Progress Meeting dates. Coordinate dates of Progress Meetings with preparation of Application for Payment requests.
- B. **Attendees:** In addition to representatives of the Contractor, Construction Administrator, Owner and the Architect, Engineer, subcontractor, supplier, or other entity concerned with current progress or involved in planning, coordination, or performance of future activities may be requested to attend these meetings on an as needed basis. All participants at the meeting shall be familiar with the Project and authorized to conclude matters relating to the Work. The Contractor shall include the site superintendent as a minimum.
- C. **Agenda:** Progress Meetings shall review and correct or approve minutes of the previous Progress Meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to the status of the Project.
1. **Construction Schedule or CPM Schedule:** Review progress since the last Progress Meeting. Determine where each activity is in relation to the required Contractor's "Construction Schedule" or "CPM Schedule" and whether each activity is on time or ahead or behind Schedule. Determine how Work that is behind Schedule will be expedited; secure commitments from parties involved to do so. Discuss whether Schedule revisions are required to insure that current and subsequent activities will be completed within the Contract Time.
 2. Review the present and future needs of each entity present, including the following:
 - a. **Interface requirements.**
 - b. **Time.**
 - c. **Sequences.**
 - d. **Status of submittals.**
 - e. **Deliveries.**
 - f. **Off-site fabrication problems.**
 - g. **Access.**
 - h. **Site utilization.**
 - i. **Temporary facilities and services.**
 - j. **Hours of work.**

- k. Hazards and risks.
 - l. Housekeeping.
 - m. Quality and work standards.
 - n. Change Orders.
 - o. Documentation of information for payment requests.
- D. **Reporting:** The Project Manager will distribute minutes of the meeting to each party present, promptly and before the next scheduled meeting, and to parties who should have been present.

1.6 SUBCONTRACTOR/COORDINATION/SAFETY MEETINGS

- A. The Contractor shall conduct Subcontractor/coordination meetings.
- B. The Contractor shall conduct a separate safety meeting after the safety plan is submitted. The Contractor shall take meeting minutes. These minutes shall be made available upon request. The Contractor shall notify the Project Manager of the times and dates of these meetings, who may elect to attend these meetings as an observer when necessary. A minimum of one safety meeting will be held per month.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01 31 19

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for the preparation, submittal, and updating of the Contractor's construction schedules and reporting progress of the Work.
 - 1. Refer to the General Conditions and the Agreement for definitions and specific dates of Contract Time.
- B. This Section includes the following:
 - 1. Format.
 - 2. Content.
 - 3. Revisions to schedules.
 - 4. Submittals.
 - 5. Distribution.
- C. **Related Sections:** The following Sections contain requirements that relate to this Section:
 - 1. Division 01 Section 01 29 76 "Progress Payment Procedures" specifies requirements for submitting Schedule of Values and Application for Payments.
 - 2. Division 01 Section 01 31 19 "Project Meetings" specifies requirements for submitting and distributing meeting and conference minutes.
 - 3. Division 01 Section 01 33 00 "Submittal Procedures" specifies requirements for submitting the Submittal Schedule.
 - 4. Division 01 Section 01 45 00 "Quality Control" specifies requirements for submitting inspection and test reports.
 - 5. Division 01 Section 01 60 00 "Product Requirements" specifies requirements for submitting the list of products.

1.3 DEFINITIONS

- A. **Construction Schedule:** A method of planning and scheduling a construction project utilizing a horizontal bar chart with a separate bar for each major portion of the Work or operation to make the schedule an effective tool for planning and monitoring the progress of the work.

1.4 QUALITY ASSURANCE

- A. **The Contractor's Consultant:** Retain a consultant to provide planning, evaluating, and reporting by CPM scheduling.
 - 1. **In-House Option:** The Owner may waive the requirement to retain a consultant if the Contractor can demonstrate that:
 - a. The Contractor has the computer equipment required to produce construction schedules.
 - b. The Contractor employs skilled personnel with experience in construction scheduling and reporting techniques.
 - 2. **Program:** Use **Microsoft Excel or Microsoft Project** latest version.
 - 3. **Standards:** Comply with procedures contained in AGC's "Construction Planning & Scheduling."

1.5 PRELIMINARY SCHEDULE

- A. Preliminary Gantt schedule is to be prepared by the Contractor and submitted to the Project Manager within **seven (7)** days of award of contract. This schedule is to cover all items of Work from the start of the project up to the completion of the project. This schedule must be revised when the actual schedule of significant items varies more than one week from the proposed schedule.

1.6 CONSTRUCTION SCHEDULE FORMAT

1. **Format:** Utilize a horizontal bar chart (Gantt) with a separate bar for each major portion of the Work or operation, identifying first work day of each week.
2. **Program:** Use **Microsoft Excel or Microsoft Project**, latest version.
3. **Sequence of Listings:** Utilize the Table of Contents of this Project Manual and the chronological order **of the start of each item of work.**
4. **Scale and Spacing:** Provide space for notations and revisions.
5. **Sheet Size:** To be coordinated with Project Manager.
6. **Weather Days Allowance:** The Contractor shall include as a separate identifiable activity on the Critical Path of the Construction Schedule, and activity labeled "Weather Days Allowance." Insert this activity immediately prior to the substantial completion milestone.

6.1 The Contractor shall be fully responsible for determining the number of weather delay days to be included in the Construction Schedule. This determination shall be based on the normal anticipated weather for the project location and the nature of the project work. The Construction Schedule shall be based on the contractor's determined weather delay allowance. The weather delay activity shall be included in the construction schedule immediately prior to the Substantial Completion milestone.

6.2 The minimal allowed duration of the Weather Days Allowance shall be calculated as follows (decimals rounded to nearest whole number):

$$\frac{\text{Contract Time (Calendar Days)}}{365} \text{ multiplied by } 7 \text{ equals Weather Days Allowance (Calendar Days)}$$

6.3 The Contractor shall insert an activity in the Critical Path of the Construction Schedule to reflect weather day occurrences when weather days are experienced and accepted by the Owner. Identify this activity as a weather delay.

6.4 The Contractor shall reduce duration of Weather Days Allowance activity as weather delays are experienced and inserted into the schedule. Remaining weather days in Weather Day Allowance at completion of project is considered float. Weather delay, when justified, are considered allowable, non compensable.

1.7 CONTENT

- A. Show complete sequence of construction by activity, with dates beginning and completion of each element of construction.
- B. Identify each item by specification section numbers.
- C. Identify work of separate phases and other logically grouped activities.
- D. Show accumulated percentages of completion of each item, and total percentage of Work completed, as of the **first** day of each month.
- E. Provide separate schedule of submittal dates for shop drawings, product data, and samples, Owner/Agency furnished products and any products identified as under Allowances, and dates reviewed submittals will be required from Architect/Engineer. Indicate decision dates for selection of finishes.
- F. Indicate delivery dates for Owner/Agency furnished products and any products identified as under Allowances.
- G. Indicate critical path with original baseline indicated.
- H. Coordinate content with Schedule of Values specified in Section 01 29 76 "Progress Payment Procedures."

1.8 SUBMITTALS AND REVISIONS TO SCHEDULES

- A. An initial bar graph schedule is to be prepared by the Contractor and submitted to the Project Manager. Refer to Article 1.5.
- B. Indicate progress of each activity to date of submittal, and projected completion date of each activity.
- C. Identify activities modified since previous submittal, major changes in scope, and other identifiable changes.
- D. Provide narrative report to define problem areas, anticipated delays, and impact on Schedule. Report corrective action taken, or proposed, and its effect.

- E. Schedules must be revised monthly and when the actual schedule of significant items varies more than **seven (7) days** from the proposed schedule.
- F. Submit revised Construction Schedules for each Application for Payment.
- G. Submit **four (4)** copies of the Construction Schedule to the Project Manager.

1.9 DISTRIBUTION

- A. Distribute copies of the Construction Schedules to the Project Manager, Construction Administrator, Architect, Engineer, Owner, Subcontractors, suppliers, and other concerned parties.
- B. Instruct recipients to promptly report, in writing, problem anticipated by projections indicated in schedules.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01 32 16

PART 1 - GENERAL**1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for the preparation, submittal, and maintenance of the Contractor's computerized progress schedule, reporting progress of the Work, and Contract time adjustments, including the following:
1. Preliminary schedule.
 2. Baseline schedule.
 3. **Two (2) week** look ahead schedules.
 4. Schedule revisions.
 5. Recovery schedules.
 6. Narratives.
 7. Schedule time extensions.
- B. The above listed Project schedules shall be used for evaluating all issues related to time for this Contract. The Project schedules shall be updated in accordance with the requirements of this Section to reflect the actual progress of the Work and the Contractor's current plan for the timely completion of the Work. The Project schedules shall be used by the Owner and Contractor for the following purposes as well as any other purpose where the issue of time is relevant:
1. To communicate to the Owner the Contractor's current plan for carrying out the Work;
 2. To identify work paths that are critical to the timely completion of the Work;
 3. To identify upcoming activities on the Critical Path(s);
 4. To evaluate the best course of action for mitigating the impact of unforeseen events;
 5. As the basis for analyzing the time impact of changes in the Work;
 6. As a reference in determining the cost associated with increases or decreases in the Work;
 7. To identify when submittals will be submitted to the Owner;
 8. To prioritize the Owner's review of submittals;
 9. To document the actual progress of the Work;
 10. To evaluate resource requirements of the Contractor and the Owner;
 11. To integrate the Work with the operational requirements of the Owner's facilities;
 12. To facilitate efforts to complete the Work in a timely manner.
 13. To document the history of the Work.
- B. Refer to the General Conditions and the Agreement for definitions and specific dates of Contract Time.
- C. **Related Sections:** The following Sections contain requirements that relate to this Section:
1. Division 01 Section 01 11 00 "Summary of Work" specifies the scope of work for the various phases, requirements regarding the Contractor's use of premises, occupancy requirements, products ordered in advance, and Owner furnished products.
 2. Division 01 Section 01 25 00 "Substitution Procedures" specifies requirements for handling requests for equals and substitutions.
 3. Division 01 Section 01 26 00 "Contract Modification Procedures" specifies requirements for handling and processing contract modifications.
 4. Division 01 Section 01 29 76 "Progress Payment Procedures" specifies requirements for submitting Schedule of Values and Application for Payments.
 5. Division 01 Section 01 31 00 "Project Management and Coordination" specifies requirements for coordinating construction operations.

6. Division 01 Section 01 31 19 "Project Meetings" specifies requirements for submitting and distributing meeting and conference minutes.
7. Division 01 Section 01 33 00 "Submittal Procedures" specifies requirements for submitting the monthly computerized progress schedule.
8. Division 01 Section 01 45 00 "Quality Control" specifies requirements for submitting inspection and test reports.
9. Division 01 Section 01 50 00 "Temporary Facilities and Controls" specifies requirements for temporary utilities, support facilities, and security protection.
10. Division 01 Section 01 60 00 "Product Requirements" specifies requirements for submitting the list of products.
11. Division 01 Section 01 77 00 "Closeout Procedures" specifies requirements for Contract closeout.

1.3 DEFINITIONS

- A. **Critical Path Method (CPM):** A method of planning and scheduling a construction project where activities are arranged based on activity relationships and network calculations determine when activities can be performed and the critical path of the Project.
- B. **Critical Path:** The longest continuous chain of activities through the network at a given data date for the Schedule to a Contract Milestone or Contract Completion. Where the path to a specific Milestone has become negative, the Critical Path shall be the longest continuous chain of activities with the greatest amount of negative float.
- C. **Near Critical Path:** Any continuous series of activities through the network to the Contract Milestone or the Contract Completion Date where the Total Float of the activity at the data date along that path is within **fifteen (15) days** of the Total Float possessed by the activity at the data date along the Critical Path.
- D. **Network Diagram:** A graphic diagram of a network schedule, showing the activities and activity relationships.
- E. **Activity:** A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction project. Activities included in a construction schedule consume time and resources.
 1. Critical activities are activities on the critical path.
 2. Predecessor activity is an activity that must be completed before a given activity can be started.
- F. **Event:** An event is the starting or ending point of an activity.
- G. **Milestone:** A key or critical point in time for reference or measurement.
- H. **Float:** Is the measure of leeway in activity performance. Accumulative float time belongs to the Owner.
 1. Free float is the amount of time an activity can be delayed without adversely affecting the early start of the following activity.
 2. Total float is the measure of leeway in starting or completing an activity without adversely affecting the planned project completion date.
- I. **Total Float:** The number of days from the late finish date (LF) to the early finish date (EF) of an activity at a given data date for the Schedule. When the LF is later than the EF, the Total Float shall be positive. When the LF and the EF are the same, the Total Float shall be zero. When the LF is earlier than the EF, the Total Float shall be negative. Unless otherwise specified all references to "float" shall mean "Total Float."
- J. **Fragnet:** The sequence of new activities and/or activity revisions, logic or resource changes that are proposed to be added to the existing schedule to demonstrate the influence of impacts to the schedule. The Fragnet shall identify the predecessors to the new activities and demonstrate the impacts to successor activities.

1.4 QUALITY ASSURANCE

- A. **Construction Scheduler:**
 1. The Contractor is required to employ or retain the services of an individual skilled in construction scheduling ("Construction Scheduler"). For projects with a Contract value greater than five (5) million dollars, the Construction Scheduler shall have at least five (5) years of verifiable experience as the person primarily responsible for preparing and maintaining detailed project schedules on projects of the same or similar size and nature as this project. The Construction Scheduler is required to attend meetings pertaining to scheduling and progress of the work including all progress meetings.
 2. Within **five (5) days** after the Notice of Award, the Contractor shall provide a statement to the Owner with the following:

- a. Identification, qualifications, and experience of the Contractor's Construction Scheduler and all other members of the Contractor's scheduling staff.
 - b. References of not less than **two (2)** previous projects on which the Contractor's Construction Scheduler has utilized CPM scheduling.
3. The Owner reserves the right to disapprove any Construction Scheduler candidate proposed for the project and/or remove, without rights to work on the project, any member of the Contractor's scheduling staff that is, in the Owner's opinion, not qualified. In case of disapproval, the Contractor shall resubmit the qualifications and references of the proposed alternate Construction Scheduler within **ten (10) days**. The Contractor must have its Construction Scheduler approved prior to the issuance of the Notice to Proceed and the submission of any schedule.
 4. Should the Construction Scheduler leave the employ of the Contractor or be re-assigned or relieved of his/her responsibilities as the Construction Scheduler on the project, the Contractor will be required to submit the qualifications of the proposed replacement Construction Scheduler within **10 days** after the date the former Construction Scheduler is no longer responsible for his/her duties on this Project.
- B. Scheduling Software:**
1. For Contracts greater than **five (5) million** dollars, the Contractor shall use the latest version of **Primavera Project Planner** as the scheduling software system for use on this Project.
 2. The Contractor shall provide one (1) licensed copy of the scheduling software to the Owner's CA for their use, registered in the Owner's name, complete with the entire manufacturer's manual, within **five (5) days** after the Contract award. The software manuals and license shall become the permanent property of the Owner.

1.5 CPM SCHEDULE FORMAT/CONTENT

- A. Format:** All Schedules required by this section shall be computer generated, critical path method (CPM) networks utilizing the precedence diagram method of scheduling.
- B. Electronic Schedule Naming:** The Contractor shall not submit any two (2) schedule files with the same file name. File names shall be in accordance with the following requirements:
1. Proposed/Final Preliminary Schedules shall be named P001, P002, P003, etc.
 2. Proposed/Final Baseline Schedules shall be named B001, B002, B003, etc.
 3. Final Updated Schedules shall be named U001, U002, U003, etc. Any revisions that are required at a particular update on a data date shall be numbered UA01, UB01, UC01, etc.
- C. Activity Identification:** Each activity in the Project schedules shall have an activity Identifier (activity ID). The Contractor is encouraged to utilize the activity ID to contain a structure enabling easy identification of work type, location, subcontractor, etc. The activity ID of an existing activity shall not be modified or assigned to another activity.
- D. Activity Description:** The activity description shall identify the scope of the activity and shall include a verb or work function (i.e. form, pour, execute, etc.), an object (i.e. slab, footing, wall, etc.), and location (i.e., first floor, roof, etc.). There shall not be any two activities with the same activity description. It shall not be necessary to investigate activity code assignments or logic relationships to identify the scope of an activity. For example, the description "Pour Footing" will not be acceptable. The description "Pour Footing West Wall, Section 2" will be acceptable. The terms "Miscellaneous," "Misc." and other vague adjectives shall not be used in an activity description. The Contractor shall standardize the use of terms and their spelling in all activity descriptions. Abbreviation used in activity descriptions shall be consistent with the abbreviations used throughout the Contract Documents and summarized on the Contract Drawings.
- E. Work Activities:** The Contractor shall include activities for work in the following list:
1. Mobilization.
 2. All required submittals and submittal review.
 3. Equipment and materials procurement/fabrication/delivery.
 4. Installing/operating temporary heat and utilities.
 5. Preliminary testing of equipment, instrumentation and controls.
 6. Final testing, including preparation time.
 7. Substantial Completion: Substantial completion activity shall meet all requirements set forth in Division 01 Section 01 77 00 "Closeout Procedures".

8. Punch list work.
 9. Operation and maintenance training.
 10. Demobilization.
 11. Final cleaning.
 12. Issuance of Certificate of Occupancy.
 13. Project Specific Issues (If Warranted).
- F. Maximum Activity Durations:** The Contractor shall prepare schedule utilizing activity durations in terms of days. Do not exceed **twenty-one (21)** day duration on activities except concrete curing, submittal review and equipment fabrication and deliveries. Where duration of continuous work exceeds **twenty-one (21)** days, subdivide activities by location or other sub-element of the work. At the request of the Owner, the Contractor shall substantiate the need for specific activities having longer durations than stated herein. If the Contractor fails to substantiate this need, then the Contractor shall modify activity durations and the corresponding work scope of the activities to the satisfaction of the Owner.
- G. Activity Dates:** Early and late start and finish dates of activities shall be calculated for each activity based upon the schedule data date, actual dates, schedule logic, schedule constraints, calendars and original duration or remaining duration, in accordance with the software to calculate incorrect early and late, start and finish dates, the Contractor shall be responsible to identify all such errors and to determine correct dates consistent with the parameters specified in this Section.
- H. Activity Predecessors and Successors:** Every activity shall have logically assigned predecessors and successors in conformance with the requirements of this Section. Unless otherwise specified, Notice to Proceed shall be the only activity in the Project Schedules without a predecessor. Unless otherwise specified, Acceptance and each Contract Milestone(s) shall be the only activity in the Project Schedules without a successor.
- I. Activity Constraints:** Activity Constraints can affect activity float calculations and shall not be used unless accepted by the Owner. The imposition of a date constraint on any activity shall only be permitted when the Contractor demonstrates the need for such a constraint to the satisfaction of the Owner.
- J. Imposed Project Finish Date:** The imposed project finish date shall be the Contract Completion date, or if the Contractor plans an early completion date, the date it plans to complete the Work.
- K. Negative Float:** Negative float is calculated when the user imposes a finish date or other constraint on the schedule and when an activity can only finish after its late finish date. The Contractor shall remove the imposed finish date and/or constraint causing the negative float when directed to do so by the Owner.
- L. Activity Codes:** The schedules shall contain activity code classifications and code values. The coding structure shall, at a minimum, include code fields for the following: Phase, Area, Location, Type of Work, Submittal/Procurement, Construction, Responsibility, Original/Extra Work, and **Division**. **All activities in the schedule must have non-blank values for the required codes.**
- M. Calendars:** The planning unit for the Work shall be days. The global calendar shall contain all union holidays. The Contractor shall coordinate holidays to be observed with the Owner and incorporate them into the schedule as non-working days. This Calendar shall be a **5-day** work week, Monday through Friday. Every activity shall be assigned a working day calendar based on when the activity is planned to occur and when it is contractually permitted to occur. The Contractor shall define and submit additional working day calendars for acceptance by the Owner that are necessary for completion of work in accordance with the requirements of the Contract Documents. Only Owner defined or Owner accepted working day calendars shall be utilized in the Project Schedules.
- N. Logic:** The Contractor shall be responsible for developing the logic of the Preliminary, Baseline and Recovery Schedules and for updating that logic each month to accurately reflect the progress of the Work to-date and the Contractor's current plan for the timely completion of the Work.
1. The following criteria shall form the basis for assembly of the schedule logic:
 - a. Which activity must be completed before a subsequent activity can be started?
 - b. Which activities can be done concurrently?
 - c. Which activities must be started immediately following a completed activity?
 - d. What major economic facility or manpower restrictions are required for sequencing these activities?
 2. All paths through the Project schedules shall proceed in the direction representing the progression of time. Activity lag duration shall not have a negative value unless the Contractor substantiates to the satisfaction of the Owner that this is the best representation of reality. The use of activity lags shall be

kept to a minimum. The Contractor shall eliminate lags by creating new activities, when the creation of new activities will perform the same function of the lag and when requested to do so by the Owner.

3. Redundant ties to preceding activities in a sequential series of activities will not be permitted. For example, if activity C is the successor in a finish-start relationship to activity B, and activity B is the successor in a finish-start relationship to activity A, then activity A shall not have a redundant finish-start relationship to activity C. A tie representing a different constraint will not be considered redundant. For example, a logic tie showing that the completion of the work scope of a predecessor is required before the successor can start is different from a logic tie representing a resource limitation and will not be considered redundant.
 4. The Contractor is required to use manpower and equipment restraints, separately noted, to optimize and level manpower and equipment requirements. Such resource leveling shall reflect a reasonable plan for accomplishing the Work. The individual activities involved may be sequenced within the limits of the available Total Float. However, when this leveling technique is used in establishing the initial schedule, it shall be reflected in the logic with restraints identified as "restraint for manpower or equipment leveling purposes only." Critical or near Critical Paths resulting from the use of manpower restraints shall be kept to a minimum.
 5. All activities with resource restraints shall be supplemented with resource loading information as noted in Paragraph G.
 6. The Contractor shall correct all incorrect logic relationships in the Schedule Updates to eliminate any out-of-sequenced logic. The Contractor shall make all changes in the logic or other adjustments found to be incorrect by the Owner.
- O. Progress Data:** Actual start and finish dates shall not be automatically updated by default mechanisms that may be included in the CPM scheduling software systems. The primary source of actual starts and finishes and period percentage completes shall be by field verification. The Contractor is to insure that progress is based on a current estimate of remaining duration to complete the Work and not the activity percent complete which calculates the remaining duration based on the original estimated duration.
- P. Submittals:**
1. Each submission that is required by the Contract Documents shall have a corresponding activity, for the preparation and review and approval at the submission. When the Contractor plans on making a submission in parts, each part of the submission shall have corresponding preparation and review and approval activities.
 2. The timing, sequencing and duration of all submitted review and approval activities shall be in accordance with the Contract Documents.
 3. All submissions designated "Revise and Resubmit" shall require that the Contractor insert new submittal preparation and review and approved activities with appropriate logic into the schedule.
 4. When submittal receives a partial approval and the partial approval is sufficient to enable the commencement of a successor activity, then the original submittal activity shall be broken down into multiple activities as necessary to accurately reflect the logic of the Contractor's current plan.
 5. When multiple items are included in a single submittal, the "Review and Approve" activity for the submittal shall be a predecessor to every activity representing the fabrication and delivery of any of the materials.
- Q. Delivery Activities:** The schedules shall include activities for all fabrication and delivery work except for short lead time items. "Short lead time" shall be defined as a period of fourteen (14) days or less from placement of order to delivery of material to the project site. Activities representing the delivery of materials or equipment for more than **one (1)** installation activity will be permitted in accordance with the following conditions.
1. The material delivery activity shall be a predecessor to the first activity representing the installation of the material in each area.
 2. When partial deliveries are received and those deliveries are adequate to enable the commencement of some, but not all, successor activities, then the original delivery activity shall be broken down into multiple activities as necessary to accurately reflect the logic of the Contractor's current plan.
- R. Inspections/Testing:** The Contractor shall include an activity for each inspection and test required by the various officials and agencies, including the Building Inspector, and Fire Marshall. The Contractor shall schedule these activities in accordance with the availability of the corresponding agency/official.
- S. Progress Override/Retained Logic:** The Contractor shall use retained logic to calculate all schedules required by this section. The use of progress override is not allowed without prior approval of the Owner.

T. Weather Days Allowance: The Contractor shall include as a separate identifiable activity on the Critical Path, and activity labeled "Weather Days Allowance." Insert this activity immediately prior to the substantial completion milestone.

1. The Contractor shall be fully responsible for determining the number of weather delay days to be included in the CPM Schedule. This determination shall be based on the normal anticipated weather for the project location and the nature of the project work. The CPM Schedule shall be based on the contractor's determined weather delay allowance, immediately prior to the Substantial Completion milestone.
2. The minimal allowed duration of the Weather Days Allowance shall be calculated as follows (decimals rounded to nearest whole number):

$$\frac{\text{Contract Time (Calendar Days)}}{365} \text{ multiplied by } 7 \text{ equals Weather Days Allowance (Calendar Days)}$$

3. The Contractor shall insert an activity in the Critical Path to reflect weather day occurrences when weather days are experienced and accepted by the Owner. Identify this activity as a weather delay.
4. The Contractor shall reduce duration of Weather Days Allowance activity as weather delays are experienced and inserted into the schedule. Remaining weather days in Weather Day Allowance at completion of project is considered float. Weather delay, when justified, are considered allowable, non compensable.

U. Regulatory/Third Party Approvals: The Contractor shall include activities in its schedule for all approvals required by regulatory agencies or other third parties.

V. Resource Loading: The Contractor shall resource load the schedules when required by this Specification and/or if requested to do so by the Owner. When required, the schedules shall be resource loaded for both the Contractor and all of its subcontractors as detailed below or as otherwise directed by the Owner. The Contractor may propose additional or alternative resource loading for the Owner review and acceptance. Defining a resource shall consist of identifying the resource name, resource description, unit of measure, and calendar assignment.

1. **Labor Resources:** Labor shall refer to all craft labor including foreman. Labor shall be measured in person-days. The labor resource definitions shall be consistent with the subcontractor work scope.
2. **Construction Equipment Resources:** The planned use of equipment requiring a licensed operator shall be reflected in equipment resource assignments to activities.
3. **Limits on Resources:** The Contractor shall indicate in its Narrative the expected amount of resource and shall define the normal or expected usage along with a maximum limit available to the Contractor. Resource limits may vary for different stages of the work. Resource limits shall be revised to reflect the Contractor's current plan for the timely completion of the work.

W. Activity Logs:

1. Activities that are modified or added by change order shall be identified in the activity log. The change order number, as issued by the Owner, and the date the activity was modified or added shall be clearly recorded.
2. Activities affected by logic changes, resource changes, duration changes and calendar changes shall be identified in the activity log. The date the activity was modified, the nature of the change and the reason for the change shall be clearly recorded.

1.6 PRELIMINARY SCHEDULE AND PRELIMINARY SCHEDULE UPDATES

- A. For projects with a construction cost estimate over five (5) million dollars, the Contractor shall submit a Preliminary Schedule and Preliminary Schedule Updates. The Notice to Proceed will not be issued and the Contractor will not be allowed to start work at the Project site until the Preliminary Schedule has been submitted and accepted.
- B. The Preliminary Schedule shall contain a detailed plan of operations for the first 90 days of Work after receipt of the Notice to Proceed.
- C. The Project Manager and Contractor shall meet after receipt of Preliminary Schedule to review and make necessary adjustments. Contractor shall submit a revised Preliminary Schedule incorporating the adjustments with **five (5) days** after meeting.
- D. All Work contemplated beyond the first **ninety (90) days** shall be shown in sufficient detail such that the Critical Path and all Contract Milestones may be identified.

- E. The Preliminary Schedule shall be updated monthly during first **ninety (90) days** after issuance of the Notice to Proceed. The first update of the Preliminary Schedule shall show the progress on the actual Notice to Proceed date and shall be submitted to the Project Manager within **five (5) days** after the issuance of the Notice to Proceed. Subsequent updates shall show the progress through the last day of the month and shall be submitted to the Project Manager by the fifth business day of each month.
- F. Preliminary Schedule Update revisions that are required as a result of review comments by the Project Manager shall be submitted within **five (5) days** of the Contractor's receipt of the Project Manager's comments. The data date of the revised Preliminary Schedule Update shall remain on the first day of the month.
- G. The Contractor shall not be permitted to make any schedule revisions (besides progress) to the Preliminary Schedule Update unless approved by the Project Manager. When schedule revisions are required, the Contractor shall submit a Schedule Revision per Article 1.11.

1.7 BASELINE SCHEDULE

- A. For projects with a construction cost estimate over five (5) million dollars, the Contractor shall submit the proposed Baseline Schedule to the Project Manager for all the work of the project within **forty-five (45) days** after issuance of the Notice to Proceed. The Accepted Preliminary Schedule shall be incorporated unchanged, as first **ninety (90) days** activity in the Contractor's Baseline Schedule.
- B. The proposed Baseline Schedule shall show sequence and interdependence of all activities required for complete performance of all Work, beginning with date of Notice to Proceed and concluding with date of final completion of the Contract. The Baseline Schedule shall depict the work as bid and as planned as of the Notice to Proceed. The data date shall be the actual date of the Notice to Proceed.
- C. The Project Manager and the Contractor shall meet after the Project Manager's receipt of the Baseline Schedule to review and make necessary adjustments. Should adjustments be required, the Contractor shall submit a revised Baseline Schedule within five (5) days after the meeting and receipt of the Project Manager's comments. Subsequent follow-up meetings and resubmissions may continue until the Project Manager accepts the Baseline Schedule.
- D. The Contractor shall require each major Trade Contractor and major supplier to submit in writing a statement certifying that the major Trade Contractor or major supplier has concurred with the Contractor's Baseline Schedule, the major Trade Contractor's or major supplier's related schedule has been incorporated accurately, including the duration of activities and crew allocations. The definition of a "major Trade Contractor" is **one (1)** that provides services valued in excess of **five (5) percent** of the Contract value. The definition of "major supplier" is **one (1)** that provides material(s) or services valued in excess of **one (1) percent** of the Contract value. Failure of the Contractor to provide the required information will delay the approval of the Baseline Schedule.

1.8 SCHEDULE UPDATES

- A. The Contractor shall update and progress the CPM Schedule through the last day of each month (the Data Date is the first day of the month). Updating and progressing the CPM Schedule shall be completed and submitted by the fifth business day each month. Except as otherwise authorized by the Project Manager, monthly submissions received after the due date are considered late.
- B. The first update will consist of the approved Baseline Schedule updated as of the first day of the first month which starts after **ninety (90) days** from the Notice to Proceed. Subsequent monthly Schedule Updates will be the previous month's approved Schedule Update or approved Revision Schedule updated to reflect progress over the last month. Schedule revisions, apart from updating the status of the remaining durations and percent completes of the various work activities will not be permitted in the Schedule Update.
- C. The Contractor shall create a copy of the previous month Schedule Update for the purpose of updating and progressing it. The schedule shall be updated to show the work actually accomplished during the preceding month, the actual time consumed for each activity, and the estimated time remaining for any activity that has been started but not completed. The updating of the percent complete and the remaining duration of any activity shall be independent functions; program features that calculate one of these parameters from the other shall be disabled.
- D. The Contractor shall make the necessary adjustments to the Schedule Update in accordance with the Project Manager's Schedule Update review comments and shall re-submit the Schedule Update within **five (5) days** after receipt of those comments.
- E. The Contractor shall prepare the monthly Schedule Updates every month starting on the month described above through the actual substantial completion date.

1.9 TWO-WEEK LOOK AHEAD SCHEDULES

- A. The Contractor shall be required to produce and submit to the Project Manager a Two-Week Look Ahead Schedule, to be updated and submitted the first day of each week. Except as otherwise authorized by the Owner, submissions received after the due date are considered late.
- B. The Two-Week Look Ahead Schedule may be a CPM schedule or a bar chart; it shall be consistent with the previously approved Schedule Update or approved Schedule Revision.

1.10 SCHEDULE REVISIONS

- A. If, at any time, the Contractor alters its logic, original durations, or descriptions, adds activities or activity codes, or in any way modifies the accepted Preliminary Schedule, accepted Preliminary Schedule Update, Baseline Schedule or Schedule Update, the Contractor must notify the Project Manager of the change(s), in writing and submit a Revision Schedule to the Project Manager for review.
- B. The preparation and submission of Revision Schedules will also be required to reflect any Contract Modifications that were approved and Construction Change Directives that were issued during the preceding period and any extra or changed work that the Contractor has started during the preceding period.
- C. With each Revision Schedule, the Contractor shall submit a written narrative explaining the nature of the change(s), the schedule, the reason for the change(s) and the impact on the schedule as a result of the change(s).
- D. All changes (i.e. duration changes, logic changes, new logic, new or modified activities changes in work sequence, etc.) shall be recorded and a note added to the activity log. The record shall include at a minimum, the date and the reason for the change, and description of the change.
- E. The required Revisions Schedules and Narratives are in addition to the regular Schedule Update. They shall be separate submittals and shall be noted as Schedule Revisions.
- F. Proposed Revision Schedules shall be submitted by the fifth day of the month and shall reflect status as of the first day of the month.
- G. The Project Manager and Contractor shall meet after the Project Manager's receipt of the Revision Schedule and Narrative to review and make necessary adjustments. Should adjustments be required, the Contractor shall submit a revised Revision Schedule to the Project Manager within **five (5) days** after the meeting and receipt of the Project Manager Comments. Subsequent follow-up meetings and resubmissions may continue until after the Project Manager accepts the Revision Schedule.
- H. Only upon acceptance of a revision to the Schedule by the Project Manager shall the revision be reflected in the next Schedule Update and Two-Week Look-Ahead Schedule.
- I. The Project Manager reserves the right to accept or reject any schedule revisions proposed by the Contractor.

