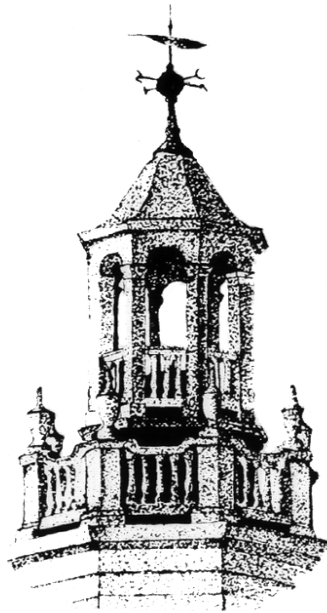


PROJECT MANUAL
FOR
THE O'NEILL CENTER ROOF REPLACEMENT NATATORIUM
WESTSIDE CAMPUS
BID NO. 2020-MRC-0003

NOVEMBER 1, 2019



FACILITIES PLANNING & ENGINEERING
WESTERN CONNECTICUT STATE UNIVERSITY
181 WHITE STREET
DANBURY, CONNECTICUT 06810

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**THE O'NEILL CENTER ROOF REPLACEMENT NATATORIUM
WESTSIDE CAMPUS
BID NO. 2020-MRC-0003**

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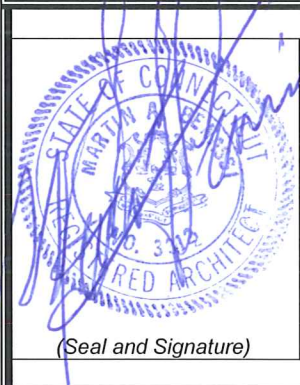
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Project Location:	Western Connecticut State University, Danbury, CT
Project Number:	BI-RD-311
Architect/Engineer:	Martin A. Benassi, AIA – Architect LLC, Two Broadway, Hamden, CT 06518

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 align="center">Martin A. Benassi <i>(Print Consultant Name)</i> 3312 License No. 7/31/2021 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 align="center"><i>(Print Consultant Name)</i> License No. 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 align="center"><i>(Print Consultant Name)</i> License No. 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 align="center"><i>(Print Consultant Name)</i> License No. 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 align="center"><i>(Print Consultant Name)</i> License No. 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 align="center"><i>(Print Consultant Name)</i> License No. Expiration Date</p>

**End of Section
00 01 07 Seals Page**

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INVITATION TO BID

Notice is hereby given that **WESTERN CONNECTICUT STATE UNIVERSITY** will accept bids for the following:

PROJECT NAME

WCSU BID NO. 2020-MRC-0003

Western Connecticut State University is seeking bid proposals for all labor and materials required to replace the roof over the natatorium on the O'Neill Center on WCSU's Westside Campus. Generally, the scope of work includes complete removal of the existing roof membrane and insulation down to the deck and associated flashing and trim and replacement with new insulation, roof membrane and associated flashing and trim as detailed. Please note: The CT Department of Labor's Prevailing Wage Rates requirement shall apply to this project.

In our continuing effort to assist in the economic development of Connecticut's small and minority business enterprises, this Invitation to Bid is reserved for vendors holding a current SBE/MBE set-aside certificate from the State of Connecticut Department of Administrative Services (DAS) Supplier Diversity (Set-Aside) Program. Please note, set-aside certificates that will have expired prior to the bid opening date, but are pending recertification approval by the DAS, do not qualify.

The Project Manual and project related drawings are available on the State of Connecticut's DAS Contracting Portal. Reference Bid No.:2020-MRC-0003.

All contractors are required to visit the site and verify existing conditions. A mandatory pre-bid meeting is scheduled for Tuesday, December 17, 2019 at 10:30 a.m., beginning at the O'Neill Center, located on WCSU's Westside Campus

Any questions or discrepancies should be submitted in writing no later than Tuesday, December 20, 2019 by 4:00 p.m., to the WCSU's Administrative Services office, located on the lower level of University Hall, WCSU, 181 White Street, Danbury, CT 06810; Attn: Mark Case; fax no. 203-837-8659; e-mail: casem@wcsu.edu. Responses to any and all inquiries shall be issued via addenda, no later than Tuesday, December 27, 2019 4:00 p.m., Any and all addenda shall be posted on the DAS contracting portal.

Sealed bids should be submitted to Mr. Mark Case, Director for Administrative Services, University Hall, Lower Level, Western Connecticut State University, 181 White Street, Danbury, CT 06810. Bids should be submitted on or before Tuesday, January 7, 2020 by 2:30 p.m. Bids will be opened publicly at the aforementioned time in the Purchasing Office. Bids received after that time will not be accepted. Interested parties are invited to attend. Bidders should submit bids in a sealed envelope with words, "Sealed Bid No. 2020-MRC-0003," the due date, and their set-aside status (SBE/MBE) on the lower left-hand corner of the envelope. In the event of an unexpected closing by the University at the scheduled bid due date and time (i.e. inclement weather closing), the bid due date shall default to 2:30 p.m. on the next business day the University is open (a business day defined as Monday – Friday, excluding weekends). Closing information can be obtained via the University's website www.wcsu.edu or via the University's weather closing phone line, 203-837-9377.

Bids are to be based on the work called for on the sketches and specifications for the subject project, as well as any addenda issued during the bid process. Bids showing informalities, qualifications or conditions may be rejected at the option of the University. Each bidder must note receipt of any Addenda or bulletins when submitting a bid. All bidders shall verify dimensions and conditions at the site and be responsible for satisfying himself as to all requirements of the contract.

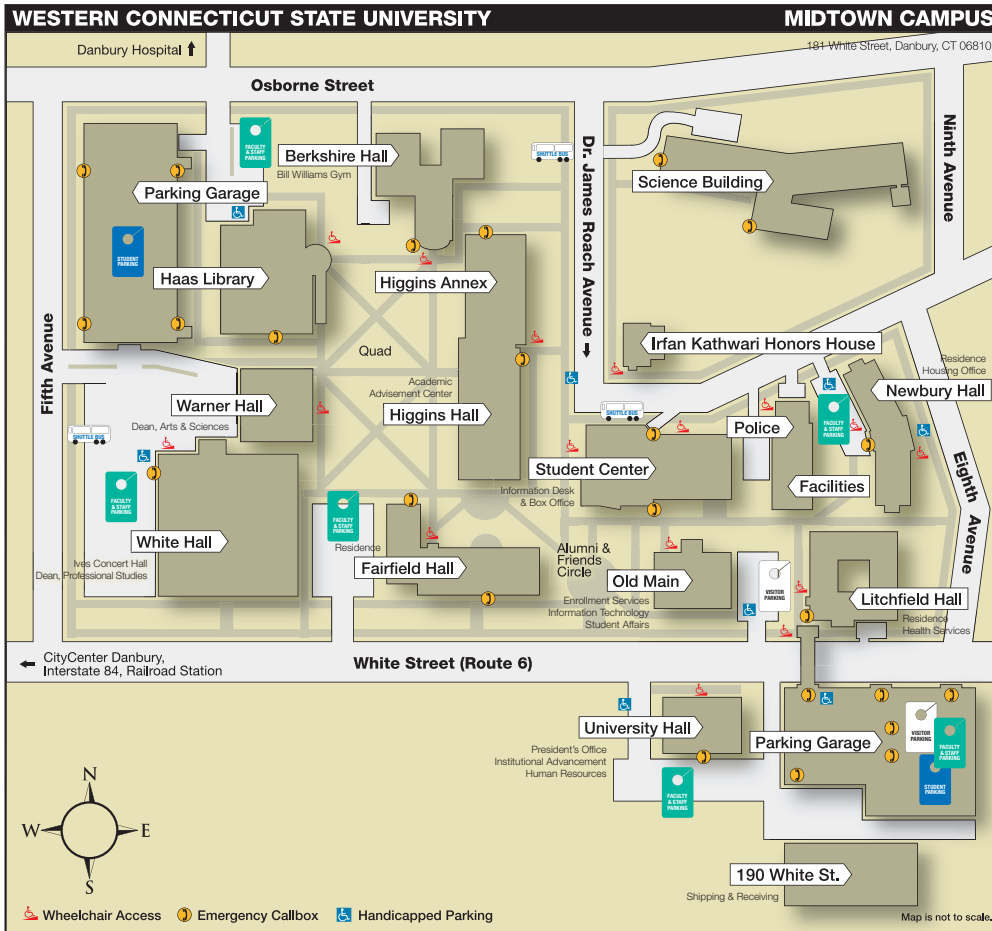
Bids must be held for a period of 90 calendar days following the date of the bid opening. Following 90 calendar days, if attempted negotiations with the lowest bidder fail to result in a contract, the University reserves the right to re-bid the project.

All work shall commence within two (2) weeks of issuance of contract or letter of intent; all work must be completed no later than May 15, 2020.

The University reserves the right to waive any technical defects in the bids, to reject any bids that do not conform to the terms described herein, and to accept or reject any part of any bid, and to reject all bids and, again, invite bids.

END

Campus Maps & Directions



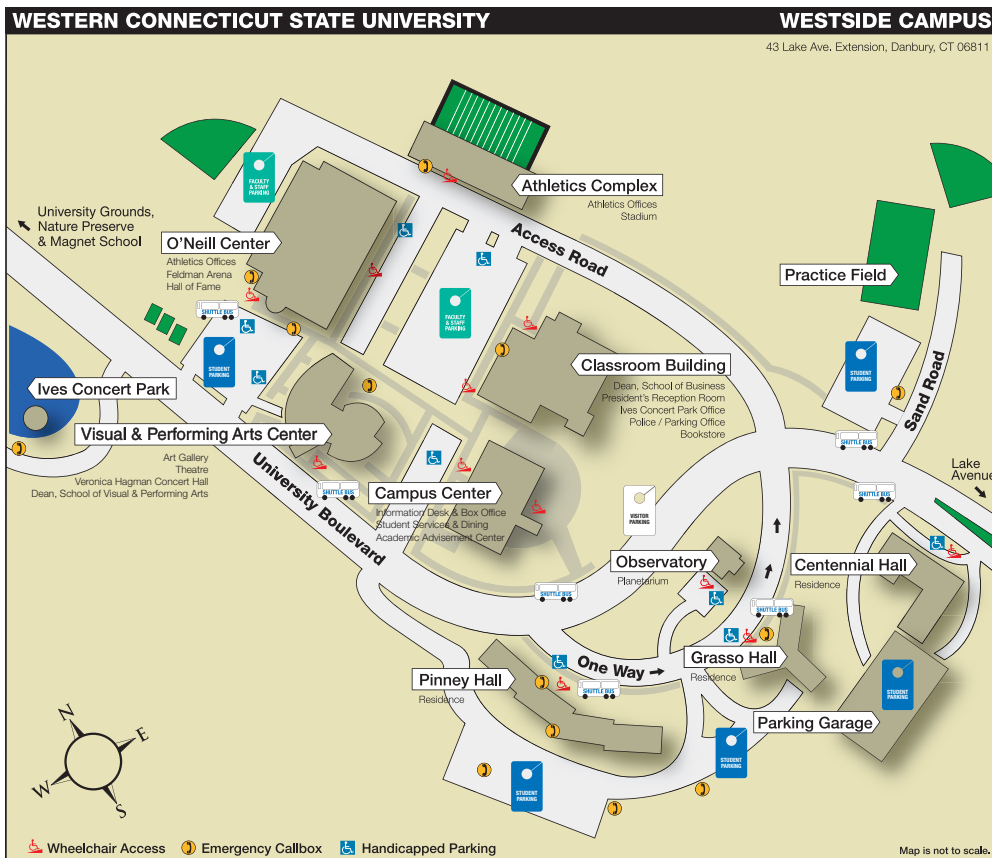
To Midtown campus (181 White Street)

From the East: Take Exit 5 off I-84 to first traffic light (Clapboard Ridge Road); turn right and continue on Main Street to White Street (fifth traffic light); turn left onto White Street and continue one half mile to campus on left.

From the West: Take Exit 5 off I-84 to first traffic light (Main Street); turn right and continue on Main Street to White Street (fourth traffic light); turn left onto White Street and continue one half mile to campus on left. Visitor parking is available in the lot adjacent to Old Main on the Midtown campus.

To Westside campus (43 Lake Ave. Extension)

Take Exit 4 off I-84; turn right onto Lake Avenue. Travel approximately one mile to campus entrance on right.



Campus-to-Campus

Midtown to Westside: Follow White Street and take a right onto Main Street (third traffic light). Follow Main Street to third traffic light (Main Street becomes Clapboard Ridge). Turn left onto I-84 West. Take Exit 4 off I-84. Turn right onto Lake Avenue. Travel approximately one mile. Campus entrance is on the directly across from Stop & Shop. General parking is available along University Boulevard.

Westside to Midtown: Turn left onto Lake Avenue for approximately one mile. Turn left onto I-84 East (third traffic light). Take Exit 5 off I-84 to first traffic light (Main Street). Turn right and continue on Main Street to White Street (fourth traffic light). Turn left onto White Street and continue one half mile. The campus is on the left.

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SPECIAL BID PROVISION

In our continuing effort to assist in the economic development of Connecticut's small and minority business enterprises, this Invitation to Bid is reserved for vendors holding a current SBE/MBE set-aside certificate from the State of Connecticut Department of Administrative Services (DAS) Supplier Diversity (Set-Aside) Program. Please note, set-aside certificates that will have expired prior to the bid opening date, but are pending recertification approval by the DAS, do not qualify.

Set-Aside Bidder Requirements

Bidders are required to provide a copy of the company's current certification. Also, DAS-certified bidders must indicate their Set-Aside status by writing SBE/MBE on the lower left-hand corner of the envelope in which the bid is submitted.

How to Obtain a Set-Aside Application

For information regarding eligibility requirements, and to obtain certification or re-certification applications, please contact:

Department of Administrative Services
Supplier Diversity Program
165 Capitol Avenue
Hartford, CT 06106
Phone: 860-713-5236

OR

Visit their website at www.das.state.ct.us and click on “**Supplier Diversity**” under the “**Services to Businesses**” heading.

END

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INSTRUCTIONS TO BIDDERS

- A. Bids are to be based on the work called for on the drawings and specifications for the subject project, as well as any addenda issued during the bid process. Bids showing informalities, qualifications or conditions may be rejected at the option of the University.

The University reserves the right to waive any technical defects in the bids, to reject any bids that do not conform to the terms described herein, and to accept or reject any part of any bid, and to reject all bids and again invite bids.

- B. Time limits will be as here-in-forth set:

1. All work shall commence within two (2) weeks of issuance of contract or letter of intent; shop drawing submittal schedule must be submitted within ten (10) days after the award of the contract.
2. All work must be completed no later than May 15, 2020.

- C. Addenda – Any addenda issued to this bid will be posted on the State of Connecticut Department of Administrative Services' website bid portal, under Western Connecticut State University's (WCSU) bid postings. The DAS website address is www.das.state.ct.us. Each bidder must note receipt of any Addenda or bulletins when submitting a bid.

- D. The bidding documents are as follows:

1. Project Manual entitled "O'Neill Center Roof Replacement Natatorium", dated November 1, 2019.
2. Drawings entitled "The O'Neill Center Roof Replacement Natatorium.

- E. The bid package will contain the following:

WCSU Bid Form – This will contain the costs to provide all of the work shown or called for in the contract documents.

CHRO State Set-Aside Goals Requirements' Worksheet - This worksheet, based on the itemized costs quoted on the WCSU Bid Form, will determine the total contract bid amount that is subject to state set-aside goals.

Checklist Items – All other required documentation must be submitted, as per the "Bid Submission Checklist Form."

- F. Bids must be held for a period of 90 calendar days following the date of the bid opening. Following 90 calendar days, if attempted negotiations with the lowest bidder fail to result in a contract, the University reserves the right to re-bid the project.
- G. All bidders will verify dimensions and conditions at the site and be responsible for satisfying himself as to all requirements of the contract.
- H. All bids will assume that any and all electrical work shall be executed by licensed electricians, in accordance with current codes.
- I. Pre-bid Meeting – All contractors are required to visit the site and become familiar with existing conditions. A mandatory pre-bid meeting is scheduled for Tuesday, December 17, 2019 at 10:30 a.m., beginning at the O'Neill Center, on WCSU's Westside Campus. The agency representative for this project is Daniel L. Casinelli, AIA, LEED AP, Director of Facilities Planning and Engineering; phone no. 203-837-8680.
- J. Inquiry Period - Any questions or discrepancies should be submitted in writing by 4:00 p.m., December 20, 2019 to the Dept. of Administrative Services, located on the lower level of University Hall, WCSU, 181 White Street, Danbury, CT 06810; Attn: Mark Case; fax no. 203-837-8659; e-mail: casem@wcsu.edu. Responses to any and all inquiries shall be issued via addenda, no later than 4:00 p.m., December 27, 2019. Any and all addenda shall be posted on the DAS contracting portal.
- K. Bid Opening – Sealed bids should be submitted to Mr. Mark Case, Director for Administrative Services, University Hall, Lower Level, Western Connecticut State University, 181 White Street, Danbury, CT 06810. Bids should be submitted on or before Tuesday, January 7, 2020, 2:30 pm. Bids will be opened publicly at the aforementioned time in the Purchasing Office. Bids received after that time will not be accepted. Interested parties are invited to attend. Bidders should submit bids in a sealed envelope with words, "Sealed Bid No. 2020-MRC-0003 and the due date. In the event of an unexpected closing by the University at the scheduled bid due date and time (i.e. inclement weather closing), the bid due date shall default to 2:30 p.m. on the next business day the University is open (a business day defined as Monday – Friday, excluding weekends). Closing information can be obtained via the University's website www.wcsu.edu or via the University's weather closing phone line, 203-837-9377.

END

**WESTERN CONNECTICUT STATE UNIVERSITY
BID SUBMISSION CHECKLIST FORM**

**Project: The O’Neill Center Roof Replacement Natatorium
Bid No. 2020-MRC-0003**

Listed below are the following forms/documentation that must be completed and submitted in the bid package before the official bid opening. Failure to comply may result in the disqualification of the bid submission.

- WCSU Bid Form
- DAS Supplier Diversity (Set-Aside) Program Certificate
- CHRO Notification to Bidders/Bidder Contract Compliance Monitoring Report
- CHRO Form of Proposal – Set-Aside Worksheet
- Bidders Qualification Statement
- OPM Ethics Form 5 - Consulting Agreement Affidavit
- Bid Bond (minimum of 10%)
- Certificate of Insurance
- Dept. of Labor - Contractors Wage Certification Form

Below are the following forms/documentation that are to be submitted at time of Contract Execution:

- OPM Ethics Form 1 - Gift and Campaign Contribution Certification
- OPM Ethics Form 5 - Consulting Agreement Affidavit
- OPM Nondiscrimination Certification Form C – Affidavit by Entity
- OPM Nondiscrimination Certification Form D or Form E (as applicable)
- Performance Bond
- Labor and Materials Payment Bond
- Contractor’s proposed construction schedule in format acceptable to the University.

END

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WESTERN CONNECTICUT STATE UNIVERSITY

BID FORM

BIDDER: _____

_____ Address Telephone No.

BID PROPOSAL FOR:

**THE O'NEILL CENTER ROOF REPLACEMENT NATATORIUM – WESTSIDE
CAMPUS
BID NO. 2020-MRC-0003**

ADDRESSED TO:

Mr. Mark Case
Director of Administrative Services
Western Connecticut State University, 181 White Street, Danbury, CT 06810

In preparing this Bid, we have carefully examined the Bidding Documents for this Work. We have visited the site and noted the conditions affecting the Work.

The Bidding Documents referred to include Drawings and Specifications prepared by Western Connecticut State University and entitled:

We acknowledge receiving the following Addenda issued by the Architect:

No. 1 dated _____ No. 2 dated _____ No. 3 dated _____ No. 4 dated _____

BASE BID:

We propose to perform the Work described in the Bidding Documents, in keeping with the definitions of Article 1 of the Instructions to Bidders, for the Base Bid Sum of :

_____ \$ _____
Dollars

Supplemental Bid #1 – Cover Kalwall w/ Membrane – Total Cost of Labor and Materials

_____ \$ _____
Dollars

TIME OF COMPLETION:

We agree that all work will be completed no later than May 15, 2020.

BID ACCEPTANCE:

We agree that this proposal shall not be withdrawn for a period of ninety calendar days after date of submittal. We understand that Owner reserves the right to accept any Bid, reject any or all Bids, and to waive any informality in the Bidding. At the time of execution of the contract, we shall furnish all required documentation as listed on the Bid Submission Checklist Form.

1. Performance Bond and Labor & Material Payment Bond each in the full amount of the Contract.
2. Certificate of Insurance.
3. EEO forms as required.
4. Contractor's proposed construction schedule in format acceptable to University.

Firm Name: _____

Address: _____

By: _____ **Title:** _____
(Name Typed)

Signature: _____ **Date:** _____

The Bidder is a/an (individual) (partnership) (corporation). Names and titles of other officers or partners are:

(For corporation, give State of incorporation and affix corporate seal.)



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, pursuant to C.G.S. §§ 4-250, 4-252(c) and 9-612(f)(2) and Governor Dannel P. Malloy's Executive Order 49.

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 a Principal or Key Personnel of the person, firm or corporation authorized to execute this certification 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.

CAMPAIGN CONTRIBUTION CERTIFICATION:

I further certify that, on or after January 1, 2011, neither the Contractor nor any of its principals, as defined in C.G.S. § 9-612(f)(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(f)(2)(A). I further certify that **all lawful campaign contributions** that have been made on or after January 1, 2011 by the Contractor or any of its principals, as defined in C.G.S. § 9-612(f)(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)

My Commission Expires





STATE OF CONNECTICUT
CONSULTING AGREEMENT AFFIDAVIT

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

My Commission Expires



STATE OF CONNECTICUT
NONDISCRIMINATION CERTIFICATION – New Resolution
By Entity
For Contracts Valued at \$50,000 or More

Documentation in the form of a corporate, company, or partnership policy adopted by resolution of the board of directors, shareholders, managers, members or other governing body of a contractor that certifies the contractor complies with the nondiscrimination agreements and warranties under Connecticut General Statutes §§ 4a-60 and 4a-60a, as amended.

INSTRUCTIONS:

For use by an entity (corporation, limited liability company, or partnership) when entering into any contract type with the State of Connecticut valued at \$50,000 or more for any year of the contract. Complete all sections of the form. Submit to the awarding State agency prior to contract execution.

CERTIFICATION OF RESOLUTION:

I, _____ , of _____ ,
Authorized Signatory Title Name of Entity

an entity duly formed and existing under the laws of _____ ,
Name of State or Commonwealth

certify that the following is a true and correct copy of a resolution adopted on the _____ day of _____ , 20 _____ , by the governing body of _____
Name of Entity

in accordance with all of its documents of governance and management and the laws of _____ , and further certify that such resolution has not been modified
Name of State or Commonwealth

or revoked, and is in full force and effect.

RESOLVED: That the policies of _____ comply with
Name of Entity

nondiscrimination agreements and warranties of Connecticut General Statutes §§ 4a-60 and 4a-60a, as amended.

The undersigned has executed this certificate this _____ day of _____ ,20 _____ .

Authorized Signatory Date

Printed Name



STATE OF CONNECTICUT
NONDISCRIMINATION CERTIFICATION – Prior Resolution
By Entity
For Contracts Valued at \$50,000 or More

Documentation in the form of a corporate, company, or partnership policy adopted by a prior resolution of the board of directors, shareholders, managers, members or other governing body of a contractor that certifies the contractor complies with the nondiscrimination agreements and warranties under Connecticut General Statutes §§ 4a-60 and 4a-60a, as amended

INSTRUCTIONS:

For use by an entity (corporation, limited liability company, or partnership) when entering into any contract type with the State of Connecticut valued at \$50,000 or more for any year of the contract. Complete all sections of the form. Attach copy of previously adopted resolution (*State of CT, Nondiscrimination Certification, Form D: New Resolution*). Submit all documentation to the awarding State agency prior to contract execution.

CERTIFICATION OF PRIOR RESOLUTION:

I, the undersigned, am a duly authorized corporate officer or member of _____.
Name of Entity

I have reviewed the attached prior resolution. I certify that:

- (1) the attached prior resolution complies with the nondiscrimination agreements and warranties of Connecticut General Statutes §§ 4a-60 and 4a-60a, as amended; and
- (2) the prior resolution remains in full force and effect on the date this documentation is submitted to the awarding State agency.

Authorized Signatory

Title

Printed Name

Date

RESERVED FOR STATE USE

I, the undersigned head of the awarding State agency, or designee, certify that the attached prior resolution complies with the nondiscrimination agreements and warranties of Connecticut General Statutes §§ 4a-60 and 4a-60a, as amended.

Signature of Agency Head (or designee)

Date

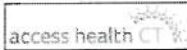
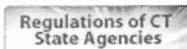
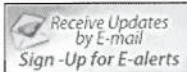
Awarding State Agency



Commission on HUMAN RIGHTS AND OPPORTUNITIES

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Tanya A. Hughes
Executive Director

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Contract Compliance

Connecticut state government spends well in excess of one billion dollars each year to purchase supplies, legal, medical and other professional services, and public works contracting services. Those who have contracts with the state to provide these services bear a special responsibility to assure that their employment and subcontracting procedures promote equal opportunity for all persons. Contract compliance laws were enacted as a means of providing equal employment opportunities for minorities and female workers and economic development and business growth opportunities for small contractors and minority and women owned businesses through the distribution of state contracting dollars.

The Connecticut Commission on Human Rights and Opportunities has the responsibility to review, monitor and enforce the equal opportunity, affirmative action and contract compliance laws of the state as they apply to contractors (including subcontractors and suppliers to contractors) who do business with the state.

Contract Compliance Law in Connecticut

There are two key contract compliance laws in Connecticut; the contract compliance law and the small contractors set-aside program. They apply to state agencies and to political subdivisions of the state other than municipalities. Examples of political subdivisions of the state include regional transit districts, regional planning agencies, councils of governments and other such quasi public agencies, as well as all agencies of the state.

- The **contract compliance law**, enacted as **Conn. Gen. Stat. Section 4a-60**, and the administrative regulations issued pursuant thereto prohibit all those who contract with the state, including subcontractors, from engaging in or permitting discrimination in recruiting, hiring or other employment practices. The law further requires state agencies to aggressively solicit the participation of minority and women owned businesses in state contracts.
- The agencies covered by the law must report all their contracts valued in excess of \$3,000 to CHRO and provide CHRO information necessary to assess their compliance with the law.
- There is a subset of the contract compliance law that pertains to construction related contracts. It places specific contract compliance responsibilities on **public works contracts**. These are agreements for construction, rehabilitation, conversion, extension, demolition or repair of a public building, highway or other changes or improvements in real property. Link to these statutes (beginning with section 46a-68b through 46a-68k) :
- The **small contractors set-aside program** requires each state agency and political subdivision of the state other than a municipality to set as an annual goal their intention to contract with certified small contractors at least 25% of their total projected annual expenditures . The law further requires that one quarter of this amount (or 6.25% of the total projected annual expenditures) be with certified minority businesses. Thus agencies may set aside contracts in whole or in part for bid only by eligible small and/or minority businesses. Link to [small contractor program statute](#) and link to [small contractor program policy guidelines and goal setting procedures](#).
- A small contractor is a company that has been in business for at least one year, has its principal place of business in Connecticut and whose gross revenues for the prior year did not exceed 10 million dollars. As of January 1, 2008 this ceiling will increase to 15 million dollars.
- A minority business is a small contractor that is 51% owned, controlled and beneficially operated by a minority person or persons. The law defines a minority person as a person with a disability, or as any person who is:
 - a *Black American*, including a person having origins in any of the Black African racial groups;
 - a *Hispanic American*, including a person of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish culture or origin;
 - an *American Indian* and a person having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification;
 - an *Asian Pacific American* and Pacific islander;
 - a person having origins in the *Iberian Peninsula, including Portugal*; or
 - a *women*.

The Department of Administrative Services is responsible for certifying businesses as small and small minority owned businesses. Certification is for a two year period and is renewable. For more information about this process, or to download the forms necessary to be certified or re-certified, link to: [DAS Certification](#)

To review the [list of certified small and minority businesses](#) link to:

For [Contract Compliance Forms and Reports](#) link here.

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25 Sigourney Street, Hartford, Connecticut 06106 / Phone: 860-541-3400

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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) (Page 2)

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) (Page 3)

<p><u>White</u> (not of Hispanic Origin)-All persons having origins in any of the original peoples of Europe, North Africa, or the Middle East.</p> <p><u>Black</u> (not of Hispanic Origin)-All persons having origins in any of the Black racial groups of Africa.</p> <p><u>Hispanic</u>- All persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.</p>	<p><u>Asian or Pacific Islander</u>- 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.</p> <p><u>American Indian or Alaskan Native</u>- All persons having origins in any of the original peoples of North America, and who maintain cultural identification through tribal affiliation or community recognition.</p>
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BIDDER CONTRACT COMPLIANCE MONITORING REPORT

PART 1 – Bidder Information

<p>Company Name: Street Address: City & State: Chief Executive:</p>	<p>Bidder Federal Employer Identification Number: Or Social Security Number:</p>
<p>Major Business Activity: (brief description)</p>	<p>Bidder Identification (response optional/definitions on page 1)</p> <p>-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</p>
<p>Bidder Parent Company: (If any)</p>	
<p>Other Locations in CT: (If any)</p>	

PART II - Bidder Nondiscrimination Policies and Procedures

<p>1. Does your company have a written Affirmative Action/Equal Employment Opportunity statement posted on company bulletin boards? Yes No</p>	<p>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</p>
<p>2. Does your company have the state-mandated sexual harassment prevention in the workplace policy posted on company bulletin boards? Yes No</p>	<p>8. Do you, upon request, provide reasonable accommodation to employees, or applicants for employment, who have physical or mental disability? Yes No</p>
<p>3. Do you notify all recruitment sources in writing of your company's Affirmative Action/Equal Employment Opportunity employment policy? Yes No</p>	<p>9. Does your company have a mandatory retirement age for all employees? Yes No</p>
<p>4. Do your company advertisements contain a written statement that you are an Affirmative Action/Equal Opportunity Employer? Yes No</p>	<p>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</p>
<p>5. Do you notify the Ct. State Employment Service of all employment openings with your company? Yes No</p>	<p>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</p>
<p>6. Does your company have a collective bargaining agreement with workers? Yes No</p> <p>6a. If yes, do the collective bargaining agreements contain non-discrimination clauses covering all workers? Yes No</p> <p>6b. Have you notified each union in writing of your commitments under the nondiscrimination requirements of contracts with the state of CT? Yes No</p>	<p>12. Does your company have a written affirmative action Plan? Yes No If no, please explain.</p> <p>13. Is there a person in your company who is responsible for equal employment opportunity? Yes No If yes, give name and phone number:</p>

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)
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WESTERN CONNECTICUT STATE UNIVERSITY

NOTICE OF CHANGES TO THE
THE CONNECTICUT COMMISSION ON HUMAN RIGHTS & OPPORTUNITIES
SELF-PERFORMANCE & SUB-CONTRACTING REQUIREMENTS
FOR THE SUPPLIER DIVERSITY (SET-ASIDE SBE/MBE) PROGRAM

The contractor who is selected to perform this state project must file and receive an approved Affirmative Action Plan by the Commission of Human Rights and Opportunities. This project is subject to the State Set-Aside goals and new self- performance and subcontracting requirements.

The contractor selected to perform this state project needs to solicit multiple bids per subcontract (class of work) from an assorted variety of subcontractors, non-trade related service providers, ethnic minority, woman, certified by State of CT. Dept. of Administrative Services Supplier Diversity (Set-Aside) Program.

Please note the following **NEW STATUTORY CHANGES TO** 4a-60g, effective October 1, 2013 as it relates to **Self-Performance & Subcontracting Requirements**

P. A. 13-304 increases the percentages of work required to be performed by any prime SBE/MBE company that is awarded a contract under the set-aside statutes. Previously, a company awarded a set-aside contract was required to self-perform at least 15% of such contract; it will now be required to self-perform at least 30%. Further, SBEs and MBEs that subcontract some of the work under their set-aside contracts will be required to subcontract at least 50% of the remaining work (i.e. the work not self-performed by the prime) to SBEs and MBEs, respectively, instead of 25%, under current law. Please note that the 50% requirement applies to the work subcontracted; in other words, the percentage to be self-performed by the prime contractor cannot be used to accomplish the 50% requirement.

- Example: If an SBE is awarded a \$100,000 state contract under the set-aside statutes, that SBE will be required to perform at least \$30,000 of the work under the contract with its own workforce. If the SBE self-performs \$30,000 of the work, and chooses to subcontract the remainder, the SBE must subcontract at least \$35,000 of the work to another certified SBE (50% of the remaining \$70,000 on the contract).

The CHRO Form of Proposal Set-Aside Worksheet must be submitted with the bid package.

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THE O'NEILL CENTER
ROOF REPLACEMENT NATATORIUM

Form of Proposal Bid # 2020-MRC-0003

Set Aside Worksheet

	Subcontractor Name	Class of work	SBE	MBE	Prime Contractor self performing \$\$	Subcontract amounts
1					\$	
2						\$
3						\$
4						\$
5						\$
6						\$
7						\$
8						\$
9	Prime Contractor Total				0	
10	SBE Subtotal	Add SBE subcontract amounts from above list and enter total at right				\$
11	MBE/WBE Subtotal	Add MBE/WBE subcontract amounts from the list and enter total to the right				\$
12	Lump Sum base bid	Enter total lump sum base bid from bid submittal form				\$
13	Bidding Prime Contractor % and \$\$\$\$				0	
14	Remaining value subject to SBE/MBE = lump sum line 12 minus prime contractor total					\$
15	SBE Percentage	Divide line 10 by line 14. Enter % to the right				%
16	MBE/WBE Percentage	Divide line 11 by line 14. Enter % to the right.				%
17	Total SBE/MBE/WBE %	Must = 50% of line 14 /add line 15+16 for total %				%

In determining and ensuring compliance with CHRO requirements this worksheet must be submitted as part of the bid submittal package. Failure to do so may be grounds for disqualification of the bid. Compliance determination shall initially be based on the base bid sum. However, for bid solicitations requiring acceptance of Alternates or Supplemental bids, a revised worksheet shall be required prior to issuance of contract.

The MBE requirement is still 6.25% of the entire bid total.

Each bidder shall submit, as part of their proposal, copies of Certificates of Eligibility for each set aside subcontractor or "screen shots" from the State of Connecticut Supplier Diversity web site for each set aside subcontractor showing name and address, certification type and certificate expiration date.

Vendor Company Name (Prime Contractor) _____

Authorized signature _____ Date _____

**STATE OF CONNECTICUT
COMMISSION ON HUMAN RIGHTS AND OPPORTUNITIES**

NOTICE CONCERNING CONTRACT COMPLIANCE RESPONSIBILITIES

TO ALL LABOR UNIONS, WORKERS REPRESENTATIVES AND VENDORS:

Any contract this contractor has with the State of Connecticut or political subdivisions of the state, other than municipalities, shall be performed in accordance with CONN. GEN. STAT. Section 4a-60 and Section 4a-60a.

This means that this contractor:

1. Agrees to provide the Commission on Human Rights and Opportunities (CHRO) with any information concerning this contractor's employment practices and procedures which relates to the Commission's responsibilities under CONN. GEN. STAT. Sections 4a-60 or 46a-56 or Section 4a-60a.; and
2. Agrees to include the provisions of CONN. GEN. STAT. Section 46a-60(a) and Section 4a-60a in each and every subcontract and purchase order and to take whatever action the CHRO deems necessary to enforce these provisions.

WITH REGARD TO RACE, COLOR, RELIGIOUS CREED, AGE, MARITAL STATUS, NATIONAL ORIGIN, ANCESTRY, SEX, MENTAL RETARDATION OR PHYSICAL DISABILITY, this means that this contractor:

1. Shall not discriminate or permit discrimination against anyone;
2. Shall take affirmative action so that persons applying for employment are hired on the basis of job-related qualifications and that employees once hired are treated without regard to their race, color, religious creed, age, marital status, national origin, ancestry, sex, mental retardation or physical disability, unless the contractor can show that the disability prevents performance of the work involved;
3. Shall state in all advertisements for employees that it is an affirmative action-equal opportunity employer;
4. Shall comply with CONN. GEN. STAT. Sections 4a-60, 46a-68e and 46a-68f and with each regulation or relevant order issued by the CHRO under CONN. GEN. STAT. Sections 46a-56, 46a-68e and 46a-68f; and
5. Shall make, if the contract is a public works contract, good faith efforts to employ minority business enterprises as subcontractors and suppliers of materials.

WITH REGARD TO SEXUAL ORIENTATION, GENDER IDENTITY OR EXPRESSION:

1. The contractor will not discriminate or permit discrimination against anyone, and employees will be treated without regard to their sexual orientation, gender identity or expression once employed; and
2. The contractor agrees to fully comply with Section 4a-60a and each regulation or relevant order issued by the CHRO under CONN. GEN. STAT. Section 46a-56.

Persons having questions about this notice or their rights under the law are urged to contact the:

COMMISSION ON HUMAN RIGHTS AND OPPORTUNITIES
AFFIRMATIVE ACTION AND CONTRACT COMPLIANCE
UNIT

450 Columbus Boulevard, Suite 2
Hartford, CT 06103
(860) 541-4709

COPIES OF THIS NOTICE SHALL BE POSTED IN CONSPICUOUS PLACES
AVAILABLE TO ALL EMPLOYEES AND APPLICANTS FOR EMPLOYMENT

SEEC FORM 10

CONNECTICUT STATE ELECTIONS ENFORCEMENT COMMISSION

Rev. 1/11

Page 1 of 3



Notice to Executive Branch State Contractors and Prospective State Contractors of Campaign Contribution and Solicitation Limitations

Acknowledgement of Receipt of Explanation of Prohibitions for Incorporation in Contracting and Bidding Documents

This notice is provided under the authority of Connecticut General Statutes §9-612(g)(2), as amended by P.A. 10-1, and is for the purpose of informing state contractors and prospective state contractors of the following law (italicized words are defined on the reverse side of this page).

CAMPAIGN CONTRIBUTION AND SOLICITATION LIMITATIONS

No *state contractor, prospective state contractor, principal of a state contractor or principal of a prospective state contractor*, with regard to a *state contract* or *state contract solicitation* with or from a state agency in the executive branch or a quasi-public agency or a holder, or principal of a holder of a valid prequalification certificate, shall make a contribution to (i) an exploratory committee or candidate committee established by a candidate for nomination or election to the office of Governor, Lieutenant Governor, Attorney General, State Comptroller, Secretary of the State or State Treasurer, (ii) a political committee authorized to make contributions or expenditures to or for the benefit of such candidates, or (iii) a party committee (which includes town committees).

In addition, no holder or principal of a holder of a valid prequalification certificate, shall make a contribution to (i) an exploratory committee or candidate committee established by a candidate for nomination or election to the office of State senator or State representative, (ii) a political committee authorized to make contributions or expenditures to or for the benefit of such candidates, or (iii) a party committee.

On and after January 1, 2011, no state contractor, prospective state contractor, principal of a state contractor or principal of a prospective state contractor, with regard to a state contract or state contract solicitation with or from a state agency in the executive branch or a quasi-public agency or a holder, or principal of a holder of a valid prequalification certificate, shall **knowingly solicit** contributions from the state contractor's or prospective state contractor's employees or from a *subcontractor* or *principals of the subcontractor* on behalf of (i) an exploratory committee or candidate committee established by a candidate for nomination or election to the office of Governor, Lieutenant Governor, Attorney General, State Comptroller, Secretary of the State or State Treasurer, (ii) a political committee authorized to make contributions or expenditures to or for the benefit of such candidates, or (iii) a party committee.

DUTY TO INFORM

State contractors and prospective state contractors are required to inform their principals of the above prohibitions, as applicable, and the possible penalties and other consequences of any violation thereof.

PENALTIES FOR VIOLATIONS

Contributions or solicitations of contributions made in violation of the above prohibitions may result in the following civil and criminal penalties:

Civil penalties—Up to \$2,000 or twice the amount of the prohibited contribution, whichever is greater, against a principal or a contractor. Any state contractor or prospective state contractor which fails to make reasonable efforts to comply with the provisions requiring notice to its principals of these prohibitions and the possible consequences of their violations may also be subject to civil penalties of up to \$2,000 or twice the amount of the prohibited contributions made by their principals.

Criminal penalties—Any knowing and willful violation of the prohibition is a Class D felony, which may subject the violator to imprisonment of not more than 5 years, or not more than \$5,000 in fines, or both.

CONTRACT CONSEQUENCES

In the case of a state contractor, contributions made or solicited in violation of the above prohibitions may result in the contract being voided.

In the case of a prospective state contractor, contributions made or solicited in violation of the above prohibitions shall result in the contract described in the state contract solicitation not being awarded to the prospective state contractor, unless the State Elections Enforcement Commission determines that mitigating circumstances exist concerning such violation.

The State shall not award any other state contract to anyone found in violation of the above prohibitions for a period of one year after the election for which such contribution is made or solicited, unless the State Elections Enforcement Commission determines that mitigating circumstances exist concerning such violation.

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CONNECTICUT STATE ELECTIONS ENFORCEMENT COMMISSION

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DEFINITIONS

“State contractor” means a person, business entity or nonprofit organization that enters into a state contract. Such person, business entity or nonprofit organization shall be deemed to be a state contractor until December thirty-first of the year in which such contract terminates. “State contractor” does not include a municipality or any other political subdivision of the state, including any entities or associations duly created by the municipality or political subdivision exclusively amongst themselves to further any purpose authorized by statute or charter, or an employee in the executive or legislative branch of state government or a quasi-public agency, whether in the classified or unclassified service and full or part-time, and only in such person's capacity as a state or quasi-public agency employee.

“Prospective state contractor” means a person, business entity or nonprofit organization that (i) submits a response to a state contract solicitation by the state, a state agency or a quasi-public agency, or a proposal in response to a request for proposals by the state, a state agency or a quasi-public agency, until the contract has been entered into, or (ii) holds a valid prequalification certificate issued by the Commissioner of Administrative Services under section 4a-100. “Prospective state contractor” does not include a municipality or any other political subdivision of the state, including any entities or associations duly created by the municipality or political subdivision exclusively amongst themselves to further any purpose authorized by statute or charter, or an employee in the executive or legislative branch of state government or a quasi-public agency, whether in the classified or unclassified service and full or part-time, and only in such person's capacity as a state or quasi-public agency employee.

“Principal of a state contractor or prospective state contractor” means (i) any individual who is a member of the board of directors of, or has an ownership interest of five per cent or more in, a state contractor or prospective state contractor, which is a business entity, except for an individual who is a member of the board of directors of a nonprofit organization, (ii) an individual who is employed by a state contractor or prospective state contractor, which is a business entity, as president, treasurer or executive vice president, (iii) an individual who is the chief executive officer of a state contractor or prospective state contractor, which is not a business entity, or if a state contractor or prospective state contractor has no such officer, then the officer who duly possesses comparable powers and duties, (iv) an officer or an employee of any state contractor or prospective state contractor who has *managerial or discretionary responsibilities with respect to a state contract*, (v) the spouse or a *dependent child* who is eighteen years of age or older of an individual described in this subparagraph, or (vi) a political committee established or controlled by an individual described in this subparagraph or the business entity or nonprofit organization that is the state contractor or prospective state contractor.

“State contract” means an agreement or contract with the state or any state agency or any quasi-public agency, let through a procurement process or otherwise, having a value of fifty thousand dollars or more, or a combination or series of such agreements or contracts having a value of one hundred thousand dollars or more in a calendar year, for (i) the rendition of services, (ii) the furnishing of any goods, material, supplies, equipment or any items of any kind, (iii) the construction, alteration or repair of any public building or public work, (iv) the acquisition, sale or lease of any land or building, (v) a licensing arrangement, or (vi) a grant, loan or loan guarantee. “State contract” does not include any agreement or contract with the state, any state agency or any quasi-public agency that is exclusively federally funded, an education loan, a loan to an individual for other than commercial purposes or any agreement or contract between the state or any state agency and the United States Department of the Navy or the United States Department of Defense.

“State contract solicitation” means a request by a state agency or quasi-public agency, in whatever form issued, including, but not limited to, an invitation to bid, request for proposals, request for information or request for quotes, inviting bids, quotes or other types of submittals, through a competitive procurement process or another process authorized by law waiving competitive procurement.

“Managerial or discretionary responsibilities with respect to a state contract” means having direct, extensive and substantive responsibilities with respect to the negotiation of the state contract and not peripheral, clerical or ministerial responsibilities.

“Dependent child” means a child residing in an individual's household who may legally be claimed as a dependent on the federal income tax of such individual.

“Solicit” means (A) requesting that a contribution be made, (B) participating in any fund-raising activities for a candidate committee, exploratory committee, political committee or party committee, including, but not limited to, forwarding tickets to potential contributors, receiving contributions for transmission to any such committee or bundling contributions, (C) serving as chairperson, treasurer or deputy treasurer of any such committee, or (D) establishing a political committee for the sole purpose of soliciting or receiving contributions for any committee. Solicit does not include: (i) making a contribution that is otherwise permitted by Chapter 155 of the Connecticut General Statutes; (ii) informing any person of a position taken by a candidate for public office or a public official, (iii) notifying the person of any activities of, or contact information for, any candidate for public office; or (iv) serving as a member in any party committee or as an officer of such committee that is not otherwise prohibited in this section.

“Subcontractor” means any person, business entity or nonprofit organization that contracts to perform part or all of the obligations of a state contractor's state contract. Such person, business entity or nonprofit organization shall be deemed to be a subcontractor until December thirty first of the year in which the subcontract terminates. “Subcontractor” does not include (i) a municipality or any other political subdivision of the state, including any entities or associations duly created by the municipality or political subdivision exclusively amongst themselves to further any purpose authorized by statute or charter, or (ii) an employee in the executive or legislative branch of state government or a quasi-public agency, whether in the classified or unclassified service and full or part-time, and only in such person's capacity as a state or quasi-public agency employee.

“Principal of a subcontractor” means (i) any individual who is a member of the board of directors of, or has an ownership interest of five per cent or more in, a subcontractor, which is a business entity, except for an individual who is a member of the board of directors of a nonprofit organization, (ii) an individual who is employed by a subcontractor, which is a business entity, as president, treasurer or executive vice president, (iii) an individual who is the chief executive officer of a subcontractor, which is not a business entity, or if a subcontractor has no such officer, then the officer who duly possesses comparable powers and duties, (iv) an officer or an employee of any subcontractor who has managerial or discretionary responsibilities with respect to a subcontract with a state contractor, (v) the spouse or a dependent child who is eighteen years of age or older of an individual described in this subparagraph, or (vi) a political committee established or controlled by an individual described in this subparagraph or the business entity or nonprofit organization that is the subcontractor.

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ACKNOWLEDGEMENT OF RECEIPT

SIGNATURE

DATE (mm/dd/yyyy)

NAME OF SIGNER

First Name	MI	Last Name	Suffix

TITLE

COMPANY NAME

Additional information may be found on the website of the State Elections Enforcement Commission,

www.ct.gov/seec

Click on the link to "Lobbyist/Contractor Limitations"

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GENERAL CONTRACTOR
BIDDERS QUALIFICATION STATEMENT

PROJECT Western Connecticut State University
NAME/NO.: O'Neill Center Roof Replacement Natatorium/ BI-RD 311 /2020-MRC-0003

All bidders are required to file this form, properly completed, WITH THEIR PROPOSAL. Failure of a bidder to answer any question or provide required information may be grounds for the awarding authority to disqualify and reject their bid. If a question or request for information does not pertain to your organization in any way, use the symbol "NA" (Not Applicable). Use additional 8 ½" x 11" sheets with your letterhead as necessary.

1. Indicate exactly the name by which this organization is known:

Name: _____

2. How many years has this organization been in business under its present business name?

Years: _____

3. How many years has this organization been in business as a General Contractor?

Years: _____

4. If this organization has not always been a General Contractor, list the trade(s) that your firm customarily performed prior to the time that you became a General Contractor:

4.1 _____

4.2 _____

4.3 _____

5. Indicate all other names by which this organization has been known and the length of time known by each name:

5.1 _____

5.2 _____

5.3 _____

6. This firm is a:

- Corporation
 - Partnership
 - Sole Proprietorship
 - Joint Venture
 - Other
-

7. Attach resumes of all supervisory personnel, such as Principals, Project Managers, and Superintendents, who will be directly involved with project on which you are now a bidder. Indicate the number of years of construction experience and number of years of which they were in a Supervisory capacity.

8. List all sub-trades which your firm customarily performs with own employees.

- 8.1 _____
- 8.2 _____
- 8.3 _____
- 8.4 _____
- 8.5 _____

9. **Trade References:** Names, addresses and telephone numbers of several firms with whom your organization has regular business dealings, (attach separate sheets as necessary):

**SECTION 00030
GENERAL CONTRACTOR
BIDDERS QUALIFICATION STATEMENT
PAGE 5 OF 6**

12. Has your organization ever failed to complete a contract, or has any officer or partner of your organization ever been an officer or partner of another organization that failed to complete a contract? If so, indicate the circumstances leading to the project failure and the name of the company which provided the bonding for the failed contract(s):

13. List all legal or administrative proceedings currently pending or concluded adversely within the last five years which relate to procurement or performance of any public or private construction contracts. (Exclude OSHA violations which are called for elsewhere in this statement).

13.1 Attached:

13.2 N/A:

14. List all willful or serious violations of any Occupational Safety and Health Act (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.

14.1

14.2

15. Has your organization had any criminal convictions related to the injury or death of any employee in the three year period preceding the bid. Please list any such convictions below.

15.1

15.2

15.3

**SECTION 00030
GENERAL CONTRACTOR
BIDDERS QUALIFICATION STATEMENT
PAGE 6 OF 6**

Dated at _____

Signed this _____ day of _____ 19 _____

Name of Organization: _____

Signature _____

(Print Name) _____

Title _____

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 _____ 19 _____

Notary Public _____

My Commission Expires _____ 19 _____

END OF SECTION

Project: O'Neill Center Roof Replacement Natatorium Project No: BI-RD-311 Bid No: 2020-MRC-0003

**Minimum Rates and Classifications
for Building Construction**

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

ID# : B 26749

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

Project Number: Project Town: Danbury
State# FAP#:

Project: O'Neill Center Roof Replacement Natatorium Project No: BI-RD-311 Bid No:
2020-MRC-0003

CLASSIFICATION

Hourly Rate

Benefits

1a) Asbestos Worker/Insulator (Includes application of insulating materials, protective coverings, coatings, & finishes to all types of mechanical systems; application of firestopping material for wall openings & penetrations in walls, floors, ceilings	38.25	27.96
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1b) Asbestos/Toxic Waste Removal Laborers: Asbestos removal and encapsulation (except its removal from mechanical systems which are not to be scrapped), toxic waste removers, blasters. **See Laborers Group 7**

1c) Asbestos Worker/Heat and Frost Insulator	40.21	30.99
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As of: Monday, November 25, 2019

2) Boilermaker	38.34	26.01
3a) Bricklayer, Cement Mason, Concrete Finisher (including caulking), Stone Masons	34.72	32.55 + a
3b) Tile Setter	34.90	25.87
3c) Terrazzo Mechanics and Marble Setters	31.69	22.35
3d) Tile, Marble & Terrazzo Finishers	26.70	21.75
3e) Plasterer	33.48	32.06

As of: Monday, November 25, 2019

-----LABORERS-----

4) Group 1: Laborers (common or general), acetylene burners, concrete specialists, wrecking laborers, fire watchers.	30.75	20.84
4a) Group 2: Mortar mixers, plaster tender, power buggy operators, powdermen, fireproofers/mixer/nozzleman (Person running mixer and spraying fireproof only).	31.00	20.84
4b) Group 3: Jackhammer operators/pavement breaker, mason tender (brick), mason tender (cement/concrete), forklift operators and forklift operators (masonry).	31.25	20.84
4c) **Group 4: Pipelayers (Installation of water, storm drainage or sewage lines outside of the building line with P6, P7 license) (the pipelayer rate shall apply only to one or two employees of the total crew who primary task is to actually perform the mating of pipe sections) P6 and P7 rate is \$26.80.	31.75	20.84
4d) Group 5: Air track operator, sand blaster and hydraulic drills.	31.50	20.84

4e) Group 6: Blasters, nuclear and toxic waste removal.	33.75	20.84
4f) Group 7: Asbestos/lead removal and encapsulation (except it's removal from mechanical systems which are not to be scrapped).	31.75	20.84
4g) Group 8: Bottom men on open air caisson, cylindrical work and boring crew.	29.03	20.84
4h) Group 9: Top men on open air caisson, cylindrical work and boring crew.	28.49	20.84
4i) Group 10: Traffic Control Signalman	18.00	20.84
5) Carpenter, Acoustical Ceiling Installation, Soft Floor/Vinyl Floor/Carpet Laying, Metal Stud Installation, Form Work and Scaffold Building, Drywall Hanging, Modular-Furniture Systems Installers, Lathers, Piledrivers, Resilient Floor Layers.	33.53	25.66

5a) Millwrights	34.04	26.09
6) Electrical Worker (including low voltage wiring) (Trade License required: E1,2 L-5,6 C-5,6 T-1,2 L-1,2 V-1,2,7,8,9)	39.62	27.25+3% of gross wage
7a) Elevator Mechanic (Trade License required: R-1,2,5,6)	53.37	33.705+a+b

-----LINE CONSTRUCTION-----

Groundman	26.50	6.5% + 9.00
Linemen/Cable Splicer	48.19	6.5% + 22.00

8) Glazier (Trade License required: FG-1,2)	38.18	21.80 + a
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9) Ironworker, Ornamental, Reinforcing, Structural, and Precast Concrete Erection	36.67	35.77
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----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. and over and Tunnel Boring Machines. (Trade License Required)	40.97	24.80 + a
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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
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Group 3: Excavator; Backhoe/Excavator under 2 cubic yards; Cranes (under 100 ton rated capacity), Grader/Blade; 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
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Group 4: Trenching Machines; Lighter Derrick; Concrete Finishing Machine; CMI Machine or Similar; Koehring Loader (Skooper).	39.48	24.80 + a
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Group 5: Specialty Railroad Equipment; Asphalt Paver; Asphalt Reclaiming Machine; Line Grinder; Concrete Pumps; Drills with Self Contained Power Units; Boring Machine; Post Hole Digger; Auger; Pounder; Well Digger; Milling Machine (over 24" Mandrell)	38.87	24.80 + a
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Group 5 continued: Side Boom; Combination Hoe and Loader; Directional Driller; Pile Testing Machine.	38.87	24.80 + a
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Group 6: Front End Loader (3 up to 7 cubic yards); Bulldozer (rough grade dozer).	38.55	24.80 + a
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Group 7: Asphalt roller, concrete saws and cutters (ride on types), vermeer concrete cutter, Stump Grinder; Scraper; Snooper; Skidder; Milling Machine (24" and under Mandrell).	38.20	24.80 + a
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Group 8: Mechanic, grease truck operator, hydroblaster; barrier mover; power stone spreader; welding; work boat under 26 ft.; transfer machine.	37.79	24.80 + a
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Project: O'Neill Center Roof Replacement Natatorium Project No: BI-RD-311 Bid No: 2020-MRC-0003

Group 9: Front end loader (under 3 cubic yards), skid steer loader regardless of attachments, (Bobcat or Similar): forklift, 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

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

As of: Monday, November 25, 2019

Group 15: Generator Operator; Compressor Operator; Pump Operator; Welding Machine Operator; Heater Operator.	32.99	24.80 + a
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Group 16: Maintenance Engineer/Oiler.	32.32	24.80 + a
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Group 17: Portable asphalt plant operator; portable crusher plant operator; portable concrete plant operator.	36.76	24.80 + a
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Group 18: Power safety boat; vacuum truck; zim mixer; sweeper; (Minimum for any job requiring a CDL license).	34.26	24.80 + a
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-----PAINTERS (Including Drywall Finishing)-----

10a) Brush and Roller	34.62	21.80
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10b) Taping Only/Drywall Finishing	35.37	21.80
10c) Paperhanger and Red Label	35.12	21.80
10e) Blast and Spray	37.62	21.80
11) Plumber (excluding HVAC pipe installation) (Trade License required: P-1,2,6,7,8,9 J-1,2,3,4 SP-1,2)	43.62	32.06
12) Well Digger, Pile Testing Machine	37.26	24.05 + a
Roofer: Cole Tar Pitch	41.50	17.00 + a

Rofer: Slate, Tile, Composition, Shingles, Singly Ply and Damp/Waterproofing	40.00	17.00 + a
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15) Sheetmetal Worker (Trade License required for HVAC and Ductwork: SM-1,SM-2,SM-3,SM-4,SM-5,SM-6)	44.74	42.48
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16) Pipefitter (Including HVAC work) 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)	(Trade 43.62	32.06
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-----TRUCK DRIVERS-----

17a) 2 Axle	29.51	24.52 + a
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17b) 3 Axle, 2 Axle Ready Mix	29.62	24.52 + a
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17c) 3 Axle Ready Mix	29.67	24.52 + a
17d) 4 Axle, Heavy Duty Trailer up to 40 tons	29.72	24.52 + a
17e) 4 Axle Ready Mix	29.77	24.52 + a
17f) Heavy Duty Trailer (40 Tons and Over)	29.98	24.52 + a
17g) Specialized Earth Moving Equipment (Other Than Conventional Type on-the-Road Trucks and Semi-Trailers, Including Euclids)	29.77	24.52 + a
18) Sprinkler Fitter (Trade License required: F-1,2,3,4)	45.57	24.33 + a

As of: Monday, November 25, 2019

19) Theatrical Stage Journeyman

25.76

7.34

Welders: Rate for craft to which welding is incidental.