1.11 RECOVERY SCHEDULES

- A. If, in opinion of the Owner, a Schedule Update indicates that the Contractor has fallen behind schedule, or that a revision in sequence or operations may be necessary for any other reason, the Contractor shall within **seven (7) days** of receiving a written request to perform "Recovery" from the Project Manager, immediately institute all necessary steps to improve his progress and shall submit such revised network diagrams, tabulations, operational plans and any supplementary information, as may be deemed necessary by the Owner, to demonstrate the manner in which an acceptance rate of progress will be regained.
- B. Should the Contractor's "Recovery" efforts not demonstrate an ability to regain an acceptable rate of progress, the Project Manager may require the development of a "Recovery Schedule" and the Contractor shall submit the Recovery Schedule within **twenty-one (21) days** of receiving a written request for the Recovery Schedule from the Project Manager. The Recovery Schedule is to be supplemented with resource allocations for every task activity and include time-scaled resource histograms. The resource allocations shall be shown to a level of detail that facilitates report generations based on labor crafts and equipment classes for the Contractor and Trade Contractors. The Contractor shall use average composite crews to display the labor loading of onsite construction activities. The Contractor shall optimize and level labor to reflect a reasonable plan for accomplishing the Work of the Contract and to assure that resources are not over allocated in multiple concurrent activities. The time-scaled resource histograms shall show labor crafts and equipment classes to be utilized on the Contract.
- C. In addition to required submittals, the "Recovery Schedule" submission will also include a Narrative as detailed herein, a time-scaled resource histogram and a Monthly Resources Loading Summary Report (tabular) indicating the peak number of resources required for each activity.

- D. The Project Manager shall be the sole judge as to whether the Recovery Schedule is sufficiently detailed. Upon acceptance of this Recovery Schedule, it shall form the basis of the new Monthly Schedule Updates going forward.
- E. No additional compensation will be allowed for Recovery Schedules required to overcome delays caused in whole or in part by the Contractor.

1.12 NARRATIVES

- A. The Contractor shall prepare and submit a Narrative to accompany the Baseline Schedule, Preliminary Schedule and each Preliminary Schedule Update and Monthly Schedule Update. The Narratives shall include:
 - 1. Identification of the update period, the data date and the schedule file name.
 - 2. A description of the current Critical and Near Critical Paths activities that are supposed to start or to be worked on over the coming month.
 - 3. Changes to the Critical Path, intermediate and completion Milestones
 - 4. Description of problem areas.
 - 5. Current or anticipated delays:
 - a. Cause of delay.
 - b. Impact of delay on other activities, Milestones, and completion dates.
 - c. Corrective action and schedule adjustments to correct the delay.
 - 6. A discussion of work completed during the period.
 - 7. A comparison of the planned versus schedule progress early on and near Critical Path activities that were to have been worked on over the last month.
 - 8. A description of any interdependencies between the Contractor's Schedule and any work by other contractors, third parties, and/or the Owner and its representatives.
 - 9. A description of the current status of float created by any previous or ongoing compensable or excusable delays, whether or not the Contractor has utilized any of this float over the last period by purposefully slowing down (pacing) and any request to utilize this float over the coming period.
 - 10. An explanation of how adverse weather has been addressed in Schedule and an accounting of the Weather Day Allowance delineating the activities incorporated into the Schedule to account of work days lost due to weather and the resultant decrease in the duration of the Weather Day Allowance.
 - 11. A description of planned labor resources to be utilized to complete critical and near Critical Path work as requested by the Project Manager.
 - 12. A description of actual and potential equipment resource limitations.

1.13 NETWORK FILES, GRAPHICAL OUTPUT AND REPORTS

- A. With each Preliminary Schedule, Preliminary Schedule Update, Baseline Schedule, Schedule Update, Revision Schedule and Recovery Schedule required by these specifications, the Contractor shall submit to the Project Manager the following schedule reports/graphics/files:
 - 1. **Three (3)** compact disc sets that each include:
 - a. A compressed back up of the entire schedule.
 - b. Gantt charts in Adobe Acrobat PDF file format, formatted to fit ANSI Size D paper (610mm x 914mm) (24" x 36"), and showing the Activity ID, Activity Description, Original Duration, Remaining Duration, Total Float, Early Start and Finish Dates, and Calendar ID. Types of Gantt Charts to be included are:
 - i. The project critical (longest) path.
 - ii. The Project near Critical Path (excluding Critical Path activities).
 - iii. All uncompleted work activities as of the data date.
 - 2. Reports in Adobe Acrobat PDF file format, formatted to fit 216mm x 279mm (8½" x 11") size paper, to include:
 - a. A listing of all activities, by activity code, with early & late starts and Total Float.

- b. A Claim Digger Report that details all changes between the current schedule submittal and the previous month's update submittal.
 - c. Detailed Predecessor/Successor Report which included a listing of all activities that immediately precede and immediately succeed that activity in the schedule logic.
3. **Three (3)** paper copies of each Gantt Charts in color and report on the paper size specified above.
- B. Schedule submittals will only be considered complete when all materials have been submitted.

1.14 FLOAT/CRITICAL PATH

- A. With the exception of the Float described in Paragraphs B and C, Float is not for the exclusive use or benefit of either the Project Manager or the Contractor but is an expiring resource available to all parties acting in good faith as needed to meet any Contract Milestone(s).
- B. As float is an expiring resource, if the Work is delayed on the Critical Path due to an excusable delay (either compensable or non-compensable) or by any delay for which responsibility has not yet been agreed upon, the Contractor may not use any float created by such delay on any other path without the express written approval of the Project Manager or unless at the time of the float consumption a time extension had been issued for the delay that created the float being consumed. Use of such float on any parallel path without the approval of the Project Manager shall be construed as a concurrent inexcusable delay to any delay caused by the Project Manager.
- C. It is acknowledged and agreed by the Contractor that Project Manager caused delays on the project may be offset by Project Manager caused time savings (including, but not limited to: Critical Path submittals returned in less time than allowed for in the Contract, approval of substitution requests which result in a savings of time along the Critical Path for the Contractor, etc.). In such an event, the Contractor shall not be entitled to receive an extension of time or delay damages until the Project Manager caused time savings are exceeded and the Contract completion date also exceeded.

1.15 EARLY COMPLETION

- A. Should Contractor submit a Preliminary Schedule, Baseline Schedule, Schedule Update or Schedule Revision showing Project Completion more than **twenty (28) days** prior to Contract Completion Date, the Project Manager may issue a Change Order, at no cost to Owner, revising the time of performance of Work and Contract completion date to match Contractor's schedule. Contract Milestone dates, if any, shall be adjusted accordingly. The assessment of liquidated damages shall be measured based on the new Milestone and Contract completion dates.
- B. Should any monthly Schedule Update show the project completion earlier than current Contract completion date, the Contractor shall show early completion time as schedule activity, identified as "Project Float." This float shall be available for use by either party as per the provisions of Article 1.14. The Owner shall not liable for any damages as a result of utilizing this float.

1.16 CONTRACT TIME EXTENSIONS

A. Mitigation of Delays:

1. The Contractor shall be responsible to develop mitigation measures for all delays regardless of responsibility for the delays and to identify all time and cost impacts to the work associated with those mitigation measures. Unless circumstances otherwise require, the Contractor shall not pursue mitigation action for which it expects the Owner to be liable prior to notifying the Owner and receiving Project Manager authorization to proceed with the mitigation action. Any action taken by the Contractor prior to receiving approval from the Project Manager shall be at the Contractor's risk.
2. When the need for mitigation arises to ensure timely completion, the Contractor shall review all uncompleted activities on the Critical and Near Critical Paths to the Contract Completion Date for errors in scope, duration, and logic and for the feasibility of performing in parallel work currently scheduled sequentially.
3. Whenever it is possible for the Contractor to mitigate delay without added cost, the Contractor shall do so. The Contractor shall mitigate all delays as efficiently and economically as possible, with the objective of minimizing both the time and cost impact of the delay regardless of responsibility for the delay. The Owner will not be liable for damages which the Contractor could have avoided by reasonable means such as prudent scheduling of the work and judicious handling of forces, equipment or plant. The Owner will not be liable for damages incurred by the Contractor during any period of time when the Contractor has failed to provide notification of delay in accordance with the Contract requirements when having the notification at the specified time could have influenced the Owner's decision or actions.

B. Time Impact Analysis:

1. If the Contractor believes that a proposed change will impact the Project Completion Date or interim Milestones, the Contractor shall submit an analysis with its Change Order Proposal demonstrating the delay to the Critical Path. This analysis shall be in the form of a Time Impact Analysis (TIA).
2. The Time Impact Analysis shall consist of: 1) a Fragnet of the portion of the schedule that will be affected by the incorporation of the change, which shall include the new activities, revised logic and durations associated with the proposal change; 2) a narrative explanation of how the proposed change would impact the schedule; 3) an impact schedule which shall be developed by incorporating the Fragnet and required changes, including any delay mitigation measures, into the most recent accepted schedule update and; 4) electronic copies of the Fragnet and impact schedule.
3. The Contractor shall submit its TIA in sufficient time to allow it to be incorporated into a Revision Schedule prior to the change order work proceeding, allowing the Owner **thirty (30)** days after receipt of the TIA and all the supporting information required with the Change Order Proposal to approve or reject the analysis.
4. Upon agreement on the schedule impact due to the proposed change and the issuance of a time extension, the Contractor shall incorporate the agreed upon Fragnet/schedule revisions in the next monthly update.
5. The Owner reserves the right to have the Contractor proceed with the change order related work without agreeing on the time associated with it and to measure the actual schedule impact via Contemporaneous Period Analysis.
6. In cases where the Contractor has not submitted a TIA with its Change Order Proposal for a particular proposed change, the Contractor agrees that the particular proposed change has no impact on the Contract Completion Date or interim Milestones and no time extension is required.

C. Contemporaneous Period Analysis:

1. When an accepted Schedule Update indicates the project has been delayed beyond the current Contract Completion Date and the Contractor believes it is entitled to an extension of time, the Contractor shall prepare and submit to the Owner a Contemporaneous Period Analysis (CPA) demonstrating the delay(s) to the Critical Path at the time of the delay, mitigation measures taken or proposed by the Contractor and request an extension of time.
 2. The Contractor's CPA and time extension request shall be submitted prior to the submission of the next Schedule Update.
 3. The request shall indicate the amount of time requested, the period when the delay was experienced and an explanation as to the cause of the delay.
 4. The CPA shall quantify the delay by comparing the completion dates and Milestone dates on an update by update basis, starting with the update just prior to the delaying event and ending with the update just after the conclusion of the delaying event. Only the accepted schedules/Schedule Updates shall be used in the CPA. The CPA shall determine the cause of the delay by correlating slippage with various unforeseen events.
 5. The CPA will consist of: 1) an update by update accounting of all delay(s) during the period in question; 2) an update by update narrative explanation of how the delay(s) affected the completion date or would have affected the completion date but for other concurrent delay(s); 3) chronologies of the issues affecting the schedule period in question; and 4) a day by day accounting and description of the unanticipated work/work stoppage on the Critical Path and/or path in question; 5) a Gantt chart comparing the as-planned schedule just prior to the start of the delay to the actual as-built for the path(s) in question.
- D.** The Owner may require the Contractor to correct errors in its TIA or CPA at anytime, whether or not the schedules have been accepted and/or time extension issued and agreed upon. Should the errors affect the outcome of the TIA or CPA, the Owner reserves the right to adjust the time extension accordingly. Generally, a schedule will be found to be in error if it does not properly reflect the sequencing, timing and durations of all the work and required events as well as mitigation efforts contemplated or which should have been contemplated at the time of the data date of the schedule.
- E.** Time Extensions will be granted only to the extent that equitable adjustments for the activity or activities affected exceed or exceeded the total or remaining float along the Critical path or activities at the time of the actual delay. Actual delays in activities which do not affect the Critical Path work or which do not move the Contractor's planned completion date beyond the Contract completion date or current completion date as affected by previous delays, will not be the basis for an adjustment to the Contract time. Time Extensions shall not be granted until a delay occurs that is:

1. Beyond control of and without fault of or negligence of the Contractor and the major Trade Contractors or Suppliers at any time.
 2. Extends the actual performance of the work beyond the Contract completion date or other specified Interim Milestones.
- E. Should a non-compensable excusable delay be concurrent with one or more compensable delays, the Contractor and Owner agree that the net result is a non-compensable, excusable delay to the extent the delay is caused by the non-compensable event.
- F. The Contractor shall have no claim for damages of any kind, or extensions or increase to the Contract time(s) or Contract Milestone(s), or adjustments of Contract Price on account of any delay, interruption or suspension of the Work or any portion thereof (herein after collectively referred to as "Delay"), due to whatever cause unless the prerequisites of this Subsection are met. The requirements of this Subsection are in addition to and not in lieu of the requirements of any other applicable subsection.

1.17 REVIEW AND ACCEPTANCE OF PROJECT SCHEDULE SUBMITTALS

- A. The Project Manager shall review schedule submittals for conformance with the requirements of the Contract Documents. Schedule review comments by the Project Manager may address whether items of Work are omitted, activity durations are reasonable or that the level of labor, materials, and equipment, the means, methods, timing, and sequencing of the Work are practicable. The planning, scheduling or execution of the Work and the accuracy of any Project Schedule shall remain the sole responsibility of the Contractor.
- B. During the review of any of the submissions required by this section, if any of the following conditions are discovered the submittal shall be returned by the Project Manager without further review for correction and re-submittal:
1. The submittal is incomplete.
 2. The submittal does not comply with the specified format.
 3. A component of the submittal has not been prepared in accordance with all of the requirements of this section.
 4. The quality of the submittal indicates that the Contractor has failed to perform an internal quality control review prior to submission.
 5. There is an inconsistency between electronic files and printed material.
- C. It is the Contractor's responsibility to ensure that all Project Schedules are in compliance with all of the requirements of the Contract Documents. The Project Manager's failure to return a submittal shall not be construed to mean that the submittal is in compliance with the requirements of the Contract Documents. The Project Manager, at its discretion, may choose to complete a submittal review even though the submittal fails to meet one of more of the conditions for rejection stated herein.
- D. The acceptance of any Project Schedule by the Project Manager does not constitute acceptance or approval of any change to the requirements of the Contract Documents including but not limited to any mandated construction sequences. The Project Manager is not responsible for any erroneous assumptions or information in any Project Schedules regardless of origin.
- E. The Contractor shall be responsible for all delays due to its failure to submit complete submittals in accordance with the requirements of the Contract Documents.
- F. The Schedule submitted will not be considered acceptable until all of the Project Manager's comments are incorporated into the schedule to the Project Manager's satisfaction.
- G. Errors in any Project Schedule accepted by the Project Manager, including but not limited to activity durations, relationships between activities, resource allocation or other float suppression techniques that do not accurately reflect the work may be identified at any time and once identified shall be corrected by the Contractor.
- H. Project Manager's acceptance of a Schedule Update shall not constitute the approval of a time extension should the Project Completion Date or Contract Milestone(s) be shown as delayed.
- I. Notwithstanding any review, review comments, acceptance, scheduling assistance or direction to change an/or revise any schedule by the Project Manager, the schedules shall at all times be the Contractor's schedule for performing the Work and not be considered as any Project Manager direction constituting a change unless the Contractor gives appropriate notice and the other Contract provisions for determining merit and entitlement are met.

1.18 PAYMENT

- A. When the Contractor submits its schedule of values in accordance with the General Conditions, it shall include an amount for the scheduling work associated with this section, this cost to be paid in accordance with section (01 29 76).
- B. Failure of the Contractor to submit a Baseline Schedule or Revised Baseline Schedule for any portion of the work in accordance with this specification may result in the withholding all Contract payment until the schedule is submitted to, and accepted for compliance with the specification and reasonableness, by the Project Manager.
- C. In the event the project extends beyond the original completion date by more than 30 days, and a time extension is granted to the Contractor, the Project Manager may require additional CPM updates which will be paid at the per month cost for the Scheduling Update services.

1.19 DISTRIBUTION

- A. Distribute copies of the computer generated schedules to Project Manager, Architect/Engineer, Owner, Subcontractors, suppliers, and other concerned parties.
- B. Instruct recipients to promptly report, in writing, problem anticipated by projections indicated in schedules.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01 32 16.13

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for submittals required for performance of the Work, including but not limited to the following:
1. **Submittal schedule.**
 2. **Shop Drawings.**
 3. **Product Data.**
 4. **Samples.**
 5. **Quality assurance submittals.**
 6. **Proposed "Substitutions/Equals".**
 7. **Warranty samples.**
 8. **Coordination Drawings.**
 9. **O & M Manuals**
- B. Administrative Submittals: Refer to other Division 01 Sections and other Contract Documents for requirements for administrative submittals. Such submittals include, but are not limited to, the following:
1. **Permits.**
 2. **Applications for Payment.**
 3. **Performance and payment bonds.**
 4. **Contractor's construction schedule.**
 5. **Daily construction reports.**
 6. **Construction Photographs.**
 7. **Insurance certificates.**
 8. **List of subcontractors.**
 9. **Subcontractors/Suppliers FEIN number's and Connecticut tax registration number.**
- C. **Related Sections:** The following Sections contain requirements that relate to this Section:
1. Division 01 Section 01 25 00 "Substitution Procedures" specifies requirements for submittal of requests for equals and substitutions.
 2. Division 01 Section 01 29 76 "Progress Payment Procedures" specifies requirements for submittal of the Schedule of Values.
 3. Division 01 Section 01 31 00 "Project Management and Coordination" specifies requirements governing preparation and submittal of required Coordination Drawings.
 4. Division 01 Section 01 31 19 "Project Meetings" specifies requirements for submittal and distribution of meeting and conference minutes.
 5. Division 01 Section 01 32 16 "Construction Progress Schedules" for requirements for construction scheduling and reporting progress of work.
- OR**
5. Division 01 Section 01 32 16.13 "CPM Schedules" for requirements for CPM scheduling and reporting progress of work.
 6. Division 01 Section 01 32 33 "Photographic Documentation" specifies requirements for submittal of periodic construction photographs.
 7. Division 01 Section 01 35 26 "Government Safety Requirements" specifies the requirements for safety plans, reports, and investigation submittals.

8. Division 01 Section 01 45 00 "Quality Control" specifies requirements for submittal of inspection and test reports and mockups.
9. Division 01 Section 01 45 23.13 "Testing for Indoor Air Quality (IAQ), Baseline IAQ, and Materials" specifies requirements for submittal of documentation required to support LEED or Green Globes certification.
10. Division 01 Section 01 77 00 "Closeout Procedures" specifies requirements for submittal of Project Record Documents and warranties at project closeout.
11. Division 01 Section 01 78 30 "Warranties and Bonds".
12. Division 01 Section 01 81 13 "Sustainable Design Requirements" specifies requirements for submittal of documentation required to support LEED or Green Globes certification.
13. Division 01 Section 01 91 00 "Commissioning" specifies requirements for submittal of quality assurance documentation related to commissioning.

1.3 DEFINITIONS

- A. Coordination Drawings show the relationship and integration of different construction elements that require careful coordination during fabrication or installation to fit in the space provided or to function as intended and as identified in the Specification Divisions 02 through 49.
 1. Preparation of Coordination Drawings is specified in Division 01 Section 01 31 00 "Project Management and Coordination" and may include components previously shown in detail on Shop Drawings or Product Data.
- B. Field samples are full-size physical examples erected on-site to illustrate finishes, coatings, or finish materials. Field samples are used to establish the standard by which the Work will be judged.
- C. Mockups are full-size assemblies for review of construction, coordination, testing, or operation; they are not Samples.

1.4 SUBMITTAL PROCEDURES

- A. Coordination: Coordinate preparation and processing of submittals with performance of construction activities. Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay.
 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 2. Coordinate transmittal of different types of submittals for related elements of the Work so processing will not be delayed by the need to review submittals concurrently for coordination.
 - a. The Architect/Engineer reserves the right to withhold action on a submittal requiring coordination with other submittals until all related submittals are received.
 - b. The Architect/Engineer reserves the right to reject incomplete submitted packages.
 3. Processing: To avoid the need to delay installation as a result of the time required to process submittals, allow sufficient time for submittal review, including time for re-submittals.
 - a. Allow **fourteen (14) days** for initial review. Allow additional time if the Architect/Engineer must delay processing to permit coordination with subsequent submittals.
 - b. If an intermediate submittal is necessary, process the same as the initial submittal.
 - c. Allow **fourteen (14) days** for reprocessing each submittal.
 - d. No extension of Contract Time will be authorized because of failure to transmit submittals to the Architect/Engineer sufficiently in advance of the Work to permit processing.
- B. **Submittal Preparation:** Place a permanent label, title block or **8-1/2 inches x 11 inches** cover page approved by the Architect/Engineer, on each submittal for identification. Indicate the name of the entity that prepared each submittal on the label or title block.
 1. The minimum number of copies required for each submittal shall be **seven (7)** or as determined otherwise at the pre-construction conference or by the Project Manager.
 2. Provide a space approximately **4 inches by 5 inches** on the label, beside the title block or on the cover page on Shop Drawings to record the Contractor's review and approval markings and the action taken.
 3. Include the following information on the label for processing and recording action taken.
 - a. **Project Name and State of Connecticut Project Number.**

- b. **Date.**
 - c. **Name and address of the Architect/Engineer, Construction Administrator, and Owner Representative.**
 - d. **Name and address of the Contractor.**
 - e. **Name and address of the subcontractor.**
 - f. **Name and address of the supplier.**
 - g. **Name of the manufacturer.**
 - h. **Number and title of appropriate Specification Section.**
 - i. **Drawing number and detail references, as appropriate.**
 - j. **Indicate either initial or resubmittal.**
 - k. **Indicate deviations from Contract Documents.**
 - l. **Indicate if "equal" or "substitution".**
- C. Submittal Transmittal:** Package each submittal appropriately for transmittal and handling. Transmit each submittal from the Contractor to the Architect/Engineer using a transmittal form. Copy the Project Manager on the transmittal. The Architect/Engineer will return all submittals to the Contractor after action is taken with a complete copy of the submittal package and one complete copy of the submittal package. The Architect/Engineer will not accept submittals received from sources other than the Contractor.
- 1. On the transmittal, record relevant information and requests for data. On the form, or separate sheet, record deviations from Contract Document requirements, including variations and limitations. Include Contractor's certification that information complies with Contract Document requirements.

1.6 SUBMITTAL SCHEDULE

- A.** After development and review by the Owner and Architect/Engineer acceptance of the Contractor's Construction or CPM schedule prepare a complete schedule of submittals. Submit the schedule to the Project Manager within **thirty (30)** days of Contract Award.
- 1. Coordinate Submittal Schedule with the list of subcontracts, Schedule of Values, and the list of products as well as the Contractor's Construction or CPM Schedule.
 - 2. Prepare the schedule in chronological order. Provide the following information:
 - a. Schedule date for the initial submittal.
 - b. Related section number.
 - c. Submittal category (Shop Drawings, Product Data, or Samples).
 - d. Name of Subcontractor.
 - e. Description of the part of Work covered.
 - f. Scheduled date for resubmittal.
 - g. Scheduled date for the Architect/Engineer's final release of approval.
- B. Submittal Schedule:** Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or modifications to submittals noted by the Architect/Engineer and additional time for handling and reviewing submittals required by those corrections.
- 1. Coordinate submittal schedule with list of subcontracts, the schedule of values, and Contractor's Construction or CPM Schedule.
 - 2. **Initial Submittal:** Submit concurrently with start-up construction schedule. Include submittals required during the first 60 days of construction. List those submittals required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
 - 3. **Final Submittal:** Submit concurrently with the first complete submittal of Contractor's construction schedule.
 - a. Submit revised submittal schedule to reflect changes in current status and timing for submittals.
- C. Coordination:** Coordinate preparation and processing of submittals with performance of construction activities.

1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 2. Submit all submittal items required for each specification section concurrently unless partial submittals for portions of the Work are indicated on approved submittal schedule.
 3. Submit action submittals and informational submittals required by the same specification section as separate packages under separate transmittals.
 4. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
 - a. **Construction Manager reserves** the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- D. Processing Time:** Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on **Construction Manager's** receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
1. **Initial Review:** Allow **fifteen (15)** days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. **Construction Manager** will advise Contractor when a submittal being processed must be delayed for coordination with related submittals not yet received. Additional time will be required if processing must be delayed to permit review of related subsequent submittals.
 2. **Intermediate Review:** If intermediate submittal is necessary, process it in same manner as initial submittal.
 3. **Resubmittal Review:** Allow **fifteen (15)** days for review of each resubmittal.
 4. **Mass Submittals:** **Six (6)** or more submittals in **one (1) day** or **twenty (20)** or more submittals in **one (1) week**. If "Mass Submittals" are received, Architect/Engineer's review time stated above may be extended as necessary to perform proper review. Architect/Engineer will review "Mass Submittals based upon priority determined by Architect/Engineer after consultation with Owner and Contractor.
- E. Distribution:** Following response to the initial submittal, print and distribute copies to the Project Manager, Architect/Engineer, Owner, subcontractors, and other parties required to comply with submittal dates indicated. Post copies in the Project meeting room and field office.
1. When revisions are made, distribute to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in construction activities.
- A. Schedule Updating:** Revise the schedule after each meeting or activity where revisions have been recognized or made. Issue the updated schedule concurrently with the report of each meeting.

1.7 DAILY CONSTRUCTION REPORTS

- A.** Prepare a daily construction report recording the following information concerning events at the site, and submit duplicate copies to the Project Manager at weekly intervals:
1. **List of subcontractors at the site.**
 2. **Approximate count of personnel at the site.**
 3. **High and low temperatures, general weather conditions.**
 4. **Accidents and unusual events.**
 5. **Meetings and significant decisions.**
 6. **Stoppages, delays, shortages, and losses.**
 7. **Meter readings and similar recordings.**
 8. **List of equipment on site and identify if idle or in use.**
 9. **Orders and requests of governing authorities.**
 10. **Change Orders received, start and end dates.**
 11. **Services connected, disconnected.**
 12. **Equipment or system tests and startups.**
 13. **Partial Completion's, occupancies.**
 14. **Substantial Completion's authorized.**
 15. **Equals or Substitutions approved or rejected.**

1.8 SHOP DRAWINGS

- A. Submit newly prepared information drawn accurately to scale. Highlight, encircle, or otherwise indicate deviations from the Contract Documents. Do not reproduce Contract Documents or copy standard information as the basis of Shop Drawings. Standard information prepared without specific reference to the Project is not a Shop Drawing.
- B. Shop Drawings include fabrication and installation Drawings, setting diagrams, schedules, patterns, templates and similar Drawings. Include the following information:
 - 1. Dimensions.
 - 2. Identification of products and materials included by sheet and detail number.
 - 3. Compliance with specified standards.
 - 4. Notation of coordination requirements.
 - 5. Notation of dimensions established by field measurement.
 - 6. Sheet Size: Except for templates, patterns and similar full-size Drawings, submit Shop Drawings on sheets at least **8-1/2 by 11 inches** but no larger than **36 by 48 inches**.
 - 7. Submit **one (1)** reproducible media and **seven (7)** prints as directed by the Project Manager. The Contractor's submittal shall identify the specification section and/or drawing number applicable to the submittal.
 - 8. Details shall be large scale and/or full size.
- C. The Contractor shall review the Shop Drawings, stamp with this approval, and submit them with reasonable promptness and in orderly sequence so as to cause no delay in his Work or in the Work of any subcontractor. Shop Drawings shall be properly identified as specified for item, material, workmanship, and project number. At the submission, the Contractor shall inform the Architect/Engineer, in writing of any deviation in the shop drawings from the requirements of the Contract Documents.
- D. The Architect/Engineer will review and comment on shop drawings with reasonable promptness so as to cause no delay, but only for conformance with the design concept of the project and with the information given in the Contract Documents. Refer to Article 5 of the General Conditions. Shop Drawings received by the Architect/Engineer that indicate insufficient study of drawings and specifications, illegible portions or gross errors, will be rejected outright. Such rejections shall not constitute an acceptable reason for granting the Contractor additional time to perform the work.
- E. The Contractor shall make any corrections required by the Architect/Engineer and shall resubmit the required number of corrected copies of Shop Drawings until fully reviewed.
- F. Upon final review submit **four (4)** additional prints, same as submitted, for use by the Project Manager.
- G. The Architect/Engineer's review and comments on Shop Drawings shall not relieve the Contractor of responsibility for any deviation from the requirements of the Contract Documents.
- H. Only final reviewed Shop Drawings are to be used on the Project site.
- I. The Work installed shall be reviewed in accordance with the Shop Drawings and the drawings and specifications. Final Review of the Shop Drawings by the Architect/Engineer shall constitute acceptance by the State and the Architect/Engineer of a variation or departure that is **clearly identified**. If the contractor believes notations made by the A/E increases the value or scope of the CD's, the contractor must provide written notice to the CA within **seven (7)** days of this issue. Final reviewed Shop Drawings shall not replace or be used as a vehicle to issue or incorporate change orders or substitutions. Substitutions shall be submitted in accordance with Division 01 Section 01 25 00 "Substitution Procedures".

1.9 SHOP DRAWINGS FOR FIRE PROTECTION SYSTEMS:

- A. Shop drawings for fire protection systems shall comply with all of the requirements in the section above "Shop Drawings". In addition Sprinkler system shop drawings and hydraulic calculations must be stamped by a professional engineer licensed in the state of Connecticut and must include the DEEP project number. **Two (2)** sets of information [as noted in this Section 01 33 00 "Submittal Procedures"] shall be submitted to the State's Insurance Carrier (SIC), and **one (1)** set shall be submitted to the Office of the State Fire Marshal (OSFM):
 - 1. **Office of State Fire Marshal:**
 - CT Department of Administrative Services
 - Construction Services
 - Office of State Fire Marshal

450 Columbus Boulevard, Suite 1304
Hartford, Connecticut 06103
Phone: (860) 713-5750

2. **State Insurance Carrier (SIC):**
FM Global Boston Operations
Plan Review
1175 Boston-Providence Turnpike
PO Box 9102
Norwood, MA 02062
Tel: (781) 440-8241 or FAX (781) 440-8742
bostonleadengineer@fmglobal.com

- B. Before the shop drawings are submitted to SIC or OSFM, the A/E's fire protection consultant must review the sprinkler design for compliance with the code, OSFM, and FM Global requirements.
- C. The State Insurance Carrier requires **two (2)** weeks prior notice of a sprinkler system acceptance test.

1.10 SHOP DRAWINGS FOR ROOFING SYSTEMS:

- A. **Construction Phase Requirements:** During product submittals and shop drawing review for Roofing Systems the Consultant shall verify FM Global requirements are satisfied for all relevant components. The DEEP PM and Construction Administer for the Project shall submit the Contractor's roofing systems product information and shop drawings to the Consultant and FM Global. Shop drawings for roofing systems shall comply with all of the requirements in the section above "Shop Drawings". **Two (2)** sets of information [as noted in this Section 01 33 00 "Submittal Procedures"] shall be submitted to the State's Insurance Carrier (SIC):

1. **State Insurance Carrier (SIC):**
FM Global Boston Operations
Plan Review
1175 Boston-Providence Turnpike
PO Box 9102
Norwood, MA 02062
Tel: (781) 440-8241 or FAX (781) 440-8742
bostonleadengineer@fmglobal.com

- B. The State Insurance Carrier requires **two (2)** weeks prior notice of roofing system shop drawing reviews.
- C. See Section **00 30 60 General Statement For FM Global Checklist For Roofing Systems** and **Section 50 60 00 FM Global Checklist for Roofing Systems**.

1.11 PRODUCT DATA

- A. Collect Product Data into a single submittal for each element of construction or system. Product Data includes printed information, schedules, such as manufacturer's installation instructions, catalog cuts, standard color charts, roughing-in diagrams and templates, standard wiring diagrams, and performance curves.
 1. Mark each copy to show applicable choices and options. Where printed Product Data includes information on several products that are not required, mark copies to indicate the applicable information. Include the following information:
 - a. **Manufacturer's printed recommendations.**
 - b. **Compliance with trade association standards.**
 - c. **Compliance with recognized testing agency standards.**
 - d. **Application of testing agency labels and seals.**
 - e. **Notation of dimensions verified by field measurement.**
 - f. **Notation of coordination requirements.**
 2. Do not submit Product Data until compliance with requirements of the Contract Documents has been confirmed.
 3. **Preliminary Submittal:** Submit a preliminary single copy of Product Data where selection of options is required.

4. **Submittals:** Submit **seven (7)** copies of each required submittal; submit **five (5)** copies where required for maintenance manuals. The Architect/Engineer will retain **one (1)** and will return the other marked with action taken and corrections or modifications required.
 - a. Unless noncompliance with Contract Document provisions is observed, the submittal may serve as the final submittal.
5. **Distribution:** Furnish copies of final submittal to installers, subcontractors, suppliers, manufacturers, fabricators, and others required for performance of construction activities. Show distribution on transmittal forms.
 - a. Do not proceed with installation until a copy of Product Data is in the Installer's possession.
 - b. Do not permit use of unmarked copies of Product Data in connection with construction.

1.12 SAMPLES

- A. Submit full-size, fully fabricated Samples cured and finished as specified and physically identical with the material or product proposed. Samples include partial sections of manufactured or fabricated components, cuts or containers of materials, color range sets, and swatches showing color, texture, and pattern.
 1. Store, mount or display Samples on site in the manner to facilitate review of qualities indicated. Prepare Samples to match the Architect/Engineer's sample. Include the following:
 - a. **Specification Section number and reference.**
 - b. **Generic description of the Sample.**
 - c. **Sample source.**
 - d. **Product name or name of the manufacturer.**
 - e. **Compliance with recognized standards.**
 - f. **Availability and delivery time.**
 2. Submit Samples for review of size, kind, color, pattern, and texture. Submit Samples for a final check of these characteristics with other elements and a comparison of these characteristics between the final submittal and the actual component as delivered and installed.
 - a. Where variation in color, pattern, texture, or other characteristic is inherent in the material or product represented, submit at least **three (3)** multiple units that show approximate limits of the variations.
 - b. Refer to other Specification Sections for requirements for Samples that illustrate workmanship, fabrication techniques, details of assembly, connections, operation, and similar construction characteristics.
 - c. Refer to other Sections for Samples to be returned to the Contractor for incorporation in the Work. Such Samples must be undamaged at time of use. On the transmittal, indicate special requests regarding disposition of Sample submittals.
 - d. Samples not incorporated into the Work, or otherwise designated as the Owner's property, are the property of the Contractor and shall be removed from the site prior to Substantial Completion.
 3. **Preliminary Submittals:** Submit a full set of choices where Samples are submitted for selection of color, pattern, texture, or similar characteristics from a range of standard choices, unless otherwise noted in specification section.
 - a. The Architect/Engineer will review and return preliminary submittals with the Architect/Engineers notation, indicating selection and other action.
 4. **Submittals:** Except for Samples illustrating assembly details, workmanship, fabrication techniques, connections, operation, and similar characteristics, submit **three (3)** sets. The Architect/Engineer will return **one (1)** set marked with the action taken.
 5. Maintain sets of Samples, as returned, at the Project Site, for quality comparisons throughout the course of construction.
 - a. Unless noncompliance with Contract Document provisions is observed, the submittal may serve as the final submittal.
 - b. Sample sets may be used to obtain final acceptance of the construction associated with each set.
- B. **Distribution of Samples:** Prepare and distribute additional sets to subcontractors, manufacturers, fabricators, suppliers, installers, and others as required for performance of the Work. Show distribution on transmittal forms.