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

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

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

3) Cranes (under 100 ton rated capacity)

- Crane with 150 ft. boom (including jib) - \$1.50 extra*
- Crane with 200 ft. boom (including jib) - \$2.50 extra*
- Crane with 250 ft. boom (including jib) - \$5.00 extra*
- Crane with 300 ft. boom (including jib) - \$7.00 extra*
- Crane with 400 ft. boom (including jib) - \$10.00 extra*

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

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

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.

As of: Monday, November 25, 2019

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

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

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

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

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

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

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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.

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.

STATUTE 31-55a

- SPECIAL NOTICE -

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

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

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

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

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

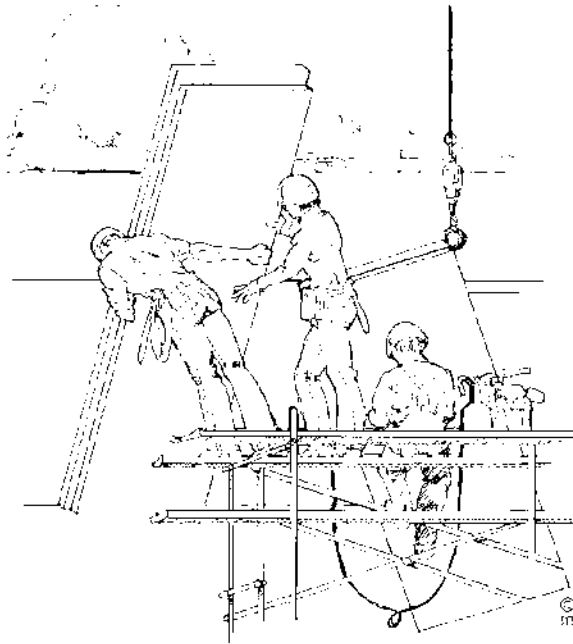
~NOTICE~

TO ALL CONTRACTING AGENCIES

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

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

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



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

CONTRACTING AGENCY CERTIFICATION FORM

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

for _____, located at _____,
contracting agency address

do hereby certify that the total dollar amount of work to be done in connection with
_____, located at _____,
project name and number address

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

CONTRACTOR INFORMATION

Name: _____

Address: _____

Authorized Representative: _____

Approximate Starting Date: _____

Approximate Completion Date: _____

Signature

Date

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

Date Issued: _____

CONNECTICUT DEPARTMENT OF LABOR
WAGE AND WORKPLACE STANDARDS DIVISION

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

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

do hereby certify that the _____
Company Name

Street

City

and all of its subcontractors will pay all workers on the

Project Name and Number

Street and City

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

Signed

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

Notary Public

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

Rate Schedule Issued (Date): _____

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***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 _____ 4) Disability _____
- 2) Pension or retirement _____ 5) Vacation, holiday _____
- 3) Life Insurance _____ 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)

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. PILEDIVERMEN. 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.

**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.

NOTICE TO BIDDERS
STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC WORKS

1. BIDS AND REJECTION OF BIDS:

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.

Every bid which is conditional or obscure, 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.

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.

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.

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 be 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.

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 or telegraph 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.

Any bid received after the scheduled closing time for the receipt of bids will be returned to the bidder unopened.

Any bid once deposited with the Department of Public Works may only be withdrawn by letter of request, signed by the depositing bidder and presented to the Chief, Bidding Section, prior to the time of opening of any bid for the project designated or identified project.

2. BID SECURITY:

Each bid must be accompanied by a certified check payable to the order of the Treasurer of the 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 Public Works and as are authorized to do business in this State, for an amount not less than 10 per cent of the bid. All checks submitted by unsuccessful bidders shall be returned to them after the contract has been awarded.

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.

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 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 to the address 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.

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 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.

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.

7. 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.

8. SECURITY FOR FAITHFUL PERFORMANCE:

8.1.1 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 per cent 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.

8.1.2 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 per cent 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 per cent 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.

9. 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.

10. CONTRACTOR'S QUALIFICATIONS:

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

11. 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.

12. 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.

13. 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) For the purposes of this section, "minority business enterprise" means any small contractor or supplier of materials fifty-one per cent or more of the capital stock, if any, or assets of which is owned 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.

14. 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.

15. 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.

16. 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.

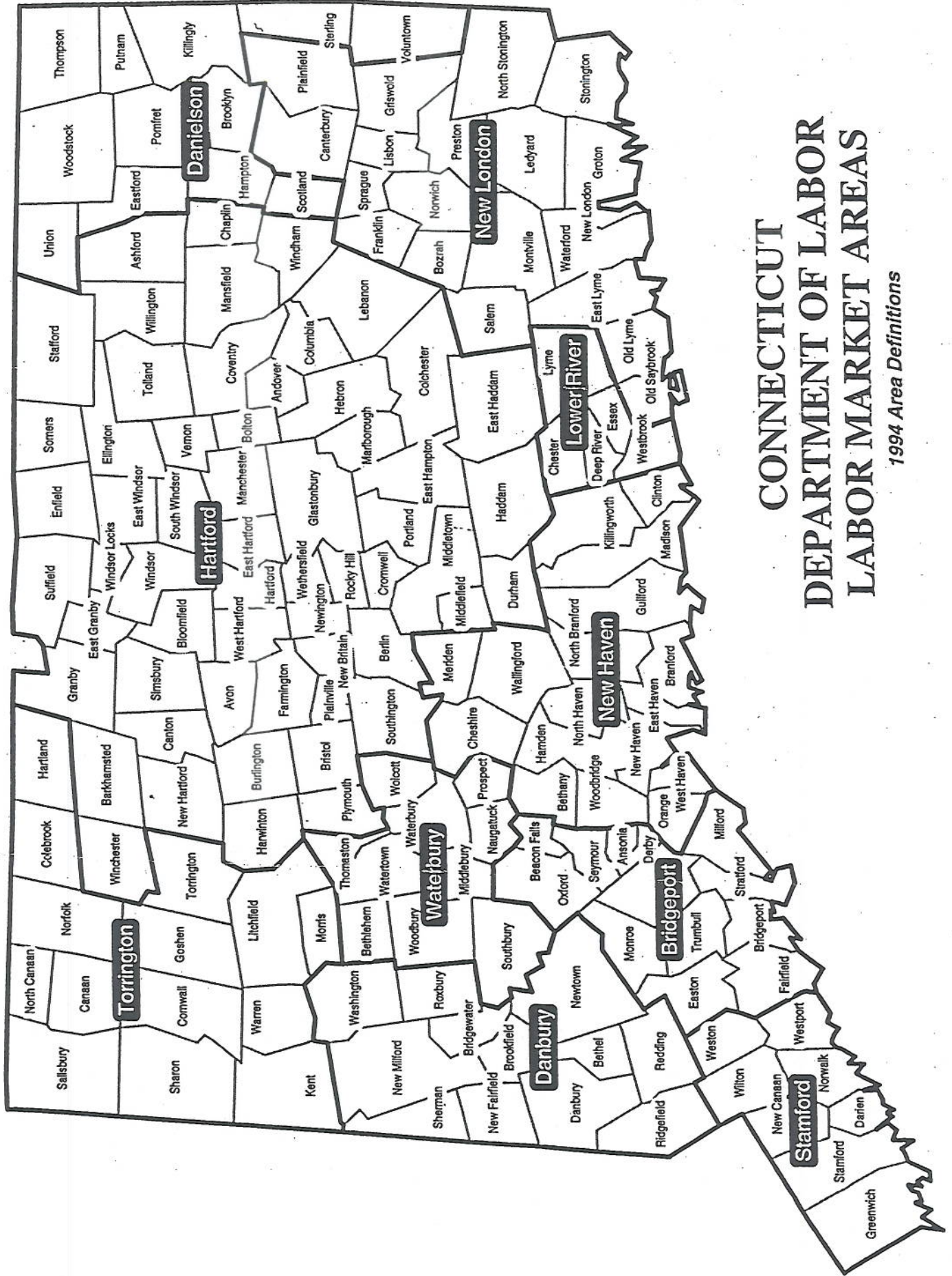
In order to avoid violations by the contractor and to cooperate with and assist the State in the implementation of the statutory mandates, any bidder awarded a contract with the State shall be required to provide the State with the following information:

- 16.1 The names and addresses of employees utilized by the contractor and by its subcontractors and how long each such employee has resided in Connecticut.
- 16.2 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.
- 16.3 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.
- 16.4 In the same manner as item (16.3) above, the statement shall indicate the steps taken to assure that the Contractor and its Subcontractors have sought out qualified residents of this State.
- 16.5 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.
- 16.6 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.



**CONNECTICUT
DEPARTMENT OF LABOR
LABOR MARKET AREAS**

1994 Area Definitions

WORKING PROCEDURES DURING CONSTRUCTION**SECTION I – GENERAL**

- A. Contact between the budgeted agency and the Architect/Engineer will be through the Construction Administrator assigned to the project. Contact between the Architect and the Contractor will be through the Construction Administrator, except on matters relating to shop drawings (Section 5 below); approval of materials (Section 6); approval of samples (Section 7).
- B. The control, field supervision, and inspection of this project through the date of guarantee required by the General Conditions will be conducted by the University or its designated representative, as directed by the University Architect delegated by the Commissioner to the Director of Construction Services, whose project organization includes the following:
- (1) Director of Facilities Planning & Engineering/University Representative
 - (2) Associate Director/Assistant Director of Facilities Planning & Engineering
 - (3) Construction Administrator/University Representative/ Project Manager
 - (4) Architect/ Engineer
- C. The Construction Administrator assigned to the project is responsible to his superiors for the control, field supervision, and inspection of the project. The Contractor and the Architect/Engineer submit to the Construction Administrator a separate written statement on each question of contract interpretation, contract discrepancy, contract change, or on any question concerning a deviation from the contract requirements.

SECTION 2 – CORRESPONDENCE

- A. Standard practice is to be as follows:
1. All correspondence must bear the correct title and assigned contract number for purposes of identification.
 2. For ease in filing, a separate letter must be issued for each subject. SEVERAL SUBJECTS ARE NOT TO BE COMBINED IN ONE LETTER.
 3. All shop drawings, samples, etc., must be accompanied by a transmittal letter, which should be clear as to what is being transmitted.
 4. Persons and/or firms receiving copies shall be noted on all copies of each letter. A check mark is to be placed beside each name so as to designate to whom the copy belongs.
 5. The following procedures as to be followed:
 - a. A copy of every letter addressed by the Architect/Engineer to the Construction Administrator (and vice versa) is to be sent to the Director of Facilities Planning & Engineering.
 - b. A copy of every letter addressed by the Architect/Engineer to the Contractor (and vice versa) is to be sent to the Director of Facilities Planning and Engineering and Construction Administrator.

- c. A copy of every letter addressed by the Contractor to the Construction Administrator (and vice versa) is to be sent to the Director of Facilities Planning and Engineering and the Architect/Engineer.
 - d. A copy of every letter addressed by either the Construction Administrator or the Architect/Engineer to the budgeted agency is to be sent to the Director of Facilities Planning and Engineering.
- B. All correspondence addressed to the Director of Facilities Planning & Engineering is to be sent to Western Connecticut State University, 181 White Street, Danbury, CT 06810. Letters shall be sent direct and with the least possible delay.

SECTION 3 – JOB DRAWINGS, DETAIL DRAWINGS, ETC.

- A. The Architect/Engineer will furnish four (4) prints, three (3) to be sent by transmittal letter directly to the Construction Administrator on the job and one (1) directly to the Director of Facilities Planning and Engineering with one (1) copy of the transmittal letter. A copy of the transmittal letter only is to be sent directly to the Director of Facilities Planning & Engineering, and three (3) prints are to be sent directly to the Contractor together with a copy of the same transmittal letter.

SECTION 4 – APPROVAL OF SUBCONTRACTORS

- A. Initial submission shall be as prescribed in the proposal attached to and made a part of the contract. Subsequent submission(s), on the Contractor's letterhead, shall include the name of the proposed subcontractor(s), what services they will be providing, and the contract amount. This information is sent to the Director of Facilities Planning and Engineering, with a copy to the Architect/Engineer, and the Construction Administrator. The Contractor will be notified by the University on approvals of all subcontractors.

SECTION 5 – SHOP DRAWINGS

- A. The Contractor shall forward, after detailed checking in his office, with a transmittal letter, three (3) prints of each shop drawing to the Architect/Engineer for initial checking, following the procedure as outlined in paragraph 2 above. At the same time, the Contractor shall send a copy of the transmittal letter to the Director of Facilities Planning and Engineering, and one (1) copy to the Construction Administrator, assigned to the project.
- B. After corrections have been made, or when the shop drawings are finally approved, the Contractor is to furnish a total of seven (7) prints of each drawing to the Architect/Engineer. For sprinkler shop drawings, provide a total of ten (10) prints. All prints to include the project name and DCS project number.
- C. Noting his action on shop drawings, the Architect/Engineer shall:
- 1. Retain two (2) sets of drawings for his files.
 - 2. Return two (2) sets to the Contractor with a transmittal letter.
 - 3. Send one (1) set to the District Construction Supervisor together with a copy of the transmittal letter.

4. Send two (2) sets to the Construction Administrator, with one (1) copy of the transmittal letter.
5. In the case of fire sprinkler systems only, add (3) sets of final approved shop drawings to make a total of (10) sets. Two (2) sets will be sent to the States Insurance Carrier. One (1) set (if the building exceeds the threshold limit) shall be sent to the State Fire Marshals office for ultimate approval and compliance. The sets submitted to the Fire Marshal and Insurance Carrier shall include hydraulic calculations, and manufacturers' specification sheets for all sprinkler heads, backflow preventors, and fire pumps (including pump curves).

SECTION 6 – APPROVAL OF MATERIALS

- A. The Contractor shall submit directly to the Architect/Engineer for approval a list of all materials and equipment proposed for use on the project, following the procedure outlined in paragraph 2 above. Approval or disapproval will be handled as follows. Note that there are three (3) broad classifications to be considered:
 1. Action on any material or equipment which is named by brand in the specifications will be taken by the Architect/Engineer.
 2. When the Contractor proposes an equal for any specified material or equipment, he shall submit to the Architect/Engineer full information (manufacturer's brochure, etc.) covering the item proposed. The Architect/Engineer will evaluate the data and submit three (3) copies of the information along with his recommendations to the Director of Facilities Planning and Engineering, who will inform the Contractor of the decision.
 3. If the Contractor proposes material or equipment that deviates from the specifications (a substitution to be handled by a change order), he shall submit full information about the item, and a credit to the owner, where applicable, supported by the manufacturer's original quotation for specified material and that for the substitution. The Architect/Engineer will review this data, and submit three (3) copies of the information along with his recommendations to the Director of Facilities Planning and Engineering, who will notify the Contractor of the decision.
 4. Time limitations for making submittals on equals or for substitutions, shall be in accordance with Article 14 of the General Conditions.
- B. Selection of paint colors and colors of interior finished materials shall be made by the Architect/Engineer, who will be responsible for obtaining approval of the using agency. After receiving this approval, he will notify the Contractor.

SECTION 7 – APPROVAL OF SAMPLES

- A. Procedure on approval of samples will be the same as for materials; however, in most cases, samples delivered by the Contractor to the job site will be examined there and will be held there until completion of the work. Approval by the Architect/Engineer is to be in writing following procedure outlined in Section 6A. (2).

SECTION 8 – REPORTS ON WORK AT SITE

- A. The diary kept by the Construction Administrator on the job will be available for the Architect/Engineer. The CC/S will also keep a list of questions for determination by the Architect/Engineer.
- B. Observation reports by the Architect/Engineer are also required.

SECTION 9 – INSURANCE CERTIFICATES

- A. All certificates, in triplicate, will be sent to the Contracts Supervisor of the Contract Section.

SECTION 10 – INSTRUCTIONS ON THE WORK

- A. All instructions on the job will be given the Contractor by the Construction Administrator, who will make any decisions not in conflict with the plans and specifications. He will advise the Architect/Engineer at all times as to actions taken. On matters of major importance, the Construction Administrator will consult with the Director of Facilities Planning and Engineering and the Architect/Engineer and obtain clearance before giving instructions to the Contractor.
- B. On engineering projects, each Architect/Engineer will keep the Engineering Section of the Department of Construction Services advised concerning instructions and interpretations given by him, and in no case will authorize engineering changes in the plans or specifications without receiving prior approval of the Engineering Section.
- C. Deviations from plans and specifications will be handled by a change order.

SECTION 11 – SCHEDULE OF VALUES OF THE WORK

- A. The Contractor shall prepare, on forms furnished by the Department of Construction Services, one (1) pencil copy of the schedule of values, for various parts of the work, broken down as directed, aggregating the total sum of the contract, and submit to the assigned Construction Administrator for review.
- B. Following this review and initialing by the Mechanical/Electrical Specialist, if applicable, the Construction Administrator will transmit the initialed copy of the schedule of values to the Hartford office for further processing.
- C. After final approval, the Hartford office will notify the Contractor to submit the final typed schedule of values in the number of copies required.
- D. Under no circumstances is the Contractor to submit a requisition for partial payment until the schedule of values has been approved.

SECTION 12 – REQUISITIONS

- A. The Contractor's requests for partial payment shall be itemized to correspond with the approved schedule of values. Requisitions shall be submitted directly to the Construction Administrator for approval and processing.
- B. Requisitions for requests for partial payment shall be submitted once a month directly to the Construction Administrator assigned to the project.

SECTION 13 – CHANGE ORDERS

- A. Any change for improvement of the work or to provide for field conditions suggested by the budgeted agency, the Department of Construction Services, the Contractor, or the Architect/Engineer, will be handled by the Construction Administrator assigned to the project. The Construction Administrator is to determine the necessity for the change and clear with the Architect/Engineer and the budgeted agency. He may ask the Architect/Engineer to prepare any documents necessary to process the change, and he will obtain from the Contractor any estimate covering additions to or deductions from the contract price.
- B. Changes requested by the agency must first be addressed by the agency head to the Commissioner of Construction Services for consideration and approval before any action will be taken by the Construction Administrator.
- C. To expedite change orders during the course of construction, proposals are to be submitted directly to the assigned Construction Administrator (in the number of copies requested) with a copy to the Director of Facilities Planning and Engineering, the District Construction Supervisor, and the Architect/Engineer.
- D. After review and comment by the budgeted agency, the request for change order, with all back-up, including the architect's/engineer's recommendations and a definite statement of need and/or reason for the change, will be submitted by the Construction Administrator to the central office of the Department of Construction Services. On approval by the Commissioner, a change order to the contract will be issued authorizing the change.
- E. The amount of compensation to be paid for additional work shall be in accordance with Article 13 of the General Conditions.
- F. Lump sum proposals are to contain certain quantities and unit prices and be itemized in sufficient detail to give the Department of Construction Services a basis for checking. When a subcontractor's price is included in the general contractor's proposal, the subcontractor's breakdowns to be included. Credits must be deducted before the percentage can be applied.
- G. Every proposal is to state whether or not extension of time is required, and if so, of how many days.
- H. In the event of disagreement between the Contractor and the Cost Review Section as to the amount of the proposal, the Cost Review Section will take the matter up with the Contractor through the Construction Administrator on the job or, if more expedient, directly with the Contractor.
- I. In no case is a Contractor to proceed without an approved Change Order, or if necessary, to expedite the work, a proceed order authorized by the Commissioner of the Director of Construction, as provided in Articles 13 and 26 of the General Conditions. This shall not, however, affect the power of the Contractor to act in a case of emergency, threats of injury to persons, damage to the work or an adjacent property.

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State Building Projects Inspection Procedures

The Office of the State Building Inspector (OSBI) and the Office of the State Fire Marshal (OSFM) are charged with the responsibility to ensure that State building projects are constructed in compliance with the State Building and Fire Safety Codes. Compliance with these Codes also includes compliance to the approved plans and specifications for the project as well as manufacturers' installation instructions requirements.

There are multiple inspections performed on construction sites: structural, architectural, electrical, mechanical, plumbing, accessibility, energy conservation, etc. The drawings and specifications, including numerous details contained within these documents, are substantial and complex. Our inspectors thoroughly inspect all work to verify that it has been done in compliance with approved documents and meets all code requirements prior to being concealed.

While our inspectors have a critical role to play in the construction process, we view our work as work that can be conducted most effectively when it is done in partnership with the project team. To that goal the following process is established.

At the beginning of each project our assigned inspector(s) will review and discuss the inspection procedure with the entire project team at a kickoff meeting in order to eliminate any confusion about the inspection process to be followed throughout construction of the project.

For each project we will ask for a primary contact from the Construction Administrator (CA). The CA will be responsible for verifying that trade work is complete and pre-tested by the contractor prior to requesting an inspection from OSBI or OSFM. The CA will also have any pertinent information (shop drawings, manufacturer's data, engineering judgements, SKS, etc.) assembled and readily available for the inspector at the time of his inspection. The CA will also accompany the inspector during the entire duration of his inspection. Failure to be complete and prepared will result in the inspection being aborted and necessitate rescheduling to a time when the work is complete and all preparations have been made. Continued failure to be prepared for requested inspections will result in a negative score on the CA's performance evaluation.



All inspection requests will be made using the following procedure:

The request must be emailed to our office at: OSBI.Inspections@ct.gov with copies to the assigned inspector(s) for the project.

The email shall include the following information:

- **The project name and project number.**
- **The date and time of the requested inspections.**
- **The type(s) of inspections requested.**
- **The name and phone number of the project contact person in case you need to be reached due to conflicts.**

Inspection requests shall be made at least 48 hours prior to the requested time of inspection

Multiple inspections can be scheduled in a single email. Just be clear as to the date and time of each inspection.

. The assigned OSBI/OSFM inspector will visit the site on the requested date and time, perform the scheduled inspection and either approve or reject the work inspected. The inspector will provide a written report of the inspection to the CA at the time of inspection.

In the event that there is a question, a clarification needed or a disputed interpretation, or any other concern regarding the inspection process, you may contact the State Building Inspector at (860) 713-5900 or the State Fire Marshal (860) 713-5750.



OSBI Required Inspections

Per Section 109.3 of the State Building Code, the following building code inspections are required on State construction projects under the jurisdiction of the Office of the State Building Inspector:

- **Footing and foundation inspections.** Footing and foundation inspections shall be made prior to placing concrete after required forms and reinforcement are in place and ready for inspection.
- **Concrete slab and under-floor inspection.** Concrete slab and under-floor inspections shall be made after in-slab or under-floor reinforcing steel and building service equipment, conduit, piping accessories and other ancillary equipment items are in place, but before any concrete is placed or floor sheathing installed, including the subfloor.
- **Frame inspection.** Framing inspections shall be made after the roof deck or sheathing, all framing, fire-blocking and bracing are in place and pipes, chimneys and vents to be concealed are complete and the rough electrical, plumbing, heating wires, pipes and ducts are approved.
- **Fire-resistant penetrations.** Protection of joints and penetrations in fire-resistance-rated assemblies shall not be concealed from view until inspected and approved.
- **Energy efficiency inspections.** Inspections shall be made to determine compliance with the International Energy Conservation Code and shall include, but not be limited to, inspections for: envelope insulation R and U values, fenestration U value, duct system R value, and HVAC and water-heating equipment efficiency.
- **Electrical.** All electrical work shall be inspected prior to concealment. This includes underground conduit prior to burial; in-wall and above ceiling electrical prior to coverings; and under slab conduit prior to concrete. Notification shall be given for all testing of electrical systems including emergency/standby power systems, emergency lighting, fire pumps and fire alarm systems. Electrical panels and equipment shall be inspected prior to energizing. Inspections are required for temporary power to construction trailers or offices.
- **Plumbing/Mechanical.** All piping and mechanical systems shall be inspected prior to concealment. Notification shall be given for testing of all piping systems and smoke testing of ductwork for kitchen hood exhaust systems. All ductwork shall be inspected prior to being insulated. All fire dampers and smoke dampers shall be tested with the Office of State Building Inspector (OSBI) witnessing tests. All mechanical equipment shall be inspected prior to energizing. Equipment will be inspected for compliance to both code requirements and the manufacturer's installation requirements.
- **Other inspections.** In addition to the inspections specified above, the building official is authorized to make or require other inspections of any construction work to ascertain compliance with the provisions of the State Building Code.
- **Special inspections.** As required by the Statement of Special Inspections required through Section 1704.

cont./



- **Final inspection.** The final inspection shall be made after all work required by the building permit is completed.

This list is offered as a guide to when an inspection should be scheduled. Basically, **an inspection is required prior to concealing work regulated by code or energizing equipment.** If there is a doubt, please call our office and we will clarify.

In addition, the Office of the State Building Inspector encourages the scheduling of inspections for initial installations of accessible building elements (such as grab bars, sinks, dispensers, etc.) to avoid relocating of elements for code compliance. The same is true for items such as handrails, guards, required signage, etc.

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OSFM Required Inspections

Inspections are to be e-mailed to OSBI.Inspections@ct.gov for the installation of systems such as but not limited to;

- ***Automatic sprinkler systems (NFPA 13)***
 - Hydrostatic Tests: Aboveground and underground piping.
 - Air Tests: Dry pipe systems.
 - System Operational Test: Water flow devices (audible alarm within 5minutes after flow begins).
 - Pressure Reducing Valves: Proper operation under flow and no flow conditions.
 - Backflow Prevention Assemblies: Forward flow test.

- ***Fire alarm and detection systems (NFPA 72)***
 - Written statement of completion.
 - Record of completion form.
 - Initial Acceptance Test.
 - Reacceptance Test where applicable.

- ***Fire pumps (NFPA 20)***
 - Suction and discharge piping shall be hydrostatically tested.
 - Suction piping shall be flushed
 - Installing contractor shall furnish a certificate of test prior to the start of the acceptance test.
 - Present at the test shall be the pump, engine, controller mfg, and the transfer switch mfg.
 - Test procedures shall be found in NFPA 20

- ***Stand pipe systems (NFPA 14)***
 - Test shall be conducted on the water distribution system.
 - Complete and sign appropriate contractors material and test certificate.
 - Underground piping supplying the system shall be flushed in accordance with NFPA 24.
 - All hose connections and fire department connections shall be tested for compatibility.
 - Hydrostatic test all new systems.
 - Hydrostatic test all new piping in existing systems that are modified.



- ***Emergency generators (NFPA 110)***
 - Acceptance test shall be conducted after completion of the installation with all EPSS accessory and support equipment in place and operating.
 - Onsite installation test shall be conducted in accordance with section 7.13.4.1 (steps 1-13)
 - Additional requirements shall be followed as indicated in sections 7.13.5 – 7.13.11.
 - Additional documentation required: see 7.13.11.
 - Evidence of the prototype test as specified in 5.2.1.2.
 - A certified analysis as specified in 5.6.10.2.
 - A letter of compliance as specified in 5.6.10.5.
 - A manufacturer certification of a rated load test at rated power factor with ambient temperature, altitude, and fuel grade recorded.

- ***Temporary heating systems***
- ***Hazardous Materials***
- ***L.P. & Natural Gas systems***
- ***Alternative suppression systems***
- ***Cooking suppression systems***

This list does not relieve the owner/contractor/designer from complying with all the requirements of the referenced documents of the Connecticut State Fire Safety Code and the Connecticut State Fire Prevention Code. Refer to the specific legally adopted NFPA standard for the complete requirements for installation, design, and testing.

A complete listing of referenced standards can be found in Chapter 2 of the Connecticut State Fire Safety Code and Connecticut State Fire Prevention Code.

Regulations of Connecticut State Agencies



OSBI/OSFM INSPECTION REQUEST & REPORT

All inspections require 48-hour notice and shall be e-mailed to: OSBI.Inspections@ct.gov

(This portion to be completed by Construction Administrator)

Project Name: Click here to enter text.

Building Permit No.: Click here to enter text.

Project No: Click here to enter text.

Date of Request Inspection: Click here to enter a date.

Time: Click here to enter text.

Requested by: Click here to enter text.

Areas to be inspected: Click here to enter text.

Pre-inspection conducted by construction administrator. (Initials): Click here to enter text.

(OSBI Use only below this line)

<input type="checkbox"/> INSPECTION <input type="checkbox"/> RE-INSPECTION RE-INSPECTION NO.:	INSPECTION DATE: INSPECTED BY:
ISSUE DATE:	ISSUED TO:

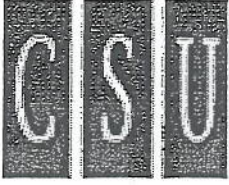
INSPECTION SUMMARY (Select all that apply)

- APPROVED** Close area. No further action required.
- PARTIALLY APPROVED** List approved locations in comments below.
- FAILED** Remedial work indicated. Re-inspection required.*
- ABORTED** Area not ready for inspection. Re-inspection required.*
- INFORMATION REQUIRED** For conducting inspection. (Specify below.)
- OTHER** Specify below.
- ATTACHMENTS** Additional report logs attached; i.e., fire damper, pipe test, etc.

*The number of re-inspections will be tracked for OSBI use.

ADDITIONAL EXPLANATORY COMMENTS: See back of form.

Connecticut State University System



Central Connecticut State University
Eastern Connecticut State University
Southern Connecticut State University
Western Connecticut State University
System Office

STANDARD TERMS AND CONDITIONS

I. DEFINITIONS

The following words, when used herein, shall have the following meanings:

1. "Contract" shall mean any agreement negotiated by and between CSU and the contractor selected by CSU as the result of a request for proposal, request for quotation, or request for bid, including, but not limited to, a personal service agreement or purchase order.
2. "CSU" shall refer to the Connecticut State University System, which is comprised of Central Connecticut State University, Eastern Connecticut State University, Southern Connecticut State University, Western Connecticut State University and the System Office, collectively and individually, as the context requires.
3. "Person" shall mean an individual, partnership, corporation or other business entity, as the context requires.
4. "Proposal" shall mean a response to a request for proposal, request for bid, or request for quotation.
5. "Proposer" shall mean a contractor that submits a response to a request for proposal, request for bid, or request for quotation.
6. "RFP" shall mean a request or invitation for proposal, bid, or quotation, as applicable.

II. TERMS AND CONDITIONS RELATED TO REQUESTS FOR PROPOSALS

A. General Conditions

1. CSU reserves the right to amend or cancel an RFP prior to the date and time for the opening of proposals. CSU, in its sole discretion, reserves the right to accept or reject any and all proposals, in whole or in part, and to waive any technicality in any proposal submitted, and to accept any part of a proposal deemed to be in the best interest of CSU.
2. Proposals received from proposers debarred by the State of Connecticut will not be considered for award.
3. CSU does not commit to specific volumes of activity, nor does it guarantee the accuracy of statistical information provided in the RFP. Such information is supplied to proposers for reference only.
4. All responses to the RFP shall be and remain the sole property of CSU.
5. Each proposer shall bear all costs associated with proposer's response to an RFP, including, but not limited to, the costs of any presentation and/or demonstration required by CSU. In addition, answers or clarifications sought by CSU arising out of or in connection with the proposal shall be furnished by the proposer at the proposer's expense.

6. CSU reserves the right to negotiate, as it may deem necessary, with any or all of the proposers that submit proposals.
7. Any alleged oral agreement or arrangement made by any proposer with CSU or any employee thereof shall not be binding.

B. Submission of Proposals

1. Proposals must be submitted on forms supplied by CSU. Telephone, facsimile, or email proposals will not be accepted in response to an RFP.
2. The time and date proposals are to be received and opened are stated in each RFP issued by CSU. Proposals received in the applicable CSU purchasing department after the date and time specified in the RFP will be returned to the proposer unopened. Proposal amendments received by CSU after the time specified for opening of proposals shall not be considered.
3. All proposals must be addressed to the location designated in the RFP. Proposal envelopes must clearly state the proposal number as well as the date and time of the opening of the proposals, as stated in the RFP. The name and address of the proposer must appear in the upper left hand corner of the envelope.
4. Proposals must be computer prepared, typewritten or handwritten in ink. Proposals submitted in pencil will be rejected.
5. Proposers must answer all the questions set forth in the RFP using the outline and numbering scheme set forth therein. Proposers must furnish all information requested in the RFP and supply all materials required for consideration. Failure of the proposer to answer all questions and supply all information and materials requested may be grounds for rejection of the proposal.
6. All proposals must be signed by a person duly authorized to sign proposals on behalf of the proposer. All signatures on the proposal must be original. Proposals bearing stamp signatures will be rejected. Unsigned proposals will be rejected.
7. Alterations or corrections to the proposal must be initialed by the person signing the proposal or his or her authorized designee. All initials on alterations or corrections to the proposal must be original. In the event that an authorized designee initials an alteration or correction, the proposer must submit a written authorization from the proposal's signatory to the authorized designee, authorizing the designee to make the alteration or correction. Failure to submit such an authorization shall result in rejection of proposal as to those items altered or corrected and not initialed.

8. Conditional proposals are subject to rejection in whole or in part, in the sole discretion of CSU. A conditional proposal is defined as one that limits, modifies, expands or supplements any of the terms and conditions and/or specifications of the RFP.
 9. Alternate proposals will not be considered by CSU, unless otherwise noted on the RFP or on the proposal form. An alternate proposal is defined as one that is submitted in addition to the proposer's primary response to the RFP.
 10. CSU does not sponsor any one manufacturer's products, but lists equipment by name and model number to designate the quality and performance level desired. Proposers may propose substitutes similar in nature to the equipment specified. The substitute must, in the sole determination of CSU, be equal in quality, durability, appearance, strength and design to the equipment or product specified in the RFP, or offer a clear advantage to CSU because of improved or superior performance. All proposals including equipment or product substitutes must be accompanied with current descriptive literature on, and data substantiating, the equal or superior nature of the substitute. All final decisions concerning substitutes will be made by CSU prior to any award. The word substitute shall not be construed to permit substantial departure from the detailed requirements of the specifications.
 11. Each proposer's prices must be firm for a period up to 120 days from date of the opening of proposals. Prices must be extended in decimal, not fraction, must be net, and must include transportation and delivery charges, fully prepaid by the contractor, to the destination specified in the proposal, and subject only to cash discount.
 12. Pursuant to Section 12-412 of the Connecticut General Statutes, the State of Connecticut is exempt from the payment of excise, transportation and sales taxes imposed by the Federal Government and/or the State. Accordingly, such taxes must not be included in proposal prices.
 13. If there is a discrepancy between a unit price and an extended price, the unit price will govern.
 14. By submitting a proposal, the proposer asserts that the offer and information contained therein is in all respects fair and without collusion or fraud and was not made in connection with any competing proposer's submission of a separate response to the RFP. By submitting a proposal, the proposer further asserts that it neither participated in the formation of CSU's solicitation development process nor had any knowledge of the specific contents of the RFP prior to its issuance, and that no employee of CSU participated directly or indirectly in the preparation of the proposer's proposal.
 15. It is the proposer's responsibility to check the website of the State of Connecticut Department of Administrative Services (www.das.state.ct.us/Purchase/Portal/Portal_Home.asp) for changes prior to the proposal opening. It is the responsibility of the proposer to obtain all information related to proposal submission including, without limitation, any and all addenda or supplements required.
 16. Any person contemplating submitting a proposal who is in doubt as to the true meaning of, or is in need of clarification of, any part of the RFP or the specifications set forth therein, must submit a written request for clarification to CSU. The proposer may rely only upon a response to a request for clarification set forth in writing by CSU.
 17. Proposals for the provision of services must include the cost of obtaining all permits, licenses, and notices required by the city or town in which the services is to be provided, and the State and Federal governments..
18. Each proposer must complete and submit with its proposal the following non-discrimination and affirmative action forms: the Notification to Proposers, Contract Compliance, and EEO-1. It shall not be sufficient to declare or state that such forms are on file with the State of Connecticut. Failure to include the required forms shall result in rejection of the proposal.
- C. Samples
 1. Samples, when required by the RFP, must be submitted strictly in accordance with the requirements of the RFP.
 2. Any and all required samples shall be furnished by the proposer at no cost to CSU. All samples, unless otherwise indicated, will become the property of CSU and will not be returned to the proposer unless the proposer states in the proposal that the sample's return is requested. A sample will be returned on the request of the proposer if the sample has not been rendered useless or beyond its useful life. The proposer must pay the costs associated with the return of any sample. Samples may be held by CSU for comparison with actual product deliveries.
 3. The making of chemical and physical tests of samples submitted with proposals shall be made in the manner prescribed by CSU.
 - D. Bonding Requirements / Guaranty or Surety
 1. If required by this RFP, the proposal must be accompanied by a bid bond or a certified check in an amount that is ten percent (10%) of the bid amount. The bid bond must be executed by an insurance company licensed to do business in the State of Connecticut. Certified checks must be made payable to CSU or the appropriate CSU University.
 2. The proposal bond must be executed by the proposer as follows:
 - (a) If the proposer is a corporation - must be signed by an official of the corporation above his or her official title, and the corporate seal must be affixed over the signature;
 - (b) If the proposer is a partnership - must be signed by a general partner;
 - (c) If the proposer is an individual - must be signed by the individual and indicate that he or she is "doing business as"
 3. The surety company executing the bond or countersigning must be licensed in Connecticut and the bond must be signed by an official of the surety company with the corporate seal affixed over his or her signature. Signatures of two witnesses for both the principal and the surety must appear on the bond.
- ### III. CONTRACT AWARD
1. All proposals properly submitted will be opened and read publicly. Upon award, the proposals are subject to public inspection. CSU will not prepare abstracts of proposals received for distribution, nor will information concerning the proposals received be conveyed by telephone.
 2. Award will be made to the lowest responsible qualified proposer who complies with the proposal requirements. Price alone need not be the sole determining factor for an award. Other criteria, listed in the RFP, may be considered by CSU in the award determination.
 3. CSU reserves the right to grant an award and/or awards by item, or part thereof, groups of items, or all items of the proposal and to waive minor irregularities and

- omissions if, in CSU's judgment, the best interests of CSU or the State of Connecticut will be served.
4. CSU reserves the right to correct inaccurate awards resulting from its administrative errors.
 5. The Award Notice and Offer (to enter into a formal contract) shall be sent to the awarded proposer by first class certified mail, return receipt requested, to the address provided in the awarded proposal, or by overnight courier. The Notice and Offer shall constitute an offer by CSU to enter into negotiations to come to a formal contract agreement. If the proposer, within ten (10) business days of receipt of said Notice and Offer, declines to begin contract negotiations, then the offer to negotiate a contract may be withdrawn and an offer to negotiate a contract extended to the next lowest responsible qualified proposer, and so on until a contract is negotiated and executed.
 6. Each proposal submitted shall constitute an offer by the proposer to furnish any or all of the commodities or services described therein at the prices given and in accordance with conditions set forth in the proposal, the RFP, and these "Standard Terms and Conditions." Acceptance and resulting contract formation shall be in a formal written document authorized by CSU's Purchasing Department and where applicable, approved by the Attorney General, and shall comprise the entire agreement between the proposer and CSU.

IV. TERMS AND CONDITIONS RELATED TO CONTRACT WITH SUCCESSFUL PROPOSER

By submitting a response to the RFP, the proposer agrees that any contract negotiated between it (if the successful proposer), as contractor, and CSU may contain the following provisions, as deemed applicable by CSU:

A. General Conditions

1. Any product developed and accepted by CSU under a contract awarded as a result of an RFP shall be sole property of CSU, unless stated otherwise in the contract.
2. Data collected or obtained by the contractor in connection with the performance of the contract shall not be shared with any third party without the express written approval of CSU.
3. The contractor shall defend, indemnify and hold harmless CSU, its officers and employees, against any and all suits, actions, legal or administrative proceedings, claims, demands, damages, liabilities, monetary loss, interest, attorney's fees, costs and expenses of whatsoever kind or nature arising out of the performance of the agreement, including those arising out of injury to or death of contractor's employees or subcontractors, whether arising before, during or after completion of the services thereunder and in any manner directly or indirectly caused, occasioned or contributed to in whole or in part, by reason of any act, omission, fault or negligence of contractor or its employees, agents or subcontractors. Without limiting the foregoing, the contractor shall defend, indemnify and hold CSU and the State of Connecticut harmless from liability of any kind for the use of any copyright or un-copyrighted composition, secret process, patented or unpatented invention furnished or used in the performance of the contract. This indemnification shall be in addition to the warranty obligations of the contractor and shall survive the termination or cancellation of the contract or any part thereof.
4. The contractor shall: (i) guarantee its products against defective materials and workmanship; (ii) repair

- damage of any kind, for which it is responsible, to CSU's premises or equipment, to its own work or to the work of other contractors; (iii) obtain and pay for all applicable licenses, permits, and notices; (iv) give all notices and comply with all requirements of the municipality in which the service is to be provided and of the State and federal governments; and (v) carry proper and sufficient insurance to protect the State from loss.
5. The contract shall be interpreted and governed by the laws of the State of Connecticut, without regard to its principles of conflicts of laws.
6. The contractor agrees that it shall be subject to and abide by all applicable federal and state laws and regulations.
7. The contractor agrees that it shall comply with Section 4a-60 of the Connecticut General Statutes and with Executive Orders Nos. 3, 16, 17 and 7B.
8. The contractor agrees that the sole and exclusive means for the presentation of any claim against the State of Connecticut, the Connecticut State University or the Board Of Trustees arising from a contract with CSU, shall be in accordance with the provisions of Chapter 53 of the Connecticut General Statutes (Claims Against the State) and that no additional legal proceedings will be initiated in any state or federal court in addition to, or in lieu of, said Chapter 53 proceedings.
9. The contractor agrees that CSU shall have and retain sole and exclusive right and title in and to the forms, maps, and/or materials produced for CSU pursuant to the contract, including all rights to use, distribute, sell, reprint, or otherwise dispose of same. The contractor further agrees that it shall not copyright, register, distribute, or claim any rights in or to said maps and/or materials or the work produced under the contract.
10. The contractor or subcontractor, as applicable, shall offer and agree to assign to CSU all rights, title and interest in and to all causes of action it may have under Section 4 of the Clayton Act, 15 U.S.C. 15, or under Chapter 624 of the general statutes, arising from the purchase of services, property or intangibles of any kind pursuant to a public purchase contract or subcontract; such assignment shall be made and become effective at the time the contract is executed by the parties, without further acknowledgment by them.
11. The contractor shall not assign or otherwise dispose of the contract or its right, title or interest therein, or its power to execute such contract, to any other person without the prior written consent of CSU.
12. CSU reserves the right to inspect commodities for conformance with proposal specifications. When commodities are rejected by CSU, said commodities shall be removed by the contractor, at the contractor's expense, from the CSU premises within forty-eight (48) hours after notification of such rejection, unless public health and safety require immediate destruction or other disposal of such rejected delivery. Rejected items left longer than forty-eight (48) hours shall be considered abandoned by the contractor and CSU shall have the right to dispose of them as its own property.
13. If any provision, term or condition of the contract is prohibited, invalid, or unenforceable then that provision, term or condition shall be ineffective to the extent of the prohibition, invalidity, or prohibition without invalidating the remaining provisions, terms and conditions unless it materially alters the nature or intent thereof.
14. Should the terms of any purchase order or invoice issued in connection with the contract conflict with the

terms of the contract, the terms of the contract shall prevail.

15. Failure of the contractor to deliver commodities or perform services as specified in the contract will constitute authority for CSU to purchase these commodities or services on the open market. The contractor shall promptly reimburse CSU for excess costs incurred by CSU due to these purchases, and these purchases shall be deducted by CSU from the quantities contracted for.
16. No right or duty, in whole or in part, of the contractor under the contract may be assigned or delegated without the prior written consent of CSU. The subcontracting or assignment of any of contractor's obligations under the contract to a subcontractor shall require the prior written approval of CSU.
17. Upon termination of the contract by CSU, the contractor shall both immediately discontinue all services (unless the notice directs otherwise) and deliver to CSU all data, drawings, specifications, reports, estimates, summaries, and such other information and materials as may have been accumulated by the contractor in performing its duties under the contract, whether completed or in progress. All such documents, information, and materials shall become the property of CSU.
18. The State of Connecticut shall assume no liability for payment for services under the terms of the contract until the contractor is notified that the contract has been accepted by CSU and, if applicable, approved by the Office of Policy and Management ("OPM") or the Department of Administrative Services ("DAS") and by the Attorney General of the State of Connecticut.

B. Insurance

1. Before commencing to perform services pursuant to the contract, the contractor shall obtain, at its own cost and for the duration of the contract, the following insurance:
 - (a) Commercial General Liability: \$1,000,000 combined single limit per occurrence for bodily injury, personal injury and property damage. Coverage shall include Premises and Operations, Independent Contractors, Products and Completed Operations, Contractual Liability and Broad Form Property Damage coverage. If a general aggregate is used, the general aggregate limit shall apply separately to the project or the general aggregate limit shall be twice the occurrence limit.
 - (b) Automobile Liability: \$1,000,000 combined single limit per accident for bodily injury. Coverage extends to owned, hired and non-owned automobiles. If the contractor does not own an automobile, but one is used in the execution of the contract, then only hired and non-owned coverage is required. If a vehicle is not used in the execution of the contract then automobile coverage is not required.
 - (c) Professional Liability: \$1,000,000 limit of liability.
 - (d) Workers' Compensation and Employers Liability: Statutory coverage in compliance with the laws of the State of Connecticut. Coverage shall include Employer's Liability with minimum limits of \$100,000 each accident, \$500,000 Disease - Policy limit, \$100,000 each employee. An Excess Liability/Umbrella Policy may be used to meet the minimum limit guidelines.
2. The contractor shall provide copies of its Certificates of Insurance to CSU, if requested to do so. The Certificates shall include the following:

(a) The certificate shall clearly identify the State of Connecticut, its officers, officials, employees, agents, boards and commissions as Additional Insured. The coverage shall contain no special limitations on the scope of protection afforded to the State.

(b) The certificate shall clearly indicate the project name and project number or some easily identifiable reference to the relationship to the State.

3. The Certificates shall be signed by a person authorized by that insurer to execute contracts on its behalf. The certificate Accord Form 25 Certificate shall indicate a minimum thirty (30) day endeavor to notify requirement in the event of cancellation or non-renewal of coverage.
4. The contractor shall assume responsibility for payment of any and all deductibles applicable to the insurance policies described in Section IV.B.1 above.
5. The contractor's insurer shall have no right of recovery or subrogation against the State and the described insurance shall be primary coverage.
6. Each required policy of insurance shall provide that it shall not be suspended, voided, cancelled or reduced except after thirty (30) days' prior written notice sent by certified mail to CSU.
7. "Claims Made" coverage shall be unacceptable, with the exception of Professional Liability.

C. Bonds

The successful proposer shall submit the following bonds, at the request of CSU, within ten (10) days of the date of receipt of the Award Notice and Offer:

1. A Performance Bond in the amount of one hundred percent (100%) of the total proposal price; and
2. A Labor and Material Payment Bond in the amount of one hundred percent (100%) of the total proposal price.

A company authorized to transact business in the State of Connecticut shall execute the bonds. Checks shall be made payable to CSU or the appropriate CSU University.

D. Delivery

1. Unless otherwise specified in the proposal, all products and equipment delivered pursuant to the contract shall be new and shall include any and all manufacturer's warranties.
2. Delivery shall be to the point specified in the contract.
3. All deliveries shall display, in plain sight, any related Purchase Order or Reference/Delivery Number. Failure to display said number may cause the shipment to be rejected and returned at the contractor's expense.
4. All deliveries shall be in compliance with Sections 22a-194 to 22a-194g of the Connecticut General Statutes related to product packaging.
5. Deliveries shall be subject to reweighing on official sealed scales designated by the State and payment shall be made on the basis of net weight of materials received.
6. Payment terms are net forty-five (45) days after receipt of goods or invoice, whichever is later. State of Connecticut certified small or minority contractors are payable under terms net thirty (30) days.
7. Monies owed to CSU or the Department of Revenue Services (DRS) by the contractor shall be deducted from current obligations.

E. Inspection and Tests

1. The inspection of all commodities and the making of chemical and physical tests of samples of deliveries to determine whether or not the contract specifications are being complied with shall be made in the manner prescribed by CSU.
2. Any item that fails in any way to meet the terms or specifications set forth in the contract is subject to be paid for at an adjusted price or rejected, in the discretion of CSU.
3. After delivery and installation of any equipment provided pursuant to the contract, the contractor shall certify to CSU that the equipment has been properly installed and is ready for use. Thereafter, for a test period of sixty (60) days, CSU shall operate the system in accordance with its normal operating practices. The acceptance test shall determine if the equipment's operating characteristics meet the performance standards set forth in the contract.

F. Advertising

Reference by the contractor to sales to CSU for advertising and promotional purposes without the prior approval of CSU shall be expressly prohibited.

TERMS/CONDITIONS

EXECUTIVE ORDERS

This Agreement is subject to the provisions of Executive Order No. 3 of Governor Thomas J. Meskill promulgated June 16, 1971, and, as such, this Agreement may be canceled, terminated or suspended by the State Labor Commissioner for violation of or noncompliance with said Executive Order No. 3, or any state or federal law concerning nondiscrimination, notwithstanding that the Labor Commissioner is not a party to this contract. The parties to this Agreement, as part of the consideration hereof, agree that said Executive Order No. 3 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 Agreement is subject to the Guidelines and Rules issued by the State Labor Commissioner to implement Executive Order No. 3, 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 Agreement is also subject to provisions of Executive Order No. 17 of Governor Thomas J. Meskill promulgated February 15, 1973, and, as such, this Agreement 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. 17, notwithstanding that the Labor Commissioner may not be a party to this Agreement. The Parties to this Agreement, as part of the consideration hereof, agree that said Executive Order No. 17, notwithstanding that the Labor Commissioner may not be a party to this Agreement, shall have joint and several continuing jurisdiction in respect to contract performance in regard to nondiscrimination, until the contract is completed or terminated prior to completion. 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. This contract is also subject to Executive Order Number 16 of Governor John G. Rowland promulgated August 4, 1999, and as such, the Agreement may be canceled, terminated or suspended by the state for violation of or noncompliance with said Executive Order No. 16. The Parties to this Agreement, as part of the consideration hereof, agree that (a) The Contractor shall prohibit as a condition of employment, any weapon or dangerous instrument defined in (b); (b) Weapon means any firearm, including BB gun, whether loaded or unloaded, any knife (excluding a small pen or pocket knife), including a switchblade or other knife having an automatic spring release device, a stiletto, any police baton or nightstick or any martial arts weapon or electronic defence weapon. Dangerous instrument means any instrument, article, or substance that, under the circumstances, is capable of causing death or serious physical injury. (c) The Contractor shall prohibit employees from attempting to use, or threaten to use, any such weapon or dangerous instrument in the state work site and employees shall be prohibited from causing, or threatening to cause, physical injury or death to any individual in the state work site. (d) The Contractor shall adopt the above prohibition as work rules, violation of which shall subject the employee to disciplinary action up to and including discharge. The Contractor shall insure and require that all employees are aware is such work rules. (e) The contractor agrees that any subcontract it enters into in furtherance of the work to be performed hereunder shall contain provisions (a) through (d) of this Section. This Agreement is subject to Executive Order No 7B of Governor Jodi M. Rell, promulgated on November 16, 2005. The Parties to this Agreement, as part of the consideration hereof, agree that (a.) The State Contracting Standards Board ("the Board") may review this contract and recommend to the state contracting agency termination of the contract for cause. The state contracting agency shall consider the recommendations and act as required or permitted in accordance with the contract and applicable law. The Board shall provide the results of its review, together with its recommendations, to the state contracting agency and any other affected party in accordance with the notice provisions in the contract no later than fifteen (15) days after the Board finalizes its recommendation. For the purposes of this Section, "for cause" means: (1.) a violation of the State Ethics Code (Conn. Gen. Stat. Chapter 10) or Section 4A-100 of the Conn. Gen. Statutes or (2.) wanton or reckless disregard of any state contracting and procurement process by any person substantially involved in such contract or state contracting agency. (b.) For the purposes of this Section, "contract" shall not include real property transactions involving less than a fee simple interest or financial assistance comprised of state or federal funds, the form of which may include but is not limited to grants, loans, loan guarantees, and participation interests in loans, equity investments and tax credit programs. Notwithstanding the foregoing, the Board shall not have any authority to recommend the termination of a contract for the sale or purchase of a fee simple interest in real property following transfer of title. (c.) Effective January 1, 2006, notwithstanding the contract value listed in Conn. Gen. Stat. 4-250 and 4-251, all procurements between state agencies and private entities with a value of \$50,000 (fifty thousand dollars) or more in a calendar or fiscal year shall comply with the gift affidavit requirements of said Sections. Certification by agency officials or employees required by Conn. Gen. Stat. 4-252 shall not be affected by this Section.