1. Field samples are full-size examples erected on-site to illustrate finishes, coatings, or finish materials and to establish the Project standard.
 - a. Comply with submittal requirements to the fullest extent possible. Process transmittal forms to provide a record of activity.

1.13 QUALITY ASSURANCE SUBMITTALS

- A. Submit quality-control submittals, including design data, certifications, manufacturer's instructions, manufacturer's field reports, and other quality-control submittals as required under other Sections of the Specifications.
- B. **Certifications:** Where other Sections of the Specifications require certification that a product, material, or installation complies with specified requirements, submit a notarized certification from the manufacturer certifying compliance with specified requirements.
 1. **Signature:** Certification shall be signed by an officer of the manufacturer or other individual authorized to sign documents on behalf of the company.
- C. **Inspection and Test Reports:** Requirements for submittal of inspection and test reports from independent testing agencies are specified in Division 01 Section 01 45 00 "Quality Control."

1.14 ARCHITECT/ENGINEER'S ACTION

- A. Except for submittals for the record or information, where action and return is required, the Architect/Engineer will review each submittal, mark to indicate action taken, and return promptly.
 1. Compliance with specified characteristics is the Contractor's responsibility.
- B. **Action Stamp:** The Architect/Engineer will stamp each submittal with a uniform, action stamp. The Architect/Engineer will mark the stamp appropriately to indicate the action taken, as follows:
 1. **Final Unrestricted Release:** When the Architect/Engineer marks a submittal "Approved for fabrication," the Work covered by the submittal may proceed provided it complies with requirements of the Contract Documents. Final payment depends on that compliance.
 2. **Final-But-Restricted Release:** When the Architect/Engineer marks a submittal "Incorporate Notations," the Work covered by the submittal may proceed provided it complies with notations or corrections on the submittal and requirements of the Contract Documents. Submit corrected copies for record. Final payment depends on that compliance.
 3. **Returned for Resubmittal:** When the Architect/Engineer marks a submittal "Rejected, or Revise and Resubmit," do not proceed with Work covered by the submittal, including purchasing, fabrication, delivery, or other activity. Revise or prepare a new submittal according to the notations; resubmit without delay. Repeat if necessary to obtain different action mark.
 - a. Do not use, or allow others to use, submittals marked "Rejected, or Revise and Resubmit" at the Project Site or elsewhere where Work is in progress.
 4. **Other Action:** Where a submittal is for information or record purposes or special processing or other activity, the Architect/Engineer will return the submittal marked "Action Not Required."
- C. **Unsolicited Submittals:** The Architect/Engineer will discard unsolicited submittals without action.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01 33 00

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for quality-control services.
- B. Quality-Control services include fire alarm acceptance testing, inspections, tests, and related actions, including reports performed by Contractor, by independent agencies, and by governing authorities. They do not include contract enforcement activities performed by the Owner.
- C. Inspection and testing services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with Contract Document requirements.
- D. Requirements of this Section relate to customized fabrication and installation procedures, not production of standard products.
 - 1. Specific quality-control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
 - 2. Specified inspections, tests, and related actions do not limit Contractor's quality-control procedures that facilitate compliance with Contract Document requirements.
 - 3. Requirements for Contractor to provide quality-control services required by Architect/Engineer, Owner, or authorities having jurisdiction are not limited by provisions of this Section.
- E. Related Sections: The following Sections contain requirements that relate to this Section:
 - 1. Division 01 Section 01 33 00 "Submittal Procedures" specifies requirements for development of a schedule of required tests and inspections.
 - 2. Division 01 Section 01 73 29 "Cutting and Patching" specifies requirements for repair and restoration of construction disturbed by inspection and testing activities.
 - 3. Division 01 Section 01 77 00 "Closeout Procedures", specific requirements for contract closeout procedures.
 - 4. Division 28 Section 28 31 00 "Fire Detection and Alarm" specifies field quality control for the Alarm System.

1.3 RESPONSIBILITIES

- A. Contractor Responsibilities: Unless otherwise indicated as the responsibility of another identified entity, the Owner, through the Project Manager, shall provide inspections, tests, and other quality-control services specified elsewhere in the Contract Documents and required by authorities having jurisdiction. All tests required by the individual specification sections are required to be scheduled and notification given to the Project Manager **24** hours in advance of the test/inspection as applicable. Costs for these services are not included in the Contract Sum.
 - 1. Where individual Sections specifically indicate that certain inspections, tests, and other quality-control services are the Contractor's responsibility, the Contractor shall employ and pay a qualified independent testing agency to perform quality-control services. Costs for these services are included in the Contract Sum.
 - 2. Where individual Sections specifically indicate that certain inspections, tests, and other quality-control services are the Owner's responsibility, the Owner will employ and pay a qualified independent testing agency to perform those services.
 - a) Such services include Special Inspections as required by the latest edition of the "Connecticut State Building Code".
 - b) Where the Owner has engaged a testing agency for testing and inspecting part of the Work, and the Contractor is also required to engage an entity for the same or related element, the Contractor shall not employ the entity engaged by the Owner. The Owner will engage the services of a qualified Special Inspector for this project. The Special Inspector, as a representative of the Owner, shall

- document and confirm compliance with the provisions of the Connecticut State Building Code for Special Inspections.
- c) Materials and assemblies for this project will be tested and construction operations inspected as the work progresses. Failure to detect any defective work or material shall not in any way prevent later rejection when such defect is discovered nor shall it obligate the State for final acceptance.
 - d) The Owner's use of testing and inspection services shall in no way relieve the Contractor of the responsibility to furnish materials and finished construction in full compliance with the Contract Documents and the Connecticut State Building Code.
- B. Retesting: The Contractor is responsible for retesting where results of inspections, tests, or other quality-control services prove unsatisfactory and indicate noncompliance with Contract Document requirements, regardless of whether the original test was Contractor's responsibility.
- 1. The cost of retesting construction, revised or replaced by the Contractor, is the Contractor's responsibility where required tests performed on original construction indicated non-compliance with Contract Document requirements.
 - 2. The Owner will issue a credit change order to cover all costs incurred related to all re-tests/re-inspections due to non-compliance to the Contract Documents, including but not limited to the Owner's costs and the Consultant's costs.
- C. Associated Services: Cooperate with agencies performing required inspections, tests, and similar services, and provide reasonable auxiliary services as requested. Notify the Agency sufficiently in advance of operations to permit assignment of personnel. Auxiliary services required include, but are not limited to, the following:
- 1. *Provide access to the Work.*
 - 2. *Furnish incidental labor and facilities necessary to facilitate inspections and tests.*
 - 3. *Take adequate quantities of representative samples of materials that require testing or assist the agency in taking samples.*
 - 4. *Provide facilities for storage and curing of test samples.*
 - 5. *Deliver samples to testing laboratories.*
 - 6. *Provide an approved design mix proposed for use for material mixes that require control by the testing agency.*
 - 7. *Provide security and protection of samples and test equipment at the Project Site.*
- D. Duties of the Testing Agency: The independent testing agency engaged to perform inspections, sampling, and testing of materials and construction specified in individual Sections shall cooperate with the Project Manager, Architect/Engineer and the Contractor in performance of the testing agency's duties. The testing agency shall provide qualified personnel to perform required inspections and tests.
- 1. The testing agency shall notify the Project Manager and the Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
 - 2. The testing agency is not authorized to release, revoke, alter, or enlarge requirements of the Contract Documents or approve or accept any portion of the Work.
 - 3. The testing agency shall not perform any duties of the Contractor.
- E. Owner will pay for the services of an independent testing agency laboratory to perform inspections, tests and other services required by the Specifications except as noted below, listed for which the Owner will issue a deduct change order to cover the cost associated with these tests:
- 1. When the Contractor notifies the Project Manager and/or Testing Agency less than 24 hours before the expected time of testing.
 - 2. When the Contractor requires testing for his own convenience.
 - 3. When the Contractor schedules a test and is not ready for the required test.
- F. Submit reports of tests that are part of the submittal requirements which indicate compliance or non-compliance with the specified standard.
- G. See also General Conditions Article 16 "Inspections & Tests".

1.4 SUBMITTALS

- A. Unless the Contractor is responsible for this service, the independent testing agency shall submit a certified written report, in duplicate, of each inspection, test, or similar service to the Project Manager. If the Contractor

is responsible for the service, submit a certified written report, in duplicate, of each inspection, test, or similar service through the Contractor.

1. Submit additional copies of each written report directly to the governing authority, when the authority so directs.
2. Report Data: Written reports of each inspection, test, or similar service include, but are not limited to, the following:
 - a. Date of issue.
 - b. Project title and number.
 - c. Name, address, and telephone number of testing agency.
 - d. Dates and locations of samples and tests or inspections.
 - e. Names of individuals making the inspection or test.
 - f. Designation of the Work and test method.
 - g. Identification of product and Specification Section.
 - h. Complete inspection or test data.
 - i. Test results and an interpretation of test results.
 - j. Ambient conditions at the time of sample taking and testing.
 - k. Comments or professional opinion on whether inspected or tested Work complies with Contract Document requirements.
 - l. Name and signature of laboratory inspector.
 - m. Recommendations on re-testing.

1.5 QUALITY ASSURANCE

- A. Qualifications for Service Agencies:** Engage inspection and testing service agencies, including independent testing laboratories, that are pre-qualified as complying with the National Voluntary Laboratory Accreditation Program and that specialize in the types of inspections and tests to be performed.
1. Each independent inspection and testing agency engaged on the Project shall be authorized by authorities having jurisdiction to operate in the state where the Project is located.
- B. Mockups:** Provide full-size, physical assemblies that are constructed on-site. Mockups will be used to verify selections made under sample submittals, to demonstrate aesthetic effects and, where indicated, qualities of materials and execution, and to review construction, coordination, testing, or operation; they are not samples. **Approved mockups establish the standard by which the Work will be judged.**

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 MOCKUPS

- A.** Build site-assembled mockups using installers who will perform same tasks for project.
- B.** Before installing portions of the Work requiring mockups, build mockups for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work:
1. Build mockups in location and of size indicated or, if not indicated, as directed by Architect/Engineer **or Project Manager**.
 2. Notify Architect/Engineer **and Project Manager** seven (7) days in advance of dates and times when mockups will be constructed.
 3. Demonstrate the proposed range of aesthetic effects and workmanship.
 4. Obtain Architect/Engineer's **and Project Manager's** approval of mockups before starting work, fabrication, or construction.
 5. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
 6. Demolish and remove mockups when directed, unless otherwise indicated.

3.2 REPAIR AND PROTECTION

- A. General: Upon completion of inspection, testing, sample taking and similar services, repair damaged construction and restore substrates and finishes. Comply with Contract Document requirements for Division 01 Section 01 73 29 "Cutting and Patching."
- B. Protect constructions exposed by or for quality-control service activities, and protect repaired construction.
- C. Repair and protection is Contractor's responsibility, regardless of the assignment of responsibility for inspection, testing, or similar services.

END OF SECTION 01 45 00

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements governing the Contractor's selection of products for use in the Project.
- B. **Related Sections:** The following Sections contain requirements that relate to this Section:
 - 1. Division 01 Section 01 25 00 "Substitution Procedures" specifies administrative procedures for handling requests for substitutions made after award of the Contract.
 - 2. Division 01 Section 01 33 00 "Submittal Procedures" specifies requirements for submittal of the Contractor's Construction Schedule and the Submittal Schedule.
 - 3. Division 01 Section 01 42 20 "Reference Standards and Definitions" specifies the applicability of industry standards to products specified.

1.3 DEFINITIONS

- A. Definitions used in this Article are not intended to change the meaning of other terms used in the Contract Documents, such as "specialties," "systems," "structure," "finishes," "accessories," and similar terms. Such terms are self-explanatory and have well-recognized meanings in the construction industry.
 - 1. "Products" are items purchased for incorporation in the Work, whether purchased for the Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
 - a. "Named Products" are items identified by the manufacturer's product name, including make or model number or other designation, shown or listed in the manufacturer's published product literature, which is current as of the date of the Contract Documents.
 - 2. "Materials" are products substantially shaped, cut, worked, mixed, finished, refined or otherwise fabricated, processed, or installed to form a part of the Work.
 - 3. "Equipment" is a product with operational parts, whether motorized or manually operated, that requires service connections, such as wiring or piping.

1.4 QUALITY ASSURANCE

- A. **Source Limitations:** To the fullest extent possible, provide products of the same kind from a single source.
- B. **Compatibility of Options:** When the Contractor is given the option of selecting between two (2) or more products for use on the Project, the product selected shall be compatible with products previously selected, even if previously selected products were also options.
- C. **Nameplates:** Except for required labels and operating data, do not attach or imprint manufacturer's or producer's nameplates or trademarks on exposed surfaces of products that will be exposed to view in occupied spaces or on the exterior.
 - 1. Labels: Locate required product labels and stamps on concealed surfaces or, where required for observation after installation, on accessible surfaces that are not conspicuous.
 - 2. Equipment Nameplates: Provide a permanent nameplate on each item of service-connected or power-operated equipment. Locate on an easily accessible surface that is inconspicuous in occupied spaces. The nameplate shall contain the following information and other essential operating data:
 - a. Name of product and manufacturer.
 - b. Model and serial number.
 - c. Capacity.

- d. Speed.
- e. Ratings.

1.5 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A.** Deliver, store, and handle products according to the manufacturer's recommendations, using means and methods that will prevent damage, deterioration, and loss, including theft.
1. Schedule delivery to minimize long-term storage at the site and to prevent overcrowding of construction spaces.
 2. Coordinate delivery with installation time to assure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
 3. Deliver products to the site in an undamaged condition in the manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing. Store products in accordance with manufacturers' instructions and maintain within temperature and humidity range required by manufacturer.
 4. Inspect products upon delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.
 5. Store products at the site in a manner that will facilitate inspection and measurement of quantity or counting of units.
 6. Store heavy materials away from the Project structure in a manner that will not endanger the supporting construction.
 7. Store products subject to damage by the elements above ground, under cover in a weathertight enclosure, with ventilation adequate to prevent condensation.
 8. For exterior storage of fabricated products, place on sloped supports above ground. Cover products subject to deterioration with impervious sheet covering; provide ventilation to avoid condensation.
 9. Store loose granular material on solid surfaces in a well-drained area; prevent mixing with foreign matter.
 10. Arrange storage to provide access for inspection. Periodically inspect to insure products are undamaged and are maintained under required conditions. Keep log showing date, time and problems, if any.
 11. Stone, masonry units and similar materials shall be stored on platforms or dry skids and shall be adequately covered and protected against damage.
 12. Materials and equipment shall be delivered, stored and handled to prevent intrusion of foreign matter and damage by weather or breakage. Packaged materials shall be delivered and stored in original, unbroken packages.
 13. Promptly inspect shipments to assure that products comply with requirements, that quantities are correct and products are undamaged.
 14. Packages, materials and equipment showing evidence of damage will be rejected and replaced at no additional cost to the Owner.

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION

- A. General Product Requirements:** Provide products that comply with the Contract Documents, that are undamaged and, unless otherwise indicated, new at the time of installation.
1. Provide products complete with accessories, trim, finish, safety guards, and other devices and details needed for a complete installation and the intended use and effect.
 2. Standard Products: Where available, provide standard products of types that have been produced and used successfully in similar situations on other projects.
- B. Product Selection Procedures:** The Contract Documents and governing regulations govern product selection. Procedures governing product selection include the following:
1. Semi-proprietary Specification Requirements: Where Specifications name two (2) or more products or manufacturers, provide one (1) of the products indicated. Comply with the requirements of Division 01 Section 01 25 00 "Substitution Procedures."

2. Descriptive Specification Requirements: Where Specifications describe a product or assembly, listing exact characteristics required, with or without use of a brand or trade name, provide a product or assembly that provides the characteristics and otherwise complies with Contract requirements.
3. Compliance with Standards, Codes, and Regulations: Where Specifications only require compliance with an imposed code, standard, or regulation, select a product that complies with the standards, codes, or regulations specified.
4. Visual Selection: Where specified product requirements include the phrase "*...as selected from manufacturer's standard colors, patterns, textures...*" or a similar phrase, select a product and manufacturer that complies with other specified requirements. The Architect/Engineer will select the color, pattern, and texture from the product line selected.

PART 3 - EXECUTION

3.1 INSTALLATION OF PRODUCTS

- A. Comply with manufacturer's instructions and recommendations for installation of products in the applications indicated. Anchor each product securely in place, accurately located and aligned with other Work.
 1. Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.

END OF SECTION 01 60 00

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. **General:** This Section specifies administrative and procedural requirements for field engineering services including, but not limited to, the following:
 - 1. Land survey work.
 - 2. Civil Engineering services.
 - 3. Damage surveys.
 - 4. Geotechnical monitoring.
- B. **Related Sections:** The following Sections contain requirements that relate to this Section:
 - 1. Division 01 Section 01 31 00 "Project Management and Coordination" for procedures for coordinating field engineering with other construction activities.
 - 2. Division 01 Section 01 33 00 "Submittal Procedures" for submitting Project record surveys.
 - 3. Division 01 Section 01 77 00 "Closeout Procedures" for submitting final property survey with Project Record Documents and recording of Owner-accepted deviations from indicated lines and levels.

1.3 SUBMITTALS

- A. **Certificates:** Submit a certificate from the Land Surveyor stating that the control information furnished by the Owner is accurate or identify inaccuracies, if they exist. The Contractor shall not take advantage of errors, which may be included in the control information. Stakes and markings shall be preserved.
- B. **Final Property Survey:** Prepare and submit 10 copies of the final property survey.
- C. **Project Record Documents:** Submit a record of Work performed and record survey data as required under provisions of "Submittals" and "Project Closeout" Sections.

1.4 QUALITY ASSURANCE

- A. Provide field engineering services to establish and record grades, lines and elevations.
- B. The Contractor shall retain a Land Surveyor registered by the State of Connecticut to confirm State furnished base lines and benchmarks, lay out the building, underground utility lines and other site work from the information furnished by the Owner and to establish and record the necessary elevations, at no additional cost to the State.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. **Identification:** The Owner will identify two (2) base lines on the Contract Drawings.
- B. Verify layout information shown on the Drawings, in relation to the property survey and existing benchmarks. Notify the Project Manager of any discrepancies immediately in writing before proceeding to lay out the Work. Locate and protect existing benchmarks and base line. Preserve permanent reference points during construction.
 - 1. Do not change or relocate benchmarks or base line without prior written approval. Promptly report lost or destroyed reference points or requirements to relocate reference points because of necessary changes in grades or locations.
 - 2. Promptly replace lost or destroyed Project baseline benchmarks. Base replacements on the original survey control points.

- C. Establish and maintain a sufficient quantity of (minimum of 2) permanent benchmarks on the site, referenced to data established by Owner supplied information.
 - 1. Record benchmark locations, with horizontal and vertical data, on Project Record Documents.
- D. **Existing Utilities and Equipment:** The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities and other construction.
 - 1. Prior to construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping. Notify the Project Manager of any discrepancies prior to proceeding.

3.2 PERFORMANCE

- A. Work from lines and levels established by the property survey. Establish benchmarks and control points to set lines and levels at each story of construction and elsewhere as needed to locate each element of the Project. Calculate and measure required dimensions within indicated or recognized tolerances. Do not scale Drawings to determine dimensions.
 - 1. Advise entities engaged in construction activities of benchmarks and control points for their use.
 - 2. As construction proceeds, check every major element for line, level, and plumb.
- B. **Surveyor's Log:** Maintain a surveyor's log of control and other survey work. Make this log available for reference.
 - 1. Record deviations from required lines and levels, and advise the Project Manager when deviations that exceed indicated or recognized tolerances are detected. On Project Record Drawings, record deviations that are accepted and not corrected.
 - 2. On completion of foundation walls, major site improvements, underground utilities, and other Work requiring field-engineering services, prepare a certified survey showing dimensions, locations, angles, elevations of construction, as-built locations and site work.
- C. **Site Improvements:** Locate and lay out site improvements, including pavements, stakes for grading, fill and topsoil placement, utility slopes, and invert elevations.
- D. **Building Lines and Levels:** Locate and lay out batter boards for structures, building foundations, column grids and locations, floor levels, and control lines and levels required for mechanical and electrical work.
- E. **Existing Utilities:** Furnish information necessary to adjust, move, or relocate existing structures, utility poles, lines, services, or other appurtenances located in or affected by construction. Coordinate with local authorities having jurisdiction.
- F. **Final Property Survey:** Prepare a final property survey showing significant features (real property) for the Project. Include on the survey a certification, signed by the surveyor, that principal metes, bounds, lines, and levels of the Project are accurately positioned as shown on the survey.

END OF SECTION 01 71 23

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for cutting and patching.
- B. **Related Sections:** The following Sections contain requirements that relate to this Section:
1. Division 01 Section 01 31 00 "Project Management and Coordination" for procedures for coordinating cutting and patching with other construction activities.
 2. Division 01 Section 01 35 16 "Alteration Project Procedures" for procedures for coordinating cutting and patching with other construction activities.
 3. Division 02 Section **02 41 19 "Selective Structure Demolition"** for demolition of selected portions of the building for alterations.
 4. Division 02 Section **02 42 93 "Building Deconstruction"** for deconstruction of selected portions of the building for alterations.
 5. Refer to other Sections for specific requirements and limitations applicable to cutting and patching individual parts of the Work.
 - a. Requirements of this Section apply to mechanical and electrical installations. Refer to Division 22, 23, and 26 Sections for other requirements and limitations applicable to cutting and patching mechanical and electrical installations.

1.3 SUBMITTALS

- A. **Cutting and Patching Proposal:** Submit a proposal to the Project Manager describing procedures well in advance of the time cutting and patching will be performed and if the Owner's Representative and/or Architect/Engineer requires approval of these procedures before proceeding. Request approval to proceed. Include the following information, as applicable, in the proposal:
1. Describe the extent of cutting and patching required. Show how it will be performed and indicate why it cannot be avoided.
 2. Describe anticipated results in terms of changes to existing construction. Include changes to structural elements and operating components as well as changes in the building's appearance and other significant visual elements.
 3. Describe affects to integrity of weather exposed or moisture resistant element.
 4. Describe affects to efficiency, maintenance, or safety of any operational element.
 5. Describe affects to Work of Owner or separate contractor.
 6. List products to be used and firms or entities that will perform Work.
 7. Indicate dates when cutting and patching will be performed.
 8. **Utilities:** List utilities that cutting and patching procedures will disturb or affect. List utilities that will be relocated and those that will be temporarily out of service. Indicate how long service will be disrupted.
 9. Where cutting and patching involves adding reinforcement to structural elements, submit details and engineering calculations sealed by an Engineer registered in the State of Connecticut showing integration of reinforcement with the original structure.
 10. Approval by the Project Manager to proceed with cutting and patching does not waive the Architect/Engineer of Record's rights to later require complete removal and replacement of unsatisfactory Work.

1.4 QUALITY ASSURANCE

- A. **Requirements for Structural Work:** Do not cut and patch structural elements in a manner that would change their load-carrying capacity or load-deflection ratio.

1. Obtain approval from the Architect/Engineer of the cutting and patching proposal before cutting and patching the following structural elements:
 - a. **Foundation construction.**
 - b. **Bearing and retaining walls.**
 - c. **Structural concrete.**
 - d. **Structural steel.**
 - e. **Lintels.**
 - f. **Structural decking.**
 - g. **Miscellaneous structural metals.**
 - h. **Exterior curtain-wall construction.**
 - i. **Equipment supports.**
 - j. **Piping, ductwork, vessels, and equipment.**
 - k. **Structural systems of special construction in Division 13 Sections.**
- B. **Operational Limitations:** Do not cut and patch operating elements or related components in a manner that would result in reducing their capacity to perform as intended. Do not cut and patch operating elements or related components in a manner that would result in increased maintenance or decreased operational life or safety.
 1. Obtain Architect/Engineer's approval of the cutting and patching proposal before cutting and patching the following operating elements or safety related systems:
 - a. **Primary operational systems and equipment.**
 - b. **Air or smoke barriers.**
 - c. **Water, moisture, or vapor barriers.**
 - d. **Membranes and flashings.**
 - e. **Fire protection systems.**
 - f. **Noise and vibration control elements and systems.**
 - g. **Control systems.**
 - h. **Communication systems.**
 - i. **Conveying systems.**
 - j. **Electrical wiring systems.**
 - k. **Operating systems of special construction in Division 13 Sections.**
- C. **Visual Requirements:** Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in the Architect/Engineer's opinion, reduce the building's aesthetic qualities. Do not cut and patch construction in a manner that would result in visual evidence of cutting and patching. Remove and replace construction cut and patched in a visually unsatisfactory manner.

1.5 WARRANTY

- A. **Existing Warranties:** Replace, patch, and repair material and surfaces cut or damaged by methods and with materials in such a manner as not to void any warranties required or existing.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

- A. Use materials identical to existing materials. For exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible if identical materials are unavailable or cannot be used. Use materials whose installed performance will equal or surpass that of existing materials.
- B. The Contractor shall install sleeves, inserts and hangers furnished by the trades needing same.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Examine surfaces to be cut and patched and conditions under which cutting and patching is to be performed before cutting. If unsafe or unsatisfactory conditions are encountered, notify the Project Manager and Architect/Engineer, before proceeding with corrective action.
- B. Openings and chases may not be shown on the Drawings. It is the responsibility of the Contractor to examine the Architectural, Electrical, Heating, Cooling, Ventilating and Plumbing Drawings and to provide chases, channels or openings where needed.
 - 1. After installing Work into openings, channels and/or chases, the Contractor shall close same. If finishes are to be restored, the new Work shall match the original and shall be done by the trade customarily responsible for the particular kind of Work.
- C. The Contractor shall verify dimensions for built-in Work and/or Work adjoining that of other trades before ordering any material or doing any Work. Discrepancies shall be submitted to the Project Manager before proceeding with the Work.
- D. See also General Conditions Article 23 "Cutting, Fitting, Patching & Digging".

3.2 PREPARATION

- A. Temporary Support: Provide temporary support of Work to be cut.
- B. Protection: Protect existing construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of the Work that might be exposed during cutting and patching operations.
- C. Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
- D. Avoid cutting existing pipe, conduit, or ductwork serving the building but scheduled to be removed or relocated until provisions have been made to bypass them.

3.3 PERFORMANCE

- A. **General:** Employ skilled workmen to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time and complete without delay.
 - 1. Cut existing construction to provide for installation of other components or performance of other construction activities and the subsequent fitting and patching required to restore surfaces to their original condition.
 - 2. DO perform cutting and patching to integrate elements of Work. Provide penetrations of existing surfaces. Provide samples for testing. Seal penetrations through floors, walls, ceilings and roofs, as applicable; restore or preserve fire-rated and smoke-barrier construction. Construction and finishes shall match original Work.
- B. **Cutting:** Cut existing construction using methods least likely to damage elements retained or adjoining construction. Where possible, review proposed procedures with the original Installer; comply with the original Installer's recommendations.
 - 1. In general, where cutting, use hand or small power tools designed for sawing or grinding, not hammering and chopping. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
 - 2. To avoid marring existing finished surfaces, cut or drill from the exposed or finished side into concealed surfaces.
 - 3. Cut through concrete and masonry using a cutting machine, such as a Carborundum saw or a diamond-core drill.
 - 4. Comply with requirements of applicable Division 32 Sections where cutting and patching requires excavating and backfilling.
 - 5. Where services are required to be removed, relocated, or abandoned, by-pass utility services, such as pipe or conduit, before cutting. Cut-off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal the remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after by-passing and cutting.
- C. **Patching:** Patch with durable seams that are as invisible as possible. Comply with specified tolerances.
 - 1. Where feasible, inspect and test patched areas to demonstrate integrity of the installation.

2. Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
 3. Where removing walls or partitions extends one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform color and appearance. Remove existing floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
 - a. Where patching occurs in a smooth painted surface, extend final paint coat over entire unbroken surface containing the patch after the area has received primer and second coat.
 4. Patch, repair, or re-hang existing ceilings as necessary to provide an even-plane surface of uniform appearance.
- 3.4 CLEANING**
- A. Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty, and similar items. Thoroughly clean piping, conduit, and similar features before applying paint or other finishing materials. Restore damaged pipe covering to its original condition.

END OF SECTION 01 73 29

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A.** Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A.** This Section includes requirements for waste management goals, waste management plan and waste management plan implementation.
- B.** Related Sections: The following Sections contain requirements that relate to this Section:
 - 1. Division 01 Section 01 11 00 "Summary of Work".
 - 2. Division 01 Section 01 20 00 "Price and Payment Procedures".
 - 3. Division 01 Section 01 25 00 "Substitution Procedures".
 - 4. Division 01 Section 01 31 19 "Project Meetings".
 - 5. Division 01 Section 01 33 00 "Submittal Procedures".
 - 6. Division 01 Section 01 45 00 "Quality Control".
 - 7. Division 01 Section 01 50 00 "Temporary Facilities and Controls".
 - 8. Division 01 Section 01 60 00 "Product Requirements".
 - 9. Division 01 Section 01 77 00 "Closeout Procedures".
 - 10. Division 01 Section 01 81 13 "Sustainable Design Requirements".

1.3 DEFINITIONS

- A. Construction Waste:** Solid wastes such as building materials, packaging and rubble resulting from construction, paving and infrastructure.
- B. Demolition Waste:** Solid wastes such as concrete, wood, brick, plaster, roofing materials, wallboard, metals, carpeting, insulation, and clean fill resulting from demolition or selective demolition of structures.
- C. Recyclable Materials:** Products and materials that can be recovered and remanufactured into a new product. Recyclable materials include, but are not limited to, the following:
 - 1. Metals (ferrous and non-ferrous), including banding, metal studs, ductwork, and piping.
 - 2. Asphaltic concrete paving.
 - 3. Portland cement concrete.
 - 4. Gypsum products.
 - 5. Paper and cardboard.
 - 6. Wood products, including structural, finish, crates, and pallets.
 - 7. Brick and masonry.
 - 8. Carpet and padding.
 - 9. Plastics.
 - 10. Copper wiring.
- D. Recycling Facility:** A business that specializes in collecting, handling, processing, distributing, or remanufacturing waste materials generated by new construction projects, into products or materials that can be used for this project or by others.
- E. Salvage and Reuse:** Existing usable product or material that can be saved and reused in some manner on the project site. Materials for reuse must be approved by the Architect/Engineer. Materials that can be salvaged and reused must comply with applicable technical specifications and include, but are not limited to, the following:
 - 1. Dimensional lumber and other wood products.
 - 2. Structural steel.
 - 3. Soil.

4. Masonry products.
 5. Plants.
- F. **Salvage for Resale:** Existing usable product that can be saved and removed intact (as is) from the project site to another site for resale to others without remanufacturing.

1.4 WASTE MANAGEMENT GOALS

- A. The Owner has established that this Project shall generate the least amount of waste possible and that processes that ensure the generation of as little waste as possible due to error, poor planning, breakage, mishandling, contamination, or other factors shall be employed.
- B. The Contractor shall use all means available to divert the greatest extent practical and economically feasible, construction waste from landfills and incinerators.
- C. Of the inevitable waste that is generated, as many of the waste materials as economically feasible shall be reused, salvaged, or recycled. Waste disposal in landfills shall be minimized.
- D. Recycle and/or salvage a minimum of **50** percent of non-hazardous construction **and demolition** waste by weight of the total solid waste generated by the Project.
- E. With regard to these goals the Contractor shall develop, for the Architect/Engineer's review, a Waste Management Plan for this Project.
- F. Take a pro-active, responsible role in management of construction waste and require all subcontractors, vendors, and suppliers to participate in the effort. Establish a construction waste management program that includes the following categories:
 1. Minimizing packaging waste.
 2. Salvage and reuse.
 3. Salvage for resale or donation.
 4. Recycling.
 5. Disposal.

1.5 SUBMITTALS

- A. **Draft Waste Management Plan:** Within 30 days after receipt of Notice of Award of Bid, or prior to any waste removal, whichever occurs sooner, the Contractor shall submit **three (3)** copies of a Draft Waste Management Plan to the Project Manager.
- B. **Final Waste Management Plan:** Once the Owner has determined which of the recycling options addressed in the Draft Waste Management Plan are acceptable, the Contractor shall submit within 10 days **three (3)** copies of a Final Waste Management Plan.
- C. **Progress Reports:** Submit **three (3)** copies of monthly progress reports, at the same time as the Application for Payment, documenting the following:
 1. Material category.
 2. Point of waste generation.
 3. Total quantity of waste in tons.
 4. Quantity of waste salvaged, in tons.
 5. Quantity of waste recycled, in tons.
 6. Total quantity of waste recovered (salvaged plus recycled) in tons.
 7. Total quantity of waste recovered (salvaged plus recycled) as a percentage of total waste.
- D. **Calculations:** Submit **three (3)** copies of calculations indicating the end-of-project rates for salvage, recycling, and disposal as a percentage of total waste generated by the Project prior to Substantial Completion.
- E. **Record Submittals:**
 1. **Donations:** Indicate which salvageable materials were donated, who they were donated to, and whether the recipient is tax exempt. Submit documentation indicating receipt of donations.
 2. **Sales:** Indicate which salvageable materials were sold, who they were sold to, and whether the recipient is tax exempt. Submit documentation indicating receipt of materials.

3. **Recycling:** Indicate which materials were recycled and the name of the facility licensed to accept them. Submit documentation such as manifests, weight tickets, receipts, and invoices.
4. **Waste Disposal:** Indicate which materials were accepted as waste by landfills and incinerator facilities licensed to accept them. Submit documentation indicating receipt of materials.

1.6 QUALITY ASSURANCE

- A. **Regulatory Requirements:** Comply with regulations of State of Connecticut Department of Environment Protection, Waste Management Bureau Recycling Program.
- B. **Waste Management Conference:** Review and discuss the waste management plan, requirements for documenting quantities of each type of waste and its disposition, procedures for materials separation, procedures for periodic collection and transportation to recycling and disposal facilities. Review waste management requirements for each trade. Verify availability of containers and bins needed to avoid delays.

1.7 WASTE MANAGEMENT PLAN

- A. **Draft Waste Management Plan:** Include the following in the Draft Plan:
 1. Analysis of the proposed jobsite waste to be generated, including types and quantities.
 2. **Landfill Options:** The name of the landfill(s) where trash will be disposed of, the applicable landfill tipping fee(s), and the projected cost of disposing of all Project waste in the landfill(s).
 3. **Alternatives to Landfilling:** A list of each material proposed to be salvaged, reused, or recycled during the course of the Project, the proposed local market for each material, and the estimated net cost savings or additional costs resulting from separating and recycling (versus landfilling) each material. "Net" means that the following have been subtracted from the cost of separating and recycling:
 - a. Revenue from the sale of recycled or salvaged materials and
 - b. Landfill tipping fees saved due to diversion of materials from the landfill. The list of these materials is to include, at a minimum, the following materials:
 - i) Cardboard.
 - ii) Clean dimensional wood.
 - iii) Beverage containers.
 - iv) Land clearing debris.
 - v) Concrete.
 - vi) Bricks.
 - vii) Concrete Masonry Units (CMU).
 - viii) Asphalt.
 - ix) Metals from banding, stud trim, ductwork, piping, rebar, roofing, other trim, steel, iron, galvanized sheet steel, stainless steel, aluminum, copper, zinc, lead, brass, and bronze.
- B. **Resources for Development of Waste Management Plan:** The following sources may be useful in developing the Draft Waste Management Plan:
 1. **Recycling Haulers and Markets:** Local haulers and markets for recyclable materials. For more information, contact the State of Connecticut Department of Environmental Protection, Waste Management Bureau Recycling Program, (860) 424-3365, www.dep.state.ct.us/wst/recycle/ctrecycle.htm.
- C. **Final Waste Management Plan:** The Final Waste Management Plan shall contain the following:
 1. Analysis of the proposed jobsite waste to be generated, including types and quantities.
 2. **Landfill Options:** The name of the landfill(s) where trash will be disposed of, the applicable landfill tipping fee(s), and the projected cost of disposing of all Project waste in the landfill(s).
 3. **Alternatives to Landfilling:** A list of the waste materials from the Project that will be separated for reuse, salvage, or recycling.
 4. **Meetings:** A description of the regular meetings to be held to address waste management. Refer to Section 01 31 19 "Project Meetings".

5. **Materials Handling Procedures:** A description of the means by which any waste materials identified in item (3) above will be protected from contamination, and a description of the means to be employed in recycling the above materials consistent with requirements for acceptance by designated facilities.
6. **Transportation:** A description of the means of transportation of the recyclable materials (whether materials will be site-separated and self-hauled to designated centers, or whether mixed materials will be collected by a waste hauler and removed from the site) and destination of materials.

1.8 WASTE MANAGEMENT PLAN IMPLEMENTATION

- A. **Manager:** The Contractor shall designate an on-site party (or parties) responsible for instructing workers and overseeing and documenting results of the Waste Management Plan for the Project.
- B. **Distribution:** The Contractor shall distribute copies of the Waste Management Plan to the Job Site Foreman, each Subcontractor, the Owner, and the Architect/Engineer.
- C. **Instruction:** The Contractor shall provide on-site instruction of appropriate separation, handling, and recycling, salvage, reuse, and return methods to be used by all parties at the appropriate stages of the Project.
- D. **Separation Facilities:** The Contractor shall lay out and label a specific area to facilitate separation of materials for potential recycling, salvage, reuse, and return. Recycling and waste bin areas are to be kept neat and clean and clearly marked in order to avoid contamination of materials.
- E. **Hazardous Wastes:** Hazardous wastes shall be separated, stored, and disposed of according to local regulations.
- F. **Application for Progress Payments:** The Contractor shall submit with each Application for Progress Payment a Summary of Waste Generated by the Project. Failure to submit this information shall render the Application for Payment incomplete and shall delay Progress Payment. The Summary shall be submitted on a form acceptable to the Owner and shall contain the following information:
 1. The amount (in tons or cubic yards) of material landfilled from the Project, the identity of the landfill, the total amount of tipping fees paid at the landfill, and the total disposal cost. Include manifests, weight tickets, receipt, and invoices.
 2. For each material recycled, reused, or salvaged from the Project: the amount (in tons or cubic yards), the date removed from the jobsite, the receiving party, the transportation cost, the amount of any money paid or received for the recycled or salvaged material, and the net total cost or savings of salvage or recycling of each material shall be indicated. Attach manifests, weight tickets, receipts, and invoices.

PART 2 – PRODUCTS

(Not Applicable)

PART 3 – EXECUTION

3.1 PLAN IMPLEMENTATION

- A. Implement the waste management plan as approved by **Project Manager**.
- B. Provide training of workers, contractors, subcontractors, and suppliers on proper waste management procedures.
 1. Distribute waste management plan to all parties involved in the Project within **three (3)** days of submittal return.
 2. Distribute plan to parties when they first begin working on the Project site. Review plan procedures and locations established for salvage, recycling, and disposal.

3.2 SEPARATION OF RECYCLABLE WASTE MATERIALS

- A. Provide the necessary containers and bins, to facilitate the waste management program, that are clearly and appropriately marked. Prevent contamination of recyclable materials from incompatible products and materials. Separate construction waste at the project site by one of the following methods:
 1. **Source Separated Method:** Waste products and materials, that are recyclable, are separated from trash and sorted into appropriately marked separate containers and then transported to the respective recycling facility for further processing. Trash is transported to a landfill or incinerator.

2. **Co-Mingled Method:** All construction waste is placed into a single container and then transported to a recycling facility where the recyclable materials are sorted and processed and the remaining trash is transported to a landfill or incinerator.
3. Other methods proposed by the Contractor and approved by the **Project Manager**.

END OF SECTION 01 74 19

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for contract closeout including, but not limited to, the following:
 - 1. Inspection procedures.
 - 2. Project record document submittal.
 - 3. Operation and maintenance manual submittal.
 - 4. Submittal of warranties.
 - 5. Final cleaning.
- B. **Related Sections:** The following Sections contain requirements that relate to this Section:
 - 1. Division 01 Section 01 11 00 "Summary of Work".
 - 2. Division 01 Section 01 29 76 "Progress Payment Procedures".
- C. Closeout requirements for specific construction activities may be included in the appropriate Sections in Divisions 02 through 49.

1.3 SUBSTANTIAL COMPLETION

- A. **General:** Basic contract definitions are included in Article 1 of the General Conditions of the Contract for Construction.
- B. **Preliminary Procedures:** Before requesting inspection for Certification of Substantial Completion, complete the following. List exceptions in the request.
 - 1. In the Application for Payment that coincides with, or first follows, the date Substantial Completion is claimed, show 100 percent completion for the portion of the Work claimed as substantially complete.
 - a. Include supporting documentation for completion as indicated in these Contract Documents and a statement showing an accounting of changes to the Contract Sum.
 - b. If 100 percent completion cannot be shown, include a list of incomplete items, the value of incomplete construction, and reasons the Work is not complete.
 - 2. Advise the Owner of pending insurance changeover requirements.
 - 3. Submit specific warranties, workmanship bonds, maintenance agreements, final certifications, and similar documents.
 - 4. Obtain and submit releases enabling the Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, certificates of compliance, operating certificates, and similar releases.
 - 5. Submit record drawings, maintenance manuals, damage or settlement surveys, property surveys, and similar final record information.
 - 6. Deliver tools, spare parts, extra stock, and similar items.
 - 7. Make final changeover of permanent locks and transmit keys to the Owner. Advise the Owner's personnel of changeover in security provisions.
 - 8. Demonstrate, thru operation and testing, the functions of all systems and/or equipment to the satisfaction of the Owner for compliance to the Contract. Complete testing of systems and instruction of the Owner's operation and maintenance personnel. Discontinue and remove temporary facilities from the site, along with mockups, construction tools, and similar elements.
 - 9. Complete final cleanup requirements.
 - 10. Certify that required training of personnel is complete.

- C. **Inspection Procedures:** The Contractor shall be ready and prepared when they request a Substantial Completion inspection. If the inspection reveals that the work is not complete, that there are extensive punch list items that will take more than **ninety (90)** days to complete and as the items listed in Article 1.3 above are not complete, the Project Manager, Architect/Engineer, and Owner will determine the inspection has failed.
- D. The Contractor is responsible for all costs to re-inspect due to a failed inspection. The Owner will issue a deduct change order to cover all costs for re-inspection.
 - 1. The Architect/Engineer will repeat inspection when requested and assured that the Work is substantially complete.
 - 2. Results of the completed inspection will form the basis of requirements for final acceptance.

1.4 ACCEPTANCE

- A. **Preliminary Procedures:** Before requesting final inspection for "Certificate of Acceptance" and final payment, complete the following. List exceptions in the request.
 - 1. Submit the final payment request with releases and supporting documentation not previously submitted and accepted. Include insurance certificates for products and completed operations where required.
 - 2. Submit an updated final statement, accounting for final additional changes to the Contract Sum.
 - 3. Submit a certified copy of the Architect/Engineer's final inspection list of items to be completed or corrected, endorsed and dated by the Architect/Engineer. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance and shall be endorsed and dated by the Architect/Engineer.
 - 4. Submit final meter readings for utilities, a measured record of stored fuel, and similar data as of the date of Substantial Completion or when the Owner took possession of and assumed responsibility for corresponding elements of the Work.
 - 5. Submit consent of surety to Final Payment.
 - 6. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
 - 7. Touch up and otherwise repair and restore marred, exposed finishes, including touchup painting.
- B. **Re-inspection Procedure:** The Inspection Group will re-inspect the Work upon receipt of notice from the Project Manager that the Work, including inspection list items from earlier inspections, has been completed, except for items whose completion is delayed under circumstances acceptable to the Owner.
 - 1. Upon completion of re-inspection, the Project Manager will prepare a Certificate of Acceptance. If the Work is incomplete, the Project Manager will advise the Contractor of Work that is incomplete or of obligations that have not been fulfilled but are required for final acceptance.

1.5 AS-BUILT DOCUMENT SUBMITTALS

- A. **General:** The Contractor shall not use As-built Drawings for construction purposes. Protect contractor As-built Drawings from deterioration and loss in a secure, fire-resistant location. Provide access to As-built Drawings for the Architect/Engineer's reference during normal working hours. Keep documents current; do not permanently conceal any work until required information has been recorded. **IMPORTANT NOTE: Failure to keep As-built Documents current is sufficient cause to withhold progress payments.**
 - 1. The Contractor shall also hire the services of a Surveyor registered in the State of Connecticut to conduct a final survey to determine the location of exterior underground utility lines and to record the results, and update existing electronic media.
 - 2. The record of exterior underground utilities shall be made at the time of installation on Mylar film drawing and AutoCAD (latest version) compatible disks. The drawing shall bear the seal of the Land Surveyor and a statement of accuracy.
- B. **As-built Drawings:** The Contractor shall maintain **one (1)** clean, complete undamaged set of blue or black line white-prints of Contract Drawings and Shop Drawings. Mark the set to show the actual installation where the installation varies substantially from the Work as originally shown. Mark which drawing is most capable of showing conditions fully and accurately. Where Shop Drawings are used, record a cross-reference at the corresponding location on the Contract Drawings. Give particular attention to concealed elements that would be difficult to measure and record at a later date. Update As-built Drawings on a monthly basis coincident with the submittal of the Application for Payment.
 - 1. Mark record sets with erasable pencil to distinguish between variations in separate categories of the Work.

2. Mark all new information that is not shown on Contract Drawings.
 3. Note related change-order numbers where applicable.
 4. Organize record drawing sheets into manageable sets. Bind sets with durable-paper cover sheets; print suitable titles, dates, and other identification on the cover of each set.
 5. Upon completion of the work, the Contractor shall submit Record Drawings to the Project Manager for the Owner's Records who will pass them on to the Architect or Engineer for transferring the changes to the Record Drawing Mylar Tracings.
 6. Submit electronic format data of all Coordination Drawings as required by the Owner, at no additional cost.
 7. Refer to Section 01 45 00 "Quality Control" Article 1.3 for required as-built drawings and specifications for fire alarm systems.
- C. Record Specifications:** The Contractor shall maintain one (1) complete copy of the Project Manual, including Addenda. Include with the Project Manual one (1) copy of other written construction documents, such as Change Orders and modifications issued in printed form during construction.
1. Mark these documents to show substantial variations in actual Work performed in comparison with the text of the Specifications and modifications.
 2. Give particular attention to equals and substitutions and selection of options and information on concealed construction that cannot otherwise be readily discerned later by direct observation.
 3. Note related record drawing information and Product Data.
 4. Upon completion of the Work, submit Record Specifications to the Project Manager for the Owner's records.
- D. Record Product Data:** The Contractor shall maintain one (1) copy of each Product Data submittal. Note related Change Orders and markup of record drawings and Specifications.
1. Mark these documents to show significant variations in actual Work performed in comparison with information submitted. Include variations in products delivered to the site and from the manufacturer's installation instructions and recommendations.
 2. Give particular attention to concealed products and portions of the Work that cannot otherwise be readily discerned later by direct observation.
 3. Upon completion of markup, submit complete set of Record Product Data to the Project Manager for the Owner's records.
- E. Record Sample Submitted:** Immediately prior to Substantial Completion, the Contractor shall meet with the Project Manager, Architect/Engineer and the Owner's personnel at the Project Site to determine which Samples are to be transmitted to the Owner for record purposes. Comply with the Owner's instructions regarding delivery to the Owner's Sample storage area.
- F. Miscellaneous Record Submittals:** Refer to other Specification Sections for requirements of miscellaneous record keeping and submittals in connection with actual performance of the Work. Immediately prior to the date or dates of Substantial Completion, complete miscellaneous records and place in good order. Identify miscellaneous records properly and bind or file, ready for continued use and reference. Submit to the Project Manager for the Owner's records.
- G. Maintenance Manuals:** Organize operation and maintenance data into suitable sets of manageable size. Bind properly indexed data in individual, heavy-duty, **2-inch**, 3-ring, vinyl-covered binders, with pocket folders for folded sheet information. Mark appropriate identification on front and spine of each binder according to Division 01 Section 01 78 23 "Operation & Maintenance Data". Included but not limited to the following types of information:
1. Emergency instructions.
 2. Spare parts list.
 3. Copies of warranties.
 4. Wiring diagrams.
 5. Recommended "turn-around" cycles.
 6. Inspection procedures.
 7. Shop Drawings and Product Data.

8. Fixture lamping schedule.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

END OF SECTION 01 77 00

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for warranties required by the Contract Documents, including manufacturer's standard warranties on products and special warranties.
 - 1. Refer to the General Conditions for terms of the Contractor's period for correction of the Work.
- B. **Related Sections:** The following Sections contain requirements that relate to this Section:
 - 1. Division 01 Section 01 33 00 "Submittal Procedures" specifies procedures for submitting warranties.
 - 2. Division 01 Section 01 77 00 "Closeout Procedures" specifies contract closeout procedures.
 - 3. Division 01 Section 01 78 23 "Operation and Maintenance Data" specifies required operation and maintenance data.
 - 4. Divisions 02 through 49 Sections for specific requirements for warranties on products and installations specified to be warranted.
 - 5. Certifications and other commitments and agreements for continuing services to Owner are specified elsewhere in the Contract Documents.
- C. **Disclaimers and Limitations:** Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor of the warranty on the Work that incorporates the products. Manufacturer's disclaimers and limitations on product warranties do not relieve suppliers, manufacturers, and subcontractors required to countersign special warranties with the Contractor.

1.3 WARRANTY REQUIREMENTS

- A. **Related Damages and Losses:** When correcting failed or damaged warranted construction, remove and replace construction that has been damaged as a result of such failure or must be removed and replaced to provide access for correction of warranted construction.
- B. **Reinstatement of Warranty:** When Work covered by a warranty has failed and been corrected by replacement or rebuilding, reinstate the warranty by written endorsement. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for depreciation.
- C. **Replacement Cost:** Upon determination that Work covered by a warranty has failed, replace or rebuild the Work to an acceptable condition complying with requirements of the Contract Documents. The Contractor is responsible for the cost of replacing or rebuilding defective Work regardless of whether the Owner has benefited from use of the Work through a portion of its anticipated useful service life.
- D. **Owner's Recourse:** Expressed warranties made to the Owner are in addition to implied warranties and shall not limit the duties, obligations, rights, and remedies otherwise available under the law. Expressed warranty periods shall not be interpreted as limitations on the time in which the Owner can enforce such other duties, obligations, rights, or remedies.
 - 1. **Rejection of Warranties:** The Owner reserves the right to reject warranties and to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
- E. Where the Contract Documents require a special warranty, or similar commitment on the Work or part of the Work, the Owner reserves the right to refuse to accept the Work, until the Contractor presents evidence that entities required to countersign such commitments are willing to do so.
- F. The Contractor shall guarantee all materials and workmanship for a period of **eighteen (18)** months from the date of Substantial Completion of the Work. In addition, the Contractor shall furnish the warranties listed below. Submit four (4) copies of each to the Project Manager in the supplier's standard form or in the form given below if there is no standard form available.

- G. **Specification/Warranty Table:** The General Contractor shall provide for all warranties as shown in the Specification/Warranty table:

Specification / Warranty Table			
Item No.	Section No.		Specification Product/Warranty
1.	05	33 23	Metal Roofing and Siding: 20 year against rupture, cracks or perforation due to corrosion, and; 20 year for fluorocarbon finish (if used) against peeling, blistering, fading and chalking as limited by industry standards, and; 10 year weathertightness warranty by General Contractor's installer.
2.	32	92 00	Plant Material, Turf and Grasses: 24 months, material and installation, and growth.

- H. Submit certification that finish materials are fire rated as specified.
 I. Submit certification that finish materials are fire rated as specified.
 J. Form of Warranty: Warranties shall be submitted in following format:

Warranty

Commissioner: Katherine S. Dykes
Department of Energy and Environmental Protection
DEEP Commissioner's Office:
79 Elm St
Hartford, CT 06106

SUPERSTRUCTURE REPLACEMENT OF CT DEEP BRIDGE E118 (DOT #06323)
Devil's Hopyard State Park
East Haddam, Connecticut
Project Number: DEPA00029000104

I (We) hereby warranty

the _____ work on the referenced project for a period of _____ years
 from _____, 20____ against failures of workmanship and materials in accordance
 with the requirements of Section _____, Page _____, Paragraph _____, of the Specifications.

Installer | Subcontractor | Vendor/Suppliers | Manufacturer

Installer or Subcontractor or Vendor/Suppliers or Manufacturer Name: _____

Installer or Subcontractor or Vendor/Suppliers or Manufacturer Signature: _____

General Contractor's Name _____

General Contractor's Signature: _____

or

General Contractor's Authorized Agent Signature: _____

- K. Bonds shall be by approved Surety Companies, made out to the Commissioner, Department of Energy and Environmental Protection on companies' standard form.
- L. Warranties, Guarantees, or bonds supplied by the General Contractor's Subcontractors or Vendors/ Suppliers or Manufacturers shall reference the project name, number, and location and be certified by the General Contractor to be for the product and installation on the project and must be countersigned by the General Contractor.
- M. Bonds shall be by approved Surety Companies, made out to the Commissioner, Department of Energy and Environmental Protection, on company's standard form.
- N. Guarantees, warranties or bonds supplied by Subcontractors, Suppliers or Manufacturers shall reference the project name, number, and location and be certified by the Contractor to be for the product and installation on the project and must be countersigned by the Contractor.

1.4 SUBMITTALS

- A. Submit written warranties prior to the date certified for Substantial Completion. If the Architect/Engineer's Certificate of Substantial Completion designates a commencement date for warranties other than the date of Substantial Completion for the Work, or a designated portion of the Work, submit written warranties upon request of the Architect/Engineer.
- B. Forms for special warranties are included in this Section. Prepare a written document utilizing the appropriate form, ready for execution by the Contractor, or by the Contractor, subcontractor, supplier, or manufacturer. Submit a draft to the Owner, through the Project Manager, for approval prior to final execution.
 - 1. Refer to Divisions 02 through 49 Sections for specific content requirements and particular requirements for submitting special warranties.
- C. **Form of Submittal:** At Final Completion compile **two (2)** copies of each required warranty properly executed by the Contractor, or by the Contractor, subcontractor, supplier, or manufacturer. Organize the warranty documents into an orderly sequence based on the table of contents of the Project Manual.
- D. Bind warranties and bonds in heavy-duty, commercial-quality, durable 3-ring, vinyl-covered loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive **8-1/2-by-11-inch** paper.
 - 1. Provide heavy paper dividers with celluloid covered tabs for each separate warranty. Mark the tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product, and the name, address, and telephone number of the Installer.
 - 2. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project title or name, and name of the Contractor.
 - 3. When warranted construction requires operation and maintenance manuals, provide additional copies of each required warranty, as necessary, for inclusion in each required manual.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not applicable)

END OF SECTION 01 78 30

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Attention is directed to the Contract and General Conditions and all Sections within Division 01 – General Requirements, which are hereby made part of this Section of the Specifications.
- B. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 DESCRIPTION OF WORK

- A. Provide all labor, materials, necessary equipment and services to complete the concrete reinforcement work, including but not necessarily limited to the following:
 - 1. Furnishing and placing of:
 - a. Deformed bar reinforcing.
 - b. Welded wire fabric.
 - c. Chairs, supports, ties and miscellaneous hardware for holding reinforcing in place.

1.3 SUBMITTALS

- A. Shop drawings for all reinforcing steel shall be submitted. Drawings shall show bending diagrams, splicing and laps of bars, shapes, dimensions, details of bar reinforcing, and accessories. Shop drawings must be reviewed by the Engineer before proceeding with the work.
- B. Review of Shop Drawings will only be for sizes and spacing of reinforcement and will not cover detailed fabricating dimensions.
- C. All concrete walls shall be drawn in elevation at a minimum of one quarter inch per foot scale showing all wall reinforcing and openings.
- D. Structural drawings or sections shall not be reproduced on shop drawings.

1.4 QUALITY ASSURANCE

- A. All work of this section shall be provided in accordance with the latest edition of the following standards that are considered to be a part of this specification the same as if fully set forth herein.
 - 1. Building Code Requirements for Reinforced Concrete (ACI 318).
 - 2. Specifications for Structural Concrete for Buildings (ACI 301).

3. The 2016 Connecticut Building Code.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Material shall conform to the latest requirements of the ASTM Standard Specifications serial designated below and manufactured in the United States.
 1. A615 Grade 60 for all bar reinforcing.
 2. A185 for Welded Steel Wire Fabric for Concrete Reinforcement.

PART 3 - EXECUTION

3.1 FABRICATION

- A. Reinforcement shall be accurately formed in the shapes and dimensions shown on the drawings and approved schedules.
- B. Reinforcement shall be shop fabricated. No field bending or re-bending or cutting will be permitted.
- C. All material shall bear mill identification symbol, and be stored so that different sizes may be identified.
- D. Wire mesh reinforcing shall be delivered in sheets.

3.2 INSTALLATION

- A. All reinforcement shall be installed in accordance with ACI 318, ACI 301 and the Connecticut Building Code.
- B. Reinforcing shall be delivered and stored at the site in a manner that will protect material from damage.
- C. When required or permitted all welding of reinforcing bars shall conform to AWS D1.4.
- D. When required or permitted, mechanical connections shall be installed in accordance with the splice device manufacturer's recommendations.

END OF SECTION 03 20 00

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Attention is directed to the Contract and General Conditions and all Sections within Division 01 – General Requirements, which are hereby made part of this Section of the Specifications.
- B. Drawings and general provisions of Contract, including General and Supplementary Conditions, and Division 1 Specification sections, apply to this section.
- C. The latest edition of referenced requirements shall apply.

1.2 DESCRIPTION OF WORK

- A. Provide all labor, materials, necessary equipment and services to complete the concrete formwork and cast-in-place concrete work as indicated on the drawings, specified herein or both.
 - 1. Forms for abutments.
 - 2. Furnishing, placing and finishing of cast-in-place concrete for abutments.
 - 3. Placing of cast-in-items such as anchor bolts, angles, clips, anchors, and the like furnished under this and other sections.
- B. Related Work: The following sections contain requirements that may apply to this section:
 - 1. Division 3 Section "Concrete Reinforcement".

1.3 SUBMITTALS

- A. Submit sand and coarse aggregate source and physical properties.
- B. Submit laboratories trial mix designs proposed in accordance with Method 1, ACI 301 or one copy each of 30 consecutive test results and the mix design used from a record of past performance in accordance with ACI 301, Method 2.
- C. The contractor shall submit the mix designs for approval at least ten (10) days before commencing any concrete operations.
- D. Submit catalog cuts and/or appropriate descriptive material and test results for the following:
 - 1. Curing compounds.
 - 2. Air entrapment admixtures.
 - 3. Non-Shrink grout.
- E. Submit procedures for protecting concrete during placement and curing if required.

1.4 QUALITY ASSURANCE

- A. All work of this section shall be provided in accordance with the latest edition of the following standards which are considered to be a part of this specification the same as if fully set forth herein:
 - 1. Specifications for Structural Concrete for Buildings ACI 301.
 - 2. Building Code Requirements for Reinforced Concrete ACI 318.
 - 3. The 2015 International Building Code with the 2018 CT building code.
- B. It is the intent of this specification to secure for every part of the work, concrete of homogeneous nature which, when hardened, will have the required strength, resistance to weathering, and such other qualities as the type of structure or its location may require.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. Cement shall be Portland Cement, Type I or II conforming to ASTM C150. Cement used in the work shall correspond to that upon which the selection of concrete proportions was based.
- B. Hi-early cement shall be used only with prior approval from the Engineer.
- C. Concrete admixtures: provide admixtures produced and serviced by established, reputable manufacturer's recommendations.
 - 1. Air-entraining admixtures shall conform to ASTM C260. Water-reducing, set-controlling admixture shall conform to ASTM C494, Type A (water-reducing), Type D (water-reducing and retarding) and Type E (water-reducing, accelerating), Type F or G (high range water-reducing, superplasticizer).
 - 2. Admixtures containing calcium chloride or thiocyanate shall not be used.
 - 3. Field Service: a qualified concrete technician employed by the manufacturer shall be available to assist in proportioning concrete materials for optimum use, to advise on proper use of the admixture and adjustment of concrete mix proportions to meet job site and climatic conditions.
- D. Aggregate:
 - 1. Fine aggregate shall conform to ASTM C33 and be clean, sharp, natural sand, free from loam, clay lumps, or other deleterious substance, within allowable standards.
 - 2. Coarse aggregate for normal weight concrete shall conform to ASTM C33 for normal weight concrete. All aggregate shall be clean, uncoated, graded aggregate, containing no clay, mud, loam, or foreign matter. Coarse aggregate for light weight aggregate shall conform to ASTM C330.

- E. Water shall be fresh, clean, and potable in compliance with ASTM C94.

PART 3 – EXECUTION

3.1 PROPORTIONING OF CONCRETE

- A. Concrete shall be composed of Portland cement, fine aggregate, coarse aggregate, water, a water-reducing admixture, and an air-entraining admixture.
- B. Proportions of ingredients shall produce concrete which will work readily into corners and angles of forms, and bond to reinforcement without segregation or excessive bleed water forming on the surface. Proportioning of materials shall be in accordance with ACI 211.1.
- C. Required Average Strength: Determinations of required average strength (f'_c) above specified strength shall be in accordance with ACI 318 and evaluations of compressive strength results of field concrete shall be in accordance with ACI 214.

3.2 REQUIRED CONCRETE QUALITIES

- A. Specified Compressive Strength at 28 days shall be as follows:
 - 1) All concrete: 4,000 psi (Normal Weight)**
- B. All concrete shall be air-entrained. Total air content required (air-entrained and entrapped air) shall be 5% +/- 1.5% for 3/4" coarse aggregate.
- C. Concrete shall be proportioned and produced to have a maximum slump of 4 inches unless a superplasticizer is used. A maximum slump of 6" shall be allowed if a superplasticizer is used. Consolidation shall be by means of vibrators.
- D. Maximum size of coarse aggregate shall not exceed 3/4".
- E. Concrete shall be adjusted to produce the required rate of hardening for varied climatic and job site conditions.
 - 1. Under 50° F. ambient temperature - Accelerate (approval in writing required from the Engineer) (Type E admixture - ASTM C494).
 - 2. Over 80° F. ambient temperature - Retard (Type D admixture ASTM C494).
 - 3. Between 50° F. and 80° F. - Normal Rate of Hardening (Type A admixture - ASTM C494).

3.3 FORMWORK PREPARATION

- A. Forms shall be used to confine and shape concrete to required dimensions. Forms shall have sufficient strength to withstand forces from placement and vibration of the concrete, and sufficient rigidity to maintain specified tolerances.

- B. Design, engineering, and construction of the formwork shall be the responsibility of the Contractor.
- C. Work shall be designed for loads, lateral pressure and allowable stresses in accordance with ACI 347, "Recommended Practice for Concrete Formwork."
- D. All tolerances, preparation of form surfaces, removal of forms etc. shall be in accordance with chapter 4 of ACI 301.
- E. Construction joints shall be located only where approved by the Engineer.
- F. Fabricate forms for easy removal without hammering or prying against concrete surfaces. Provide crush or wrecking plates where stripping may damage cast concrete surfaces. Provide top forms for inclined surfaces steeper than 1.5 horizontal to 1 vertical. Kerf wood inserts for forming keyways, reglets, recesses, and the like, for easy removal.
 - 1. Do not use rust-stained steel form-facing material.
- G. Form openings, chases, offsets, sinkages, keyways, reglets, blocking, screeds, and bulkheads required in the Work. Determine sizes and locations from trades providing such items.
- H. Clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt, and other debris just before placing concrete.
- I. Retighten forms and bracing before placing concrete, as required, to prevent mortar leaks and maintain proper alignment.
- J. Coat contact surfaces of forms with form-release agent, according to manufacturer's written instructions, before placing reinforcement.

3.4 EMBEDDED ITEMS

- A. Place and secure anchorage devices and other embedded items required for adjoining work that is attached to or supported by cast-in-place concrete. Use Setting Drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
 - 1. Install anchor bolts and other anchorage devices accurately located, to elevations required.

3.5 CONCRETE PLACEMENT

- A. Formwork shall have been completed and all snow, ice, water, and debris removed from within forms.
- B. Joints:
 - 1. General: Construct joints true to line with faces perpendicular to surface plane of concrete.

2. Construction Joints: Locate and install so as not to impair strength or appearance of concrete, at locations indicated or as approved by Engineer.
- C. Sub grades shall be sufficiently coated with water to eliminate water loss from the concrete.
- D. Concrete shall not be placed on frozen ground.
- E. Concrete shall be ready-mixed, batched, mixed and transported in accordance with ASTM C94.
- F. Preparations: Contractor shall provide access for delivery and provide sufficient equipment and manpower to rapidly place all concrete.
- G. Conveying: Concrete shall be handled from mixer to final deposit rapidly by methods which will prevent segregation or loss of ingredients to maintain required quality of concrete. It shall be placed in the forms or on grade as near as practicable to its final position and shall be prohibited from free falling more than 4 feet.
- H. Concrete shall be deposited continuously; when continuous placement is not possible, construction joints shall be located as approved by the Engineer. Concrete shall be placed as nearly as possible to its final position. Avoid rehandling or flowing.
 1. Consolidate placed concrete with mechanical vibrating equipment. Use equipment and procedures for consolidating concrete recommended by ACI 309R.
 2. Do not use vibrators to transport concrete inside forms. Insert and withdraw vibrators vertically at uniformly spaced locations no farther than the visible effectiveness of the vibrator.
Place vibrators to rapidly penetrate placed layer and at least 6 inches into preceding layer. Do not insert vibrators into lower layers of concrete that have begun to lose plasticity. At each insertion, limit duration of vibration to time necessary to consolidate concrete and complete embedment of reinforcement and other embedded items without causing mix constituents to segregate.
- I. Cold Weather: When ambient temperatures are below 40F, or at 45F and falling, the requirements of ACI 306R "Recommended Practice for Cold Weather Concreting" shall be followed.
 1. Temperature of concrete delivered at the job site shall comply with the requirements of ACI 306R, "Cold Weather Concreting."
 2. Concrete temperature shall be maintained during cold weather for the recommended period of time specified in Table 1.4.2 in A.C.I. 306R.
 3. Special attention shall be given to the corners and edges of concrete during cold weather to prevent damage.
 4. Provisions shall be made to retain heat by using insulating blankets or by an outside heat source.

- J. Hot Weather: When ambient temperatures are at or above 75F or at 70F and rising, the requirements of ACI 305R “Recommended Practice for Hot Weather Concreting” shall be followed.
1. The temperature of concrete delivered at the job site shall comply with the requirements of ACI 305R,
- K. Curing and Protection: Immediately following placement, concrete shall be protected from premature drying, hot and cold temperatures, rain, flowing water and mechanical injury. Materials and method of curing shall be approved by the Engineer.
1. Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends laped at least 12 inches (300 mm), and sealed by waterproof tape or adhesive. Cure for not less than seven days. Immediately repair any holes and tears during curing period using cover material and waterproof tape.
 - a. Moisture cure or use moisture-retaining covers to cure concrete surfaces to receive floor coverings.
 - b. Moisture cure or use moisture-retaining covers to cure concrete surfaces to receive penetrating liquid floor treatments.
- L. Vertical and Overhead Surface Finishes:
1. Interior and exterior exposed areas finished: Give a grout finish of uniform color and smooth finish treated as follows:
 - a. After concrete has hardened and laitance, fins and burrs removed, scrub concrete with wire brushes. Clean stained concrete surfaces by use of a hone stone.
 - b. Grout mix composed of one part of Portland cement, 1.5 parts fine sand, bonding admixture, and water at a 50:50 ratio. Mix to achieve the consistency of thick paint. Work grout into surface of concrete with cork floats or fiber brushes until all pits, and honeycombs are filled.
 - c. After grout has hardened slightly, but while still plastic, scrape grout off with a sponge rubber float and, about one hour later, rub concrete vigorously with burlap to remove any excess grout remaining on surfaces.
 - d. In hot, dry weather use a fog spray to keep grout wet during setting period. Complete finish of area in same day. Make limits of finished areas at natural breaks in wall surface. Leave no grout on concrete surface overnight.
 2. Textured: Finish as specified. Maximum quantity of patched area 2 square feet in each 1,000 square feet of textured surface.