NON-DISCRIMINATION

- (a) For the purposes of this section, "minority business enterprise means any small contractor or supplier of materials fifty-one percent or more of the capital stock, if any, or assets of which is owned by a person or persons: (1) who are active in the daily affairs of the enterprise; (2) who have the power to direct the management and policies of the enterprise; and (3) who are members of a minority, as such term is defined in subsection (a) of Conn. Gen. Stat. 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 purposes of this section, Commission means the Commission on Human Rights and Opportunities.
- For 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 the Contractor has a collective bargaining agreement or other contract or understanding and each vendor with which the 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. Stat. 46a-68e and 46a-68f and with each regulation or relevant order issued by said Commission pursuant to Conn. Gen. Stat. 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 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 projects.
- (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 provision 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. Stat. 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.
- (g) The contractor agrees to the following provisions: The contractor agrees and warrants that in the performance of the agreement such Contractor will not discriminate or permit discrimination against any persons 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; 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; 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; 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.
- (h) The Contractor shall include the provisions of the foregoing paragraph in every subcontract or purchase order entered into in order to fulfill any obligations 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

INSURANCE

The contractor agrees that while performing services specified in the agreement that he shall carry sufficient insurance (liability and/or other) as applicable according to the nature of the service to be performed so as to "save harmless" the State of Connecticut from any insurable cause whatsoever. If requested, certificates of such insurance shall be filed with the contracting State agency prior to the performance of services.

STATE LIABILITY

The State of Connecticut shall assume no liability for payment for services under the terms of this agreement until the contractor is notified that this agreement has been accepted by the contracting agency and, if applicable, approved by the Office of Policy and Management (OPM) or the Department of Administrative Services (DAS) and by the Attorney General of the State of Connecticut.

General Conditions of the Contract for Construction
Department of Public Works
State of Connecticut
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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 Construction Administrator 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 Public Works (DPW) Commissioner acting directly or through specifically authorized DPW personnel or agent(s) having authority to perform duties defined in Article 25.

1.21 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 Public Works Assistant Project Manager, Department of Public Works 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.

1.22 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.

1.23 CONTRACT DOCUMENTS OR CONTRACT: 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.

1.24 CONTRACTOR OR GENERAL CONTRACTOR: A sole proprietor, partnership, firm or Corporation, under direct Contract with the Department of Public Works, 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.

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

1.26 CONTRACT START DATE OR DATE OF COMMENCEMENT OF THE WORK: The date, speci-

fied by the Owner in the Notice to Proceed, on which the Contractor is required to start the Work.

1.27 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.

1.28 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.

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

1.30 DEPARTMENT OF PUBLIC WORKS (DPW) 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.

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

1.32 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.

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

1.34 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.

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

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

1.37 GUARANTEE: See Warranty.

1.38 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.

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

1.40 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.

1.41 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.

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

1.43 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.

1.44 OWNER OR DEPARTMENT: The State of Connecticut, Department of Public Works acting through its Commissioner or specifically authorized Department personnel or agent.

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

1.46 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.

1.47 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.

1.48 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.

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

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

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

1.52 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.

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

1.54 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.

1.55 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.

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

1.57 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.

1.58 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.

1.59 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.

1.60 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.

1.61 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.

1.62 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.

1.63 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.

1.64 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.

1.65 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.

1.66 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.

1.67 SYSTEMS COMMISSIONING AUTHORITY (SCA): An independent entity under contract directly with the Owner or Owner's Representative responsible for performing the specified commissioning procedures.

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.

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 Condi-

tions, 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.

called for by any one shall be as binding as if called for by all. Where discrepancies of 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 3
CORRELATION OF CONTRACT DOCUMENTS

ARTICLE 4
COMMENCEMENT AND PROGRESS OF WORK

3.1 The Contract Documents are complementary, and what is

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 to 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 Pub-

lic 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 DPW 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 manufac-

tured 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 are 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.

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 Systems Commissioning Authority (SCA) and Construction Administrator will direct the retesting of the equipment once at no "charge" to the Contractor for their time. However, the Systems Commissioning Authority's and Construction Administrator's time for additional testing will be charged to the Contractor.

16.5.2 The time for the Systems Commissioning Authority 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 DPW Project Manager is the Commissioner's only authorized repre-

sentative 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 DPW 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 Public Works 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 be deducted seven and one-half percent (7.5%) of the amount of each Application for Payment to be retained by the Owner as Retainage until Final Completion.

28.2.1 The Commissioner has the sole discretion in the determination of reduction in Retainage. At fifty percent (50%) completion of the Work the Owner shall issue a "Contractor's Performance Evaluation". If the Contractor receives a performance evaluation score of "Good" or better, then the Retainage withheld may be reduced to five percent (5%). All subsequent Applications for Payment shall be subject to five percent (5%) Retainage. Upon Substantial Completion, the Retainage may be reduced at the request of the Contractor and recommendation of the DPW 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 DPW Project Manager's estimate of the remaining Work or two and one-half percent (2.5%), which ever is greater. All requests for Retainage Reduction shall be done on DPW Form 748F_Retainage Reduction Request, which can be found at the end of the General Conditions.

28.2.2 Subsequent to Substantial Completion, in limited circumstances, at the sole discretion of the Commissioner, a reduction of Retainage below Two and one-half 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 re-

quirements 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 Document 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 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 Notwithstanding any provision or language in the Contract to the contrary, the State may terminate the Contract 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 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 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 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 40 13 BID PROPOSAL FORM, subsections 4.4.2 and 4.4.3, 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 Bidding and Contracts Unit, Department of Public Works, 165 Capitol Avenue, Room G-35, Hartford, CT 06106 unless otherwise directed in writing. Presented below is a narrative summary of the insurance required.

35.1.1 Commercial General Liability 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 Public Works, 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 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 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 Excess Liability (Other than Umbrella Form) insurance in the amount of \$5,000,000 for bids of \$1,000,000 - \$10,000,000 and in the amount of \$10,000,000 for bids of \$10,000,001 - \$20,000,000. Refer to Section 00 92 00 Amendments of the Project Manual for Excess Liability insurance requirements for bids exceeding \$20,000,000.

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 SECTION 00 40 13 BID PROPOSAL FORM, subsection 4.4.2 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 Section 00 40 13 Bid Proposal Form, subsection 4.4.3 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 Hold Harmless Provisions: The Contractor shall at all times indemnify and save harmless the State of Connecticut, the Department of Public Works, and their respective officers, agents, and employees, on account of any and all claims, damages, losses, litigation, expenses, counsel fees and compensation arising out of injuries (including death) sustained by or alleged to have been sustained by the officers, agents, and employees of said State or Department, or of the Contractor, his Subcontractor, or materialmen and from injuries (including death) sustained by or alleged to have been sustained by the public, any or all persons on or near the Work, or by any other person or property, real or personal (including property of said State or Department) caused in whole or in part by the acts, omissions, or neglect or the Contractor including, but not limited to, any neglect in safeguarding the Work or through the use of unacceptable materials in constructing the Work of the Contractor, any Subcontractor, materialman, or anyone directly employed by them or any of them while engaged in the performance of the Contract, including the entire elapsed time from the date of the Notice to Proceed or the actual Commencement Of The Work whichever occurs first until its completion as certified by the Department of Public Works.

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.

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:

38.5.1A 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 DPW 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 DPW 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.

END



State of Connecticut



Department of Public Works

Retainage Reduction Request

To: David O'Hearn, P.E., Deputy Commissioner
Room 473B, 165 Capitol Avenue, Hartford, CT 06106

From: (), General Contractor

Subject: Project No. ()
Reduction of Retainage at ()% project completion

In accordance with the General Conditions, Article 28, (type general contractor's name) hereby requests a reduction of retainage to an amount of XX%. The following list of items required under the general conditions is in compliance with the terms of the contract and has been verified by the Contractor.

- Performance Evaluation is a minimum of 60%
- 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 A-E's comments on the submitted material resulting in an appropriate basis for progress of the Work.
- 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 Owner's and/or Architect's or Engineer's comments on the submitted material resulting in an appropriate progress of the Work.
- Proper and adequate supervision and home office support of the Project.
- The Work completed to date has been installed or finished in a manner acceptable to the Owner.
- The progress of the Work is consistent with the approved CPM Schedule or Construction Schedule.
- All approved credit Change Orders have been invoiced.
- All Change Order requests for pricing are current.
- The Contractor has and is maintaining a clean worksite in accordance with the Contract Documents.
- All Subcontractor payments are current at the time of reduction request.
- Contractor is compliant with set-aside provisions of the contract.

Contractor Certification

_____ name signature date

Project Manager Recommendation

_____ name signature date

Approved

Deputy Commissioner David O'Hearn signature date

SUPPLEMENTARY GENERAL CONDITIONS

1. SCOPE AND LOCATION OF WORK

- a. The work in connection with the subject project involves the located on the Midtown Campus of Western Connecticut State University, Danbury, Connecticut.
- b. This contract will include all new items unless otherwise approved.
- c. Please refer to Section 01100 Summary of Work.
- d. The referencing project name and no. are as follows:
Project Name: The O'Neill Center Roof Replacement Natatorium
Ref. No.: DAS Project No. BI-RD 311 /Bid #2020-MRC-0003
- e. It is the intention of the project to end up with a complete, finished, code compliant, safe university facility.

2. UNIVERSITY REPRESENTATIVE

- a. The University Representative/Construction Administrator is Daniel L. Casinelli, AIA, LEED AP, Western Connecticut State University, 181 White Street, Danbury, CT 06810, telephone: 203-837-8680.

3. EXAMINATION OF SITE

- a. It is not the intent of the drawings to show all existing conditions. All bidders are required to visit and examine the site prior to submitting bids. Failure to visit the site and note all conditions will in no way relieve the Contractor of his responsibility for completing the work called for in the contract documents.

4. INTENT OF DOCUMENTS

- a. The specifications are intended to describe all material and labor necessary to determine the intention of the subject project and assumes the inclusion of all miscellaneous and incidental items necessary to complete the work.
- b. These specifications are divided into titled divisions and sections under the divisions. The divisions and sections do not, however, operate to make the University Representative an arbiter to establish the limits to the contract between the Contractor and his Subcontractors.
- c. In the event of a conflict within the contract documents...the more stringent requirements will apply.

5. USE OF PREMISES. SPECIAL WORKING CONDITIONS

- a. The Contractor shall confine the construction to the following time period:

Monday through Friday, 7:30 a.m. to 4:30 p.m.

- b. Parking for Contractor's employees will be limited to an area designated by the University. The Contractor shall be provided identification stickers for employees' cars.
- c. The contract shall be responsible for keeping the premises clean and shall pick up rubbish and debris daily.

6. MAINTENANCE OF TRAFFIC WAYS

- a. The Contractor shall be granted the use of paved roads and parking areas but shall not infringe in use of same, or access thereto, for passage over the Owner's property. Traffic ways shall not be blocked by standing trucks, parked cars, material storage, construction operations, or in any other manner.
- b. Public roads, and the existing paved roads and parking areas on Owner's property, shall be kept free from scrap and other material due to construction operations, and any damage to their surface caused by the Contractor shall be repaired by him at his own expense to the satisfaction of the University Representative.

7. PLANS AND SPECIFICATIONS AT THE SITE

The contractor shall maintain at the site of the work, one copy of all specifications, addenda, approved shop drawings, change orders, and other modifications, schedules and instructions, in good order and marked to record all changes made during construction. These shall be available at all times to the agency representative.

8. SHOP DRAWINGS

- a. Shop drawings shall be submitted in sufficient number of copies and manner to facilitate the work and shall show all work in detail.
- b. The Contractor shall review the shop drawings, stamped with his 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 sub-contractor. Shop drawings shall be properly identified as specified, for item, material, workmanship (when required) and project. At the submission, the Contractor shall inform the Architect, in writing, of any deviation in the shop drawing from the requirements of the Contract Documents.

9. SAMPLES

- a. Submit samples of all items where specifically required. Furnish information and data describing items or materials offered as being equal to those specified, as may be necessary to establish such quality. The Owner's decision will be final.
- b. Mark samples clearly to show:
 - (1) Name of trade, type quality or grade and any further designation necessary to identify the items or material
 - (2) Manufacturer's or producer's name
 - (3) Name of Contractor or Subcontractor, if any
 - (4) Name and number of project
- c. Submit samples of such size and/or number sufficient to show quality, type, range of color, finish and texture.
- d. Materials furnished shall be equal to approved samples.

10. CONSTRUCTION EQUIPMENT

- a. The contractor shall furnish and maintain, at his own cost and risk, all tools, apparatus and appliances necessary to insure speed, convenience and safety in the execution of his contract. All such items shall comply with OSHA REGULATIONS AND ALL APPLICABLE CODES, STATUTES, RULES AND REGULATIONS.
- b. All staging, supports, bracing and similar work, exterior and interior, shall be furnished erected and removed by this Contractor and maintained in safe condition by him without charge to and for the use of all trades as needed by them for proper execution of their work, except where specified to the contrary in the contract documents.
- c. All hoisting equipment and machinery required for the property and expeditious prosecution and progress of the work shall be furnished, installed, operated and maintained in safe condition by this Contractor for the use of all subcontractors' materials and/or equipment delivered to the designated hoisting area except that which is specifically required in each appropriately related section of the specifications. All costs for hoisting operating services shall be borne by this Contractor, unless specifically excepted elsewhere.

11. RECORD DRAWINGS DURING CONSTRUCTION

- a. The Contractor is to maintain at the project site two (2) sets of black (or blue) and white prints of the Contract Drawings on which he must record changes as they occur on the job.
- b. At the conclusion of construction, he is to turn one (1)-corrected set over to the Agency.

12. PROTECTION

- a. Safety: The contractor shall review, follow and adhere to the policies and procedures defined in the Western Connecticut State University "Safety Requirements for Contractors" document available through the Environmental and Facilities Services Department at the University at 203-837-9309. Any of the forms that need to be completed, due to the type of work being performed, pertaining to the work described in the document shall be submitted to the University Representative, Environmental and Facilities Services Department and Architect/Engineer prior to the start of any project.
- b. Fire protection: The contractor shall, during the progress of construction, assume all responsibilities for loss or damage by fire to the work included in his contract until completion of the contract. All fire used within structure for working purposes shall be extinguished when not in use. No flammable material shall be stored in the structure in excess of the amounts allowed by the authorities. No gasoline shall be stored in the structure outside of working hours.
- c. Protection from theft or vandalism: The Contractor shall be solely responsible for damage, loss or liability due to theft or vandalism.
- d. All building equipment, furnishings, grounds, planting, etc. shall be protected from damage of every description and any such damage thereto shall be repaired or otherwise made good at no expense to the University.
- e. Supply and install any and all protective coverings and barricades necessary to prevent damage or personal injury. The Contractor shall be held responsible for, and must make good, at his own expense, any water damage or any other type of damage due to improper protective coverings.
- f. Protect at all times the public and building personnel from injury due to construction activities

13. TEMPORARY OFFICES

Temporary offices will not be provided by the University for this project.

14. TEMPORARY TELEPHONES

Public telephones are not available on the Campus grounds.

15. TEMPORARY TOILET SERVICE

The University will permit the Contractor to use a specified existing toilet facility within the building. It shall be required of the Contractor to maintain and keep the toilet reasonably clean, or the privilege may be terminated in which case he must provide portable, chemical toilet facilities.

16. TEMPORARY LIGHT AND POWER

Power for construction purposes will be provided by the University. The Contractor will provide all necessary equipment, electrical cables, etc. that he may need in the use of the electric power.

17. DELIVERY, STORAGE AND HANDLING

All materials and equipment shall be so delivered, stored and handled as to prevent intrusion of foreign matter and any damage by weather or breakage. Packaged materials shall be delivered and stored in original packages. Packages, materials and equipment showing evidence of damage shall be rejected and replaced at no additional cost to owner. The contractor will make his own accommodations for deliveries and not use WCSU Receiving Department for deliveries.

18. CODE AND SPECIFICATIONS

All references to standard specifications and codes made throughout the specifications refer to the latest edition in effect at the dates of proposal. Such references include current addenda and errata, if any, and shall be considered a part of these specifications as much as if the pertinent portion of those standard specifications were printed herein in their entirety.

19. ADDENDA ISSUED DURING BIDDING PERIOD

When returning a bid, the Contractor will note receipt of any addenda received

20. DIMENSIONS AND MEASUREMENTS

The Contractor and each subcontractor shall **verify** all dimensions before ordering any material or doing any work, and shall be responsible for connection of same. Any difference that may be found shall be submitted for clarification before submitting a bid and for construction.

21. FINAL CLEANING

The Contractor, preparatory to final inspection, shall provide final cleaning of all work in readiness for use.

22. SPECIAL REQUIREMENT, GUARANTEES AND WARRANTIES

The contractor shall guarantee all materials and workmanship for a period of eighteen (18) months, from the date of substantial completion. In addition, the Contractor shall provide special guarantees where indicated in the contract documents or where a manufacturer's guarantee exceeds eighteen (18) months.

23. FORMS, BONDS, GUARANTEES AND WARRANTIES

The Contractor shall furnish to the Agency Representative the foregoing documents in the following manner:

a. Addressed to:

Luigi Marcone
Chief Facilities Officer & Assoc. V.P. for Campus Planning
Western Connecticut State University
181 White Street; Danbury, CT 06810

b. Project Title and Number:

c. I (We) hereby guarantee (warranty) the _____ work on the referenced project for a period of _____ years from _____ against failure of workmanship and materials, etc., in accordance with the requirements of Division _____, Section _____, Page _____, Paragraph _____, of the contract specifications.

Signed _____

Contractor
(By Authorized Agent)

- d. All required bonds shall be by the respective Surety Companies, made out to Western Connecticut State University.
- e. All guarantees supplied by Subcontractors, suppliers of manufacturers shall be countersigned by Contractor.

24. OPENINGS, CHASES, INSERTS, ETC.

- a. These may not be shown on the working drawings, and it shall be the responsibility of the Contractor to examine the electrical, heating, plumbing and ventilating drawings and consult with the contractors for same, and to provide all such chases, channels, openings definitely located by such trades previous to the construction by him of the work involved.
- b. The Contractor, his subcontractors and others shall furnish properly located and install sleeves, inserts, hangers, etc., required for the installation of their work.
- c. After the installation and completion of the work for which openings, channels, chases, etc., have been provided, the Contractor shall properly close and finish all openings, channels, chases, etc. as required to complete the work.

25. OCCUPANCY PRIOR TO FINAL INSPECTION

- a. Upon completion, and before final inspection, together with the status of completion and terms of occupancy will be issued by the University.
- b. The University will obtain from the General Contractor written approval of such occupancy and will determine whether such occupancy or use is possible and, if so, will make arrangements for holding a job inspection with the Contractor.
- c. A punch list based on this inspection, together with the status of completion and terms of occupancy will be issued by the University.

The letter granting such occupancy will state the terms and conditions of occupancy and that fire insurance coverage has been requested, the effective date of which will indicate to the Contractor that he may cancel the fire insurance coverage normally carried on the building by him.

26. OPERATING AND MAINTENANCE INSTRUCTIONS

- a. Upon completion, and before final acceptance, the Contractor in coordination with the Architect, shall provide information concerning all mechanical equipment, alarm

and safety equipment and shall furnish three (3) separately bound sets of operating and maintenance instructions, properly labeled for said equipment. These shall be typewritten or mimeographed, 8-1/2 x 11 inch sheets describing the equipment and detailing the sequencing and settings. Complete data on lubrication, service repair, and parts listed shall be included in these instructions. Manufacturers' bulletins or catalogs will be acceptable for the above purpose, but shall be amplified as required to provide full instructions. Installed model, size, rating, operating and other applicable information shall be clearly identified.

Manufacturers' specific operating and servicing manuals are acceptable, provided they fully cover the requirements and any additional data is appended. Complete writing and control diagrams are required to explain the operating; services and repair are to be included, and their location in the building given. Valve identification shall include the assigned tab numbers in the valve directory. All copies shall be submitted by the University.

- b. In addition, the Contractor shall furnish and install enclosed in clear plastic with eyelet for fastening, one (1) set of operating instructions, with necessary diagrams, which shall be hung adjacent to the item of equipment or at the operating stations to which the instructions apply.
- c. Upon completion of all work and tests, the Contractor shall furnish the necessary skilled labor to fully instruct the University personnel in the location, operation and maintenance of the equipment.

END OF SECTION

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. 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: BI-RD-311

C. Project Title: O'Neill Center Roof Replacement Natatorium.

D. Project Location: Western Connecticut State University, located in Danbury, Connecticut.

E. The Project Description:

- 1. Roof Replacement – Removal of existing single-ply membrane roofing system down to concrete deck, inspect and repair decking, all new insulation and protection board, fully adhered PVC membrane system, installation of all new flashings, and coping.
- 2. The Authorities Having Jurisdiction for Threshold Projects, Non-Threshold Projects, and/or Connecticut State University System (CSUS) 2020 Projects, as defined by the Connecticut General Statutes, are the Connecticut Department of Administrative Services (DAS) / Construction Services (CS) Office of State Building Inspector (OSBI) and Office of State Fire Marshal (OSFM)

F. Owner:

- 1. **Owner's Name:** The Owner is the State of Connecticut, Department of Administrative Services.
- 2. **Authorized Representative for the Owner: DAS/CS Project Manager Name:** Tony DeNapoli.
 - a. **DAS/CS Project Manager's Location:** The DAS/CS Project Manager is located at 450 Columbus Blvd, Suite 1201, Hartford, CT, 06103.
 - b. **Phone: (860) 713-5844**
 - c. **Mobile: (860) 597-7384**
 - d. **Email(s): Anthony.DeNapoli@ct.gov**

3. **Authority:** The DAS/CS Project Manager is the only authorized representative for the Department of Administrative Services 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 **Western Connecticut State University**
2. **Agency Representative Name and Title: Daniel L. Casinelli.** The Agency Representative's Title is **Director of Facilities Planning & Engineering.**
 - a. **Agency Representative Location:** The Agency Representative is located at **Western Connecticut State University, 181 White Street, Danbury, CT 06810.**
 - b. **Phone: (203) 837-8680**
 - c. **Fax: (203) 837-8723**
 - d. **Email(s): casinellid@wcsu.edu**
3. **Authority:** The Agency Representative has the administrative authority for the facility and or site where the work is being performed but does not have the authority to change the Contract Documents or direct the Contractor.

H. Architect and Engineer (A/E):

1. **Architect's Name:** The Architect representing the firm for this project is **Martin A. Benassi, AIA – Architect, LLC**
 - a. **Architect's Location:** The Architect is located at **Two Broadway, Hamden, CT 06518**
 - b. **Phone: 203-281-5000**
 - c. **Fax: 203-248-6072**
 - d. **Email(s): mбенасси@mabarchitect.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 Construction Administrator to the DAS/CS Project Manager.
 - b. As the authorized representative of the Department of Administrative Services 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 Construction Administrator in that function except for shop drawings.

I. Construction Administrator (CA):

1. **Construction Administrator Name: Martin A. Benassi, AIA Architect LLC.**
 - a. **Construction Administrator Location:** The Construction Administrator is located at **Two Broadway, Hamden, CT 06518.**
 - b. **Phone: 203-281-5000**
 - c. **Fax: 203-248-6072**
 - d. **Email(s): mбенасси@mabarchitect.com**
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.

K. **Work:** The Work Includes but is not limited to the following:

- 1 **Selective Demolition**
- 2 **Roof Removal**
- 3 **Concrete Decking Repair**
- 4 **Misc Rough Carpentry**
- 5 **Roofing Insulation**
- 6 **PVC Roofing**
- 7 **Sheet Metal Flashing & Trim**
- 8 **Roof Accessories**
- 9 **Joint Sealant**
- 10 **Roof Drains**

- 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 Construction Administrator, 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.

1.6 WORK SEQUENCE (PHASES)

- 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. Site Phasing Plan is shown on Drawing Sheet No. **(Not applicable)**
- C. The entire Project shall be constructed in One (1) Phase(s). Work of these Phase(s) shall be substantially complete, ready for occupancy within 60 Calendar Days of commencement of the Work (the "**Contract Time**").
- D. Phase 1 shall include the following portions of work, including all labor and material, shown on the drawings and/or as specified hereinafter. Work of this Phase shall be substantially complete, ready for occupancy within 60 Calendar Days of commencement of the Work. The intent of Phase 1 includes but is not limited to the following:

1. **Selective Demolition**
2. **Concrete Decking Repair**

3. **Miscellaneous Rough Carpentry**
4. **Roof Removal**
5. **Roofing Insulation**
6. **PVC Roofing**
7. **Sheet Metal Flashing & Trim**
8. **Roof Accessories**
9. **Joint Sealant**
10. **Roof Drains**

1.7 **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. All deliveries for the project are to enter the property from **main driveway**. The Contractor shall check all roadways for accessibility and clearances for deliveries of all large material and equipment. The Contractor shall inform the Construction Administrator 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 Construction Administrator, 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 Construction Administrator 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 Construction Administrator, will be visible on the premises.
- C. Use of the Existing Building:** Maintain the existing building in a weather-tight condition throughout the construction period. Repair damage caused by construction operations. Take all precautions necessary to protect the building and its occupants during the construction period. Note: Check with Agency special types of conditions. Contractor personnel are not allowed to use the Cafeteria or vending machines within the existing buildings unless authorized in writing by the agency.

1.8 OCCUPANCY REQUIREMENTS

A. Full Agency Occupancy During Construction: The Owner reserves the right to allow the Agency to occupy the site and existing building during the entire construction period. Cooperate with the Agency during construction operations to minimize conflicts and facilitate Agency usage. Perform the Work so as not to interfere with the Agency's operations.