- M. Do not place concrete when weather conditions prevent proper placement and consolidation, or when concrete has attained its initial set, or has contained its water or cement content for more than 1-1/2 hours.

3.6 TESTING AND INSPECTION

- A. Materials and operations shall be tested and inspected as work progresses. Failure to detect defective work shall not prevent rejections when defect is discovered.
- B. The following testing services shall be performed by the testing laboratory selected and paid for by the Owner:
 - 1. Mold and cure four specimens from each sample of concrete.
 - 2. Test specimens in accordance with "Method of Test for Compressive Strength of Molded Concrete Cylinders," ASTM C39. Two specimens shall be tested at 28 days for acceptance and one shall be tested at 7 days for information. An additional cylinder shall be made as an extra in case a 56-day break is required.
 - 3. Make one strength test for each concrete placement. (One test consists of 3 cylinders.)
 - 4. Determine slump, air content and temperature for each strength test and whenever consistency of concrete appears to vary.
 - 5. All sampling of pumped concrete shall be done at the discharge end of the pump lines.
- C. To facilitate testing and inspection, the contractor shall:
 - 1. Furnish necessary labor to assist testing agency in obtaining and handling samples at the job site.
- D. Owner agrees to pay for the above tests with the exception of work that is found to be defective. Subsequent tests shall be taken and paid for by the contractor.
- E. During cold weather additional weather information shall be recorded including temperatures at several points within the enclosure and on the concrete surface, corners, and edges to show range of values. See Chapter 9 of A.C.I. 306R.

END OF SECTION 03 30 00

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Attention is directed to the Contract and General Conditions and all Sections within Division 01 – General Requirements, which are hereby made part of this Section of the Specifications.

1.2 DESCRIPTION OF WORK

- A. Provide all labor, materials, necessary equipment and services to complete the structural steel work and related work, called for in this Section of the Specifications, including but not necessarily limited to the following:
 - 1. Furnishing and erecting structural steel.
 - 2. Standard and special connections, including angles, plates, washers, and inserts.
 - 3. All steel support angles, plates, bolts, inserts for cast in place concrete, etc., which are attached to the structure.
 - 4. All welding where required.
 - 5. Delivery of bearing plates, and anchor bolts to the site for installation by others.

1.3 QUALITY ASSURANCE

- A. All work of this Section shall be provided in accordance with the latest edition of the following:
 - 1. AISC Specification for the Design, Fabrication and Erection of Structural Steel for Buildings.
 - 2. AISC Code of Standard Practice.
 - 3. The 2018 Connecticut Building Code.

1.4 SUBMITTALS

- A. Submit for review, prior to fabrication, anchor bolt and erection plans and shop drawings for all structural steel showing the kind of material, steel certification, sizes of members, details of pieces, and methods of securing same together.
- B. Structural steel supplier is responsible for dimensions to be confirmed and correlated at the job site, for information that pertains solely to the fabrication processes or to techniques of construction and for coordination of the work of other trades. Erection plans shall be reviewed and all dimensions coordinated, before any piece detail drawings are begun.
- C. Submit for review, qualifications of welder performing shop and field welding.

- D. Substitution of sections or modifications of details shall be made only when approved by the Engineer in writing.
- E. No structural drawings shall be reproduced as shop drawings.
- F. All paint products shall be submitted for approval.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. All structural steel shall be new, clean, free from defects impairing strength, durability and appearance, and be of the best commercial quality for purpose specified.
- B. All primary steel framing including but not limited to beams and columns shall conform to the requirements of ASTM A572 grade 50, ASTM A992. Secondary members such as hangers, and plates shall conform to the minimum requirements of ASTM A36.
- C. High-strength bolts, including nuts and washers, shall comply with ASTM A325. Minimum dimensions for bolts, washer, beveling, etc., shall comply with the requirements of the "Specifications for Structural Joints using ASTM A325 Bolts". All bolts shall be bearing type.
- D. Welding electrodes shall be as approved for use with ASTM A36, A572 grade 50, or ASTM A992 under the AISC Specification.
- E. Galvanized steel shall conform to ASTM 123.
- F. All anchor bolts to conform to the requirements of ASTM F1554.

PART 3 – EXECUTION

3.1 FABRICATION

- A. All shop fabrication shall conform to Section M2, AISC Specification. Shearing and punching shall be without ragged or torn edges. Holes shall be enlarged only by reaming. Burning of holes will not be permitted.
- B. Unless otherwise noted, make all connections in accordance with the AISC Manual of Steel Construction.
- C. All welding, shop and field, shall be performed only by procedures and welders qualified in accordance with standards for workmanship of the American Welding Society.
- D. The Steel Fabricator shall be AISC Quality Certified Category 1 or 2 for Steel Structures or a member of the Structural Steel Fabricators of New England.
- E. All exposed structural steel is to be galvanized, or painted as called out in the Contract Documents.

3.2 ERECTION

- A. Erection of steel shall be done in conformance with Section 7 of AISC "Code of Standard Practice."
 - 1. All structural framing shall be accurately set and secured in position.
 - 2. All structural steel work shall be maintained in its position with adequate bracing and guying until all permanent field connections are completed. Guying shall not be removed without written permission from Engineer.
- B. Burned holes will not be permitted for any bolted connections. No field burning of base plates will be allowed. Refabrication of base plates will be required at all locations where the anchor bolts are found to be out of tolerance more than 1/2".
- C. Temporary bracing for the steel frame shall be designed to support all loads to which the structure may be subjected, including wind, impact from erection equipment and its operation, and as required by applicable codes. Such bracing shall be left in place as long as required for safety.
- D. No field welding shall be done when the temperature is less than 15 degrees F.
- E. All galvanized steel that has been field weld shall be touched up with galvanized repair paint.

3.3 INSPECTION

- A. The material to be furnished under the section shall be subject to inspection and tests in the shop and field.
- B. The testing agency shall have access to all quality control data.
- C. In the event that inspections reveal bolts to be undersized, loose or defective, the cost of re-bolting and re-testing shall be at the structural steel supplier's expense.

END OF SECTION 05 12 00

PART 1- GENERAL

1.1 SUMMARY

- A. Scope of Work: Contract Drawings indicate extent and general configuration of roof. Provide materials for and install complete roof system including, but not limited to:

1. Metal.
2. Underlayments.
3. Fasteners and attachment devices.
4. Flashings and other accessories.

- B. Material Included But Not Installed Under This Section:

1. Extra Stock: Matching sheet metal for fabrication and installation under Section. Furnish extra stock in timely sequence.

- C. Related Work Specified In Other Sections:

For use over solid plywood decking. Rustic Shingle can be installed over or smooth composition shingles provided the composition shingles are smooth and installed over solid decking. Rustic Shingle can be installed over wood shingles provided the shingle butt is no more 3/8" thick, the shingles are smooth and they are installed over a solid substrate.

1.2 REFERENCES

- A. Aluminum Association: "Publication 35: Specifications for aluminum sheet metal work in building construction."
- B. American Society for Testing and Materials, current edition to apply:
B209 – Aluminum and Aluminum-Alloy Sheet and Plate.
- C. Underwriters Laboratory: Building Materials Directory.

1.3 PERFORMANCE REQUIREMENTS

- A. Structural Design: Comply with design criteria.
- B. Watertightness: No uncontrolled water leakage shall occur through roof system.
- C. Wind Uplift: Shall be installed to meet applicable building codes.
- D. Fire Safety: Shall be installed to meet applicable building codes.

- E. Material Compatibility: Prevent contact between dissimilar metals and between metals and potentially corrosive or staining substances.
- F. Special Environmental Conditions: Roof shall be compatible with following environmental conditions when applicable:
 - 1. Marine environment.
 - 2. High industrial pollution levels.
- G. Expansion and Contraction: Shall be installed to accommodate thermal expansion and contraction.

1.4 SUBMITTALS

- A. Product Data: Submit manufacturer's specifications, standard detail drawings and installation instructions.
- B. Shop Drawings:
 - 1. Submit shop drawings indicating thickness and dimensions of parts, fastenings and anchoring methods.
 - 2. Indicate roof terminations, clearly showing flashings and change of direction.
 - 3. Clearly indicate locations of field-applied sealant.
 - 4. Show locations of nailing clips and types of hold-down clips and fasteners.
 - 5. Provide a plan showing layout of entire roof.
- C. Samples:
 - 1. Submit two sample panels, 12" long x 12" wide, showing metal gauge thickness, seam profile and required finish.
 - 2. Submit standard color samples on metal for Architect's selection.
- D. Applicators: Submit list of completed Projects and name of Architects.

1.5 QUALITY ASSURANCE

- A. Manufacturer's Qualifications:
 - 1. Twenty years minimum experience in factory fabrication of metal roofing systems.

2. Products listed in this specification section are as manufactured by Classic Products, Inc.
 3. No other bidder will be accepted without prior written approval of architect based upon other manufacturer's products meeting all specified requirements.
 4. Substitution requests must be submitted at least ten working days prior to bid date and approved substitutions will be set forth in an addendum.
 5. No substitutions will be permitted after bid date.
 6. No fax requests will be accepted.
- B. Installer's Qualifications: Installer shall provide necessary manpower and equipment to assure progress of work in accordance with Project schedule. Installer shall employ a foreman on Project site who shall have a minimum of five years experience installing similar products on comparable projects.
- C. Regulatory Requirements: Comply with requirements of applicable building codes and other agencies having jurisdiction for wind uplift ratings.
- D. Pre-Installation Conference:
1. Conduct meeting.
 2. Convene and conduct pre-installation conference.
Notify others whose work requires coordination with roof installation.
 3. Review and coordinate scheduling, sequencing of trades that influence roof installation, tool and utility requirements, and other Project requirements.

1.6 DELIVERY, STORAGE AND HANDLING

- A. Comply with manufacturer's delivery, storage and handling instructions.
- B. Schedule deliveries to assure continuous progress of work.
- C. Protect products against damage.
- D. Store under waterproof covering, with proper ventilation to prevent condensation.
- E. Inspect materials upon arrival at site and note damaged materials. Do not install damaged materials.
- F. Verify access limitations to site and roof.
Verify that materials proposed to be stored or staged on roof do not exceed structural limitations of building.

1.7 SEQUENCE AND SCHEDULING

- A. Schedule work of this Section to avoid impeding work of other sections.

1.8 WARRANTY

- A. Furnish manufacturer's standard limited transferable warranty stating architectural fluorocarbon finish will be:
 - 1. Free of fading or color change in excess of 5 NBS units as measured per ASTM D2244 for a period of 20 years.
 - 2. Will not chalk in excess of numerical rating of 8 when measured in accordance with standard procedures specified in ASTM D659 for a period of 20 years.
 - 3. Will not peel, crack or delaminate for a period of 50 years.
- B. Furnish written warranty signed by applicator for five-year period from date of substantial completion of building covering repairs required to maintain roof and flashings in watertight conditions.

PART 2- PRODUCTS

2.1 MANUFACTURER

- A. Acceptable Product: Rustic Shingle aluminum roofing panels as manufactured by Classic Products, Inc., Piqua, OH, Tel. 1-800-543-8938.
- B. Substitutions:
 - 1. Substitutions must fully comply with specified requirements.
 - 2. Refer to Quality Assurance Section 1.05 for substitution request procedures.

2.2 MATERIALS

- A. Panels:
 - 1. Provide factory-formed interlocking panels with a 12" x 24" exposure each produced from .019" thick aluminum alloy 3105.

2.3 ACCESSORIES

- A. General: Accessories shall be as recommended by roof system manufacturer to meet performance criteria.

- B. Underlayment:
1. One layer 30 lb. asphalt felt; ASTM D226; or One one layer RoofTopGuard II poly-based underlayment.
- C. Flashing:
1. Flashings shall provide for positive drainage, prevent ponding of water, and allow moisture to drain off roof without affecting underlying construction. Flashing to prevent capillary action.
 2. Flashings utilizing pop rivets must be self-sealing or sealed with sealant and always be above line of water flow.
- D. Penetration Seals:
1. Round Penetrations: Flash with aluminum and neoprene pipe boots.
 2. Rectangular Openings: Flash with flashings compatible with roof system.
- E. Snow Retention Devices: If necessary, provide and install snow retention devices approved by roof manufacturer for use with roof system.
- F. Fasteners:
1. Fasten through the integrated nailing tab on the top of the panel and a nail clip provided by the roof system manufacturer. Each panel is secured to the deck with two fasteners.
 2. Provide fasteners of sizes and types required by Project conditions to meet performance specifications and roof manufacturer's recommendations. Fasteners shall be corrosion resistant and compatible with roofing and other materials.
 3. Pop Rivets: Provide non-corroding, not-staining type. They shall be sealed and located above flow of water. Rivets shall have a minimum shank diameter of 0.125 inches and shall be of sufficient length to form a proper head.
- G. Sealants:
1. Sealants shall be color-matched butyl rubber sealant provided by roof system manufacturer, non-corrosive and compatible to adjacent material.
 2. Seal with cartridge-type sealant.
 - a. Sealants shall remain fluid.
 - b. Sealants shall adhere to panel surfaces. Clean panels that may be lightly coated

with lubricants or airborne contaminants. Sealants must be compatible with contiguous materials.

- c. Sealants should be applied only to dry surfaces.

2.5 FINISHES

A. Painted.

1. Pretreatment: Metal shall undergo continuous cleaning, rinsing, and chemical conversion process immediately prior to painting.
 2. Exterior Coat:
 - a. Primer coat shall be 0.2 mil minimum average thick, fully cured, and corrosion resistant and flexible base for topcoat.
 - b. Topcoat shall yield a 0.7 mil minimum average thick coating. Topcoat shall be fully cured and of consistent color throughout Project.
 - c. Adhesion:
 - i. Bend Test: 1/8" mandrel, no tape pull-off per ASTM D522.
 - ii. Reverse Impact: 3 x metal thickness per ASTM D2794.
 - d. Corrosion Resistance:
 - i. Salt Spray: 1000 hours per ASTM B117.
 - e. Accelerated Weathering: 2000 hours hours of weathering in a Xenon Arc Weatherometer per ASTM G23 or ASTM G26.
 - f. Weatherability: 5 year South Florida or equivalent exterior exposure:
 - i. Color Retention: 5 AEE units maximum degradation per ASTM D2244.
 - ii. Chalk resistance: 8 minimum rating per ASTM D4214.
 3. Gloss Retention: 75% minimum retention per ASTM D523.
 4. Back Coat: Corrosion resistant primer plus wash coat, 0.7 mil minimum average total dry thickness.
- B. Color: As selected by architect from manufacturer's standard colors. (Custom colors available, consult manufacturer.)

2.6 FABRICATION TOLERANCES

- A. Panel Construction: Uniformly dimensioned. Fasteners and nailing clips shall be concealed.

PART 3- EXECUTION

3.1 EXAMINATION

- A. Examine substrate to ensure it is solid and smooth.
- B. Do not commence installation until field conditions have been verified.
- C. Ensure cuttings from field fabrication are removed prior to installation.

3.2 PREPARATION

- A. Field measure prior to fabrication of custom fabricated items.
- B. Lay out work to provide random appearance and to avoid short courses. Where field cutting is required, make cuts in a workmanlike manner.
- C. Protection:
 - 1. Adjacent surfaces: When possible, install flashings prior to siding and stucco installation.
 - 2. Dissimilar metals: Isolate any dissimilar metals to prevent corrosion.

3.3 INSTALLATION

- A. General: Comply with approved shop drawings, manufacturer's installation instructions, and applicable construction and safety regulations.
- B. Underlayment: Install underlayment according to procedures recommended by roof system manufacturer.
- C. Panels shall be interlocked with each other and securely attached to the roof deck.
- D. Flashings:
 - 1. Follow approved details.
 - 2. Flashings shall be lapped four inches and fastened 12 inches on center.
 - 3. Lap valley minimum of six inches.

4. Allow for expansion and contraction of lineal accessories.
- E. Protective Materials: Provide temporary protective materials if needed to protect previously installed roof surfaces.
- F. Sealants:
1. Apply only to dry surfaces in accordance with sealant and roof manufacturer's instructions.
 2. Apply only in bend thickness of minimum 3/8". Remove excess sealant from exposed surfaces.
 3. Apply in workmanlike manner.
 4. Install sealants only when ambient temperature and conditions are in accordance with sealant manufacturer's recommendations.
- G. Accessories: Securely install in accordance with manufacturer's instructions.

3.4 ADJUSTING, CLEANING, AND PROTECTION

- A. Protect roof from damage by work of other sections on, above, or adjacent to roof.
- B. Installed panels and accessories shall be secured before leaving roof area at end of day.
- C. Keep installed roof clean and protected from damage.
- D. Clean gutters of roof installation debris at completion.
- E. Repair minor damage to finishes. Use matching coatings recommended by roof manufacturer. Remove and replace items which can not be satisfactorily repaired.
- F. Protect roofing from metal filings or shavings. Metal filings or shavings shall be cleaned from panels or flashing surfaces by end of each day.

END OF SECTION 05 33 23

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes framing using timbers

1.3 DEFINITIONS

- A. Timbers: Lumber of 5 inches nominal or greater in least dimension.
- B. Inspection agencies, and the abbreviations used to reference them, include the following:
 - 1. NeLMA: Northeastern Lumber Manufacturers' Association.
 - 2. NHLA: National Hardwood Lumber Association.
 - 3. NLGA: National Lumber Grades Authority.
 - 4. SPIB: Southern Pine Inspection Bureau (The).
 - 5. WCLIB: West Coast Lumber Inspection Bureau.
 - 6. WWPA: Western Wood Products Association.

1.4 SUBMITTALS

- A. Product data: submit product data for proprietary timber connectors.
- B. Shop Drawings: For heavy timber framing. Show layout, dimensions of each member, and details of connections.
- C. Shop drawings shall be prepared under the supervision and direction of a Professional Engineer licensed in the jurisdiction where the project is located. Drawings submitted for approval shall be signed and sealed by the engineer.
- D. Samples: submit samples of timber materials, including surface treatment and finishes.
- E. Material Certificates:
 - a. For timbers specified to comply with minimum allowable unit stresses. Indicate species and grade selected for each use and design values approved by NELMA.

- b. For preservative-treated wood products. Indicate type of preservative used and net amount of preservative retained. For products receiving a waterborne treatment, include statement that moisture content of treated materials was reduced to levels specified before fabrication.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Keep timbers dry during delivery and storage. Store timbers off of the ground and covered.
- B. Cut and stack timbers so as not to encourage the growth of sap-stain fungi, mold or mildew. Stack timbers with stickers and spacers between bundles to allow air circulation.
- C. Provide reasonable protection during transportation, storage, handling and erection of the timbers to avoid marring, staining, or the accumulation of excess moisture, dirt and foreign matter.

PART 2 – PRODUCTS

2.1 TIMBER

- A. Comply with grading rules of lumber-grading agencies certified by ALSC's Board of Review as applicable.
 - a. Factory mark each item of timber with grade stamp of grading agency
 - b. For exposed timber indicated to receive a stained or natural finish, apply grade stamps to surfaces that are not exposed to view, or omit grade stamps and provide certificates of grade compliance issued by grading agency.
- B. Timber species: White oak, Boxed heart
- C. Timber grade: Refer to Design Data on Drawing S1.0
- D. Moisture content: Green
- E. Dressing: timbers shall be surfaced four sides, S4S. Timber sizes are nominal dimensions.

2.2 TIMBER CONNECTORS

- A. Provide bolts, 5/8 inch unless otherwise indicated, complying with ASTM A307, Grade A; provide nuts complying with ASTM A563; and, where indicated, provide flat washers.
- B. Materials: Unless otherwise indicated, fabricate from the following materials:
 - a. Structural-steel shapes, plates and flat bars complying with ASTM A36

2.3 FINISHES

- A. Penetrating sealer: one coat of Messmer's UV Plus - Natural

2.4 FABRICATION

- A. Timbers shall be fabricated in strict conformance to approved shop drawings. Fabrication prior to receipt of approved shop drawings shall be at the Contractor's risk.
- B. Connection Joinery: Timbers shall be fabricated to join tightly and in proper alignment at the time of assembly. Small (1/8" or less) variations where the faces of joints come together (in alignment or separation) are acceptable. Provisions shall be made in the detailing of joinery to allow for dimensional changes (joint separation and alignment) associated with timber drying shrinkage.
- C. Coat non-exposed crosscuts with end sealer.

PART 3 – EXECUTION

3.1 ERECTION

- A. General: Erect heavy timber framing true and plumb.
- B. The Contractor shall be responsible for all temporary shoring and bracing necessary to maintain the stability of the timber frame during erection of the timber frame.
- C. Install timber connectors as indicated

3.2 FINAL CLEAN UP

- A. Repair any damaged surfaces or finishes after completing erection. Replace damaged heavy timber framing if repairs are not approved by Architect.

END OF SECTION 06 13 00

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Exterior painting, including surface preparation.

1.2 RELATED SECTIONS

- A. Section 05 12 00 - "Structural Steel".

1.3 REFERENCES

- A. Green Seal Standard GS-11; May 20, 1993.
- B. US Green Building Council, (USGBC) - Green Seal standards for LEED paint credits.
- C. Occupational Safety and Health Act (OSHA) - Safety Standards.
- D. American National Standards Institute (ANSI) - Performance Standards.
- E. Paint Decorating Contractors of America (PDCA) - Application Standard.
- F. National Paint and Coatings Association (NPCA) - Gloss Standard.
- G. American Society for Testing Materials (ASTM) - Testing Methods.
- H. Master Paint Institute (MPI #) - Established paint categories and standards.
- I. Ozone Transmission Commission (OTC) - Established levels of Volatile Organic Compounds.
- J. SCAQMD 1168 - South Coast Air Quality Management District Rule #1168; October 3, 2003.
- K. SSPC (PM1) - Steel Structures Painting Manual, Vol. 1, Good Painting Practice; Society for Protective Coatings; 1993, Third Edition.
- L. SSPC (PM2) - Steel Structures Painting Manual, Vol. 2, Systems and Specifications; Society for Protective Coatings; 1995, Seventh Edition.
- M. 40 CFR 59, Subpart D - National Volatile Organic Compound Emission Standards for Architectural Coatings; U.S. Environmental Protection Agency; current edition.

1.4 DEFINITIONS

- A. Commercial as used in this Section refers to a product well suited for a commercial application.
- B. DFT as used in this Section refers to the Dry Film Thickness of the coating.
- C. Enamel refers to any acrylic or alkyd (oil) base paint which dries leaving an eggshell, pearl, satin, semi-gloss or high gloss enamel finish.

- D. DTM as used in this Section refers to paint that is applied Direct To Metal.
- E. Product Data: Provide a complete list of all products to be used, with the following information for each:
 - 1. Manufacturer's name, product name and/or catalog number, and general product category.
 - 2. Cross-reference to specified paint system(s) that the product is to be used in; include description of each system.
- F. Samples: Submit three paper samples, 5 inches by 7 inches (127mm x 178mm) in size, illustrating selected colors for each color and system selected with specified coats cascaded.
- G. Manufacturer's Instructions: Indicate special surface preparation procedures.
- H. Maintenance Data: Submit data on cleaning, touch-up, and repair of painted and coated surfaces.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: All primary products specified in this section will be supplied by a single manufacturer with a minimum of ten years experience.
- B. Installer Qualifications: All products listed in this section are to be applied by a Painting Contractor with a minimum of five years demonstrated experience in surface preparation and field application of the same type and scope as specified.

1.6 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.
- C. Disposal:
 - 1. Never pour leftover coating down any sink or drain. Use up material on the job or seal can and store safely for future use.
 - 2. Do not incinerate closed containers.
 - 3. For specific disposal or recycle guidelines, contact the local waste management agency or district. Recycle whenever possible.

1.7 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.

1.8 WARRANTY

- A. Inspection of all surfaces to be coated must be done by the manufacturer's representative to insure proper preparation prior to application. All thinners, fillers, primers and finish coatings shall be from the same manufacturer to support a product warranty. Products other than those submitted shall be accompanied by a letter stating its fitness for use and compatibility.
- B. At project closeout, provide to the Owner or owner's representative an executed copy of the Manufacturer's standard form outlining the terms and conditions of and any exclusions to their Limited Warranty against Manufacturing Defect.

1.9 EXTRA MATERIALS

- A. At project closeout, supply the Owner or owner's representative one gallon of each product for touch-up purposes. Cans shall be clearly marked with color name, number and type of paint.
- B. At project closeout, provide the color mixture name and code to the Owner or owner's representative for accurate future color matching.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Benjamin Moore and Co., which is located at: 101 Paragon Dr ; Montvale, NJ 07645; Toll Free Tel: 866-708-9181; Email: info@benjaminmoore.com; Web:www.benjaminmoore.com

2.2 MATERIALS - GENERAL

- A. Volatile Organic Compound (VOC) Content:
 - 1. Provide coatings that comply with the most stringent requirements specified in the following:
 - a. 40 CFR 59, Subpart D-National Volatile Organic Compound Emission Standards for Architectural Coatings.
 - b. Determination of VOC Content: Testing and calculation in accordance with 40 CFR 59, Subpart D (EPA Method 24), exclusive of colorants added to a tint base and water added at project site; or other method acceptable to authorities having jurisdiction.
- B. Compatibility: Provide materials that are compatible with one another and the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.

2.3 MIXING AND TINTING

- A. Except where specifically noted in this section, all paint shall be ready-mixed and pre-tinted. Agitate all paint prior to and during application to ensure uniform color, gloss, and consistency.

- B. Thinner addition shall not exceed manufacturer's printed recommendations. Do not use kerosene or other organic solvents to thin water-based paints.

2.4 EXTERIOR PAINT SYSTEMS

- A. METAL: Misc. Iron, Ornamental Iron, Structural Iron and Steel, Ferrous Metal.
 - 1. Latex Systems:
 - a. Gloss Finish
 - 1) 1st Coat: Corotech Acrylic Metal Primer V110 (199 g/L), LEED Credit.
 - 2) 2nd Coat: Benjamin Moore Ultra Spec EXT Gloss Finish N449 (46 g/L) MPI # 11.
 - 3) 3rd Coat: Benjamin Moore Ultra Spec EXT Gloss Finish N449 (46 g/L) MPI # 11.
- B. Acceptable Manufacturers:
 - 1. Benjamin Moore
 - 2. Pittsburgh Paints
 - 3. BEHR

PART 3 EXECUTION

3.1 EXAMINATION

- A. The Contractor shall review the product manufacturer's special instructions for surface preparation, application, temperature, re-coat times, and product limitations.
- B. The Contractor shall review product health and safety precautions listed by the manufacturer.
- C. The Contractor shall be responsible for enforcing on site health and safety requirements associated with the Work.
- D. Do not begin installation until substrates have been properly prepared.
- E. Ensure that surfaces to receive paint are dry immediately prior to application.
- F. Ensure that moisture-retaining substrates to receive paint have moisture content within tolerances allowed by coating manufacturer. Where exceeding the following values, promptly notify Engineer and obtain direction before beginning work.
- G. Examine surfaces to receive coatings for surface imperfections and contaminants that could impair performance or appearance of coatings, including but not limited to, loose primer, rust, scale, oil, grease, mildew, algae, or fungus, stains or marks, cracks, indentations, or abrasions.
- H. Correct conditions that could impair performance or appearance of coatings in accordance with specified surface preparation procedures before proceeding with coating application.

3.2 PREPARATION - GENERAL

- A. Clean surfaces thoroughly prior to coating application.
- B. Do not start work until surfaces to be finished are in proper condition to produce finished surfaces of uniform, satisfactory appearance.
- C. Stains and Marks: Remove completely, if possible, using materials and methods recommended by coating manufacturer; cover stains and marks which cannot be completely removed with isolating primer or sealer recommended by coating manufacturer to prevent bleed-through.
- D. Remove Mildew, Algae, and Fungus using materials and methods recommended by coating manufacturer.
- E. Remove dust and loose particulate matter from surfaces to receive coatings immediately prior to coating application.
- F. Remove or protect adjacent hardware, electrical equipment plates, mechanical grilles and louvers, lighting fixture trim, and other items not indicated to receive coatings.
- G. Move or protect equipment and fixtures adjacent to surfaces indicated to receive coatings to allow application of coatings.
- H. Protect adjacent surfaces not indicated to receive coatings.
- I. Prepare surfaces in accordance with manufacturer's instructions for specified coatings and indicated materials, using only methods and materials recommended by coating manufacturer.

3.3 SURFACE PREPARATION

- A. Existing Coatings:
 - 1. Remove surface irregularities by scraping or sanding to produce uniform substrate for coating application; apply one coat primer of type recommended by coating manufacturer for maximum coating adhesion.
 - 2. If presence of lead in existing coatings is suspected, cease surface preparation and notify Engineer immediately.
- B. Metals - Ferrous, Unprimed: Remove rust or scale, if present, by wire brush cleaning, power tool cleaning, or sandblast cleaning; remove grease, oil, and other contaminants which could impair coating performance or appearance by solvent cleaning, with phosphoric-acid solution cleaning of welds, bolts and nuts; spot-prime repaired welds with specified primer.

3.4 APPLICATION - GENERAL

- A. Application of primers, paints, stains or coatings, by the Contractor, will serve as acceptance that surfaces were properly prepared in accordance with the manufacturer's recommendation.

- B. Apply each coat to uniform coating thickness in accordance with manufacturer's instructions, not exceeding manufacturer's specified maximum spread rate for indicated surface; thins, brush marks, roller marks, orange-peel, or other application imperfections are not permitted.
- C. Allow manufacturer's specified drying time, and ensure correct coating adhesion, for each coat before applying next coat.
- D. Inspect each coat before applying next coat; touch-up surface imperfections with coating material, feathering, and sanding if required; touch-up areas to achieve flat, uniform surface without surface defects visible from 5 feet (1.5 m).
- E. Remove dust and other foreign materials from substrate immediately prior to applying each coat.
- F. Where paint application abuts other materials or other coating color, terminate coating with a clean sharp termination line without coating overlap.
- G. Where color changes occur between adjoining spaces, through framed openings that are of same color as adjoining surfaces, change color at outside stop corner nearest to face of closed door.
- H. Re-prepare and re-coat unsatisfactory finishes; refinish entire area to corners or other natural terminations.

3.5 CLEANING

- A. Clean excess coating materials, and coating materials deposited on surfaces not indicated to receive coatings, as construction activities of this section progress; do not allow to dry.
- B. Re-install hardware, electrical equipment plates, mechanical grilles and louvers, lighting fixture trim, and other items that have been removed to protect from contact with coatings.
- C. Reconnect equipment adjacent to surfaces indicated to receive coatings.
- D. Relocate to original position equipment and fixtures that have been moved to allow application of coatings.
- E. Remove protective materials.

3.6 PROTECTION AND REPAIR

- A. Protect completed coating applications from damage by subsequent construction activities until completion of painting project.
- B. Touch-up coatings damaged by subsequent construction activities.

END OF SECTION 09 91 00

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Provide all labor, materials and equipment required to perform the work called for in this section of the Specification, or as shown on the drawings, including but not necessarily limited to the following:
1. The clearing of the ground of trees, stumps, brush, rubbish, and all objectionable material within the excavation, embankments and fill areas as indicated on the plans, or as directed.
 2. Clear site of plant life and grass as indicated on the Drawings and as necessary to complete the work.
 3. Remove root systems of trees and shrubs in areas cleared.
 4. Removal of all existing concrete and bituminous concrete from within the excavation, embankments and fill areas as indicated on the plans, or as directed.
 5. Protection of existing trees that are to remain.
 6. Protection of all site elements to remain including but not limited to railings, utilities and all other items identified on the drawings.
 7. Installation of construction fencing, gates, and all other materials required to secure the construction site.
 8. Disposal of debris off site.
 9. Stripping and stockpiling existing topsoil.
 10. Layout of all work/improvements.
- B. Related work:
1. Section 31 23 00 - "Excavation and Fill".
 2. Section 31 25 00 - "Erosion and Sediment Controls".

1.3 SUBMITTALS

- A. The Contractor shall submit for review a detailed Sequence of Construction Plan for all construction that differs from the guidelines set forth in the Contract Documents or if not completely defined in the Contract Documents to allow for Contractor flexibility. Sequence of

Construction Plan shall include provisions for Emergency Operations due to weather, or any other site emergency. No work shall be allowed until Sequence of Operations plan is approved by the Owner's Representative and the Engineer.

1.4 REGULATORY REQUIREMENTS

- A. Conform to applicable local, state and federal regulations for disposal of debris.
- B. Burning of debris will not be allowed.
- C. Disposal of stumps on site will not be allowed.
- D. The Contractor shall provide written documentation of compliance with all disposal regulations.

1.5 JOB CONDITIONS

A. Protection

- 1. Peripheral areas outside of the Contract Limits shall not be disturbed or used for storing materials without authorization of the Owner's Representative.
- 2. Any damage to existing plant material or other improvements is the responsibility of the Contractor and shall be repaired or replaced immediately at no cost to the owner.
- 3. Topsoil stockpile areas must be approved by the Owner's Representative prior to placement of topsoil stockpiles.
- 4. Prevent movement or settlement of adjacent structures. Provide and place bracing, shoring and underpinning and be responsible for safety and support of structures. Assume liability for such movement, settlement, damage, or injury. Provide services of registered Structural Engineer to design bracing, shoring and/or underpinning if this work is required.
- 5. Prevent movement, settlement or collapse of adjacent services, sidewalks, driveways and trees. Assume liability for such movement, settlement or collapse. Promptly repair damage at no cost to the Owner.

B. Utilities (if necessary)

- 1. Arrange and pay for disconnecting, removing, capping and plugging utility services. Disconnect and stub off. Notify the affected utility companies in advance and obtain approval before starting this work.
- 2. Place markers to indicate location of disconnected services. Identify service lines and capping locations on Project Record Documents.

C. Maintaining Traffic

1. Conduct demolition operations and the removal of debris to ensure minimum interference with roads, streets, walks, and other adjacent occupied or used facilities.
2. Do not close or obstruct streets, walks or other occupied or used facilities without permission from authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.

PART 2 - PRODUCTS

2.1 TREE PROTECTION FENCE

- A. Fence shall be 4 feet high "Safety Barricade" fencing.
 1. Color: Orange.
 2. Top tension rope: 3/8" braided nylon/polypropylene rope.
- B. Posts shall be heavy gauge steel posts, six feet long. Contractor shall submit a sample.

2.2 TEMPORARY CHAIN LINK FENCING

- A. Unless otherwise indicated, type of temporary chain link fencing shall be Contractor's option. Following types are acceptable:
 1. New materials or previously used salvaged chain link fencing in good condition.
 2. Posts: Galvanized steel pipe of diameter to provide rigidity. Post shall be suitable for setting in anchoring with base plates or stantions.
 3. Fabric: Woven galvanized steel wire mesh. Provide in continuous lengths to be wire tied to fence posts or prefabricated into modular pipe-framed fence panels.
- B. Gates: Provide personnel and vehicle gates of the quantity and size indicated on the Drawings or required for functional access to site.
 1. Fabricate of same material as used for fencing.
 2. Vehicle gates:
 - a. Minimum width: 20 feet to allow access for emergency vehicles.
 - b. Capable of manual operation by one person.

PART 3 - EXECUTION

3.1 GENERAL

- A. Conduct site clearing, demolition and preparation to ensure minimum interference with roads and adjacent property owners and as required by the Owner.
- B. Refer to Construction Documents for Construction Phasing and requirements and limitations on site clearing and grubbing.
- C. All sedimentation control devices as shown on the plans, or as directed, shall be installed prior to any excavation activities or stump removal. Construction methods shall conform to article 2.19.03 of the Form 817. See Section 312500 of the specifications.

3.2 PREPARATION

- A. Verify that existing plant life designated to remain is tagged or identified.
- B. Flag limits of clearing for review by the Engineer prior to the start of any construction.
- C. Identify required lines, levels, contours, and datum.
- D. Identify known underground utilities (if necessary). Stake and flag locations.
- E. Identify and flag surface and aerial utilities (if necessary).
- F. Notify the appropriate utility authority to remove and relocate utilities (if necessary).
- G. Maintain and protect existing utilities remaining which pass through work area (if necessary).

3.3 PROTECTION

- A. Identify and protect utilities that are to remain (if necessary).
- B. Protect plant growth and features remaining as final landscaping. Minimum protection includes the installation of orange construction fencing at the limits of the canopy of existing trees. Other measures shall be as directed by the Owner.
- C. Protect control points, benchmarks, and existing work from damage or displacement.
- D. Any and all measures taken to protect the existing site features, either described in these documents and Contract Drawings or as directed by the Owner, shall be included in the cost of the work
- E. Protect above and below grade utilities which are to remain (if necessary).
- F. Repair immediately any damage done to tree crowns or root systems.
- G. The contractor shall protect natural streambanks by (NDDB Determination Number 201900828 dated January 25, 2019):
 - 1. Minimizing removal of vegetation on streambanks;

2. Minimizing the alteration and/or hardening of streambanks (i.e., minimize riprap use);
3. After project completion, ensuring that traffic flow of the public is effectively directed over the bridge and diverted or prevented from traveling down banks toward the river.

3.4 CLEARING AND GRUBBING

- A. Install erosion controls prior to any stump removal. Completely remove stumps, roots, and other debris protruding through ground surface.
- B. Clear areas required for access to site and execution of the work.
 1. Limits of Clearing and Grubbing shall be restricted as indicated on the drawings and as required by regulatory agencies.
- C. Remove trees and shrubs within marked areas and as shown on the Drawings. Grub out stumps, roots and surface rock to a depth of 3 feet below any subgrade.
 1. Use only hand methods for grubbing inside drip line of trees indicated to remain.
- D. Clear undergrowth and deadwood, without disturbing subsoil.
 1. Fill depressions caused by clearing and grubbing operations with satisfactory soil material, unless further excavation or earthwork is indicated.

3.5 REMOVAL AND DISPOSAL

- A. All debris, trees, shrubs, brush, stumps, roots, and grass cleared and grubbed shall be removed and disposed of in accordance with all local, State and Federal regulations.
- B. Burning and/or burial of cleared and grubbed material on the site shall not be permitted.
- C. Contractor shall provide written documentation of proper disposal of all cleared and grubbed material and compliance with all applicable regulations.

3.6 "CALL BEFORE YOU DIG"

- A. Contractor shall notify "Call Before You Dig" (800) 922-4455 a minimum 48 hours prior to start of construction and every 30 days thereafter for the duration of the project.

3.7 STRIPPING AND STOCKPILING TOPSOIL

- A. Topsoil is defined as friable loam surface soil. Satisfactory topsoil is reasonably free of subsoil, clay lumps, stones and other objects over 2 inches in diameter, without weeds, roots and other objectionable material.
- B. Contractor shall confirm the approximate quantity to be stripped and overall quality of topsoil to be stripped and shall review with the owner's Representative prior to proceeding with work.

1. Topsoil test results on topsoil to be stripped shall be delivered to the Owner's Representative to determine acceptability of topsoil for reuse. See Section 329115 Topsoil for specific testing requirements.
- C. Strip topsoil to full depths encountered in a manner to prevent intermingling with the underlying subsoil or other objectionable material.
 1. Prepare the areas of existing loam so as to provide clump free topsoil. Use a sod cutting rototiller or other approved method.
 2. Where trees are indicated to be left standing, hold topsoil stripping a sufficient distance away to prevent damage to the root system.
- D. Stockpile topsoil in storage piles constructed to freely drain surface water. Generally, topsoil is to be stockpiled as indicated on the Drawings.
- E. Topsoil stockpiles shall be immediately seeded with 3 pounds of perennial ryegrass per 1,000 square feet to prevent erosion.
- F. Upon completion of the job, any excess topsoil, present, shall remain the property of the Owner. The Contractor shall haul all excess topsoil to a location designated by the Owner, at no additional cost to the Owner.

3.8 FIELD QUALITY CONTROL AND ENGINEERING

- A. All subgrades must be observed and approved by the Engineer prior to fill placement. Sufficient time must be given to the Engineer to observe and perform any necessary tests on the subgrade.
- B. The Contractor shall provide all offsets and other construction reference points necessary to establish and maintain location and elevation of all proposed improvements as shown on the Drawings and as field approved by the Owner's Representative during construction.
- C. The Contractor, at his own expense, shall do all engineering required for establishing grades, lines, levels, dimensions and reference points for all trades; shall be responsible for maintaining bench marks and other survey marks, and shall replace as directed, any bench marks which have been disturbed or destroyed.
- D. The Contractor shall compare all grades, lines, levels and dimensions as shown on the Drawings and actual site conditions, and shall promptly report to the Owner, before commencing work, any inconsistencies he may discover.
- E. Contractor shall provide as-built survey of each phase of grading as noted below. Contractor shall not proceed with the subsequent phase without approval from the owner's representative. As-built survey shall be conducted in a grid of not more than 40 ft. on-center in each direction.
 1. Subgrade prior to placement of fill
 2. Gravel/sand fill prior to placement of topsoil

3. Topsoil prior to seeding

3.10 LAYOUT OF TEMPORARY FENCING

- A. Installation of temporary fencing shall not deter or hinder access to existing and new hose connections and fire hydrants.
 1. Maintain 3 feet diameter clear space around fire hydrants.
 2. Where fire hydrant or hose connection is blocked by fencing, provide access gate.
- B. Access: Provide gates for personnel, delivery of materials, and access by emergency vehicles.
- C. Field verify location with SDR.

3.11 INSTALLATION OF TEMPORARY FENCING

- A. Chain link posts:
 1. Space at 10 feet maximum.
 2. Posts shall be set in steel post plates or stantions. Contractor shall provide precast concrete blocks or other system to anchor post bases.
 3. Gate posts: Use bracing or concrete footings to provide rigidity for accommodating size of gate.
- B. Fabric: Securely attach to posts.
- C. Gates: Install with required hardware.
- D. Plastic mesh fencing: Space steel support posts to ensure mesh remains vertical and at proper height. Securely tie mesh to posts.

3.12 MAINTENANCE AND REMOVAL OF TEMPORARY FENCING

- A. Maintain fencing in good condition. If damaged, immediately repair.
- B. Remove temporary fencing upon completion of work or when no longer required for security or control. Repair damage caused by installation of temporary fencing.

3.13 DISPOSAL OF WASTE MATERIALS

- A. Burning and Burial: Burning and burial are not permitted on Owner's property.
- B. Clean up: Remove materials and debris from site preparation work as it accumulates.

1. Do not place or store materials and debris within the limits of any existing street, public right-of-way or roadway.
 2. Parking, loading, and operation of trucks, dumpsters, etc. on existing highway and streets shall be governed by existing laws, ordinances, and regulations.
- C. Disposal of Debris: Remove waste materials and unsuitable and excess topsoil from Owner's property and dispose of off-site legally and in a manner satisfactory to State, County, or local authorities having jurisdiction.

3.14 HAZARDOUS MATERIAL AND WASTE CONTROL

- A. Excavation and disposal of contaminated, polluted or “environmentally compromised” materials shall be conducted in conformance with the environmental and abatement specifications. The handling of contaminated polluted or “environmentally compromised” water to be discharged as a result of dewatering shall be performed in accordance with the environmental and abatement specifications. Refer to environmental remediation drawings and specifications.

END OF SECTION 31 10 00

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to work of this Section.
- B. All related Specification Sections shall be used in conjunction with this Section.

1.2 SUMMARY

- A. Provide all labor, materials, necessary equipment and services to complete the work called for in this Section or as shown on the plans, including but not necessarily limited to the following:
 - 1. Rough and finish grading.
 - 2. Excavating, backfilling and compacting for structures.
 - 3. Addition of processed aggregate base or borrow (if required), and disposal of unsuitable or excess materials.
 - 4. Structural backfill under slabs on grade and against foundation walls.
- B. Related Work: The following sections contain requirements that may apply to this section:
 - 1. Section 31 10 00 - "Site Clearing"
 - 2. Section 31 25 00 - "Erosion and Sediment Controls"

1.3 EXCAVATION CLASSIFICATIONS

- A. Earth excavation or "excavation" consists of removal of materials encountered to the subgrade elevations indicated and subsequent reuse or disposal of the materials removed. All excavation is classified as earth excavation unless it otherwise meets the classifications provided below for unauthorized excavation, additional excavation, or rock excavation.
- B. Unauthorized Excavation:
 - 1. Unauthorized excavation consists of removal of materials beyond indicated subgrade elevations or dimensions without specific direction of the Engineer. Unauthorized excavation, as well as remedial work directed by the Engineer, shall be at Contractor's expense.
- C. Additional Excavation:
 - 1. When excavation has reached required subgrade elevations, notify the Engineer who will make an inspection of conditions.
 - 2. If unsuitable bearing materials are encountered at required subgrade elevations, carry excavations deeper and replace excavated material as directed by the Engineer.

3. Removal of unsuitable material as directed and its replacement with suitable material will be paid for under the unit rate bid for this classification.

1.4 SUBMITTALS

- A. General: Refer to Division I for Submittal Requirements.
- B. Laboratory and field test results including on-site and borrow topsoil analysis, soil material gradation, Modified Proctor, and compaction test results. Cost of testing shall be the responsibility of the Contractor.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Topsoil Suitable for Reuse: Excavated material not to contain materials harmful to plant life, to be clean, fertile and friable, well draining, natural sandy loam. All topsoil shall be free of roots, sticks, rocks larger than one inch, subsoil, weeds, debris and other deleterious material prior to excavating material to be reused as topsoil. The material shall have demonstrated by the occurrence upon it of healthy plant growth that it is of good quality and free draining. Topsoil shall be uniform in quality and texture and contain organic matter and mineral elements necessary for sustaining healthy plant growth. Topsoil stockpiled for reuse shall be screened prior to placement unless otherwise approved by the Engineer.

1. Topsoil shall have the following optimum ranges unless otherwise approved by the Engineer.

Organic content	3-20% (By loss of ignition at 375 C method of testing)
pH	6.0 – 8.0

2. Nutrient levels shall be achieved by the Contractor's addition of amendments to the topsoil to meet the optimum nutrient levels specified in the testing laboratory report for each crop/plant to be installed.
 3. Topsoil shall meet the USDA Soils Textural Classification percentages of sand, silt and clay for "sandy loam" or "loam" classification.
 4. Topsoil shall be completely free of any toxic chemical, hazardous waste and any material or condition that would prevent the establishment of a suitable lawn and/or playing fields.
- B. Subsoil Suitable for Reuse: Material used for general filling outside of limits of pavements may be either approved material available from excavation on-site or approved material, obtained from off-site, certified to conform to the following grain-size gradation:

<u>Square Mesh Sieve</u>	<u>% Passing (by Weight)</u>
3 1/2"	100
2"	90
1/4"	30-80
#40	5-30
#100	0-15

It shall be clean, free of clay and organic material and capable of satisfactory compaction. If sufficient approved on-site material is not available to meet grading requirements indicated, Contractor shall provide additional approved off-site material at no extra cost to Owner.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Identify required lines, levels, contours, and datum.
- B. Identify known underground utilities (if necessary). Stake and flag locations.
- C. Identify and flag surface and aerial utilities (if necessary).
- D. Notify the appropriate utility authority to remove and relocate utilities (if necessary).
- E. Maintain and protect existing utilities remaining which pass through work area (if necessary).

3.2 PROTECTION

- A. Protect trees, shrubs, lawns, and other features remaining as a portion of final landscaping.
- B. Protect bench marks, existing structures, fences, sidewalks, paving, and curbs from equipment and vehicular traffic.
- C. Protect above and below grade utilities which are to remain.
- D. Protect excavations by shoring, bracing, sheet piling, underpinning, or other methods required to prevent cave-in or loose soil from falling into excavation.
- E. Underpin adjacent structures which may be damaged by excavation work, including service utilities and pipe chases.
- F. Notify Engineer of unexpected subsurface conditions such as rock if encountered. Discontinue affected work in area until notified to resume work.
- G. Protect bottom of excavations and soil adjacent to and beneath foundations from frost.
- H. Grade excavation top perimeter to prevent surface water runoff into excavation.
- I. Maintain bottom of all excavations stable, dry and free of water on a 24-hour basis.

3.3 MAINTAIN ROADS PASSABLE

- A. Contractor shall maintain access to the park during construction.

3.4 DUST CONTROL

- A. During the progress of work, the Contractor shall conduct his operations and maintain the area of his activities, including sweeping and sprinkling of water as necessary, so as to minimize the creation and dispersion of dust. If the Engineer decides that it is necessary to use calcium chloride for more effective dust control then the Contractor shall furnish and apply the material as directed.
- B. Calcium chloride shall be commercial grade, furnished in 100-pound, 5-ply bags, stored under weatherproof cover and stacked alternately for ventilation. Application for dust control shall be at the rate of about 1/2 pound per square yard per application, unless otherwise directed by the Engineer.

3.5 EXCAVATION

- A. Excavate topsoil and subsoil required for underground structures, construction operations, and other work.
- B. Remove all muck, peat and other unsuitable bearing material from areas where structures are to be located. If unsuitable material exists at limits of excavation shown on Drawings, obtain approval of Engineer prior to removal of material. Unauthorized excavation of unsuitable material will not be considered for payment.
- C. Machine slope banks to angle of repose or less until shored.
- D. Excavation generally shall not interfere with normal 45° bearing splay of any foundation.
- E. Hand trim excavation and leave free of loose matter.
- F. Correct unauthorized excavation at no additional expense to the Owner with material approved by the Engineer.
- G. Fill over-excavated areas under structure bearing surfaces with structural fill in accordance with direction by the Engineer.
- H. Stockpile excavated material to be reused in area designated on site and remove excess or unsuitable subsoil not being reused from site.
- I. Maintain bottom of all excavations stable, dry and free of water on a 24-hour basis.
- J. Excavate to the lines and grades indicated, and deeper as required to reach suitable bearing soil as judged by the Engineer. The excavation shall be made deeper in areas where the subgrade is judged by the Engineer to have inadequate bearing capacity.

- K. Conduct unclassified excavation using appropriate methods and equipment in sufficient quantity and sizes to perform the work as specified and as shown on the Drawings.
- L. Adhere to specified restrictions for excavation and removal of buried structures.
- M. Carry out excavation in such a manner that damage to adjacent roads, structures and utilities is prevented.
- N. Control the inflow of water into excavations by acceptable construction de-watering methods and procedures. Control the inflow of water to prevent loss of materials from outside the limits of excavation.
- O. Prevent disturbance to all soil subgrades.
- P. Remove unsuitable and excess suitable excavated material from the excavation and site promptly. Do not stockpile excavated material immediately outside the site limits.
- Q. Limits of the excavation shall allow for adequate working space for installing forms and as required for safety of personnel.
- R. Remove unstable bottom material. Remove large stones, boulders, debris and unsuitable soil from excavation bottoms.
- S. Excavation for the convenience of the Contractor shall conform to limits acceptable to the Engineer and shall be at no additional expense to the Owner.
- T. Contractor shall provide 8-inches of 3/8" crushed stone at bottom of excavations in water.

3.6 SUBSURFACE OBSTRUCTIONS

- A. All buried structures shall be removed in confined excavations as general excavation proceeds. Do not excavate for buried structure removal below subgrade elevations unless otherwise directed by the Engineer.
- B. Buried structures which extend below foundation subgrade elevations shall be cut off and left in place below the subgrade elevation, except as directed by the Engineer. If the buried structures directly interfere with a foundation support location, immediately notify the Engineer who will determine whether the buried structures should be removed or left in place. The Contractor will be paid for removal of buried structures encountered below subgrade elevations only when removal of the buried structures is directed by the Engineer.
- B. Buried structures below subgrade elevations which are removed by the Contractor without being directed by the Engineer to do so shall be backfilled with lean concrete or properly compacted granular fill, unless otherwise directed by the Engineer, at no additional cost to the Owner.

3.7 EXCAVATION FOR STRUCTURES

- A. Excavation for structures shall be done to provide proper bearing for structures, to produce the proper grade and dimensions for finished construction, and in a satisfactory manner.
- B. Excavation related to the structure shall be to the full depth required to provide suitable bearing material.
- C. All traces of peat, loam or other unsuitable materials shall be fully removed.
- D. Site preparation and other construction activities shall be conducted in a manner so as to minimize the disturbance of clay soils to remain in place, where applicable.

3.8 FIELD QUALITY CONTROL

- A. All subgrades must be observed and approved by the Engineer prior to fill placement. Sufficient time must be given to the Engineer to observe and perform any necessary tests on the subgrade.
- B. The Contractor shall provide all offsets and other construction reference points necessary to establish and maintain location and elevation of all proposed improvements as shown on the Drawings and as field approved by the Owner's Representative during construction.
- C. The Contractor, at his own expense, shall do all engineering required for establishing grades, lines, levels, dimensions and reference points for all trades; shall be responsible for maintaining bench marks and other survey marks, and shall replace as directed, any bench marks which have been disturbed or destroyed.
- D. The Contractor shall compare all grades, lines, levels and dimensions as shown on the Drawings and actual site conditions, and shall promptly report to the Owner, before commencing work, any inconsistencies he may discover.

3.9 SUBGRADE PREPARATION AND PROTECTION

- A. General:
 - 1. Complete the excavations to the required subgrade elevations allowing for subbase material, bedding layers, plus any additional depth required to accommodate particular requirements.
 - 2. All subgrades must be observed and accepted by the Engineer prior to proof-rolling or placement of Compacted Granular Fill or any structure over subgrades.
 - 3. Remove any additional materials below subgrade elevations, which are unsuitable where directed by the Engineer.
 - 4. Proof-roll the exposed subgrade with a minimum 10-ton vibratory roller for a minimum of four (4) passes or as required by the Engineer.

5. Where directed by the Engineer, backfill all holes or voids encountered outside of minimum excavation limits with Compacted Granular Fill in layers not exceeding nine (9) inches measured before compaction and compact to 95 percent of maximum dry density (ASTM D1557) using appropriate compaction equipment.

3.10 PLACEMENT AND COMPACTION OF MATERIALS

- A. Backfill areas to contours and elevations.
- B. Backfill systematically, as early as possible, to allow maximum time for natural settlement. Do not backfill over porous, wet, or spongy subgrade surfaces.
- C. Protect fill area by grading to drain and providing a smooth surface which will readily shed water. Grade the surface of the areas in such a manner as to prevent ponding of surface water runoff in areas to receive compacted fill.
- D. To the extent that it is practicable, each layer of fill shall be compacted to the specified density the same day it is placed.
- E. Fill that is too wet for proper compaction shall be disced, harrowed or otherwise dried to a proper moisture content for compacting to the required density. If the fill material cannot be dried within 48 hours of placement, it shall be removed and replaced with drier fill.
- F. If fill is too dry for proper compaction, the Contractor shall apply water to the fill uniformly applied over the surface of the loose layer. Sufficient water shall be added to allow compaction to the required density.
- G. Employ a placement method so not to disturb or damage work.
- H. Maintain optimum moisture content of backfill materials to attain required compaction density.
- I. Make changes in grade gradual. Blend slopes into level areas.
- J. Remove surplus backfill materials from site and dispose of in an acceptable manner.
- K. Leave stockpile areas completely free of excess fill materials.
- L. Contractor shall be aware of existing conditions, including existing building construction, and shall choose compaction equipment and methods accordingly. Compaction adjacent to foundation walls shall be performed with walk behind plate compactor.

3.11 COMPACTION TESTING

- A. Compaction testing will be performed in accordance with ASTM D 1556, or D 2922 and the General Conditions.
- B. If tests indicate work does not meet specified requirements, remove work and replace at no cost

- to Owner.
- C. Materials and operations shall be tested and inspected as work progresses. Failure to detect defective work shall not prevent rejections when defect is discovered.
 - D. To facilitate testing and inspection, the Contractor shall:
 - 1. Furnish necessary labor to assist testing agency in obtaining and handling samples at the job site.
 - 2. Contractor shall provide 48 hours notice to the Owner prior to testing.
 - E. Owner agrees to pay for the above tests with the exception of work that is found to be defective. Subsequent tests shall be taken and paid for by the Contractor.

3.12 TOLERANCES

- A. Top Surface of Backfilling: Plus or minus one inch.

END OF SECTION 31 23 00

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to work of this Section.
- B. 2002 Connecticut Erosion and Sedimentation Guidelines
- C. All related specification sections shall be used in conjunction with this section.
- D. Connecticut Department of Transportation Form 817.

1.2 SUMMARY

- A. This section discusses Construction Dewatering.
- B. Related Work: The following sections contain requirements that may apply to this section:
 - 1. Section 31 23 00 - “Excavation and Fill”

1.3 PERFORMANCE REQUIREMENTS

- A. Dewatering shall include all necessary control and disposal of groundwater on a 24-hour basis during construction.
- B. Dewatering shall include the lowering of the groundwater table to relieve any hydrostatic head that could cause a decrease in the stability of the excavated subgrade. It shall also include the intercepting of seepage, which could otherwise emerge from the slope or sides of excavations, which could cause a decrease in the stability of the excavated subgrade or the slopes or sides of the excavations.
- C. Dewatering shall be performed during construction to temporarily protect against the following:
 - 1. The loss of any material beneath the excavated subgrade or from the slopes or sides of the excavations or the movement of any fine particle materials from the soil.
 - 2. Any increased vertical or lateral loads on the excavation support systems.
 - 3. Any disturbance, rupture, instability, boiling or heaving of the bottom of excavated subgrade during:
 - a. Excavation.
 - b. Placement of foundation or bedding materials.
 - c. Construction of slabs, footings, pipes, conduits, underdrains and any other structures.
 - d. Backfilling operations.
- D. The Contractor is forbidden from discharging water collected from the dewatering operations directly into watercourses, wetlands areas, and storm drainage systems. As a result, the Contractor shall provide for methods, materials and construction, to be approved by the Engineer and Owner, for collection and treatment of the dewatering operations discharge(s). At a minimum, these methods will include conveying the discharged water through a sedimentation system, appropriately sized for the operation.

If, in the sole opinion of the Engineer, the sedimentation system is inadequate, the contractor shall be required to provide dual compartment septic tank, appropriately sized for the operation, to which the dewatering water shall be directed.

In no case will discharge containing visible sediment, or other pollutants be allowed to discharge to wetlands areas or drainage systems. The proposal for treating the dewatering discharge water shall be prepared by a Connecticut Registered Professional Engineer.

1.4 ADDITIONAL PROVISIONS

- A. Provide, operate and maintain any dewatering system required to lower and control groundwater levels and groundwater hydrostatic pressure during the construction of the work, as required by this Section and the Contract Documents with no additional time allowed for the completion of the work.
- B. Remove and dispose of water resulting from activities described in 1.1 C and 1.2 A above.
- C. Remove dewatering systems and equipment when no longer required.

1.5 SUBMITTALS

- A. Submit under provisions of Division 1.
- B. DEWATERING PLAN: The Contractor shall submit plans for the proposed dewatering system to the Engineer for review. Dewatering system shall be designed by a Professional Engineer licensed to practice in the State of Connecticut for the drainage area being directed to the dewatering system and submitted for review. Sizes and locations shown on the plans are minimums.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Design the dewatering system with a comprehensive engineering analysis from a qualified professional engineer.
- B. Do not allow surface water to enter any excavations by grading, dikes, etc.
- C. Continuously check on and maintain dewatering operations to ensure of the stability of excavations and constructed slopes while preventing any flood hazards, erosion control, and prevention of damaged subgrades, permanent structures, and site improvements adjacent to excavation.
- D. Once dewatering operations are finished, remove the dewatering system.

2.2 REGULATORY REQUIREMENTS:

- A. Before starting any dewatering operations, comply with EPA notification regulations and the water and debris disposal regulations of authorities with jurisdiction.

PART 3 - EXECUTION

3.1 GENERAL PRACTICES

- A. The dewatering system shall be capable of developing an excavated subgrade relieved of any hydrostatic pressure that could cause a decrease in the stability of the excavated subgrade and which will provide the necessary groundwater control for the proper performance required for completion of the work.
- B. The dewatering system shall not cause damage to newly constructed or existing properties, buildings, utilities and other work due to the loss of ground or support from incompletely drained soils or from removal of soil particles caused by the dewatering system.
- C. Dewatering facilities shall be located only where they will not cause interference with work performed by others.
- D. If the dewatering system utilized by the Contractor causes or threatens to cause damage to new or existing facilities, the dewatering system shall be removed and/or modified at no additional expense to the Owner.
- E. Dispose of subsurface water collected in a manner that conforms to all applicable local and state ordinances, statutes and laws as well as Section 1.2 above.
- F. Maintain continuous and complete effectiveness of the installation at all times.
- G. Provide dewatering necessary to maintain the groundwater table a minimum of 2 feet below the bottom of excavated subgrade or the prevailing level of backfill as it is being placed. The groundwater table shall also be maintained at a level, which will not result in uplift pressure in excess of 80% of the downward pressure produced by the weight of the structure and any backfill in place.

3.2 JOB CONDITIONS

- A. Erosion Control: The Contractor shall provide adequate protection from erosion from any of the dewatering operations utilized during the course of the construction. Any damage, disruption or interference to newly constructed work or existing properties, building, structure, utilities and/or other work resulting directly or indirectly from dewatering operations conducted under this Contract shall be remedied by the Contractor to the satisfaction of the Engineer, at no cost to the Owner.
- B. Treatment of Dewatering Operations Discharges: It shall be the responsibility of the Contractor to provide such additional treatment as may be required to meet the provisions of the Contract. This may include the construction of sumps and/or settling basins, stone rip rap, silt fences or other the noted septic tankage requirements. They shall be provided and later removed and/or filled in with acceptable backfill material once they are no longer needed at no additional expense to the Owner.
- C. The Contractor shall ensure that water pumped out of the work area includes filtering to remove sediment (NDDDB Determination Number 201900828 dated January 25, 2019).
- D. The Contractor shall use contained structures such as sandbags (not loose gravel) in the construction of cofferdams (NDDDB Determination Number 201900828 dated January 25, 2019).

3.3 HAZARDOUS MATERIAL AND WASTE CONTROL

- A. Excavation and disposal of contaminated, polluted or “environmentally compromised” materials shall be conducted in conformance with the environmental and abatement specifications. The handling of contaminated, polluted or “environmentally compromised”

water to be discharged as a result of dewatering shall be performed in accordance with the environmental and abatement specifications.

3.4 PROTECTION

- A. While dewatering operations are taking place, protect and maintain the dewatering system.
- B. Promptly repair any damages that may be placed on adjacent facilities due to the dewatering system.

END OF SECTION 31 23 19

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Provide all labor, materials, necessary equipment and services to complete the work called for in this Section or as shown on the plans, including but not necessarily limited to the following:

1. Slope protection and erosion control devices and measures as shown on the Drawings, around material stockpiles, and where directed by the Engineer.
2. Maintenance, repair and replacement of slope protection and erosion control devices and measures as required. One employee of the General Contractor shall be assigned to inspect the erosion control measures and to maintain or repair them as necessary. Such maintenance and repair shall take precedence over other work.
3. Removal of slope protection and erosion control devices and measures when no longer required.
4. Construction of temporary perimeter stone swales, sediment forebays, dewatering basins, sediment basin, and outlet structures.
5. Temporary seeding or vegetative cover.
6. Installation of anti-tracking pad.
7. Removal of collected sediment and debris.
8. Restoration of disturbed areas to finish surface indicated on Drawings.
9. Installation of permanent mulches.
10. Conformance to erosion notes on plans and “Connecticut General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities”; (Effective Date: October 1, 2013).

- B. Related Work: The following sections contain requirements that may apply to this section:

1. Section 31 10 00 – “Site Clearing”
2. Section 31 23 00 – “Excavation and Fill”

3. Section 32 92 00 – “Lawns and Grasses”

1.3 REFERENCE STANDARDS

- A. Connecticut Department of Energy and Environmental Protection, General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities.
- B. Form 817, State of Connecticut Department of Transportation, Standard Specifications for Roads, Bridges and Incidental Construction, 2002.
- C. Connecticut Guidelines for Soil Erosion and Sediment Control, the Connecticut Council on Soil and Water Conservation, 2002.
- D. Connecticut Stormwater Quality Manual, 2004.
- E. Connecticut Department of Transportation Drainage Manual, 2000.

1.4 SEQUENCING/SCHEDULING

- A. Install all soil erosion and sediment control devices and measures prior to commencing construction. Install additional measures as required during construction and maintain such structures throughout construction period.

1.5 SUBMITTALS

- A. Submit under provisions of Division 1.
- B. Submit a detailed Erosion and Sedimentation Control Plan prepared by a Professional Engineer licensed to practice in the State of Connecticut to the Owner and Engineer for review. Measures shown on the drawings are the minimum required. The Plan shall include specific measures related to the Contractor’s means and methods for carrying out the proposed work. The Plan shall note the sequence of construction and any phasing of the work.
- C. Submit a dewatering plan that will ensure protection of wetland areas and particularly the storm drainage system. Prior to the start of any work, this plan must be approved by the Engineer and the Owner.
- D. Jute Mesh, Netting, Erosion Control Blanket or Matting and Filter Fabric: 12” x 12” sample with manufacturing data and instruction for installation.
- E. Shredded Bark Mulch: 1 gallon showing range of size, tree material, and name and address of supplier.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Hay Bales.

1. Hay bales shall consist of hay from acceptable grasses and legumes, free from weeds, reeds, twigs, chaff, debris, other objectionable material or excessive amounts of seeds and grain. Hay shall be free from rot or mold and the moisture content shall not exceed fifteen (15) percent by weight at the time of weighing.
2. The hay shall be securely baled with wire of adequate size to allow for possible rusting while in use and to permit re-handling when the bale is in a saturated condition.
3. Individual bales shall be of a longitudinal shape not exceeding one hundred (100) pounds when weighed.

B. Stakes for Silt Fence: Hardwood or metal. Posts shall be of wood or steel and a minimum of 3.5 feet long. Wood posts shall be nominal 1 x 1 inches. Steel posts shall be round or U, T or C-shaped with a minimum weight of 1.3 pounds per foot, and have projections for fastening the wire to the fence.

C. Silt Fence Fabric:

1. Filter fabric for silt fence shall consist of pervious sheets of woven propylene, nylon, polyester, or ethylene yarn. Filter fabric material shall be on the ConnDOT approved material list and shall meet the following requirements.

PHYSICAL REQUIREMENTS FOR FABRIC SILT FENCE

Property	Test Method	Requirement
Grab Strength	ASTM D-4632-86	100 lbs.
Grab Elongation	ASTM D-4632-86	30% maximum
Trapezoid Tear Strength	ASTM D-4632-86	65 lbs.
Mullen Burst Strength	ASTM D-3786-80a	200 psi
Coefficient of Permeability k	ASTM D-4491-85	0.01 cm/sec.
Ultraviolet Stability	ASTM D-4355-84	90%

The filter fabric shall contain a stabilizer and/or inhibitors to make the filaments resistant to deterioration resulting from exposure to sunlight or heat to provide a minimum of 6 months of expected usable construction life at a temperature range of 0 to

120 degrees F. The filter fabric shall be a minimum of 42 inches wide, cut from a continuous roll to finish fence length to avoid the use of seams. Splice filter fabric together only when absolutely necessary and only at a support post, with a minimum 6-inch overlap and securely sealed. The filter fabric shall be free of defects or flaws which significantly affect its physical and/or filtering properties.

D. Wire Backing:

1. Wire for backing reinforcement shall be a minimum of 12 gauge with maximum mesh spacing of 6 inches.
2. Minimum height shall be 42 inches.
3. Wire staples for attaching filter fabric to wooden posts shall be No. 9 gauge and shall be at least 1 inch long.

E. Filter Fabric shall conform to requirements of M.08.01-26 of Form 817.

F. Jute Mesh and Anchoring Devices: Conform to requirements of M.13.06 of Form 817.

G. Erosion Control Mat shall conform to Section M.13.09 of the Form 817. Erosion control matting shall be on the CT DOT Qualified Product List for erosion control materials.