1. Provide adequate building and fire code egress from the buildings during the renovation process and/or as indicated on the Contract Documents. The Contractor will be responsible to maintain and protect egress ways during the construction sequence as required and/or indicated in the Contract documents. The Contractor shall be responsible for preparing egress plans for Owner approval and for DAS/CS Office of State Building Official and Office of State Fire Marshal for approval if required.

B. Partial Agency Occupancy: The Owner reserves the right to allow the Agency to occupy and to place and install equipment in completed areas of the building prior to Substantial Completion, provided such occupancy does not interfere with completion of the Work. Such placing of equipment and partial occupancy shall not constitute acceptance of the total Work.

1. Should it become necessary or advisable, as the work nears final completion, for the Agency to occupy a portion of the building prior to final acceptance, the Contractor shall cooperate in completing such areas and making same accessible.
2. The Construction Administrator will determine whether such occupancy or use is possible and, if so, will make arrangements for holding a job inspection with the DAS/CS Project Manager, Agency Representative, and Contractor.
3. A comprehensive list of items to be completed or corrected as issued by the Contractor, together with the status of completion and terms of occupancy, will be forwarded to the DAS/CS Project Manager by the Construction Administrator. A letter will be issued by the DAS/CS Project Manager and Contractor to Construction Administrator granting such occupancy and will state the terms and conditions of occupancy.
4. Prior to partial Agency occupancy, mechanical and electrical systems shall be fully operational. Required inspections and tests shall have been successfully completed. Upon occupancy, the Agency will operate and maintain mechanical and electrical systems serving occupied portions of the building.
5. The Architect will prepare a "Certificate of Substantial Completion" for each specific portion of the Work to be occupied prior to Agency occupancy. Use the "Certificate of Substantial Completion" form as required by the Owner and forward the Certificate to the DAS/CS Office of State Building Inspector for a Certificate of Occupancy and obtain the same after his review and approval.
6. The DAS/CS Project Manager will request a signed "Certificate of Compliance" from the Architect and Contractor, and forward the Certificate to the Office of State Building Inspector for a Certificate of Occupancy and obtain the same after his review and approval.
7. A letter from the DAS/CS Project Manager to the Agency Representative with copy to the Contractor granting occupancy will state the terms and conditions of occupancy and that fire insurance coverage has been requested, the effective date of which will indicate to the Contractor that they may cancel fire insurance coverage for that portion of the project.
8. Upon occupancy, the Agency will assume responsibility for maintenance and custodial service for occupied portions of the building.
9. **Work after Partial Agency Occupancy:**
 - 9.1 For all work to complete the area occupied, warranty work, the balancing and Commissioning (Cx) of systems, repair of latent defects and adjustments after partial occupancy, the Contractor is responsible for all costs associated with working in occupied buildings.

C. Agency Occupancy:

1. The Construction Administrator will determine whether such occupancy is possible and, if so, will make arrangements for holding a job inspection with the DAS/CS Project Manager, Agency Representative, and Contractor.

2. A comprehensive list of items to be completed or corrected as issued by the Contractor, together with the status of completion and terms of occupancy, will be forwarded to the DAS/CS Project Manager and the Contractor by the Construction Administrator. A letter will be issued by the DAS/CS Project Manager and Contractor to Construction Administrator granting such occupancy and will state the terms and conditions of occupancy.
3. Prior to Agency occupancy, mechanical and electrical systems shall be fully operational. Required inspections and tests shall have been successfully completed. Upon occupancy, the Agency will operate and maintain mechanical and electrical systems serving occupied portions of the building.
4. The Architect will prepare a "Certificate of Substantial Completion" for the Work to be occupied prior to Agency occupancy. Use the "Certificate of Substantial Completion" form as required by the Owner.
5. The DAS/CS Project Manager will request a signed "Certificate of Compliance" from the Architect and Contractor, and forward the Certificate to the Office of State Building Inspector for a Certificate of Occupancy and obtain the same after his review and approval.
6. A letter from the DAS/CS Project Manager to the Agency Representative with copy to the Contractor granting occupancy will state the terms and conditions of occupancy and that fire insurance coverage has been requested, the effective date of which will indicate to the Contractor that they may cancel fire insurance coverage for the project.
7. Upon occupancy, the Agency will assume responsibility for maintenance and custodial service for occupied portions of the building.
8. **Work after Agency Occupancy:**
 - 8.1 For all work to complete the occupied building, warranty work, the balancing and commissioning of systems, repair of latent defects and adjustments after occupancy, the Contractor is responsible for all costs associated with working in occupied buildings.

1.9 PRODUCTS ORDERED IN ADVANCE

- A. General:** The Owner has negotiated purchase orders with suppliers of material and equipment to be incorporated into the Work. The Owner has assigned these purchase orders to the Contractor. Costs for receiving handling and storage, and installation are included in the contract sum.
1. The Contractor's responsibilities are the same as if the contractor negotiated the purchase orders. If necessary, the Contractor shall renegotiate purchase and execute final purchase-order agreements.
 2. A "Schedule of Products Ordered in Advance" is included at the end of this section.

1.10 OWNER-FURNISHED PRODUCTS

- A.** The Owner may furnish various products as indicated in the construction documents. The Work includes providing support systems to receive Owner's equipment, and mechanical and electrical connections.
1. The Owner will arrange for and deliver necessary shop drawings, product data, and samples to the Contractor.
 2. The Owner will arrange and pay for delivery of Owner-furnished items according to the Contractor's Construction Schedule.
 3. Following delivery, the Owner will inspect items delivered for damage.
 4. If Owner-furnished items are damaged, defective, or missing, the Owner will arrange for replacement.
 5. The Owner will arrange for manufacturer's field services and for the delivery of manufacturer's warranties to the appropriate Contractor.

6. The Contractor shall designate delivery dates of Owner-furnished items in the Contractor's Construction Schedule.
7. The Contractor shall review shop drawings, product data, and samples and return them to the Architect noting discrepancies or problems anticipated in use of the product.
8. The Contractor is responsible for receiving, unloading, and handling Owner-furnished items at the site.
9. The Contractor is responsible for protecting Owner-furnished items from damage, including damage from exposure to the elements. The Contractor shall repair or replace items damaged as a result of his operations.

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 **Division 01 Section 01 35 16 "Alteration Project Procedures"** for **removal responsibility** and additional information.

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, Architect, 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 816, 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 816 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 and Building, 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:

Proposed vehicle and equipment access routes;
Locations of proposed staging/lay-down and storage areas, utility connections;
Delivery access of materials, handicap access;
Building egress, proposed pedestrian traffic flows in the interior and exterior of the building;
Temporary access-ways;
Office trailer and dumpster locations;
Location of perimeter construction fencing and gates;
Other protection measures around and in the building(s);
Temporary partitions, proposed pedestrian traffic flows around and in each building;

E. Scope Review:

1. Prior to signing a Contract with the State, DAS/CS 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 DAS/CS 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 **five (5)** sets of the Contract Documents on or about the time of execution of the Contract, free of charge. If additional copies are wanted, they will be available at the direct additional cost of their reproduction, to the Contractor.
2. The Contractor shall receive **one (1)** set of AutoCAD compatible (latest version) Floor Plans on Electronic Data Storage Devices at no cost on or about the time of execution of the Contract from the Architect. Additional sets of AutoCAD compatible (latest version) Floor Plans on Electronic Data Storage Devices from the Architect shall be available at the 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. 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."

I. PMWeb Project Management:

1. DAS/CS is using PMWeb as the project management collaborative software tool for this project.
2. The Contractor is required to utilize PMWeb for the duration of this project and shall provide all project information via this program management software. This includes, but is not limited to contracts, applications for payment, change orders, change order proposals, requests for information, etc.
3. The DAS/CS Project Manager shall arrange for training. This training is for the Contractor's Staff, the DAS/CS Project Manager, the Construction Administrator, the A/E, and their representatives.
4. DAS/CS will be establishing a project specific email "file" address for this project. The Contractor shall send an electronic "file" copy of all project documents to this email address, to include but not limited to all project correspondence, project emails, forms, etc.
5. The Contractor is required to scan all documents that contain wet (ink) signatures and send a copy of those documents electronically to the DAS/CS Project Manager and the project specific email "file" address. The hard copy of the wet signature documents shall be

transmitted as directed by the DAS/CS Project Manager. This includes, but is not limited to all contracts, change orders, applications for payment, closeout documentation, etc.

- J.** 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 DAS/CS 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 DAS/CS in accordance with this provision.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01 11 00

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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. 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 77 00 Closeout Procedures
 - Section 02 41 00 Selective Demolition
 - Section 07 01.50.23 Roof Removal

1.3 ALLOWANCES

- A. Not Applicable

1.4 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 Bidding Documents or 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 DAS/CS 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 Construction Administrator.
 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 Schedule:** A "Unit Price Schedule" is included at the end of this Section. Specification Sections referenced in the Schedule contain requirements for materials described under each unit price.

1.5 Schedules:

D. Unit Price Schedule - Miscellaneous:

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:

1.	MISCELLANEOUS Items	UNIT	\$ ADD	\$ DEDUCT

2. Unit Prices shall be negotiated if there is a change in scope of work.

E. Unit Price Schedule - Alterations:

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 – Alterations:

1.	ALTERATION ITEMS	UNIT	\$ ADD	\$ DEDUCT
	a. Concrete Deck Patching	SF	\$100.00	\$90.00
	b. Miscellaneous Wood Blocking	LF	\$1.60	\$1.44

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:** Requires the **installation** of PVC membrane on existing skylights (Kalwall panels) along the perimeter of the building including all related flashing, sheet metal, ribs, scaffolding, lifts for access, site protection, and any other material required by the manufacturer and as detailed on Drawings. Membrane to be by same manufacturer as roofing material and included under roofing warranty.

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 on the **"Equal or Substitute Product Request (Form 7001)"**, an example of which is shown at the end of this Section. The Form is available from the Construction Administrator (CA). 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 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's Action:** If necessary, the Architect 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 will notify the Construction Administrator 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 Construction Administrator 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 Construction Administrator, Architect, 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 Construction Administrator, Architect, 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 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. If the following conditions are not satisfied, the Architect will return the requests to the Construction Administrator 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 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 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'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



**7001
Equal or Substitute
Product Request**

Page 1 of 2

Request Phase:	Pre-Bid <input type="checkbox"/>	Post Bid <input type="checkbox"/>	(See Article 15 Materials: Standards, General Conditions)		
(If Pre-bid only) Current Bid Due Date:	<input type="text"/>	Request No.:	<input type="text"/>	Dated:	<input type="text"/>
To:	State of Connecticut Department of Administrative Services, Construction Services	DAS Project No.:	<input type="text"/>		
		Project Name / Location:	<input type="text"/>		

References:	Specification(s):	Section(s):	<input type="text"/>	Paragraph(s):	<input type="text"/>	
	Drawing(s):	Drawing(s) No(s):	<input type="text"/>	Detail(s) No(s):	<input type="text"/>	
Contractually Specified Product:	<input type="text"/>					
Contractor Proposed Product:	<input type="text"/>					
Proposed Product is:	Equal:	<input type="checkbox"/>	Substitute:	<input type="checkbox"/>	Model No.:	<input type="text"/>

IMPORTANT:
**See Attached Data For Both Specified And Proposed Products
As Required By Article 15 General Conditions.**

Data attached:	Drawings:	<input type="checkbox"/>	Product Data:	<input type="checkbox"/>	Reports:	<input type="checkbox"/>	Samples:	<input type="checkbox"/>
	Tests:	<input type="checkbox"/>	Other:	<input type="text"/>				

Reason(s) for not providing the Specified Product:
<input type="text"/>

Similar Installation:	Project Name:	<input type="text"/>	Architect's Name:	<input type="text"/>
	Project Location:	<input type="text"/>	Owner's Name:	<input type="text"/>
			Date Installed:	<input type="text"/>



7001
 Equal or Substitute
 Product Request

Page 2 of 2

Will proposed substitution impact other parts of the Work?	No	<input type="checkbox"/>	Yes	<input type="checkbox"/>	<i>If Yes Attach An Explanation.</i>	
Will proposed substitution increase Contract Time?	No	<input type="checkbox"/>	Yes	<input type="checkbox"/>	<i>By Number Of Calendar Days</i> <input style="width: 50px;" type="text"/>	
Actual Dollar Savings to the State of Connecticut if substitution is accepted:					\$ <input style="width: 100px;" type="text"/>	
The Undersigned Certifies: That The Proposed Request For An Equal Or Substitute Product Conforms To All Of The Requirements Of Division 01 General Requirements, Section 01 25 00 Substitution Procedures.						
Request Submitted By General Contractor / CMR: <input style="width: 80%; border: none;" type="text"/> <div style="text-align: right; font-size: small; margin-top: 5px;"><i>(Firm's Typed Name)</i></div>						
By:	<input style="width: 100%; border: none;" type="text"/> <div style="text-align: center; font-size: x-small;"><i>(Typed Name)</i></div>	<input style="width: 100%; border: none;" type="text"/> <div style="text-align: center; font-size: x-small;"><i>(Title)</i></div>	<input style="width: 100%; border: none;" type="text"/> <div style="text-align: center; font-size: x-small;"><i>(Signature)</i></div>	<input style="width: 100%; border: none;" type="text"/> <div style="text-align: center; font-size: x-small;"><i>(Date)</i></div>		
Contractor / CMR Send copies to : DAS PM: <input type="checkbox"/> CA: <input type="checkbox"/>						
Consultant's Request Received on (Date): <input style="width: 100px;" type="text"/> Consultant's Review – This Substitution Request is:						
<input type="checkbox"/>	Approved:	<i>(Submittal(s) in accordance with Div. 01 General Requirements, Section 01 33 00 Submittal Procedures.)</i>				
<input type="checkbox"/>	Approved as Noted:	<i>(Submittals in accordance with Div. 01 General Requirements, Section 01 33 00 Submittal Procedures.)</i>				
<input type="checkbox"/>	Rejected:	Use Specified Materials.				
<input type="checkbox"/>	Rejected:	Request Not Received Within Specified Time Period - Use Specified Materials.				
Reviewed Issued By:						
Name: <input style="width: 80%; border: none;" type="text"/> <div style="text-align: right; font-size: x-small; margin-top: 5px;"><i>(Typed Name)</i></div>						
Title: <input style="width: 80%; border: none;" type="text"/>						
Signature: <input style="width: 40%; border: none;" type="text"/> <input style="width: 40%; border: none;" type="text"/> <div style="display: flex; justify-content: space-around; font-size: x-small; margin-top: 5px;"><i>(Signature)</i><i>(Date)</i></div>						
CONSULTANT Send copies to: DAS PM <input type="checkbox"/> CA <input type="checkbox"/> Chief Architect <input type="checkbox"/> Chief Engineer <input type="checkbox"/>						
If Approved: As noted by Consultant, DAS Chief Architect: <input style="width: 60%; border: none;" type="text"/> <input style="width: 20%; border: none;" type="text"/> <div style="display: flex; justify-content: space-around; font-size: x-small; margin-top: 5px;"><i>(Signature)</i><i>(Date)</i></div>						
Copies: Project File Red R2						

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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 16.13 "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".
- C. All Forms referenced in this Section are available for download from the DAS website (www.ct.gov/DAS)> Doing Business With The State > State Building Construction > Publications and Forms > DAS Construction Services Library > 7000 Series - Construction Phase Forms.

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, the Contractor shall submit a "Request for Information" in writing to the Architect via the Construction Administrator. "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.
 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 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 to respond to the request provided that the Architect responds within the seven (7) days set forth above.

6. A "Request for Information Response" from Architect 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 Construction Administrator 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, through the Construction Administrator, 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/Owner-Initiated Requests For Proposals: The Architect or Owner will issue a detailed description of proposed changes in the Work via the Construction Administrator 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 Construction Administrator for the Architect'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 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 via the Construction Administrator 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 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 through the Construction Administrator 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 Construction Administrator will issue a "Change Order" for signatures of the Architect, 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 16.13 "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 Construction Administrator 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 DAS/CS Project Manager (PM) with Architect/Engineer and Construction Administrator (CA) advice)
 - 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 and Construction Administrator 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 Construction Administrator 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 Construction Administrator 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.
- 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'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 Construction Services, 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

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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 16.13 "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 Construction Administrator 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 Construction Administrator.
 - c. Comply with Construction Administrator'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 Construction Administrator 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 Construction Administrator.

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 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-Builts - 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 Construction Administrator. 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 Construction Administrator 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 Construction Administrator. 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 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 Construction Administrator and authorities having jurisdictions. If unsatisfactory conditions exist notify the Construction Administrator 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 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 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 Construction Administrator shall review the completed coordination drawings for general compliance and then submit them to the Architect 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, 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 and two (2) copies to the Construction Administrator 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 Construction Administrator 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

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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 16.13 "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 Construction Administrator convenient to the Owner, the Construction Administrator, Architect, 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 Construction Administrator. The Construction Administrator 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, 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.
19. Coordination with Audio Visual and Telecommunications.

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 Construction Administrator 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 Construction Administrator, Contractor, Subcontractors, Owner and Architect, 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 Construction Administrator will record significant discussions and agreements and disagreements of each Pre-installation/Construction Conference, and the approved schedule. The Construction Administrator 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 Construction Administrator will conduct progress meetings, bi-weekly, at the Project Site or at regular intervals as agreed upon at the Pre-construction Conference. The Construction Administrator will notify the Owner, the Architect, 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, 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 Construction Administrator 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 Construction Administrator 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 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 Construction Administrator 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 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 Construction Administrator.
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 Construction Administrator. 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 Construction Administrator.

1.9 DISTRIBUTION

- A. Distribute copies of the Construction Schedules to Construction Administrator, Architect, 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

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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 construction photographs.
- B. **Related Sections:** The following Section contains requirements that relate to construction photographs:
1. Division 01 Section 01 33 00 "Submittal Procedures" specifies general requirements for submitting digital construction photographs.

1.3 SUBMITTALS

- A. **Photographs:** Provide a digital camera to take **twenty-four (24)** or more photos each time. Deliver **two (2)** sets of photo files on **one (1)** CD-ROM and **one (1)** set of prints (8x10) to the Construction Administrator for the Department.
- B. **Extra Sets:** When requested by the Owner, the photographer shall prepare extra sets of prints or CD-ROM. The photographer shall distribute these directly to the designated parties who will pay the costs for the extra sets directly to the photographer.

1.4 QUALITY ASSURANCE

- A. Engage a qualified commercial photographer to take photographs during construction.
- B. **Photographer's Qualifications:** Photographer shall be an individual of established reputation who has been regularly engaged as a professional photographer for not less than **three (3) years**.

PART 2 - PRODUCTS

2.1 PHOTOGRAPHIC COPIES

- A. On the date the work is begun and every **thirty (30) days** thereafter (until the work is at least 95 percent complete), the Contractor shall have digital photographs of the construction taken by a professional photographer.
- B. **Identification:** Label each CD-ROM with project name and date the photographs were taken. With each submittal provide an applied label, rubber-stamped or index sheet with the following information:
1. **Name of the Project.**
 2. **Name and address of the photographer.**
 3. **Name of the Architect.**
 4. **Name of the Contractor.**
 5. **Date the photographs were taken.**
 6. **Vantage Point:** Description of vantage point, in terms of location, direction (by compass point), and elevation or story of construction.

PART 3 – EXECUTION

3.1 PRECONSTRUCTION PHOTOGRAPHS

- A. Before starting construction, take digital photos of the site and surrounding properties from different points of view, as selected by the Construction Administrator.
 - 1. Take digital photos in sufficient number to show existing site conditions before starting Work.
 - 2. Take digital photos of adjacent existing buildings either on or adjoining the property in sufficient detail to record accurately the physical conditions at the start of construction.

3.2 PHOTOGRAPHIC REQUIREMENTS

- A. Take **twenty-four (24)** or more digital photographs monthly, coinciding with the cutoff date associated with each Application for Payment. The Construction Administrator shall select the vantage points for each shot to best show the status of construction and progress since the last photos were taken.
- B. As the digital photographs are a record of the work progress, they shall be taken each month, whether or not they show work done during the preceding month. Deliver the CD-ROMs and prints within **ten (10) days** of their taking.
- C. Provide and coordinate the use of photographic software to assure that the photos are viewable by all interested parties.

END OF SECTION 01 32 33

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. **Warrantee 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 16.13 "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 reserves the right to withhold action on a submittal requiring coordination with other submittals until all related submittals are received.
 - b. The Architect 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 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 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, 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 Construction Administrator.
 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, 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 using a transmittal form. Copy the Construction Administrator on the transmittal. The Architect 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 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 acceptance of the Contractor's Construction or CPM schedule prepare a complete schedule of submittals. Submit the schedule to the Construction Administrator 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'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 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 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. **Architect and Construction Manager reserve** 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 **Architect'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. **Architect** 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's review time stated above may be extended as necessary to perform proper review. Architect will review "Mass Submittals based upon priority determined by Architect after consultation with Owner and Contractor.
- E. Distribution:** Following response to the initial submittal, print and distribute copies to the Construction Administrator, Architect, 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 Construction Administrator 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 Construction Administrator. 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, in writing of any deviation in the shop drawings from the requirements of the Contract Documents.
- D. The Architect 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 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 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 Construction Administrator.
- G. The Architect'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 shall constitute acceptance by the State and the Architect 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 DAS/CS 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 DAS/CS 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 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'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 will review and return preliminary submittals with the Architects 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 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'S ACTION

- A. Except for submittals for the record or information, where action and return is required, the Architect 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 will stamp each submittal with a uniform, action stamp. The Architect will mark the stamp appropriately to indicate the action taken, as follows:
 1. **Final Unrestricted Release:** When the Architect 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 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 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 will return the submittal marked "Action Not Required."
- C. **Unsolicited Submittals:** The Architect will discard unsolicited submittals without action.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01 33 00

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PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including Division 00 General Conditions of the Contract for Construction for Design-Bid-Build 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 performing alteration and renovation Work.
- B. Related Sections: The following Sections contain requirements that relate to this Section:
1. Division 00 Section 00 30 00 "General Statements for Available Information" for information that is available in addition to the Bidding Documents for review by bidders. Such information may include an existing conditions survey, contaminated soil reports, contaminated groundwater reports, hazardous building material reports, geotechnical data, etc.
 2. Division 01 Section 01 31 00 "Project Management and Coordination" for procedures for coordinating cutting and patching with other construction activities.
 3. Division 01 Section 01 73 29 "Cutting and Patching" for procedures for cutting and patching.
 4. Division 01 Section 01 74 19 "Construction Waste Management & Disposal" for the requirements for waste management goals, waste management plan and waste management plan implementation.
 5. Division 02 Section 02 41 19 "Selective Structure Demolition" for demolition of selected portions of the building for alterations.
 6. Division 02 Section 02 42 93 "Building Deconstruction" for deconstruction of selected portions of the building for alterations.
 7. Division 50 00 00 "Project-Specific Available Information" for information that is referenced in Section 00 30 00 "General Statements for Available Information"
 8. Refer to other Sections for specific requirements and limitations applicable to performing alteration Work with individual parts of the Work.
 9. Requirements of this Section apply to mechanical and electrical installations. Refer to Division 21, 22, 23 and 26 Sections for other requirements and limitations applicable to renovation Work by mechanical and electrical installations.
- C. **Definitions:**
1. Clean Fill: Either (1) natural soil or (2) rock, brick, ceramics, concrete, and asphalt paving fragments which are virtually inert and pose neither a pollution threat to ground or surface waters nor a fire hazard.
 2. Contaminated Soil: Treated or untreated soil and/or sediment affected by a known or suspected release and determined, or reasonably expected to contain substances exceeding Residential Direct Exposure Criteria or GA Pollutant Mobility Criteria, as these terms are defined in the Remediation Standard Regulations (RCSA Section 22a-133k-1).
 3. Hazardous Soil: Soil that is classified as a hazardous waste. Soil is classified as hazardous waste if it exhibits a hazardous waste characteristic or if it contains RCRA-listed hazardous constituents above Connecticut's RCRA "Contained-In" Policy dated May 2002.
 4. Natural Soil: Soil in which all substances naturally occurring therein are present in concentrations not exceeding the concentrations of such substance occurring naturally in the environment and in which soil no other substance is analytically detectable.
 5. Polluted Soil: Soil affected by a release of a substance at a concentration above the analytical detection limit for such substance in accordance with RCSA 22a-133k-1(a)(45) or

for naturally occurring substance at a concentration that exceeds concentrations that naturally occur in the environment.

6. Regulated Soil: Includes Polluted Soil, Contaminated Soil, and Hazardous Soil.
7. Groundwater Remediation Wastewater: Wastewater generated in connection with investigating pollution or remediating polluted groundwater or soil. Groundwater remediation wastewater includes without limitation groundwater withdrawn from a groundwater recovery well; groundwater which collects in an excavation or foundation drain or other subsurface facility or structure; groundwater contaminated runoff and stormwater impacted by on-site pollutants from any construction activity; condensate resulting from construction or maintenance of a soil vapor extraction system; and wastewater generated by developing, testing, sampling, or purging a well.

PART 2 - PRODUCTS

2.1 PRODUCTS FOR PATCHING AND EXTENDING WORK

- A. New materials: As specified in product sections; match existing Products and Work for patching and extending Work.
- B. Type and Quality of Existing Products: Determine by inspecting and testing Products where necessary, referring to existing Work as a standard.

2.2 SALVAGEABLE MATERIALS

- A. The **Contractor** shall be responsible for removing the following salvageable items from premises and transporting said items.
- B. The **Contractor** shall notify the Construction Administrator in writing **seven (7)** days prior to removing all salvageable items from the existing alteration project location and unloading all salvageable items and store items in the appropriate location as directed by personnel.

PART 3 - EXECUTION

3.1 INSPECTION

A. General:

1. Observe all existing conditions prior to submitting a bid. Include in the bid, existing conditions and their impact, particularly to cost and health and safety of workers and occupants, and proper function and operation of the facility. Be aware of other work being performed. Failure to visit the site shall in no way provide relief from the necessity of furnishing materials or performing any work that may be required to complete the work in accordance with the Contract Documents without additional cost to the Owner. All site visits shall be scheduled with the Owner.
2. The quantities, locations and the extent of work indicated are best estimates, which are limited by the physical constraints imposed by occupancy of the facility. Consider all aspects of the substrates within the identified plan area. Material information and quantities were obtained from site surveys. Accordingly, variations (plus or minus 10 percent) in quantities within the limits of the work area are considered as having no impact on contract sum and contract performance period. Where additional abatement work is required beyond the above variations, the contract sum and contract performance period shall be adjusted under provisions of Division 01 of the Specifications.
3. Verify that demolition is complete and areas are ready for installation of new Work.
4. Beginning of restoration Work means acceptance of existing conditions.

B. Project Procedures for Work Involving Asbestos Containing Material (ACM):

1. The **Contractor** is responsible for abating all **Asbestos Containing Material (ACM)** that is visible and accessible.