TYPE 1. Slopes 4h:1v to 3.1h:1v or as noted on the drawings:
minimum fabric weight of 7.5 oz./sy
100% straw fiber matrix
Biodegradable natural organic fiber netting (one side)

TYPE 2. Slopes 3h:1v to 2.1h:1v or as noted on the drawings:
minimum fabric weight of 8.5 oz./sy
100% straw fiber matrix
Biodegradable natural organic fiber netting (top and bottom)

TYPE 3. Slopes 2h:1v to 1.6h:1v or as noted on the drawings:
minimum fabric weight of 10 oz./sy
70% straw fiber; 30% coconut fiber matrix
Biodegradable natural organic fiber netting (jute fiber top and bottom)

H. Shredded Bark Mulch:

1. Air-dried, pine or hardwood bark shredded to a size ranging from 1/4 inch to 2 inches.
2. Free from rot, leaves, twigs, shavings, coarse material, debris, and any other materials injurious to plant growth.

I. Hay Mulch:

1. Obtain from acceptable grass or legume mowings, free from weeds, coarse matter or other objectionable material.

- 2. Free from rot or mould with moisture content of not more than 15 percent when delivered to project.
- J. Netting: Approved material suitable for holding hay mulch in close contact with ground.
- K. Mulch Binders:
 - 1. Asphalt: Approved product manufactured for this purpose.
 - 2. Synthetic: Approved product manufactured for this purpose.
- L. Crushed stone for construction entrance and stone berms: 2 inch diameter conforming to M.02.01-2 of Form 817.
- M. Temporary Seeding: Temporary seeding shall be placed if the contractor anticipates leaving exposed areas over the winter months.
- N. Silt sack shall consist of filter fabric (see below), lifting straps and containment area.
 - 1. Filter fabric for silt sack shall consist of pervious sheets of woven monofilament fabric. Filter fabric material shall meet the following requirements.

PHYSICAL REQUIREMENTS FOR SILT SACK FABRIC

Property	Test Method	Requirement
Grab Strength	ASTM D-4632-86	200 lbs.
Grab Elongation	ASTM D-4632-86	24x10
Trapezoid Tear Strength	ASTM D-4632-86	75 lbs.
Mullen Burst Strength	ASTM D-3786-80a	450 psi
Coefficient of Permeability k	ASTM D-4491-85	0.14 cm/sec.
Ultraviolet Stability	ASTM D-4355-84	70%

- O. Curlex Sediment Logs shall be installed over bare soil, over rolled erosion control products, on steep slopes, or around inlets and outlets. Fibers shall be evenly distributed throughout the diameter and length of the log. Density of the sediment logs shall not exceed 2.6 lb/ft³ to allow necessary flow rates for filtering.

PART 3 - EXECUTION

3.1 GENERAL

- A. The Contractor shall plan and execute all operations, particularly those associated with excavation and backfilling, in such a manner as to minimize the amount of excavated and

exposed fill or other foreign material that is washed or otherwise carried into wetlands and waterways.

- B. The Contractor shall furnish and place hay bales, silt fencing and other materials necessary for sedimentation and erosion control for streams and wetlands.
- C. In the event the sedimentation or siltation prevention measures used by the Contractor prove to be inadequate as determined by the Engineer, the Contractor shall be required to adjust his operations to the extent necessary to prevent any such sedimentation or siltation from occurring.
- D. The Contractor shall keep streams, brooks and other water crossings clear of mud, silt, debris and other objectionable materials resulting from his construction operations. The Contractor shall maintain flow capacity of river and stream channels to prevent unnatural flooding due to the Contractor's operations.
- E. The Contractor shall use temporary vegetation, soil stabilization matting, and mulching to protect areas exposed during construction. He shall minimize the amount of bare earth exposed at any one time during construction, and he shall also minimize the length of time bare earth is exposed.
- F. Excavated material to be stockpiled for reuse shall be stored away from brooks, streams and wetland areas to prevent the washing of same back into the resource area.
- G. Baled hay shall be placed to form temporary water stops, dams, diversions, dikes, berms and for other uses connected with water pollution control. Should any bales become too clogged to be effective, they shall be removed from the site and new hay bales provided as directed by the Engineer. Bales shall be replaced as often as necessary to provide effective sediment control.
- H. Following completion of construction activities in a particular area, bales shall be legally disposed of, by the Contractor, off-site in an environmentally sound manner.
- I. On sloping terrain, hay bales may be used to trap sediment until vegetation has become established. The details of their placement shall be as approved by the Engineer.
- J. Sediment laden water that is being pumped from the trenches or excavations shall not be pumped directly into water courses. Sedimentation basins of filter fabric, wire fencing and hay bales or other means acceptable to the Engineer shall be used for this purpose.
 - 1. **If, in the sole opinion of the Engineer, the sedimentation system is not sufficient, the contractor shall be required to provide gross particle separator(s) upstream of the pump discharge areas. These separators may consist of dual compartment septic tanks, with inlet and outlet baffles. The outlet from the tank shall discharge into the sedimentation basins described above.**
- K. Spoil resulting from the trench excavation shall be leveled or removed to permit entry of water from adjacent land surfaces without excessive erosion or harmful ponding.

- L. The silt fence shall be maintained at no additional cost to the Owner as follows: Inspect silt fences and filter barriers immediately before and after each rainfall and at least daily during prolonged rainfall. Provide any required repairs immediately. Should the fabric on a fabric silt fence decompose or become ineffective prior to the end of the expected usable life and the barrier still be necessary, replace the fabric promptly.
- M. Remove sediment deposits after each storm event as directed by the Engineer. As a minimum, remove sediment when deposits reach approximately one-half the height of the barrier. Dispose of sediment deposits off-site, placed upland in a manner which will prevent its later erosion into the resource area, or in a manner approved by the Engineer.
- N. Maintain the fabric silt fence until all upslope soils are permanently stabilized by vegetation.

3.2 HAY BALE CHECKS AND BARRIERS

- A. Place hay bale checks and barriers where indicated on Drawings.
- B. Excavate soil to form shallow trench, place and firmly stake bales. Wedge loose hay between bales. Backfill and compact excavated soil against hay bales.
- C. Conform to installation details indicated on Drawings.
- D. Maintenance
 - 1. Inspect checks and barriers periodically and after each storm.
 - 2. Remove accumulated sediment periodically and when directed by Engineer.
 - 3. Repair any damage immediately.
- E. Removal and clean-up
 - 1. Remove checks and barriers when no longer required or when directed by Engineer.
 - 2. Restore disturbed areas to finish surface indicated on Drawings.

3.3 SILT FENCE

- A. Place silt fence where indicated on the Drawings.
- B. Firmly set stakes and attach wire backing and filter fabric as indicated on Drawings.
- C. Maintenance
 - 1. Inspect checks and barriers periodically and after each storm.
 - 2. Remove accumulated sediment periodically and when directed by Engineer.

3. Repair any damage immediately.

D. Removal and clean-up

1. Remove checks and barriers when no longer required or when directed by Engineer.
2. Restore disturbed areas to finish surface indicated on Drawings.

3.4 JUTE MESH

A. Place jute mesh where indicated on Drawings immediately after surface upon which it is to be placed has been finished as specified under other sections of these specifications.

B. Conform to installation methods indicated on Drawings and described in 9.48.03 of Form 817.

C. Maintenance

1. Inspect checks and barriers periodically and after each storm.
2. Remove accumulated sediment periodically and when directed by Engineer.
3. Repair and damage immediately.

D. Removal and clean-up

1. Remove checks and barriers when no longer required or when directed by Engineer.
2. Restore disturbed areas to finish surface indicated on Drawings.

3.5 HAY MULCH

A. Spread mulch immediately following seeding operations.

B. Mulch shall be uniformly spread by hand or machine at a rate of approximately 2 tons per acre.

C. Apply mulch to obtain a uniform depth without matted spots.

D. Stabilize mulch immediately after mulch is spread with netting, asphalt or synthetic tacking material.

E. Conform to manufacturer's instructions and obtain firm, continuous contact between mulch and soil.

F. Maintenance

1. Repair and replace areas which have been damaged.

G. Removal and Clean-up

1. Remove checks and barriers when no longer required or when directed by the Engineer.
2. Restore disturbed areas to finish surface indicated on Drawings.

3.6 SHREDDED BARK MULCH

- A. Spread mulch immediately following finish grading and planting.
- B. Apply mulch to obtain a uniform depth of 3 inches. Remove large pieces and debris.
- C. Repair and replace mulch as required to protect underlying soil.

3.7 STONE BERMS AND SWALES

- A. Place stone to form berms around catch basins in areas to be paved prior to placement of pavement at locations as indicated on the Drawings.
- B. Conform to dimensions indicated on the Drawings.
- C. Repair and replace stone berms as required to protect catch basins and pipes.
- D. Construct stone swales around perimeter of excavation. Swale shall maintain a positive pitch to temporary sediment basin. Swales and sediment basin shall be cleaned as required to maintain function.

3.8 CONSTRUCTION ENTRANCE

- A. Install temporary construction entrance consisting of 2 inch crushed stone placed to the depth and area indicated on the Drawings.
- B. Remove stone when no longer required. Restore subgrade and finish to grades with materials indicated on the Drawings.

3.9 FILTER FABRIC AND SILT SACKS AT CATCH BASINS

- A. Place filter fabric and/or silt sack under grate at each catch basin in areas to be paved immediately after catch basin installation at locations indicated on the Drawings.
- B. Clean and replace filter fabric and silt sacks as required to protect catch basins and pipes.

3.10 CURLEX SEDIMENT LOGS

- A. Sediment logs shall be installed in accordance to manufacturer's installation guidelines, staking pattern guide, and details to the extents shown on the project drawings.
- B. Secure logs to subgrade using wood stakes every two lineal feet across the length of the sediment log. The stakes shall be intertwined with the outer mesh of the log only and driven into the ground a minimum of 16 inches on the downstream side of the sediment log.
- C. Sediment logs shall remain in place until fully established vegetation and root systems are present.

3.11 PROTECTION OF AIR RESOURCES

- A. During the progress of work, the Contractor shall conduct his operations and maintain the area of his activities, including sweeping and sprinkling of water as necessary, so as to minimize the creation and dispersion of dust. If the Engineer decides that it is necessary to use calcium chloride for more effective dust control then the Contractor shall furnish and apply the material as directed.
- B. Calcium chloride shall be commercial grade, furnished in 100-pound, 5-ply bags, stored under weatherproof cover and stacked alternately for ventilation. Application for dust control shall be at the rate of about 1/2 pound per square yard per application, unless otherwise directed by the Engineer.
- C. Burning of rubbish and waste material on the site shall not be permitted.
- D. Construction equipment shall be equipped with properly operating emission control devices and mufflers. Equipment not utilizing said devices shall be removed immediately from the site.

3.12 HAZARDOUS MATERIAL AND WASTE CONTROL

- A. Disposal of volatile fluid wastes (such as mineral spirits, waste oil, gasoline, or paint thinner) in storm or sanitary sewer systems or into streams or waterways shall not be permitted.

In the event that any such waste is spilled onto the ground, the Contractor shall immediately notify the Engineer, promptly clean up the spillage and all contaminated soil, and dispose of the cleanings as hazardous waste material. If a spill occurs, the clean-up activities shall take precedence over normal construction activities in order that damage to the environment is minimized.

- B. Fuels, lubricants or other hazardous materials shall not be stored in any resource areas.
- C. Fuel, lubricants and other hazardous materials shall be stockpiled within an area of positive containment. The area shall have no open communication with surface water bodies or

other resource areas, shall have a base of relatively impermeable material and shall have an adequate supply of materials required for spill clean up.

- D. All hazardous materials containers shall be properly marked and their contents identified. All fuel oil, lubricant, gasoline, and hydraulic fluid containers shall be fixed in place on the transport vehicle when the vehicle is in motion.
- E. The construction project shall be in compliance with all Federal, State, and local laws with respect to hazardous materials.
- F. All clean up and disposal operations shall comply with all applicable Federal, State, and local statutes, regulations and ordinances and anti-pollution laws.
- G. Excavation and disposal of contaminated, polluted or "environmentally compromised" materials shall be conducted in conformance with the environmental and abatement specifications. The handling of contaminated, polluted or "environmentally compromised" water to be discharged as a result of dewatering shall be performed in accordance with the environmental and abatement specifications.

3.13 NOISE ABATEMENT

- A. Construction equipment including generator and compressors shall be enclosed or equipped with mufflers, silencers or other equipment to minimize noise.
- B. The Contractor shall limit construction noise in accordance with EPA latest standard criteria.

3.14 PERMITS

- A. The Contractor shall comply with all requirements of all applicable Federal, State, and local regulations and all permits issued for the Contract.
 - 1. Flood Management Certificate.
- B. General Permit Registration or the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities, for disturbed areas greater than 1 acre and less than 20 acres. Contractor shall submit an application 60 days prior to the start of construction.
 - 1. Assume responsibility for storm water pollution control by submitting to the Connecticut Department of Energy and Environmental Protection (DEEP) a "General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities" registration; conform to the permit requirements.
 - 2. Conform to the Erosion and Sediment Control Plan included in the Contract Documents or use another plan, prepared at the Contractor's expense by a Professional Engineer, licensed by the State of Connecticut, which has been approved by the Owner and the Connecticut Department of Energy and Environmental Protection.

3. Sign and cause to be signed by each appropriate subcontractor, the Certification Statement required by the General Permit.
4. Provide, maintain, and monitor a rain gauge on the site; monitoring shall include maintaining a log of the readings. The rain gauge shall remain the property of the Contractor.
5. Inspect all erosion controls measures on a weekly basis and after each rainfall event. Record corrective measures and repairs that are required, when they were performed and who made the corrections/repairs.
6. FEE: The fee for registration under the General Permit is \$3,000.
7. Inspections: The site must be inspected by the Engineer within the first 30 days after the beginning of the work for conformance with the General Permit and proper initial implementation of all control measures as noted in the Erosion and Sediment Control Plans. The Contractor shall notify the Engineer when construction has commenced.
8. Permit information and forms can be downloaded from the DEEP website:

http://www.ct.gov/deep/cwp/view.asp?a=2709&q=324212&deepNav_GID=1643

END OF SECTION 31 25 00

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Provide all labor, materials, necessary equipment and services to complete the work called for in this Section or as shown on the plans, including but not necessarily limited to the following:
 - 1. Stone Aggregate Walk.
- B. Related Work: The following sections contain requirements that may apply to this section:
 - 1. Section 31 23 00 - "Excavation and Fill"
 - 2. Section 31 15 01 - "Aggregate Surfacing Edging"

1.3 SUBMITTALS

- A. Submit under provisions of Division 1.
- B. Submit certified sieve analysis for all materials specified in this section.

1.4 QUALITY ASSURANCE

- A. Material Standards: as defined in State of Connecticut, Department of Transportation Standard Specifications Form 817.

PART 2 - PRODUCTS

2.1 STONEDUST

- A. Native blue-grey crushed trap rock conforming to Form 817, Article M.01.01 Gradation: "dust".

2.2 PROCESSED STONE AGGREGATE BASE

- A. Conform to Section 31 15 01 "Aggregate Surfacing Edging".

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that the subgrade is true to line and grade, and compacted to the required density. Subgrade surface to be smooth, free of irregularities, depressions, or unsuitable material which cannot compact to will become impervious.

3.2 INSTALLATION

- A. Spread and compact stone dust to achieve the depth as detailed after final compaction. The material shall be wetted and rolled to a firm, even surface, level with the adjacent turf.
- B. Provide additional material, re-compact and sprinkle on subsequent days as necessary to thoroughly bond the surface.
- C. Refer to Section 32 15 01 – Aggregate Surfacing Edging for additional requirements regarding the aggregate walk.

END OF SECTION 32 15 00

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Provide all labor, materials and equipment required to perform the work called for in this section of the Specification, or as shown on the drawings, including but not necessarily limited to the following:

- 1. Aggregate surfacing edging.

- B. Related Work: The following sections contain requirements that may apply to this section:

- 1. Section 31 23 00 – “Excavation and Fill”
 - 2. Section 32 15 00 - “Aggregate Surfacing”

1.3 SUBMITTALS

- A. Submit under provisions of Division 1.
- B. Submit all related aggregate surface edging product information.

1.4 WARRANTY

- A. 15-year limited material warranty for landscape edging from manufacturing defects in workmanship or material.

PART 2 - PRODUCTS

2.1 HEAVY DUTY L-SHAPED PROFILE MAINTENANCE STRIP EDGING

- A. Permaloc PermaStrip, 1/8" (3.2mm) x 6" (152.46mm) high, extruded aluminum, 6063 alloy, T-6 hardness, maintenance strip edging for straight-line and gentle curve applications in corrugated L-shaped profile having 1.2 inch (30.5 mm) horizontal base. Section shall have loops on side of section to receive stakes spaced approximately 2 feet (610 mm) apart along its length.
- B. Thickness: 1/8 inch (3.2 mm) gage section at 0.060 inch (1.52 mm) minimum thick with 0.200 inch (5.1 mm) exposed top lip and 3/16 inch (4.8 mm) gage section at 0.076 inch 1.93 mm) minimum thick with 0.190 inch (4.8 mm) exposed top lip. Length: 8' (2.44m) sections.

- C. Connection Method: Section ends shall splice together with a horizontal 0.060 inch (1.52 mm) thick x 1 inch (25 mm) wide x 4 inches (102 mm) long aluminum sliding connector.
- D. Stake: 12" (305mm) Stakes to interlock into section loops. Finish: Mill Finish. Paint finish shall comply with AAMA 2603 for electrostatically baked on paint.

PART 3 - EXECUTION

3.1 Landscape Edging Installation

- A. Preparation: Ensure that all underground utility lines are located and will not interfere with the proposed edging installation before beginning work. Locate border line of edging with string or other means to assure border straightness and curves as designed.
- B. Set edging into trench with the horizontal base resting on compacted subbase and top at 1/2 inch (12.7 mm) above compacted finish grade on turf side. Loops for stakes are to be placed on the turf side. Drive stakes through edging loops until locked in place. Requires 8 stakes evenly spaced for each 16 feet (4.88 meters) section, or 3 stakes evenly spaced for each 8 feet (2.44 meters) section. Provide longer stakes, heavier gage stakes, or any combination of previously mentioned as necessary to firmly secure edging for permanent intended use.
- C. Where edging sections turn at corners and at angled runs, cut edging partially up through its height from bottom and turn back to desired angle to form rounded exposed radius.
- D. Backfilling and Cleanup: Backfill both sides of edging, confirm and adjust if necessary that sections are securely held together, and compact backfill material along edging to provide top of edging at 1/2 inch (12.7 mm) above turf finish grade. Cleanup and remove excess material from site.

END OF SECTION 32 15 01

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to work of this Section.
- B. All related specification sections shall be used in conjunction with this Section.

1.2 WORK INCLUDED

- A. Provide all labor, materials, necessary equipment and services to complete the work called for in this Section or as shown on the plans, including but not necessarily limited to pavement marking as indicated on the Drawings or as specified herein. This may include but not be limited to:
 - 1. Parking Stalls.
 - 2. Painted Islands.
 - 3. Handicap/Accessible Parking Stalls and Symbols.
 - 4. Other markings as may be required.

1.3 REFERENCE STANDARD

- A. State of Connecticut Department of Transportation Standard Specifications for Road and Bridge Construction (Form 817).
- B. Manual on uniform traffic control devices.
- C. American Society for Testing and Materials (ASTM)

1.4 SUBMITTALS

- A. Submit under provisions of Division 1.
- B. Material Safety Data Sheet.

PART 2 - PRODUCTS

2.1 MATERIAL

- A. Paint shall meet pavement requirements of AASHTO M248, Type N for regular dry pavement.
- B. Parking bay marking shall be a chlorinated rubber base traffic land marking paint, factory mixed, quick drying and non-bleeding complying with Federal Specification TT-P-115, Type III, color: as noted on plans.
 - 1. Provide white paint for parking stall striping, crosswalks, directional arrows and

- stop bars on asphalt within the parking area.
- 2. Provide white paint for handicap stalls and hatching.
- C. Block out Paint: Line block out paint shall be TT-P-110C; color shall be black.
- D. Roadway pavement markings shall be TT-P-1952E, Type III, reflectorized paint. Glass beads shall conform to TT-B-1325.
 - 1. Provide white paint for crosswalks and stop bars.
- E. Color FED-STD-595 color chip shall be as follows.
 - 1. White – 37925
 - 2. Black – 37038

2.2 PROHIBITED MATERIAL

- A. The manufacturer shall certify that the product does not contain mercury, lead, hexavalent chromium, toluene, chlorinated solvents, hydrolysable chlorine derivatives, ethylene-based glycol ethers and their acetates, nor any carcinogen, as defined in 29 CFR 1910.1200. The lead content shall not exceed 0.06 percent by weight of the dry film and the test for chromium content shall be negative.

PART 3 - EXECUTION

3.1 GENERAL

- A. Pavement shall be cleaned of all dirt, oil and other matter prior to painting.
- B. Parking and pavement marking shall be laid out and reviewed by the Engineer prior to painting.
- C. Paint shall not be placed on damp pavement or within 24 hours of the last precipitation.
- D. The Contractor shall be responsible for securing the area in order to allow the paint sufficient time to dry.

3.2 INSTALLATION

- A. Equipment: Use atomizing spray-type equipment, guides, and templates designed for the purpose and which are also designed to apply strips, symbols, and letter of uniform size and cross section, with clear-cut edges and uniform thickness for the coverage specified.
- B. Layout of the Work:
 - 1. Provide sufficient control points to permit application of stripes, directional arrows, messages, crosswalk marking, and parking space delineations as shown on the drawings.
 - 2. Locate and layout marking in a manner that will not interfere with adhesion of

paint or leave permanent non-specified markings.

C. Application:

1. Surface Conditions: Do not apply paint to new bituminous pavement until 48 hours after pavement has been placed. On new Portland Cement concrete pavement, do not apply paint until the pavement has been allowed to cure for a minimum of seven days.
2. Cleaning: Clean the surface of areas to be painted of dust, dirt, laitance, oil, and other foreign substances detrimental to paint adhesion.
3. Painting:
 - a. Apply paint only during daylight hours. Except for special area and markings requiring hand painting, apply all pavement marking by machine.
 - b. Suspend painting operations when wind conditions are such that blowing of spray-applied paint and deposit of dust on newly applied paint is likely.
 - c. Sweep and clean surface to eliminate loose material and dust. Do not begin marking asphalt surfacing until acceptable by the Owner's representative.
 - d. Paint shall be asphalt base traffic paint applied in accordance with the manufacturer's recommendations with a width as shown on the plans and a thickness of not less than 12 nor more than 18 mils.
 - e. Apply paint with mechanical equipment to provide uniform straight edges. Apply in two coats at manufacturer's recommended rates. Paint shall be applied at a rate of 100 square feet to 115 square feet per gallon.
 - f. Quick drying, hot applied paint shall be applied at a temperature of 120° F to 150° F at the spray gun.
 - g. Proceed with pavement marking only on clean, dry surfaces and at a minimum and rising ambient or surface temperature of 40° F for oil based materials and 55° F for water-based materials, and not exceeding 95° F.

D. Corrective Measures

1. Repair or remove and reapply any pavement markings that fail to satisfy the requirements indicated. Submit proposed means of cleaning, removing, or obliterating unsatisfactory markings to the Architect for approval prior to commencing corrective work. Use materials for cleaning pavement of spills, spatter, or overspray that will not injure the paved surface.

END OF SECTION 32 17 23

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions, and Division 1 Specification sections, apply to this section.
- B. All related specification sections shall be used in conjunction with this section.

1.2 SUMMARY

- A. Provide all labor, materials, tools and equipment, as and when required to perform the work specified herein or as shown on the plans, including but not necessarily limited to the following:
 - 1. Provide and install 6'-0" high vinyl coated chain link fence fabric, framework and accessories where shown on the plans and as specified herein. Do not perform this work without the approval from the Owner's Representative.
 - 2. Line Post Spacing: At intervals not exceeding 10 feet.
- B. Related Work:
 - 1. Section 31 10 00 - "Site Clearing".
 - 2. Section 31 23 00 - "Excavation and Fill".

1.3 REFERENCES

- A. ANSI/ASTM A123 - Zinc (Hot Dip Galvanized) Coatings on Iron and Steel Products.
- B. ANSI/ASTM F567 - Installation of Chain-Link Fence.
- C. ASTM A116 - Zinc-Coated (Galvanized) Steel Woven Wire Fence Fabric.
- D. ASTM A120 - Pipe, Steel, Black and Hot-Dipped Zinc Coated (Galvanized) Welded and Seamless, for Ordinary Uses.
- E. ASTM A121 - Zinc-Coated (Galvanized) Steel Barbed Wire.
- F. ASTM A153 - Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
- G. ASTM A392 - Zinc-Coated Steel Chain-Link Fence Fabric.
- H. ASTM A428 - Weight of Coating on Aluminum-Coated Iron or Steel Articles.
- I. ASTM A491 - Aluminum-Coated Steel Chain Link Fence Fabric.
- J. ASTM A569 - Steel, Carbon (0.15 Maximum Percent), Hot-Rolled Sheet and Strip Commercial Quality.

- K. ASTM A585 - Aluminum Coated Steel Barbed Wire.
- L. ASTM C94 - Ready-mixed Concrete.
- M. ASTM F573 - Residential Zinc-Coated Steel Chain Link Fence Fabric.
- N. ASTM F668 - Poly (Vinyl Chloride) (PVC) Coated Steel Chain Link Fence Fabric.
- O. Chain Link Fence Manufacturers Institute (CLFMI) - Product Manual.
- P. FS RR-F-191 - Fencing, Wire and Post Metal (and Gates, Chain Link Fence Fabric, and Accessories).
- Q. ConnDOT Form 817

1.4 SUBMITTALS

- A. Submit under provisions of Division 1.
- B. Shop Drawings: Indicate plan layout, spacing of components, post foundation dimensions, hardware anchorage, and schedule of components.
- C. Product Data: Provide data on fabric, posts, accessories, fittings and hardware.

PART 2 - PRODUCTS

2.1 MATERIALS AND COMPONENTS

- A. Materials and Components: Conform to CLFMI Product Manual or ConnDOT Form 816, whichever is more stringent.
- B. Fabric Size: CLFMI Standard Industrial.
- C. Intermediate Posts: Type I round.
- D. Terminal, Corner, Rail, Brace, and Gate Posts: Type I round.
- E. All posts shall be galvanized steel Schedule 40.
- F. The polyvinyl chloride coated chain link fence material shall conform to section M.10.05.1 of Form 817. The color of the coating shall be black.
- G. Posts, rails, caps and accessories shall be hot dipped galvanized as per Section M.10.05.2 of Form 817. Outside galvanized surface shall be coated with the same polyvinyl chloride coating as the chain link mesh material.

2.2 COMPONENTS (As follows or ConnDOT Form 817, whichever is more stringent)

- A. Line Posts: 2.38 inch diameter.
- B. Corner and Terminal Posts: 2.88 inch.
- C. Gate Posts: (1) 12' Double Swing Gate 4.0 inches
- D. Top and Brace Rail: 1.66 inch diameter, plain end, sleeve coupled.
- E. Gate Frame: 1.66 inch diameter or as manufacturer recommends.
- F. Fabric: 2-inch diamond mesh interwoven wire, 9-gauge thick, top salvage twisted tight, bottom salvage knuckle end closed.
- G. Tension Wire: 7-gauge thick steel, single strand.
- H. Tension Band: 1/8" x 1" prestressed steel.
- I. Tension Strap: 1/4 x 3/4 inch thick steel.
- J. Tie Wire: Aluminum alloy steel wire.

2.3 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; galvanized.
- C. Extension Arms: Cast steel galvanized to accommodate 3 strands of barbed wire, single-arm, vertical.
- D. Gate Hardware: Fork latch with gravity drop; two 180° gate hinges per leaf and hardware for padlock.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install framework, fabric, accessories and gates in accordance with manufacturer's instructions.
- B. Set intermediate terminal and gate posts plumb, in concrete footings with top of footing 2 inches below finish grade. Slope top of concrete for water runoff.
- C. Line Post Footing Depth Below Finish Grade: 3 feet.
- D. Corner, Gate and Terminal Post Footing Depth Below Finish Grade: 4 feet or as per manufacturer's recommendations.

- E. Brace each gate and corner post to adjacent line post with horizontal center brace rail and diagonal truss rods. Install brace rail, one bay from end and gate posts.
- F. Provide top rail through line post tops and splice with 6-inch long rail sleeves.
- G. Install center and bottom brace rail on corner gate leaves.
- H. Stretch fabric between terminal posts or at intervals of 100 feet maximum, whichever is less.
- I. Position bottom of fabric 2 inches above finished grade.
- J. Fasten fabric to top rail, line posts, braces, and bottom tension wire with tie wire at maximum 15 inches on center.
- K. Attach fabric to end, corner, and gate posts with tension bars and tension bar clips.
- L. Install bottom tension strap stretched taut between terminal posts.
- M. Do not swing gate from building wall; provide gate posts.
- N. Install gate with fabric. Install three hinges per leaf, latch, catches, drop bolt, retainer and locking clamp.
- O. Provide concrete center drop to footing depth and drop rod retainers at center of double gate openings.

3.2 ERECTION TOLERANCES

- A. Maximum Variation From Plumb: 1/4 inch.
- B. Maximum Offset From True Position: 1 inch.
- C. Components shall not infringe adjacent property lines.

END OF SECTION 32 31 13

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The General Provisions: of the Contract including General and Supplementary Conditions, and Division One General Requirements apply to work specified in this section.

1.2 SUMMARY

- A. Work Included: Providing, testing, placing and finish, grading all stockpiled and borrow topsoil as shown on Drawings and specified herein to properly complete all lawn and planting operations.
1. Spread all stockpiled topsoil to produce a uniform depth throughout proposed general lawn areas.
 2. Supply and spread borrow topsoil to a uniform depth throughout all proposed lawn areas.

1.3 RELATED WORK DESCRIBED ELSEWHERE

1. Division 31, Section "Site Clearing"
2. Division 31, Section "Excavation and Fill"

1.4 QUALITY ASSURANCE

- A. Topsoil:
1. Testing: Representative topsoil samples shall be tested to determine:
 - a. Amendments necessary for good plant growth.
 - b. Acidity.
 - c. Organic content.
 - d. Mechanical analysis – sand, silt, and clay. Analysis shall include 200 sieve hydrometer wash as per ASTM D 422 to isolate specific percentages of silt and clay.
 2. Both borrow and stockpiled topsoil shall be tested as per 1.04 A.1. Provide up to 3 tests for each stockpile used.
 - a. Topsoil testing costs shall be borne by the Contractor.
 - b. Testing laboratory shall approved by the Owner and Engineer.

1.5 SUBMITTALS

- A. Topsoil test results shall be submitted to the Engineer for review to determine acceptability. The Engineer will be the sole judge of acceptance.

1.6 PRODUCT HANDLING

- A. Delivery of borrow topsoil to the site shall be coordinated such that it is placed as delivered and no stockpiling required.

PART 2 - PRODUCTS

2.1 BORROW TOPSOIL

- A. Not to contain materials harmful to plant life, to be clean, fertile, friable, well draining, natural sandy loam. All topsoil to be free of any subsoil earth clods sods, stones over 1” in any dimension, sticks, roots, weeds, litter and other deleterious material. Topsoil shall be uniform in quality and texture and contain organic matter and mineral elements necessary for sustaining healthy plant growth.
- B. Topsoil shall have the following optimum ranges unless otherwise approved by the Engineer.

Organic content	3% - 15% (by loss of ignition at 375 C method of testing.)
pH	6.0 – 8.0
- C. Nutrient levels shall be achieved by the Contractor’s addition of amendments to the topsoil to meet the optimum nutrient levels specified in the testing laboratory report for each of crop/plant to be installed.
- D. Proposed topsoil shall meet the USDA Soils Textural Classification percentages of sand, silt, and clay for “sandy loam” or “loam” classification.
- E. Topsoil shall be completely free of any toxic chemical, hazardous waste and any material or condition that would prevent the establishment of a suitable lawn.

2.2 STOCKPILED TOPSOIL

- A. Stockpiled topsoil proposed for reuse shall conform to all requirements of paragraph 2.1 of this Section and shall be screened unless otherwise approved by the Engineer.

PART 3 – EXECUTION

3.1 SHAPING AND GRADING OF SUBSOIL AT ALL LAWN AREAS

- A. After rough grading has been completed, shape and grade lawn subgrade areas to lines and levels as noted on the drawings.

- B. Shape subgrade areas to allow placement of uniform depths of stockpiled and borrow topsoil. Adjustments may be necessary due to field conditions. Provide all shaping adjustments at no additional cost to the owner.

3.2 TOPSOIL SPREADING

- A. After shaping of lawn subgrades remove all sticks, stones, or foreign material one (1) inches or greater in dimension. Harrow or otherwise loosen the subgrade soil to a depth of four (4) inches if required to correct overcompaction. Remove debris and stone off-site.
- B. Do not apply topsoil to the scarified subgrade without approval by the Engineer. Topsoil will not be permitted to be spread until topsoil test reports have been submitted and approved. Topsoil shall not be delivered or worked in a frozen or muddy condition.
- C. Uniformly distribute and spread stockpiled and borrow topsoil from over all graded lawn areas to conform smoothly to the lines, grades, and elevations shown or otherwise required. All lawn areas to have a minimum of six (6) inches of topsoil after compaction.
- D. Topsoil shall be spread in two (2) lifts. Each lifts shall be thoroughly mixed with the previous subgrade by disking, harrowing, or other approved means.
- E. Compaction of topsoil shall consist of raking the topsoil to remove debris and provide uniform grade, rolling the topsoil in one direction, raking the topsoil to fill low areas and remove high areas and re-rolling 90 degrees to first rolling. Roller shall be 30 gallon maximum hand roller.
- F. Loosen topsoil to a depth of 6" by scarifying or other disking methods. Obtain a loosened friable soil bed to a depth of 3-4". At no time will rubber tired loaders or graders having greater compaction than a small farm tractor be allowed on topsoil. Keep all heavy equipment and trucks off prepared topsoil. Do not prepare while ground is wet or frozen.
- G. Provide additional topsoil where and as required to properly meet all proposed finish grades.
- H. Remove any weeds, debris, foreign matter and stones having any dimension greater than ¾". Remove from property.
- I. Fine grade to a smooth uniform surface. The entire area shall present an even grade with no depressions where water will stand. Any protective fencing around existing trees shall be removed and disposed of by the Contractor at this time. Topsoil shall be smoothly blended to existing finish grades around trees erosion control devices and adjacent existing conditions, maintain existing surface drainage patterns. Round-off all top and toe of slopes. Reinstall erosion control devices and protective fencing as required.
- J. Approval of surface shall be obtained before seeding or sodding operations begin. If requested, perform bulk density and compaction readings to monitor degree of soil compaction/seed bed friability.

- K. Place topsoil only when it can be immediately followed by seeding or sodding operations.

3.3 PROTECTION

- A. Keep: heavy equipment, trucks, etc. off topsoiled areas. At no time will equipment other than light tractors be allowed on any topsoiled areas.
- B. If compaction (greater than 90%) occurs, scarify to a depth of 6" and regrade. ASTM D1557-78, method C shall be used to measure compaction.

END OF SECTION 32 91 19

PART 1 - GENERAL

1.1 WORK INCLUDED

- A. The Work of this Section includes, but is not limited to, furnishing all labor, materials and equipment required to provide all lawns and grass, in place, as shown on the Drawings, specified herein, and as necessary for a complete installation.

1.2 RELATED WORK DESCRIBED ELSEWHERE

- A. All sections of Division 1.
- B. Division 31, Section "Erosion and Sediment Control"
- C. Division 31, Section "Site Clearing"
- D. Division 31, Section "Excavation and Fill"
- E. Division 32, Section "Topsoil"

1.3 QUALITY ASSURANCE

- A. Industry Reference Standards:
 - 1. American Society for Testing and Materials (ASTM) publications: ASTM C 602, (1975) "Agricultural Liming Materials".
 - 2. Federal Specifications (FS): FSO-F-241 C (1). Fertilizers: Mixed Commercial.
 - 3. State of Connecticut: Department of Agriculture:
 - a. Connecticut Commercial Fertilizer Law: Chapter 427A (P.A. 73-278) of Connecticut General Statutes, Revisions and Subsequent Amendments.
 - b. Connecticut Agriculture and Seed Law: Chapter 424 of Connecticut General Statutes Revised to 1979 as amended.
- B. Installer's Qualifications: Engaged firm must be able to provide evidence to indicate five years documented experience in the installation of work specified herein.
- C. Requirements of Regulatory Agencies:
 - 1. Comply with the requirements of State Department of Environmental Protection.
 - 2. Hazardous Materials: Section 22A-54 of the Connecticut General Statutes.
 - 3. State Department of Agriculture
 - a. Commercial Fertilizer Law.
 - b. Agricultural and Vegetable Seed Law.

- D. Source Quality Control: Producer's tests for purity and germination of seed dated within nine months of sowing.

1.4 SUBMITTALS

- A. General: Refer to Division 1 for Submittal Requirements.
- B. Manufacturer's Product Data: Specifications and Instruction: Submit material specifications and Material Safety Data Sheets (MSDS) and installation instructions where applicable as required in Division 1, attesting that the following materials meet the requirements specified:
 - 1. Fertilizer
 - 2. Seed Mix
 - 3. Lime
 - 4. Herbicides
 - 5. Pesticides
- C. Test Reports:
 - 1. Laboratory Test Reports: Submit copies of the reports of all tests listed below for the following materials. Test reports shall be submitted within 30 days after test. Tests indicating modifications of a material, such as topsoil, shall be submitted and accepted by the Engineer's prior to beginning the modification.
 - a. Topsoil:
 - 1) Tests shall be done by a university or private soils testing laboratory.
 - 2) Report shall include recommended additives to correct deficiencies. Test for:
 - a) Chemical Analysis
 - b) pH
 - c) Mechanical Analysis
 - d) Organic Content
 - 3) Up to three tests for each stockpile used shall be required, as determined by the Engineer.
- D. Certificates:
 - 1. The Engineer shall be furnished with duplicate signed copies of a statement from the vendor certifying that each container of seed delivered is labeled in accordance with The Connecticut State Department of Agriculture Agricultural and Vegetable Seed Law and the United States Department of Agriculture Seed laws.

- E. Usage Verification: The Engineer shall be furnished with product labels and verification of the quantities of materials used in performance of the work specified herein. Materials would include:
 - 1. Fertilizer
 - 2. Seed
 - 3. Lime
 - 4. Pesticides
 - 5. Herbicides

- F. Submittals Schedule:
 - 1. Before Installation:
 - a. Manufacturer's Product Data and Material Safety Data Sheets (MSDS).
 - b. Test Reports.
 - c. Seed Certificates.
 - 2. During Installation: Usage Verification.
 - 3. After Installation: Usage Verification.

1.5 JOB CONDITIONS

- A. Coordination: Coordinate all work of this section with related work of other sections. Failure to coordinate properly will not reduce the obligation to meet the standards of acceptance of the various elements of work contained herein.

- B. Sequencing and Scheduling:
 - 1. No lawn shall be begun until acceptance of fine grading by the Engineer.
 - 2. No seeding shall be done in the areas where construction operations may damage the work.
 - 3. All existing or new lawn areas damaged by construction operations or other causes shall be repaired to the Engineer's satisfaction.

- C. Existing Conditions: All work that the work of this section is contingent upon shall be examined and any deficiencies shall be reported to the Engineer. Commencement of work will be construed to mean complete acceptance of the preparatory work. No adjustment will be made for discrepancies brought to the attention of the Engineer after work has begun.

- D. Extent of Work: All areas of the project site affected by construction operations and not covered by building, roads, parking lots, walks, planting beds or other permanent improvements are to be covered by lawn. Should the type of lawn to be placed in a given area be unclear on the drawings, the Engineer shall provide the final determination.

PART 2 - PRODUCTS

2.1 GENERAL MATERIALS REQUIREMENTS

- A. Water: Shall be potable or source approved by the Engineer.
- B. Seed Mulch:
 - 1. Mechanical Seeding: Provide clean seed-free salt hay or threshed straw of wheat, rye, oats or barley.
 - 2. Hydroseed: Provide a cellulose pulp fiber such as "Silva Fibre" as produced by Weyerhaeuser Company, Tacoma, Washington, or substitution accepted by the Engineer.
- C. Soil Conditioners: The following soil additives shall be used singly or in combination as required to meet the specified requirements for topsoil.

- 1. Ground Limestone: Provide dolomitic agricultural limestone as defined in of ASTM C-51-81. The material must comply with the following gradation:

Square Mesh Sieves	Percent Passing By Weight
Pass #10	100
Pass #20	90
Pass #100	40

The minimum total carbonate content shall be 85%.

- 2. Fertilizer: Percentage by weight of nitrogen and phosphoric acid and potash shall be determined by the soil analysis. Provide a commercial grade with a minimum of 50 percent of the nitrogen being derived from organic sources and meeting the requirements of the Connecticut Commercial Fertilizer Law.
- D. Erosion Preventative:
 - 1. Mild Slopes: (Slopes less than 3 feet horizontal to 1 foot vertical). Provide clean, seed free, salt hay or threshed straw of wheat, rye, oats or barley bound by Terra Tack AR as manufactured by Grass Growers, 424 Cottage Place, Plainfield, NJ 07060, (201-755-0923) or substitution accepted by the Engineer.
- E. Chemical Preventatives and Controls:
 - 1. Immediately prior to the application of preventatives and controls, the Contractor shall determine whether each of the items is permitted in the State of Connecticut. Substitutions must be accepted by the Engineer.
 - 2. The chemical preventatives and controls shall be commercial materials for agricultural use accepted by the Engineer.
 - 3. Crab Grass Control: Provide Tupersan as manufactured by Dupont; Baylam as manufactured by Elanco Products Co., a division of Ely Lilly Company. Crab grass control with lawn seeding shall be Tupersan; spring crab grass control after a fall seeding shall be pendimethlin or an appropriate substitute approved by the Owner, applied at a rate and in accordance with manufacturer's recommendations.
 - 4. Clover Control: Provide MCPP as manufactured by Diamond Shamrock or W.A. Cleary Corp.

5. Board Leaf Weed Control: Provide a non-phenol compound, such as Confront, approved by the Owner.
 6. Lawn Pest and Disease Control: Provide material recommended by the Agricultural Extension Services State Entomologist or State Experiment Station and approved by the Engineer.
 7. Eradicant Herbicide: Provide Round up (Glyphosate) as manufactured by Monsanto. Apply as per manufacturer's recommendations for new lawn installations.
- F. Seed Requirements and Analysis:
1. Shall conform to the requirements of the Connecticut Agricultural and Vegetable Seeds Law where applicable and shall be Blue Tag Certified Seed where described herein.
 2. All seed mixes shall be submitted the Engineer's for approval.
 3. The containers shall be delivered to the site unopened and with all labels attached.
 4. Composition shall conform to the requirements in the following tables. Any change must be accepted by the Engineer.
 5. Seed shall be current year's seed and be 100% free of noxious weeds, Poa annua and bent grasses. The mix shall vary depending on the timing of the planting as described herein.
 - a. Lawn areas: All areas to receive "mowable grass seed mix" as indicated on the plans shall receive the following seed mix. All seed shall be Blue Tag Certified Seed.

TYPE SEED	LBS/ACRE	PURITY	GERMINATION
Creeping Red Fescue	5	98%	85%
Kentucky Bluegrass	45	85%	75%
Perennial Ryegrass (Pennfire)	10	95%	90%

2.2 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Delivery:
1. Submit material delivery schedule in advance of the delivery so that material may be inspected upon arrival at the job site, Remove rejected material from the site immediately.
 2. During delivery protect all materials from damage from the elements and neglect or abuse.
 3. Deliver all materials to the site in their original, unopened containers bearing the manufacturer's analysis, name, trade name, or trade mark, and indication of conformance to State and Federal laws as required. Delivery will include material safety data sheets with products.

- B. Storage: Provide dry storage for fertilizers, seed, herbicides and pesticides, and all other amendments in such a manner as to prevent damage or inclusion of foreign materials.
- C. Handling: Avoid damaging materials being moved from the storage area to the planting site. Do not drop or dump materials from vehicles. Damaged materials will be rejected and shall be removed from the site immediately.

PART 3 – EXECUTION

3.1 PRE-INSTALLATION REQUIREMENTS

- A. Pre-installation Inspection: Site shall be inspected as specified in Part 1; Job Conditions, prior to pre-installation job meeting.
- B. Pre-installation Job Meeting: Prior to installation of work, conduct job meeting at project site with installers of other work requiring coordination, (if any) and Engineer's for purpose of reviewing job conditions, project requirements and procedures to be followed in performing work. All work of this section performed prior to the pre-installation job meeting shall be subject to immediate rejection.

3.2 RATES OF APPLICATION

- A. Chemical controls and preventatives and grass seed shall be applied at the following rates:

<u>Material</u>	<u>Per 1,000 Sq. Feet</u>
Initial Soil Amendments	Soil Test Recommendations
Grass Seed	Manufacturer's recommendations by mix type
Hay	80 lbs.
Hay Tackifier	2.75 pounds
Cellulose Pulp Fiber	30 pounds
Crabgrass Preventative	Manufacturer's Recommendations
Lawn Pest and Disease	Extension Services-State Entomologist's or State Experiment Station's Recommendations
Soil Insect Control	Extension Services State Entomologist's Recommendations
Board Leaf Weed Control	Manufacturer's Recommendations
Herbicide	Manufacturer's Recommendations for new lawn installations
Lawn Re-fertilizing	20-10-10 with 50% sulfur coated urea (SCU), 51 lbs. material per 1,000 s.f. to achieve 1 lb. N per 1,000 s.f.

3.3 INSTALLATION

- A. Planting Seasons: Installation of new lawns shall be done between April 15 and June 1st for Spring planting and August 15th and September 15th for Fall planting.

B. Soil Preparation:

1. Soil preparation of new lawn areas disturbed by grading operations:
 - a. Where lawns are to be planted in areas that have been altered or disturbed by excavating, grading, or stripping operations, prepare soil as follows:
 - 1) Limit soil preparation to areas to be planted within 7 days.
 - 2) Loosen topsoil within lawn areas to a minimum depth of 4 inches. Remove all stones over ¾" in any dimension, sticks, weeds, clods, lumps, roots, rubbish and other extraneous matter.
 - b. Protect existing lawn areas and create a smooth transition between them and new work with a tolerance not to exceed ¼" over 10' unless expressly specified plans.
 - c. Fine grade as necessary to achieve a smooth even surface true to line and grade with a tolerance not to exceed ¼" over 10' unless expressly specified plans. Match grades smoothly with existing lawn areas to remain.
 - d. Secure acceptance of fine grading by the Engineer prior to the commencement of seeding operations.
2. Soil preparation of new lawn areas undisturbed by grading operations:
 - a. Where lawns are to be planted in areas that have not been altered or disturbed by excavating, grading, or stripping operations, prepare soil as follows:
 - b. Protect existing lawns to remain to prevent undue damage.
 - c. Create a smooth transition between new work and existing lawns to remain.
 - d. Apply Roundup (Glyphosate) to all existing areas which are to be seeded.
 - e. Allow 7 days prior to disturbing the soil.
 - f. Till soil to a depth of not less than 6 inches.
 - g. Grade lawn areas to a smooth uniform surface with a tolerance not to exceed ¼" over 10 feet, unless expressly specified on the plans. Fill in depressions and remove high areas.
 - h. Remove all stones over ¾" in any dimension, sticks, weeds, clods, lumps, roots, rubbish, and other extraneous matter.
 - i. Fine grade as necessary to achieve a smooth even surface true to lines and grades shown on drawing with a tolerance not to exceed ¼" over 10 feet, unless expressly specified on the plans.
 - j. Secure acceptance of fine grading by Engineer prior to beginning seeding operations.
 - k. Moisten prepared lawn areas before planting if soil is dry. Water thoroughly and allow surface to dry off before planting of lawns. Do not create a muddy soil condition.
3. Restore prepared areas to specified condition if eroded or otherwise disturbed after fine grading and prior to planting.

C. Seeding New Lawns.

1. Where fine lawns abut other newly planted or existing planted areas establish limits of fine lawn with lime. Secure approval by Engineer of limed edge prior to beginning seeding operations.
2. Application of Soil Amendments:
 - a. Apply fertilizer, lime and other initial soil amendments evenly at rates determined by topsoil test results and thoroughly incorporate into the upper 2 inches of topsoil by disking, harrowing or other acceptable methods.
 - b. Rake the finished surface smooth and free of stones greater than ½ inch.
3. Mechanical Seeding of New Lawns:
 - a. Do not use wet seed or seed which is moldy or has been damaged in transit or storage.
 - b. Sow seed using a spreader or seeding machine. Do not seed when wind velocity exceeds 5 miles per hour or when the ground is in a frozen, wet or otherwise non-tillable condition.
 - c. Sow no less than the quantity of seed specified.
 - d. Cover seed with a thin layer of topsoil by raking or dragging.
 - e. Immediately after the seeding operations have been completed, the seed shall be set with a cultipacker, brillion or similar equipment with the final rolling at right angles to the prevailing winds to prevent wind erosion.
 - f. Protect seeded areas against erosion either by spreading specified hay mulch or hydro-mulching immediately after completion of seeding operations. If hay mulch is used, spread uniformly to form a continuous blanket not less than 80 lb. per 1,000 s.f. over seeded areas. Spread by hand, blower or other suitable equipment.
 - g. Anchor mulch by spraying with hay tackifier at the rate of 2.75 lb. Per 1,000 s.f. Take precautions to prevent damage or staining of structures or other plantings adjacent to mulched areas. Immediately clean such areas where damage occurs.
4. Maintain a moist seed bed at all times. Water the seed bed so that the topsoil is wet to a depth of two inches.
5. Protect the seed bed with barricades, if necessary, to keep all traffic off the areas.
6. Prior to the first mowing in the spring, consult with the Engineer as to what areas will need to be re-seeded and those that will be filled in by fertilizing and rhizome and tiller development. Those areas that are determined to need reseeding will be done within four (4) days of such determination. All equipment used on the seed bed shall have turf tires. Areas that are determined by the Engineer to be isolated points of erosion that can not be stabilized by reseeding shall be sodded. Areas that require an application of herbicide shall be determined by the Engineer. Contractor shall apply herbicide and reseed as required.

D. Hydroseeding New Lawns:

1. Mix specified seed, fertilizer, pulverized mulch and pulverized mulch tackifier in water, using equipment specifically designed for hydroseed application. Continue mixing until uniformly blended into homogeneous slurry suitable for hydraulic application.
 2. Apply slurry uniformly to all areas to be seeded. Rate of application as required to obtain specified seed sowing rate.
 3. Hydroseeding equipment may be either portable or truck mounted, with dual agitation, a minimum working volume of 1,000 gallons and a maximum spray range of 80 feet.
 4. Hydroseeding equipment must be capable of uniformly applying the slurry mix, including wood fiber mulch, at the specified rate and at the required locations.
 5. Seed, fertilizer, mulch and water shall be mixed and applied to achieve application quantities specified. Material shall be applied in two (2) equal applications, with the equipment during the second pass moving perpendicular to the direction employed during the first pass. Hydroseeding shall not be done when it is raining or snowing, or when wind velocities exceed 5 mph. Seed shall not be placed in water until immediately before application.
- E. Existing Lawns:
1. All existing lawn areas shall be protected from unnecessary damage due to construction operations.
 2. Existing lawn areas within the Contract Limits shall be maintained by the Contractor until such time as construction or planting operations commence within them. At that time, the Contractor shall assume total responsibility for maintenance as specified herein of existing lawn areas within the contract limits until acceptance.

3.4 PROTECTION

- A. Erect barricades and warning signs as required to protect newly seeded areas and existing lawn areas from traffic. Maintain barricades until final acceptance.

3.5 MAINTENANCE

- A. General: Final acceptance of all work under Section 32 92 00 will be at the end of the maintenance period herein described.
- B. Maintenance Period: Begin maintenance of new lawns immediately after each area is planted and continue until final acceptance. Begin maintenance of all existing lawn areas within the contract limits as required immediately after commencement of any disturbance and continue until final acceptance.
- C. Specific Operations:
1. Maintenance shall consist of the following elements:
 - a. Watering, fertilizing, weed control, disease control, insect control, mowing, trimming and other operations such as rolling, regrading or replanting as required to establish a smooth, acceptable lawn, free of eroded or bare areas.

- b. Remulch with new mulch in areas where the mulch has been displaced by wind or maintenance operations. Anchor as required to prevent displacement.
 - c. Replant bare areas using same materials specified for lawns.
2. Watering: If irrigation has not been installed, provide and maintain temporary piping, hoses and lawn watering equipment to convey water from sources and to keep lawn areas uniformly moist as required for proper growth. Lay out temporary lawn watering system and arrange watering scheduling to avoid walking over muddy or newly seeded areas. Use equipment and water in such a way as to prevent puddling, water erosion and displacement of seed or mulch.
3. Initial lawn mowing shall occur when grass reaches a height of 3 inches or by November 1st, whichever comes first. Mowing shall be discontinued during winter months while lawn is dormant. Continue mowing in the spring. Time the subsequent mowings to maintain the grass at 1 ½” to encourage continued germination of bluegrass seedlings without shading by germinated grass. Mowing should occur on approximate 5 day intervals for the first 6 weeks after the initial spring mowing. Do not allow grass height to become longer than 2 1/8”. Mowing shall be accomplished with a reel mower in good working order with sharp blades and bed knives and without fluid leaks. At six weeks, gradually increase the height of cut by ¼” per mowing until final mowing height of 2 ½” is achieved. An increase in cutting height of ¼’ shall not occur in less than 5 days. As the mowing height increases, the length of time between cuts or mowings may increase, but not more than 1/3 of the grass height should ever be removed at one time.
- a. Apply fertilizer after first mowing and when the grass is dry. Use fertilizer which will provide 0.5 lb. of actual nitrogen per 1,000 s.f. of lawn area.
 - b. Apply a second application of fertilizer at the beginning of the spring growing season at a rate of ¾ lb. actual nitrogen per 1,000 s.f. of lawn area. Apply when the grass is dry.
 - c. Apply a third application of fertilizer at 6 weeks after the initial spring mowing at a rate of ¾ lb. actual nitrogen per 1,000 s.f. of lawn area. Apply when the grass is dry.

3.6 FINAL ACCEPTANCE OF LAWNS

A. General:

- 1. Seeded lawns will be acceptable provided requirements, including maintenance, have been complied with and healthy, uniform close stand of specified grass is established, free of weeds, disease, insects, bare spots and surface irregularities.
- 2. No lawn will be accepted prior to 60 days from its installation and 6 mowings (minimum).

B. Inspections:

- 1. Preliminary Inspection for Final Acceptance:
 - a. Prior to granting final acceptance, a preliminary inspection for acceptance will be made by the Engineer to determine that all lawns and all other required and

related work is in place and that it has been installed in accordance with the drawings and specifications.

2. Inspection for Final Acceptance:
 - a. A final inspection for acceptance of all lawns will be held after all adjustments required by the preliminary inspection for acceptance have been made. The Contractor shall notify the Engineer in writing, requesting an inspection to grant final acceptance.
 - b. At the discretion of the Owner, final acceptance may be granted to individual areas. Any such agreements shall be determined at the pre-installation meeting.
 - c. Following acceptance, the Owner shall assume responsibility for all lawn maintenance.

END OF SECTION 32 92 00

Appendix Ai:
CT DEEP Flood Management Certification
FM-201703389



Connecticut Department of Energy & Environmental Protection, State Parks
79 Elm Street
Hartford, CT 06106-5127

Attention: Tom Tyler, Director, State Parks Division tom.tyler@ct.gov

Application No.: 201703389
Town: East Haddam
Waters: Eightmile River
Permit type: Flood Management
Project: Replacement of Bridge # E118 (DOT No. 06323) over Eightmile River

Dear Mr. Tyler:

The Commissioner of Energy and Environmental Protection has approved your application to conduct certain regulated activities. Your attention is directed to the conditions of the enclosed permit. You should read your permit carefully. Construction and other work must conform to that which is authorized.

If you have not already done so, you should contact your local Planning and Zoning Office and the U. S. Army Corps of Engineers to determine local and federal permit requirements on your project, if any. Write the Corps' New England District, Regulatory Branch, 696 Virginia Road, Concord, MA 01742-2751; <http://www.nae.usace.army.mil/> or call 1-800-343-4789.

If you have any questions concerning your permit, please contact the Land & Water Resources Division at (860) 424-3019.

July 7, 2017

DATE

Krystyna M. Krudysz

FLOOD MANAGEMENT CERTIFICATION

Connecticut Department of Energy & Environmental Protection, State Parks
79 Elm Street
Hartford, CT 06106-5127

Attn: Tom Tyler, Director of State Parks Division, tom.tyler@ct.gov

Re: **Approval of Certification
FM-201703389**

Replacement of Bridge # E118 (DOT No. 06323) over Eightmile River
East Haddam, CT

Dear Mr. Tyler:

The Land & Water Resources Division of the Department of Energy & Environmental Protection has reviewed the flood management certification application prepared by Joseph Buyonje of Department of Energy & Environmental Protection/ Engineering, State Parks, and signed by Tom Tyler of the Department of Energy & Environmental Protection, State Parks (“Certifying Agency”).

The certification document dated April 18, 2017 and submitted April 18, 2017 states that the proposed activity has been designed in compliance with the requirements of Section 25-68d(b) of the Connecticut General Statutes (CGS) and Section 25-68h-1 through 25-68h-3 of the Regulations of Connecticut State Agencies (RCSA).

The project consists of replacement of Devil's Hopyard State Park Covered Bridge # E118 and repair substructure by repointing of mortar joints at the abutments where necessary and re-chinking of stones where gaps are large in the stone masonry abutments in the Town of East Haddam, as shown on plans entitled, “*CT DEEP I.D. # E118 (DOT Bridge # 06323 Loop Trail Over Eightmile River, Devil's Hopyard State Park, East Haddam, CT,*” last revised June 12, 2017. The project is located within the Zone A/X of Eightmile River.

The above referenced certification is hereby approved with the following conditions:

Special Conditions:

1. Before beginning work around underwater support structures protect freshwater mussels that will be exposed. At least two weeks before installation of coffer dams or other instream work, you must contact the Wildlife Division. Contact Laura.saucier@ct.gov and DEEP.NDDBrequest@ct.gov, to arrange for freshwater mussels to be moved and relocated.

2. All unconfined instream activities should be conducted during the time period of June 1 through September 30.

Operating Conditions:

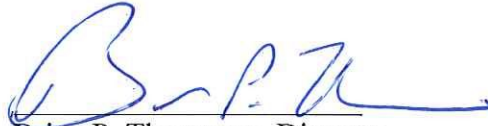
1. This approval shall expire ten years after issuance or if the construction of any structures or facilities authorized herein has not commenced within three years of issuance of this approval.
2. The Certifying Agency may not make any alterations, except de minimis alterations, to any structure, facility, or activity authorized by this certification unless the Certifying Agency applies for and receives a modification of this certification. A de minimis alteration means a change in the design or operation of the authorized permit that does not increase its adverse environmental or other regulatory impacts.
3. In constructing or maintaining any structure or facility or conducting any activity authorized herein, or in removing any such structure or facility, the Certifying Agency shall employ best management practices to control storm water discharges, to prevent erosion and sedimentation, and to otherwise prevent pollution of wetlands and other waters of the State. The Certifying Agency shall immediately inform the Commissioner of any adverse impact or hazard to the environment which occurs or is likely to occur as the direct result of the construction, maintenance, or operation of structures, facilities, or activities authorized herein. Best Management Practices include, but are not limited, to practices identified in the *Connecticut Guidelines for Soil Erosion and Sediment Control* as revised, *2004 Connecticut Stormwater Quality Manual*, Department of Transportation's *ConnDOT Drainage Manual* as revised, and the Department of Transportation Standard Specifications as revised.
4. All temporary structures, cofferdams, and fill shall not impede the movement of flood flows and shall be removed at the completion of their use. The design of such temporary structure, cofferdams and fill shall be based on the DOT Drainage Manual, where applicable. All temporary and permanent fill shall be clean and free of stumps, rubbish, and hazardous or toxic material.
5. The Certifying Agency shall cause to be removed equipment and materials from the floodplain during periods when flood warnings have been issued or are anticipated by a responsible federal, state or local agency. It shall be the Certifying Agency's responsibility to obtain such warnings when flooding is anticipated.

This authorization is subject to and does not derogate any present or future property rights or other rights or powers of the State of Connecticut, conveys no property rights in real estate or material nor any exclusive privileges, and is further subject to any and all public and private rights and to any federal, state, or local laws or regulations pertinent to the property or activity affected thereby. No revisions or alterations to the approved plans are allowed without first obtaining written approval from this Division.

If there are any questions, contact Krystyna M. Krudysz of the Land & Water Resources Division at 860-418-5942.

July 7, 2017

Date



Brian P. Thompson, Director
Land & Water Resources Division

BPT/

cc: Sarah V. Battistini, sarah.battistini@ct.gov
John D. Byron JR, john.byron@ct.gov

Appendix Aii:
CT DEEP General Permit for Water
Resources Construction Activities
201903049-GPCST



79 Elm Street • Hartford, CT 06106-5127

www.ct.gov/deep

Affirmative Action/Equal Opportunity Employer

Date March 21, 2019

Joseph Buyonje
CT DEEP
163 Great Hill Road
Portland, CT 06480

SUBJECT: DEEP License #: 201903049-GPCST
Superstructure replacement, and substructure maintenance on DEEP Bridge #E118
(DOT#06323), East Haddam

Dear Mr. Buyonje:

Please find attached a copy of your subject license and relevant enclosures which are being issued pursuant to your application of February 22, 2019. Your attention is directed to the conditions of the license. All work must conform to that which is specifically authorized.

Any work in regulated areas of the State which has not been authorized by a valid license is a violation of state law and subject to enforcement action by the Department of Energy & Environmental Protection and the Office of the Attorney General.

Your initiation of authorized activities will be relied upon as your agreement to comply with the terms and conditions of the license.

If you have not already done so, you should contact your local Planning and Zoning Office and the U. S. Army Corps of Engineers to determine local and federal permit requirements on your project, if any. Write the Corps' New England District, Regulatory Branch, 696 Virginia Road, Concord, MA 01742-2751; <http://www.nae.usace.army.mil/> or call 1-800-343-4789.

If you should have any questions or concerns, please contact me at (860) 424-3233, or john.natale@ct.gov.

Sincerely,

A handwritten signature in blue ink that reads "John Natale".

John Natale, Analyst
Land & Water Resources Division
Bureau of Water Protection & Land Reuse

Encl(s): License # 201903049-GPCST

201903049-GPCST

cc: File 201903049-GPCST

cc (via email): Herbert May, P.E., Macchi Engineers: hmay@macchiengineers.com
Emmett J. Lyman, East Haddam First Selectman: admin@easthaddam.org
Steve Gephard, CT DEEP Fisheries Division: steve.gephard@ct.gov
Diane Ray, USACE diane.m.ray@usace.army.mil



Connecticut Department of Energy and Environmental Protection License*

General Permit for Water Resource Construction Activities - Approval of Authorization

Licensee(s): State of CT DEEP, Bureau of
Central Services, Engineering
and Field Support Services Unit

Licensee Address(s): 163 Great Hill Road
Portland, CT06480

License Number(s): 201903049-GPCST

Municipality: East Haddam

Project Description: Replace the superstructure of DEEP Bridge #E118 (DOT#06323),
and conduct maintenance on the bridge's substructure.

Project Address/Location: Devil's Hopyard State Park

Waters: Eight Mile River

**Authorizing CT Statute(s)
and/or Federal Law:** CGS Section 22a-36 to 45

**Applicable Regulations of
CT State Agencies:** 22a-39-1 to 15

Agency Contact: Land & Water Resources Division,
Bureau of Water Protection & Land Reuse, 860-424-3019

License Expiration: Upon expiration of the General Permit for Water Resource
Construction Activities, April 2, 2024

Project Site Plan Set: State of Connecticut Department of Environmental Protection,
Devil's Hopyard State Park, Replacement of CT DEEP Bridge
#E118, Loop Trail Over Eight Mile River, East Haddam,
Connecticut, Contract ID: 12PSX0213AZ, 11 sheets, prepared by
Macchi Engineers, December 7, 2018.

License Enclosures: General Permit - Water Resource Construction Activities

*Connecticut's Uniform Administrative Procedure Act defines License to include, "the whole or part of any agency permit, certificate, approval, registration, charter or similar form of permission required by law . . ."

Authorized Activities:

The Licensee is hereby authorized to conduct the following work as described in application # 201903049-GPCST:

1. Replace the superstructure of CT DEEP Bridge #E118 (CT DOT Bridge #06323), and conduct minor substructure work, in accordance with the site plan set referenced above.

Failure to comply with the terms and conditions of this license shall subject the Licensee and / or the Licensee's contractor(s) to enforcement actions and penalties as provided by law.

This license is subject to the following Terms and Conditions:

1. **License Enclosure(s) and Conditions.** The Licensee shall comply with all applicable terms and conditions as may be stipulated within the License Enclosure(s) listed above.
2. All activities shall be conducted in accordance with plans entitled: State of Connecticut Department of Environmental Protection, Devil's Hopyard State Park, Replacement of CT DEEP Bridge #E118, Loop Trail Over Eight Mile River, East Haddam, Connecticut, Contract ID: 12PSX0213AZ, 11 sheets, prepared by Macchi Engineers, December 7, 2018, submitted as part of the application.
3. An NDDDB response (NDDDB #201900828), dated January 25, 2019, indicated that the following State-listed species were documented within the project area: Eastern pearl shell (*Margaritifera margaritifera*), special concern; tiger spiketail (*Cordulegaster erronea*), threatened; moustached clubtail (*Gomphus adelphus*), special concern; skillet clubtail (*Gomphus ventricosus*), special concern. These species are sensitive to sediment disturbance and to the effects of construction projects that occur instream or along riverbanks.

To protect these species:

- a. The applicant shall use best management practices to control sedimentation and erosion in the project area as indicated in the project proposal.
- b. At least two weeks before installation of cofferdams or other instream work, the applicant shall contact the CT DEEP Wildlife Division (Laura.saucier@ct.gov and DEEP.NDDDBrequest@ct.gov) to arrange for freshwater mussels to be moved and re-located.
- c. The applicant shall use contained structures such as sandbags (not loose gravel) in the construction of cofferdams.
- d. The applicant shall ensure that water pumped out of the work area includes filtering to remove sediment.
- e. The applicant shall protect natural streambanks by:
 1. Minimizing removal of vegetation on streambanks;
 2. Minimizing the alteration and/or hardening of streambanks (i.e., minimize rip-rap use);

3. After project completion, ensuring that traffic flow of the public is effectively directed over the bridge and diverted or prevented from traveling down banks toward the river.

Issued under the authority of the Commissioner of Energy and Environmental Protection on:

March 21, 2019

Date



Brian P. Thompson

Division Director

Land & Water Resources Division

Appendix Aiii:
US Army Corps of Engineers
General Permit 19 Self-Verification-
NAE-2020-00074



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS
696 VIRGINIA ROAD
CONCORD, MASSACHUSETTS 01742-2751

6 January 2020

Regulatory Division
File Number: NAE-2020-00074

CT Department of Energy & Environmental Protection
163 Great Hill Road
Portland, CT 06053

Dear Mr., Mrs.:

PROPOSED WORK/LOCATION: Replacement of Bridge Superstructure, East Haddam, CT.

We have reviewed your proposal to perform work within Corps of Engineers jurisdiction. We have assigned this file number NAE-2020-00074. Please reference this number in any future correspondence with us.

Since your project may have only minimal individual and cumulative impacts on waters and wetlands of the United States, it is authorized by the Corps of Engineers under the Connecticut General Permits (GPs). This authorization does not obviate the need to obtain other federal, state, or local approvals. You are responsible for ensuring that the work meets the terms and conditions of the CT GPs. We have recorded this project as permittee self-verification of the CT GPs in our database.

Please contact me at (978) 318-8703 if you have any questions.

Sincerely,

A handwritten signature in black ink that reads "Kevin R. Kotelly". The signature is written in a cursive style with a large, looped "y" at the end.

Kevin R. Kotelly, P.E.
Chief, Permits & Enforcement Branch
Regulatory Division

Enclosure (plans)