2. In **demolition projects, every attempt** should be made by the **Contractor** to **remove all ACM**.
3. If testing for asbestos has been conducted at the facility scheduled for renovation, demolition, reconstruction, alteration, remodeling, or repair, then the results of the asbestos testing are summarized in **Division 50 00 00 Project-Specific Available Information, Section 50 30 00 Hazardous Building Materials Inspection and Inventory** at the end of the Technical Specification Sections. Under no circumstance shall this information be the sole means used by the Contractor for determining the extent of asbestos. The Contractor shall be responsible for verification of all field conditions affecting performance of the Work.
4. If the Contractor should encounter any material suspected or known to contain asbestos **not previously identified and assigned as the Contractor's responsibility**, then the Contractor should immediately notify the Construction Administrator **in writing** of same. It is the Owner's responsibility to have the material tested and abated (if necessary). The Owner will respond within **twenty four (24) hours** after receiving the Contractor's written request to the Construction Administrator for testing the suspect material. **If necessary, the Contractor will abate ACM within a reasonable time period after the Owner's issuance of a Change Order for the additional abatement work.**
 - 4.1 When the **Owner** requests the **Contractor** undertake the responsibilities for the **abatement and disposal of the ACM**, then the compensation to the Contractor by Owner for the Work shall be determined by the **"Unit Prices"** stated in **Section 01 20 00 Contract Considerations**.
5. 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 Agreement 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.

3.2 PREPARATION

- A. Cut, move, or remove items as are necessary for access to alteration and renovation Work. Replace and restore at completion.
- B. Remove unsuitable material not marked for salvage, such as rotted wood, corroded metals, and deteriorated masonry and concrete. Replace materials as specified for finished Work.
- C. Remove debris and abandoned items from area and from concealed spaces.
- D. Prepare surface and remove surface finishes to provide for proper installation of new Work and finishes.
- E. Close openings in exterior surfaces to protect existing Work **[and salvageable items]** from weather and extremes of temperature and humidity. Insulate ductwork and piping to prevent condensation in exposed areas.

3.3 INSTALLATION

- A. Coordinate alteration and renovation Work to expedite completion, and if required sequence Work to accommodate Owner occupancy.
- B. Remove, cut and patch Work in a manner to minimize damage and to provide restoring products and finishes to original and or specified condition in accordance with **Section 01 73 29 "Cutting and Patching"**.
- C. Refinish visible existing surfaces to remain in renovated rooms and spaces, to specified condition for each material, with neat transition to adjacent finishes in accordance with **Section 01 73 29 "Cutting and Patching"**.
- D. In addition to specified replacement of **[equipment and fixtures, restore existing plumbing, heating, ventilation, air conditioning, and electrical systems]** to full operational condition.

- E. Recover and refinish Work that exposes mechanical and electrical Work exposed accidentally during the Work.
- F. Install products as specified in individual specification sections.

3.4 TRANSITIONS

- A. Where new Work abuts or aligns with existing, perform a smooth and even transition. Patch work to match existing adjacent Work in texture and appearance.
- B. When finished surfaces are cut so that a smooth transition with new Work is not possible, terminate existing surface along a straight line at a natural line of division and make recommendation to Architect/Engineer.

3.5 ADJUSTMENTS

- A. Where removal of partitions or walls result in adjacent spaces becoming one, rework floors, walls, and ceilings to a smooth plane without breaks, steps, or bulkheads.
- B. Where a change of plane of **1/4-inch** in **(12) inches** or more occurs, request recommendation from Architect/Engineer for providing a smooth transition.
- C. Trim existing doors as necessary to clear new floor finish. Refinish trim as required.
- D. Fit Work at penetrations of surfaces as specified in **Section 01 73 29 "Cutting and Patching"**.

3.6 REPAIR OF DAMAGED SURFACES

- A. Patch or replace portions of existing surfaces that are damaged, lifted, discolored, or showing imperfections.
- B. Repair substrate prior to patching finishes.

3.7 FINISHES

- A. Finish surfaces as specified in individual product specification sections.
- B. Finish patches to produce uniform finish and texture over entire area. When finish cannot be matched, refinish entire surface to nearest intersections.

3.8 CLEANING

- A. In addition to cleaning specified in **Section 01 50 00 "Temporary Facilities and Controls"**, clean Agency occupied areas of Work.

END OF SECTION 01 35 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 DEFINITIONS

- A. **General:** Basic contract definitions are included in the General Conditions of the Contract for Construction.
- B. **"Indicated":** The term "indicated" refers to graphic representations, notes, or schedules on the Drawings, or other paragraphs or Schedules in the Specifications, and similar requirements in the Contract Documents. Terms such as "shown," "noted," "scheduled," and "specified" are used to help the reader locate the reference. Location is not limited to this term.
- C. **"Directed":** Terms such as "directed," "requested," "authorized," "selected," "approved," "required," and "permitted" mean directed by the Architect, requested by the Architect, and similar phrases.
- D. **"Approved":** The term "approved," when used in conjunction with the Architect's action on the Contractor's submittals, applications, and requests, is limited to the Architect's duties and responsibilities as stated in the Conditions of the Contract.
- E. **"Regulations":** The term "regulations" includes laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, as well as rules, conventions, and agreements within the construction industry that control performance of the Work.
- F. **"Furnish":** The term "furnish" means supply and deliver to the Project Site, ready for unloading, unpacking, assembly, installation, and similar operations.
- G. **"Install":** The term "install" describes operations at the Project Site including the actual unloading, unpacking, assembly, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
- H. **"Provide":** The term "provide" means to furnish and install, complete and ready for the intended use.
- I. **"Installer":** An installer is the Contractor or another entity engaged by the Contractor, either as an employee, subcontractor, or contractor of lower tier, to perform a particular construction activity, including installation, erection, application, or similar operations. Installers are required to be experienced in the operations they are engaged to perform.
 - 1. The term **"experienced,"** when used with the term **"installer,"** means having a minimum of **five (5)** previous projects similar in size and scope to this Project, being familiar with the special requirements indicated, and having complied with requirements of authorities having jurisdiction.
 - 2. **Trades:** Using terms such as "carpentry" does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to tradespersons of the corresponding generic name.
 - 3. **Assigning Specialists:** Certain Sections of the Specifications require that specific construction activities shall be performed by specialists who are recognized experts in those operations. The specialists must be engaged for those activities, and their assignments are requirements over which the Contractor has no option. However, the ultimate responsibility for fulfilling contract requirements remains with the Contractor.
 - a. This requirement shall not be interpreted to conflict with enforcing building codes and similar regulations governing the Work. It is also not intended to interfere with local trade-union jurisdictional settlements and similar conventions.
- J. **"Project Site"** is the space available to the Contractor for performing construction activities, either exclusively or in conjunction, with others performing other Work as part of the Project. The

extent of the Project Site is shown on the Drawings and may or may not be identical with the description of the land on which the Project is to be built.

- K. "Testing Agencies":** A testing agency is an independent entity engaged to perform specific inspections or tests, either at the Project Site or elsewhere, and to report on and, if required, to interpret results of those inspections or tests.

1.3 SPECIFICATION FORMAT AND CONTENT EXPLANATION

- A. Specification Format:** These Specifications are organized into Divisions and Sections based on CSI's "MasterFormat" 49-Division format and numbering system.
- B. Specification Content:** This Specification uses certain conventions regarding the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations or circumstances. These conventions are explained as follows:
- 1. Abbreviated Language:** Language used in Specifications and other Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be interpolated, as the sense requires. Singular words will be interpreted as plural and plural words interpreted as singular where applicable as the context of the Contract Documents indicates.
 - 2. Streamlined Language:** The Specifications generally use the imperative mood and streamlined language. Requirements expressed in the imperative mood are to be performed by the Contractor. At certain locations in the Text, subjective language is used for clarity to describe responsibilities that must be fulfilled indirectly by the Contractor or by others when so noted.
 - a.** The words "**shall be**" are implied where a colon (:) is used within a sentence or phrase.

1.4 INDUSTRY STANDARDS

- A. Applicability of Standards:** Except where the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.
- B. Publication Dates:** Comply with the standards in effect as of the date of the Contract Documents unless a specific date is indicated in the Contract Documents or the governing regulations cited herein.
- C. Conflicting Requirements:** Where compliance with **two (2)** or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent and highest quality requirement. Request a decision from the Architect before proceeding on requirements that are different but apparently equal, and where it is uncertain which requirement is the most stringent.
- 1. Minimum Quantity or Quality Levels:** The quantity or quality level shown or specified shall be the minimum acceptable. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of the requirements. Request a clarification from the Architect regarding uncertainties before proceeding.
- D. Copies of Standards:** Each entity engaged in construction on the Project is required to be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.
1. Where copies of standards are needed to perform a required construction activity, the Contractor shall obtain copies directly from the publication source.
- E. Abbreviations and Names:** Trade association names and titles of general standards are frequently abbreviated. Where such acronyms or abbreviations are used in the Specifications or other Contract Documents, they mean the recognized name of the trade association, standards-generating organization, authorities having jurisdiction, or other entity applicable to the context of

the text provision. Refer to Thompson Gale's "Encyclopedia of Associations," available in most libraries.

1.5 GOVERNING REGULATIONS AND AUTHORITIES

- A. Copies of Regulations:** Obtain copies of the “**latest applicable State Codes**” and the following regulations and retain at the Project Site to be available for reference by parties who have a reasonable need during submittals, planning, and progress of the Work, until Substantial Completion.
1. Connecticut State Building Code - 2018.
 - 1.1 CT Supplement - 2018
 - 1.2 CT Amendments - 2018
 - 1.3 International Building Code - 2015
 - 1.4 International Existing Building Code - 2015
 - 1.5 International Mechanical Code - 2015
 - 1.6 International Plumbing Code - 2015
 - 1.7 International Energy Conservation Code - 2015
 - 1.8 National Electric Code (NFPA 70) - 2017
 - 1.9 ICC/ANSI A117.1-Accessible and Usable Buildings and Facilities - 2009
 2. Connecticut Fire Safety Code - 2018
 - 2.1 CT Supplement - 2018
 - 2.2 CT Amendments - 2018
 - 2.3 International Fire Safety Code - 2015
 - 2.4 NFPA 101 - 2015
 3. Connecticut Fire Prevention Code - 2018
 - 3.1 NFPA 1 - 2015
 4. Occupational Safety and Health Administration (OSHA)
 - 4.1 OSHA 29 CFR Part 1910 Occupational Safety and Health Regulations
 - 4.2 OSHA 29 CFR Part 1926 Occupational Safety and Health Regulations for Construction -
- B.** The “**latest applicable State Codes**” are available for download from the DAS website (www.ct.gov/das) > Doing Business With The State > State Building Construction > Publications and Forms > Office of State Building Inspector *and* Office of State Fire Marshal. Also visit the www.ctdol.state.ct.us Connecticut Department of Labor website.

1.6 SUBMITTALS

- A. Permits, Licenses, and Certificates:** For the Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

END OF SECTION 01 42 20

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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, 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 Construction Administrator, 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 Construction Administrator **48** 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 Construction Administrator, Architect 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 Construction Administrator 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 Construction Administrator 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".

H. Fire Alarm/Acceptance Testing Procedures:

1. For **all** buildings (exceeding the threshold limit and not exceeding the threshold limit), the fire alarm testing shall be as the authority having jurisdiction shall dictate. This will be as determined by the Office of the State Fire Marshal (OSFM), and shall include, but not be limited to, the requirements as set below:
 - a. Protective Signaling Systems: All protective signaling systems shall meet with acceptance testing requirements of the applicable standards listed NFPA 101/[and NFPA 13/
 - b. Prior Test Notification: At least **five (5)** working days prior to testing, the Fire Alarm Contractor shall notify (in writing) the following people of the proposed date the acceptance tests are to be performed (Also, see Part 2 of Certificate of Compliance).
 - Department of Administrative Services – OSFM Representative
 - General Contractor
 - Engineer of Record
 - Equipment Supplier Representative
 - Sprinkler Contractor
 - c. **Certificates of Compliance:**
 - 1) A Fire Alarm System Inspection and Testing Certification and Description form shall be prepared for each system (See NFPA 72)).
 - 2) Parts 1 and 3 through 9, shall be completed after the system is installed and the installation of the wiring has been checked. Every alarm device must also be pre-tested to ensure proper operation and correct annunciation at each remote annunciator and control panel. Part 1 of the form (Certification of System Installation) shall be signed by the fire alarm contractor. The signed and completed preliminary copies of the Certification form shall be forwarded to all parties along with the Prior Test Notification.
 - 3) Part 2, of each applicable form, shall be completed after the operational tests have been completed.
 - 4) After the completion of the operational acceptance tests and sign-off of test witness (with stipulations noted), final copies of the Certificates shall be forwarded to the Department of Construction Services Representatives.
- d. **Tests:**
 - 1) All tests shall be conducted in accordance with the Manufacturer's Testing Recommendations.
 - 2) All testing equipment, apparatus (i.e. sound level decibel meter, 2-way radio communication, test devices, ladders, tools, lighting, etc.) and personnel shall be supplied by the Fire Alarm Contractor and Sprinkler Contractor.

- e. **System Documentation:** Every system shall include the following documentation, which shall be delivered to the Department of Construction Services Representatives upon final acceptance of the system. An owner's manual or manufacturer's installation instructions covering all system equipment, including the following:
- 1) A detailed narrative description of the system inputs, evacuation signaling, ancillary functions, annunciation, intended sequence of operations, expansion capability, application considerations, and limitations.
 - 2) Operator's instructions for basic systems operations including alarm acknowledgment, system reset, interpreting system output (LED's CRT display, and printout), operation of manual evacuation signaling and ancillary function controls, changing printer paper, etc.
 - 3) A detailed description of routine maintenance and testing as required and recommended and as would be provided under a maintenance contract, including testing and maintenance instructions for each type of device installed. This information should include:
 - (a) A listing of individual system components that require periodic testing and maintenance.
 - (b) Step by step instructions detailing the requisite testing and maintenance procedures and the intervals at which those procedures should be performed.
 - (c) A schedule that correlates the testing and maintenance procedures required by paragraph (2) above and with the listing required by paragraph (1) above.
 - 4) Detailed troubleshooting instructions for each type of trouble condition recognized by the system, including opens, grounds, parity errors, "loop failures," etc. These instructions should include a list of all trouble signals, and step by step instructions describing how to isolate those problems and correct them (or call for service as appropriate).
 - 5) A service directory, including a list of names and telephone numbers for those who should be called to service the system.
- f. **As-Built Drawings:**
- 1) The Contractor will produce two (2) sets of as-built drawings and specifications for the fire alarm system, indicating the location (and programmed address, if applicable) of all devices and appliances, the wiring sequences, wiring methods, connection of the components, and sequence of operation of the protective signaling system as installed, shall be given to the Department of Construction Services representatives. This shall be in Accordance with NFPA 72 Refer also to Section 01 77 00 "Closeout Procedures".

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 Construction Administrator. 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 **[or Construction Administrator]**.
 2. Notify Architect **[and Construction Administrator]** 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's **[and Construction Administrator'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 Division 00 General Conditions of the Contract for Construction for Design-Bid-Build and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes requirements for identification badges, parking stickers, construction facilities and temporary controls, including temporary utilities, support facilities, and security and protection.
- B. Temporary utilities include, but are not limited to, the following:
 - 1. **Temporary water service and distribution.**
 - 2. **Temporary electric power and lighting services.**
 - 3. **Temporary heating, cooling and ventilation**
 - 4. **Temporary sanitary facilities, including drinking water.**
- C. Support facilities include, but are not limited to, the following:
 - 1. **Field offices – Contractor, Subcontractor, Owner, and Construction Administrator.**
 - 2. **Storage and fabrication sheds.**
 - 3. **Dewatering facilities and drains.**
 - 4. **Temporary enclosures.**
 - 5. **Temporary lifts, hoists and elevator use.**
 - 6. **Temporary project identification signs.**
 - 7. **Temporary exterior lighting.**
 - 8. **Collection and disposal of waste and cleaning.**
 - 9. **Stairs.**
- D. Security and protection facilities include, but are not limited to, the following:
 - 1. **Temporary fire protection.**
 - 2. **Permanent fire protection.**
 - 3. **Security for site and Agency.**
 - 4. **Barricades, warning signs, and lights.**
 - 5. **Enclosure fence.**
 - 6. **Security enclosure and lockup.**
 - 7. **Protection.**
 - 8. **Environmental protection.**
 - 9. **Identification badges for Contractor's personnel & parking stickers.**

1.3 RELATED SECTIONS

- A. Division 01 Section 01 57 30 "Indoor Environmental Control" for additional provisions governing temporary heating, ventilating and air conditioning.

1.4 SUBMITTALS

- A. **Temporary Utilities:** Submit reports of tests, inspections, meter readings, and similar procedures performed on temporary utilities.
- B. **Implementation and Termination Schedule:** Within **twenty-one (21)** days of the date established for commencement of the Work, submit a schedule indicating implementation and termination of each temporary utility.

1.5 QUALITY ASSURANCE

- A. **Regulations:** Comply with industry standards and applicable laws and regulations of authorities having jurisdiction including, but not limited to, the following:
 - 1. **Building and fire code requirements.**
 - 2. **Health and safety regulations.**
 - 3. **Utility company regulations.**
 - 4. **Police, fire department, and rescue squad rules.**
 - 5. **Environmental protection regulations.**
 - 6. **Americans with Disabilities Act.**
- B. **Standards:** OSHA. Comply with NFPA 241 "Standard for Safeguarding Construction, Alteration, and Demolition Operations," ANSI A10 Series standards for "Safety Requirements for Construction and Demolition," and NECA 200 "Recommended Practice for Installing and Maintaining Temporary Electric Power at Construction Sites."
 - 1. **Electrical Service:** Comply with NEMA, NECA, and UL standards and regulations for temporary electric service. Install service in compliance with NFPA 70 "National Electric Code."
- C. **Inspections:** Arrange for authorities having jurisdiction to inspect and test each temporary utility before use. Obtain required certifications and permits.

1.6 PROJECT CONDITIONS

- A. **Temporary Utilities:** Prepare a schedule indicating dates for implementation and termination of each temporary utility. At the earliest feasible time, when acceptable to the Owner, the Construction Administrator will direct the change over from use of temporary service to use of permanent service.
- B. **Conditions of Use:** Keep temporary services and facilities clean and neat in appearance. Operate in a safe and efficient manner. Relocate temporary services and facilities as the Work progresses. Do not overload facilities or permit them to interfere with progress. Take necessary fire-prevention measures. Do not allow hazardous, dangerous, or unsanitary conditions, or public nuisances to develop or persist on-site.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. **General:** Provide new materials. If acceptable to the Architect, the Contractor may use undamaged, previously used materials in serviceable condition. Provide materials suitable for use intended.
- B. **Lumber and Plywood:** Comply with requirements in Division 06 Section 06 10 00 "Rough Carpentry."
 - 1. For signs and directory boards, provide 3/4-inch exterior grade, Grade A-B Fir plywood. Mount sign on preservative treated Fir posts.

- a. Project sign shall be 4' x 8' painted and supported on 4-inch x 4-inch posts, of a design to be provided by the Owner via the Construction Administrator.
- 2. **Vision Barriers:** Provide minimum 1/2-inch thick exterior plywood.
- 3. For safety barriers, sidewalk bridges, and similar uses, provide minimum 5/8-inch thick exterior plywood.
- C. **Paint:** Comply with requirements of Division 09 Section 09 91 00 "Painting."
 - 1. For sign and directory boards applying graphics, provide exterior-grade alkyd gloss enamel over exterior primer unless otherwise indicated.
- D. **Tarpaulins:** Provide waterproof, fire-resistant, UL-labeled tarpaulins with flame-spread rating of 15 or less. For temporary enclosures, provide translucent, nylon-reinforced, laminated polyethylene or polyvinyl chloride, fire-retardant tarpaulins.
- E. **Water:** Provide potable water approved by local health authorities.
- F. **Enclosure Fencing:** Provide 0.120-inch thick, galvanized 2-inch chain link fabric fencing six (6) feet high galvanized steel pipe posts, 1-1/2 inches knuckle both bottom and top I.D. for line posts and 2-1/2 inches I.D. for corner posts.

2.2 EQUIPMENT

- A. **General:** Provide new equipment. If acceptable to the Architect, the Contractor may use undamaged, previously used equipment in serviceable condition. Provide equipment suitable for use intended.
 - 1. The Contractor shall furnish tools, apparatus and appliances, hoists and/or cranes and power for same, scaffolding, runways, ladders, temporary supports and bracing and similar work or material necessary to insure convenience and safety in the execution of the Contract except where this is otherwise specified in any Specification Section. All such items shall meet the approval of the Owner but responsibility for design, strength and safety shall remain with the Contractor. All such items shall comply with Federal OSHA regulations and applicable codes, statutes, rules and regulations, including compliance with the requirements of the current edition of the "Manual of Accident Prevention in Construction" published by the Associated Contractors (AGC) and the standards of the State Labor Department.
 - 2. Staging, exterior and interior, required for the execution of this Contract, shall be furnished, erected, relocated if necessary and removed by the Contractor. Staging shall be maintained in a safe condition without charge to and for the use of all trades as needed.
- B. **Water Hoses:** Provide 3/4-inch, heavy-duty, abrasion-resistant, flexible rubber hoses with pressure rating greater than the maximum pressure of the water distribution system. Provide adjustable shutoff nozzles at hose discharge and backflow preventers.
- C. **Electrical Outlets:** Provide properly configured, NEMA-polarized outlets to prevent insertion of 110- to 120-Volt plugs into higher voltage outlets. Provide receptacle outlets equipped with ground-fault circuit interrupters, reset button, and pilot light for connection of power tools and equipment.
- D. **Electrical Power Cords:** Provide grounded extension cords. Use hard-service cords where exposed to abrasion and traffic. Provide waterproof connectors to connect separate lengths of electric cords if single lengths will not reach areas where construction activities are in progress. Do not exceed safe length-voltage ratio.
- E. **Lamps and Light Fixtures:** Provide general service incandescent lamps of wattage required for adequate illumination. Provide guard cages or tempered-glass enclosures where exposed to breakage. Provide exterior fixtures where exposed to moisture.

- F. **Heating Units:** Provide temporary heating units that have been tested and labeled by UL, FM, or another recognized trade association related to the type of fuel being consumed.
- G. **Temporary Field Offices:** Provide prefabricated or mobile units with lockable entrances, operable windows, and serviceable finishes. Provide heated and air-conditioned units on foundations adequate for normal loading.
- H. **Temporary Toilet Units:** Provide self-contained, single-occupant toilet units of the chemical, aerated recirculation, or combustion type. Provide units properly vented and fully enclosed with a glass-fiber-reinforced polyester shell or similar nonabsorbent material.
- I. **Fire Extinguishers:** Provide hand-carried, portable, UL-rated, Class A fire extinguishers for temporary offices and similar spaces. In other locations, provide hand-carried, portable, UL-rated, Class ABC, dry-chemical extinguishers or a combination of extinguishers of NFPA-recommended classes for the exposures.
 - 1. Comply with NFPA 10 and NFPA 241 for classification, extinguishing agent, and size required by location and class of fire exposure.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Use qualified personnel for installation of temporary facilities. Locate facilities where they will serve the Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required.
- B. Provide each facility ready for use when needed to avoid delay. Maintain and modify as required. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.2 TEMPORARY UTILITY INSTALLATION

- A. **General:** Engage the appropriate local utility company to install temporary service or connect to existing service. Where company provides only part of the service, provide the remainder with matching, compatible materials and equipment. Comply with company recommendations.
 - 1. Arrange with company and existing users for a time when service can be interrupted, if necessary, to make connections for temporary services.
 - 2. Provide adequate capacity at each stage of construction. Prior to temporary utility availability, provide trucked-in services.
 - 3. Obtain easements to bring temporary utilities to the site where the Owner's easements cannot be used for that purpose.
 - 4. **Use Charges:** If cost or use charges for temporary facilities are specified by this section to be borne by the Owner the cost or use charges for temporary facilities will be borne not longer than **thirty (30)** days after final acceptance of the project.
- B. **Temporary Water Service and Distribution:**
 - 1. Water for construction purposes may be taken from the existing service. The Contractor shall provide connections, approved backflow prevention device, meter and pipe to the water main or nearest hydrant, subject to the approval of the Owner. Upon completion of work, the Contractor shall remove the temporary connections and backfill if necessary. If new water service is installed before construction is complete, the new system may be used provided it is returned to the Owner in as-new condition. The Contractor shall pay for the water used, as metered.
- C. **Temporary Electric Power and Lighting Services:**

1. Power and lighting may be taken from the power company's nearest pole with temporary poles, if needed, to extend the line to project. If permanent power lines have been installed before beginning project, then temporary lines can be brought in from the last pole.
2. Provide service required for construction with branch wiring and distribution boxes located to provide power and lighting by construction-type extension cords. Meter shall be provided and installed by the Contractor.
3. The Contractor shall pay all costs of temporary power and light.

OR:

4. **Power Distribution System:** Install wiring overhead and rise vertically where least exposed to damage. Where permitted, wiring circuits not exceeding 125 Volts, ac 20 Ampere rating, and lighting circuits may be nonmetallic sheathed cable where overhead and exposed for surveillance.
5. **Temporary Lighting:** When overhead floor or roof deck has been installed, provide temporary lighting with local switching. Install and operate temporary lighting that will fulfill security and protection requirements without operating the entire system. Provide temporary lighting that will provide adequate illumination for construction operations and traffic conditions.

C. Temporary Heating, Cooling and Ventilating:

1. Provide temporary heat required by construction activities for curing or drying of completed installations or for protection of installed construction from adverse effects of low temperatures or high humidity. Select safe equipment that will not have a harmful effect on completed installations or elements being installed. Coordinate ventilation requirements to produce the ambient condition required and minimize consumption of energy.
 - a. **Heating Facilities:** Except where the Owner authorizes use of the permanent system, provide vented, self-contained, LP-gas or fuel oil heaters with individual space thermostatic control.
 - b. Use of gasoline-burning space heaters, open flame, or salamander heating units is prohibited.
2. Provide temporary heat during construction for interior areas included in the Contract to counteract low temperatures or excessive dampness. Maintain during said period or periods until final completion of the Contract, unless otherwise approved by the Owner in writing. Windows, doors, ventilators and similar openings shall be temporarily closed. Provide heat and ventilation to maintain specified conditions for construction operations and to protect materials and finishes from damage by temperature or humidity. The permanent heating system is not to be used for temporary heating unless approved, in writing, by the Owner. If approved, use of the permanent heating system by the Contractor does not constitute beneficial use by the Owner. The warranty for said system will not commence until Substantial Completion is granted. Costs shall be paid by the Contractor. See individual Sections for temperature/humidity limits. Temporary heating methods shall comply with OSHA regulations and other applicable codes, statutes, rules and regulations and shall be approved by the Architect/Engineer and Owner.
3. Permanent air handling equipment, when used for temporary heating, shall be equipped with disposable "construction" filters. The construction filters shall have an average efficiency at least equal to the filters specified under Division 23, but not less than 30 percent when tested in accordance with ASHRAE 52.2 "Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size." The filters shall have an average arrestance of not less than 90 percent efficiency on one (1) micron size particles. Before turning over the system for final acceptance, the contractor shall remove and dispose of the construction filters; clean the

ductwork; spray clean the heating and cooling coils, and drain pans to "like new" condition; and install the filters specified in Division 23 Section 23 40 00 "HVAC Air Cleaning Devices."

4. The Contractor may use the existing heating system with temporary extensions, radiators or unit heaters, but such use is subject to the Owner's approval. Coordinate use of existing facilities with Owner. Provide additional, temporary extensions and units to satisfy the criteria given in the preceding paragraph. Owner will pay cost of energy used. Take measures to conserve energy. At the termination of construction, return the facilities to their original condition. Before operation of permanent facilities, verify that installation is approved for operation and that filters are in place.
 5. Steam from the Agency's lines shall be metered and paid for by the Contractor at a price approved by the Agency and Owner. The Contractor shall arrange with his Heating Subcontractor to install and maintain temporary piping, radiators or unit heaters, reducing valves, steam traps and other necessary fittings and accessories. Traps shall be provided to prevent steam from entering main returns. The temporary layout shall meet the approval of the Architect/Engineer. Condensate meter (or meters) shall be installed to record usage of steam. At the termination of construction, return the facilities to their original condition.
 6. Refer to Section 01 57 30 "Indoor Environmental Control" for additional requirements regarding means and methods of providing temporary heating, cooling and ventilating. Meet manufacturer's standards for minimum and maximum temperatures and humidity governing installation of materials and systems.
- D. Temporary Telephone Service and Data:** Provide temporary telephone service throughout the construction period for all personnel engaged in construction activities. Install telephone on a separate line for each temporary office and first aid station. Contractor shall provide telephone service in his office and separate telephone service in the DAS/CS Office and Construction Administrator's Office, if provided. It is preferred that the Contractor use a cellular phone. Basic service and local calls will be paid for by the Contractor. Toll calls will be paid for by the respective users.
1. **Separate Telephone Lines:** Provide additional telephone lines for the following:
 - a. Where an office has more than **two (2)** occupants, install a telephone for each additional occupant or pair of occupants.
 - b. Provide dedicated telephone lines for a separate fax machine in both the Contractor's office and the DAS/CS / CA office.
 2. At each telephone, post a list of important telephone numbers.
- E. Temporary Sanitary Facilities, Including Drinking Water:** Temporary sanitary facilities include temporary toilets, wash facilities, and drinking-water fixtures. Comply with regulations and health codes for the type, number, location, operation, and maintenance of fixtures and facilities. Install where facilities will best serve the Project's needs.
1. Provide toilet tissue, wash basins with water, soap and paper towels, paper cups, and similar disposable materials for each facility. Provide covered waste containers for used material. The Contractor shall maintain the facilities in a sanitary condition.
 2. **Toilets:** The Contractor shall install self-contained chemical toilet units. Shield toilets to ensure privacy. Use of pit-type privies will not be permitted. Provide separate facilities for male and female personnel.
 3. **Water Coolers:** Where power is accessible, provide electric hot/cold water coolers to maintain dispensed cold water temperature at 45 to 55 degrees F. Provide bottled water service and cup supplies and maintain in a clean sanitary condition.
- F. Storm and Sanitary Sewer:** If sewers are available, provide temporary connections to remove effluent that can be discharged lawfully.

1. Filter out excessive amounts of soil, construction debris, chemicals, oils, and similar contaminants that might clog sewers or pollute waterways before discharge.
 2. Connect temporary sewers to the municipal system, as directed by sewer department officials.
 3. Maintain temporary sewers and drainage facilities in a clean, sanitary condition. Following heavy use, restore normal conditions promptly.
- G. Storm Water Pollution Control:** Provide earthen embankments and similar barriers in and around excavations and sub-grade construction, sufficient to prevent flooding by runoff of storm water from heavy rains.

3.3 SUPPORT FACILITIES INSTALLATION

- A. General:** Locate field offices, storage sheds, and other temporary construction and support facilities in designated area as shown on the Contract Documents. The location of the trailers on the Drawings is diagrammatic in nature. Final placement of the trailers is to be approved by the Construction Administrator.
1. Maintain support facilities until Final Completion. Remove prior to Final Completion with permission from the Owner.
- B. Field Offices:** Provide insulated, weathertight temporary offices of sufficient size to accommodate required office personnel at the Project Site. Keep all offices clean and orderly, sweep weekly and remove rubbish on a daily basis. Furnish and equip offices as follows:
1. The Contractor shall provide an office for their own use and a method to contact them by e-mail and telephone at any point and time.
 2. **[OPTION "C"]** The Contractor shall provide a field office, for the sole use of the Construction Administrator and the Owner; **(1) one double-wide trailer 24' x 60' including connector or (2) 12' x 60' trailers with connector.** The trailer shall be in "new condition" as determined by the Construction Administrator. **The trailer shall have a minimum of three (3) offices (minimum 150 square feet each), a main meeting area and a sound insulated toilet room, sink and hot and cold running water.** The trailers shall have ample natural light, heating of sufficient capacity to maintain 70 degrees F in winter and air conditioning of sufficient capacity to maintain 75 degrees F in summer. The operational noise level of the supplied HVAC systems shall be low enough so as not to impede the conducting of meetings. The Contractor shall provide a 5-lb ABC fire extinguisher and an OSHA approved first aid kit. The Contractor shall provide the following furniture, which will remain his property. The furniture may be used but shall be in good condition as judged by the Construction Administrator. The Contractor shall supply the Construction Administrator and the Owner office or trailer(s) with a water cooler for hot and cold water.

2.1	The Contractor shall provide a lockable chemical toilet(s) with toilet tissue for the owners' use. The Contractor shall maintain the facility in a sanitary condition. (See Section 01 52 19 Temporary Sanitary Facilities).
2.2	Four (4) Lockable, double-pedestal, office desks, each with an executive chair.
2.3	Four (4) Plan tables.
2.4	Two (2) Plan racks.
2.5	Twenty (20) Conference chairs and a conference table (approx. 5 feet x 12 feet).
2.6	Four (4) Side tables (approx. 3 feet x 5 feet).

2.7	Four (4) Wall mounted, cork display boards (4 foot x 6 foot).
2.8	Two (2) Wall mounted, white, wipe-off board, with markers (3 foot x 4 foot).
2.9	Eight (8) File cabinets (lockable four drawer letter size).
2.10	Four (4) Bookshelves each with 10 linear feet x 12 inch wide shelving.
2.11	Four (4) Large capacity waste receptacles.
2.12	One (1) Plain paper, Fax Machine with dedicated telephone line approved by Owner.
2.13	Four (4) Telephones with telephone lines and voice mail.
2.14	Four (4) Telephones lines (dedicated to computer use) with high-speed Internet connection (minimum of DSL or cable modem service).

3. Field Office Computer System

The Design Builder shall provide **Insert number of computers** Field Office Computer System(s) for the Department's exclusive use for each field office specified. The Design Builder has the option to provide either a desktop or a laptop computer system in accordance with the minimum requirements listed below.

3.1 Field Office Desktop Computer System:

.1	Processor:	
.2	Memory:	
.3	Hard Drive:	
.4	Optical Drive:	
.5	Ports:	
.6	Network/Wireless:	Ethernet or wireless card to be compatible with the selected internet and office network connections;
.7	Graphics:	
.8	Monitor:	
.9	Keyboard:	
.10	Mouse:	

OR:

3.1 Field Office Laptop Computer System:

.1	Processor:	
.2	Memory:	
.3	Hard Drive:	
.4	Optical Drive:	
.5	Ports:	
.6	Network/Wireless:	Ethernet or wireless card to be compatible with the selected internet and office network connections;
.7	Graphics:	
.8	Display:	
.9	Battery:	
.10	External Monitor:	
.11	External Keyboard	
.12	External Mouse:	
.13	Miscellaneous:	One compatible port replicator with AC adapter, one additional AC adapter, one DC adapter and one padded carrying case

4. Computer Software:

The Contractor shall provide software for the computer system in accordance with the minimum requirements listed below.

4.1	Operating System Software:	
4.2	Productivity Software:	
4.3	Security Software:	
4.4	All software shall include the most current updates and patches at the time the computer system is provided to the Owner. The Construction Manager shall provide for installation of updates and patches for the operating system, productivity and security software during the term of use of the computer system by the Owner. Updates and patches shall be provided by an automatic update method.	
4.5	The Owner may install and maintain proprietary software on the computer in order to run the Owner's construction management programs.	

5. Miscellaneous Computer Requirements

The initial condition of the computer system shall be nearly pristine. All owner installed e-mail accounts, games, spyware, online services, applications, network or other profiles previously set up on the system shall be removed prior to placement in the field office. If the system was provided for a previous DAS/CS contract, all software not specified shall be removed prior to placement in the current field office.

- 5.1** The Contractor shall provide an uninterruptible power supply (UPS), minimum **Insert** VA, **Insert** Watts and full time surge suppression for each field office computer system specified in this Section.
- 5.2** The Contractor shall provide all cables, connections and software required to connect the field office computer system to the printer and the scanner.
- 5.3** When more than one computer system is specified for a field office, the Contractor shall provide either an Ethernet or wireless office network to allow all computer systems in the field office to access the field office internet service, the printer and the scanner.
- 5.4** The Contractor shall provide appropriate dust covers for all field office desktop computer systems.
- 5.5** The Contractor shall provide all manuals necessary for operation of the computer system and software with the system and shall include all documentation normally furnished with the equipment and software when purchased.
- 5.6** The Owner will be utilizing the computer system to run or access Owner provided construction management software applications. These applications are known to run on Intel and AMD compatible equipment when using the Windows **Insert** operating system. If the Owner experiences problems running these applications due to hardware or software compatibility, the Contractor shall replace the equipment to ensure compatibility to the satisfaction of the Owner within **five (5)** business days.
- 5.7** The computer system shall be maintained in good working order. If a portion of the system becomes defective, inoperable, damaged, or stolen, that portion shall be repaired or replaced within **five (5)** business days after the Contractor is notified by the Owner. If the computer system and related accessories are not maintained by the Design-Builder as required, the Owner may withhold partial payments until the computer system is operational to the Owner's satisfaction.

6. **Field Office Internet Service:**

The Contractor shall provide broadband internet service for the field office. Broadband internet service shall be capable of a minimum average upload speed of Insert unless otherwise approved by the Owner.
 7. When the Contractor supplies the trailer(s) they shall equip each trailer with a water cooler for hot and cold water.
- C. Storage and Fabrication Sheds:** Install storage and fabrication sheds sized, furnished, and equipped to accommodate materials and equipment involved, including temporary utility service. Sheds may be open shelters or fully enclosed spaces within the building or elsewhere on-site.
1. Storage sheds for tools, materials and equipment shall be weathertight with heat, lighting and ventilation for products requiring controlled conditions.
 2. Remove temporary materials, equipment services and construction before Substantial Completion.
 3. Clean and repair damage caused by installation or use of temporary facilities. Restore existing facilities used during construction to specified or original condition.
- D. Temporary Roads and Paving:** Construct and maintain temporary roads and paving to support the indicated loading adequately and to withstand exposure to traffic during the construction period. Locate temporary paving for roads, storage areas, and parking where the same permanent facilities will be located. Review proposed modifications to permanent paving with the Construction Administrator and Architect.
1. Provide paving for pedestrian access and parking for field offices.
 2. Paving: Comply with Division 32 Section 32 12 16 "Asphalt Paving" for construction and maintenance of temporary paving.
 3. Coordinate temporary paving development with sub-grade grading, compaction, installation and stabilization of sub-base and installation of base and finish courses of permanent paving.
 4. Install temporary paving to minimize the need to rework the installations and to result in permanent roads and paved areas without damage or deterioration when occupied by the Owner.
 5. Extend temporary paving in and around the construction area as necessary to accommodate delivery and storage of materials, equipment usage, administration, and supervision.
- E. Dewatering Facilities and Drains:** For temporary drainage and dewatering facilities and operations not directly associated with construction activities included under individual Sections, comply with dewatering requirements of applicable Division 31 Sections. Where feasible, utilize the same facilities. Maintain the site, excavations, and construction free of water.
- F. Temporary Enclosures:** Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities.
1. Where heat is needed and the permanent building enclosure is not complete, provide temporary enclosures where there is no other provision for containment of heat. Coordinate enclosure with ventilating and material drying or curing requirements to avoid dangerous conditions and effects.
 2. Install tarpaulins securely, with incombustible wood framing and other materials. Close openings of 25-sq ft or less with plywood or similar materials.
 3. Close openings through floor or roof decks and horizontal surfaces with load-bearing, wood-framed construction.

4. Where temporary enclosure exceeds 100-sq ft in area, use UL-labeled, fire-retardant-treated material for framing and main sheathing.

G. Temporary Lifts, Hoists and Elevator Use:

1. Provide facilities for hoisting materials and employees. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.
2. Refer to Division 14 Sections for elevators.

H. Temporary Project Identification Signs: Prepare project identification and other signs of size indicated. Install signs where indicated to inform the public and persons seeking entrance to the Project. Support on posts or framing of preservative-treated wood or steel. Do not permit installation of unauthorized signs.

1. **Project Sign:** Engage an experienced sign painter to apply graphics. Comply with details to be furnished by the Construction Administrator.
 - a. **Temporary Tripod Frame:** For groundbreaking ceremonies only, provide a temporary tripod for the sign illustrated and described below. Make the tripod of 12 ft long 2" x 4"s (Stud Grade), beveled and bolted at the top. Provide approximately 5-ft between legs at grade. Provide a 6-ft long, 2" x 4" seat for the sign; locate 5-ft above grade and nail in place. Nail sign at four (4) places where edges intersect tripod legs. Drive a 24" long, pointed 2" x 4" stake into the earth next to each leg and nail to legs.
 - b. **Project Sign:** The Contractor shall contact the Construction Administrator for the proper wording for the project sign. Fabricate sign of 3/4" Exterior Grade A-B Fir plywood. Mount sign on preservative treated Fir posts. The Owner shall provide design, color selection and illustration of the Project Sign. Paint both sides and all edges of sign and the posts with two (2) coats of exterior, white, alkyd primer. Paint the border and letters with "bulletin" (sign) paint. Letter sizes, colors and related information are given on the illustration below. A self-adhesive decal of the State seal will be furnished at the Contract signing. Erect the sign within two (2) weeks after execution of the Contract and remove the sign within one (1) week after completion of the project.
 - c. **Project Sign Detail:** Sign letter sizes, fonts, colors and related information are shown in the illustration available for download from the DAS website (www.ct.gov/das) > Doing Business With The State > State Building Construction > Publications and Forms > DAS Construction Services Library > 3000 Series - Design Phase Forms.

I. Temporary Exterior Lighting: Install exterior yard and sign lights so signs are visible when Work is being performed.

J. Collection and Disposal of Waste and Cleaning:

1. Collect waste within the contract limit line from construction areas daily. Provide separate containers for proper waste recycling. Comply with requirements of NFPA 241 for removal of combustible waste material and debris. Enforce requirements strictly. Do not hold materials more than seven (7) days during normal weather or three (3) days when the temperature is expected to rise above 80 degrees F. Handle hazardous, dangerous, or unsanitary waste materials separately from other waste by containerizing properly. Dispose of material lawfully.
2. Maintain areas under Contractor's control free of waste materials, debris and rubbish. Maintain in a clean and orderly condition.
3. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces and other closed or remote spaces before closing the space.

4. Periodically clean interior areas before start of surface finishing and continue cleaning on an as-needed basis.
 5. Control cleaning operations so that dust and other particulates will not adhere to wet or newly coated surfaces.
- K. Temporary Environmental Controls:** Contractor is to provide the following controls.
1. Rodent and Pest Control: Before deep foundation work has been completed, retain a local exterminator or pest control company to recommend practices to minimize attraction and harboring of rodents, roaches, and other pests. Employ this service to perform extermination and control procedures at regular intervals so the Project will be free of pests and their residues at materials.
 2. Dust Control (construction and demolition).
 3. Noise Control.
 4. Erosion and Sediment Control.
 5. Pollution Control.
 6. Traffic Control.
- L. Stairs:** Until permanent stairs are available, provide temporary stairs where ladders are not adequate. Cover finished permanent stairs with a protective covering of plywood or similar material so finishes will be undamaged at the time of acceptance.

3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION (listed in Paragraph 1.2 D)

- A.** Except for use of permanent fire protection as soon as available, do not change over from use of temporary security and protection facilities to permanent facilities until Substantial Completion, or longer, as requested by the Owner.
- B. Temporary Fire Protection:** Until fire-protection needs are supplied by permanent facilities, install and maintain temporary fire-protection facilities of the types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 10 "Standard for Portable Fire Extinguishers" and NFPA 241 "Standard for Safeguarding Construction, Alterations, and Demolition Operations."
1. Provide and locate fire extinguishers where convenient and effective for their intended purpose, but not less than one extinguisher on each floor at or near each usable stairwell.
 2. Store combustible materials in containers in fire-safe locations.
 3. Maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire-protection facilities, stairways, and other access routes for fighting fires. Prohibit smoking in hazardous fire-exposure areas.
 4. Provide supervision of welding operations, combustion-type temporary heating units, and similar sources of fire ignition.
 5. The Contractor, during construction, shall be responsible for loss or damage by fire to the work of the Contract until completion. Any fire used within the structure for working purposes shall be extinguished when not in use. Bitumen or tar shall be melted on the ground only. No flammable material shall be stored in the structure in excess of amounts allowed by the authorities. No gasoline shall be stored in or close to the building at any time. The Contractor shall assign a responsible employee to be in charge of fire protection measures.
 6. If an EPDM or other single-ply roof is included in the work that requires cleaning of mating surfaces of laps with gasoline, limit amount of gasoline on roof to two (2) gallons which shall be in UL listed containers. Also provide one 30 B:C fire extinguisher within 75 feet of any point on the roof.

- C. Permanent Fire Protection:** At the earliest feasible date in each area of the Project, complete installation of the permanent fire-protection facility, including connected services, and place into operation and use. Instruct key personnel on use of facilities.
- D. Security for Site and Agency:**
1. Provide security program and facilities to protect work, existing facilities and the Owner and Agency's operations from unauthorized entry, vandalism and theft. Coordinate with the Owner's and Agency's security program.
 2. The Contractor shall be solely responsible for damage, loss or liability due to theft or vandalism.
- E. Barricades, Warning Signs, and Lights:** Comply with standards and code requirements for erection of structurally adequate barricades. Paint with appropriate colors, graphics, and warning signs to inform personnel and the public of the hazard being protected against. Where appropriate and needed, provide lighting, including flashing red or amber lights.
1. Provide covered walkways as required by governing authorities for public rights-of-way and for public access to existing buildings.
 2. Provide temporary, insulated, weathertight closures at openings to the exterior to provide acceptable working conditions and protection for materials, to allow for temporary heating and to prevent entry of unauthorized persons. Provide doors with self-closing hardware and locks.
 3. Barriers and enclosures shall be in conformance with code requirements. Do not block egress from occupied buildings unless necessary to further the work of the Contract. In this case, secure the Owners approval of an alternate egress plan.
 4. See also General Conditions Article 19, "Protection of the Work, Persons and Property".
- F. Enclosure Fences:** Before excavation begins, install an enclosure fence with lockable entrance gates. Locate where indicated on the Construction Documents, or enclose the entire site or the portion determined sufficient to accommodate construction operations. Install in a manner that will prevent people, dogs, and other animals from easily entering the site, except by the entrance gates.
1. Provide chain link construction fencing with posts set in a compacted mixture of gravel and earth. Use existing fence to the extent possible.
- G. Security Enclosure and Lockup:** Install substantial temporary enclosure of partially completed areas of construction. Provide locking entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security. Provide keys to the Construction Administrator.
1. **Storage:** Where materials and equipment must be stored, and are of value or attractive for theft, provide a secure lockup. Enforce discipline in connection with the installation and release of material to minimize the opportunity for theft and vandalism.
- H. Protection:**
1. Protect buildings, equipment, furnishings, grounds and plantings from damage. Any damage shall be repaired or otherwise made good at no expense to the Owner.
 2. Provide protective coverings and barricades to prevent damage. The Contractor shall be held responsible for, and must make good at his own expense, any water or other type of damage due to improper coverings. Protect the public and building personnel from injury.
 3. Provide temporary protection for installed products. Control traffic in immediate area to minimize damage.

4. Provide protective coverings for walls, projections, jambs, sills and soffits of openings. Protect finished floors and stairs from traffic, movement of heavy objects and storage. Prohibit traffic and storage on waterproofed and roofed surfaces and on lawn and landscaped areas.
 5. Provide temporary partitions and ceilings to separate work areas from Agency-occupied areas to prevent penetration of dust and moisture into Agency-occupied areas and equipment. Erect framing and sheet materials with closed joints and sealed edges at intersections with existing surfaces.
 6. See also General Conditions Article 19, "Protection of the Work, Persons and Property".
- I. **Environmental Protection:** Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations, and minimize the possibility that air, waterways, and subsoil might be contaminated or polluted or that other undesirable effects might result.
- J. **Traffic Ways:**
1. The Contractor may use on-site paved roads and parking areas but shall not encumber same or their access. Public highways shall not be blocked by standing trucks, parked cars, material storage, construction operations or in any other manner.
 2. Public roads and existing paved roads, drives and parking areas on Owner's property shall be kept free from scrap or debris due to construction operations and any damage to their surface caused by the Contractor shall be repaired by him at his own expense.
 3. If the work of the Contract affects public use of any street, road, highway or thoroughfare, the Contractor shall confer with the police authority having jurisdiction to determine if and how many police are needed for public safety in addition to any barriers and signals that may be needed. The Contractor will be responsible for payment of any needed police services.
- K. **Identification Badges for Contractor's Personnel, Visitors & Parking Stickers:**
1. The Contractor will provide each person working or visiting at the site with an identification badge, bearing the name of the Contractor and a number. As badges are assigned, a record shall be kept by the Contractor and given to the Construction Administrator and Agency Administrator. Update and correct the records of all badges issued on a semi-monthly basis.
 2. Badges are to be worn on outer garment where visible at all times while at the construction site, return them to the Contractor's field office at the end of each day and pick them up there each morning.
 3. All vehicles parking in the Contractor's parking lot and those used around the site require an ID sticker. They will be issued by the Agency. Each contractor shall apply for parking stickers through the Construction Administrator no more than semi-monthly and shall keep record of all stickers issued.

3.5 OPERATION, TERMINATION, AND REMOVAL

- A. **Supervision:** Enforce strict discipline in use of temporary facilities. Limit availability of temporary facilities to essential and intended uses to minimize waste and abuse.
- B. **Maintenance:** Maintain facilities in good operating condition until removal. Protect from damage by freezing temperatures and similar elements.
1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.

2. Protection: Prevent water-filled piping from freezing. Maintain markers for underground lines. Protect from damage during excavation operations.
- C. Termination and Removal:** Unless the Architect/CA requests that it be maintained longer, remove each temporary facility when the need has ended, when replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with the temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
1. Materials and facilities that constitute temporary facilities are the Contractor's property. The Owner reserves the right to take possession of project identification signs.
 2. Remove temporary paving not intended for or acceptable for integration into permanent paving. Where the area is intended for landscape development, remove soil and aggregate fill that do not comply with requirements for fill or subsoil in the area. Remove materials contaminated with road oil, asphalt and other petrochemical compounds, and other substances that might impair growth of plant materials or lawns. Repair or replace street paving, curbs, and sidewalks at the temporary entrances, as required by the governing authority.
 3. At Substantial Completion, clean and renovate permanent facilities used during the construction period including, but not limited to, the following:
 - a. Replace air filters and clean inside of ductwork and housings.
 - b. Replace significantly worn parts and parts subject to unusual operating conditions.
 - c. Replace lamps burned out or noticeably dimmed by hours of use.

END OF SECTION 01 50 00

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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 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

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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 Construction Administrator 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 Construction Administrator 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 Construction Administrator 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 Demolition"** for demolition of selected portions of the building for alterations.
 4. 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 Construction Administrator 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 Construction Administrator 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. **Equipment supports.**
 - b. **Piping, ductwork, vessels, and equipment.**
- 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.**
- 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'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 Construction Administrator and Architect, 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 Construction Administrator 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. 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] [75]** 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'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 Construction Administrator.
- 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.
- 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 **Owner**
- 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 **[Architect] [Owner] [Construction Administrator]**.

END OF SECTION 01 74 19

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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 building system start up and system demonstration and includes the following:
 - 1. Starting Systems.
 - 2. Demonstration and instructions.
 - 3. Testing, adjusting, and balancing.
- B. **Related Sections:** The following Sections contain requirements that relate to this Section:
 - 1. Division 01 Section 01 45 00 "Quality Control" specifies quality assurance and inspecting services.
 - 2. Division 01 Section 01 77 00 "Closeout Procedures" specifies requirements for contract close out requirements for system operation and maintenance data and extra materials.
 - 3. Division 01, Section 01 91 00 "Commissioning" specifies process requirements for system commissioning.
 - 4. Division 23, Section 23 08 00 "Commissioning of HVAC" specifies requirements HVAC&R system commissioning.

1.3 STARTING SYSTEMS

- A. Coordinate schedule for start-up of various equipment and systems.
- B. Provide written notification to the Construction Administrator **30 days** prior to start-up of each item.
- C. Verify that each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, and control sequence for other conditions that may cause damage.
- D. Verify that tests, meter readings, and specified electrical characteristics agree with those required by the equipment or system manufacturer.
- E. Verify that wiring and support components are complete and tested.
- F. Execute the start-up under supervision of manufacturer's representative, in accordance with manufacturer's instructions.
- G. When referenced in individual specification sections, require manufacturer to provide an authorized representative to be present at the site to inspect, check, and approve equipment or system installation prior to start-up, and to supervise placing equipment or system in operation.
- H. Submit a written report in accordance with Division 01 Section 01 45 00 "Quality Control" that the equipment or system has been properly installed and is functioning properly.

1.4 DEMONSTRATION AND INSTRUCTIONS

- A. Demonstrate operation and maintenance of Products to Owner and Agency Personnel **fourteen (14)** days prior to substantial completion.
- B. Demonstrate Project equipment and instruct in a classroom environment at location designated by the Construction Administrator and instructed by a qualified manufacturer's representative who is knowledgeable about the Project.

- C. For equipment or systems requiring seasonal operation perform demonstration for season within **six (6)** months.
- D. Utilize operation and maintenance manuals as basis for instruction. Review contents of manual with Owner and Agency Personnel in detail to explain all aspects of operation and maintenance.
- E. Demonstrate start-up, operation, control, adjustment, troubleshooting, servicing, and maintenance, and shutdown of each item at agreed upon scheduled time and at equipment or designated location.
- F. Prepare and insert additional data in operations and maintenance manuals when need for additional data becomes apparent during demonstration.
- G. Starting and adjusting equipment does not constitute acceptance by the owner since commissioning is a requirement of this contract. Additionally, the warranty does not begin until substantial completion has been granted for that specific item.

1.5 TESTING, ADJUSTING, AND BALANCING

- A. The Contractor will employ and pay for the testing services of an independent consultant to verify the testing, adjusting, and balancing.
 - 1. Comply with the requirements of Division 01 Section 01 91 00 "Commissioning" as they relate to the Work of this Section.
- B. Reports will be submitted by the independent testing consultant to the Construction Administrator indicating observations and results of tests and indicating compliance or non-compliance with the requirements of the Contract Documents.
- C. The Owner may employ and pay for the services of an independent consultant to verify testing, adjusting, and balancing which was performed by the Contractor.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01 75 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 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 punchlist 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 Construction Administrator, Architect, 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 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's final inspection list of items to be completed or corrected, endorsed and dated by the Architect. 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.
 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 Construction Administrator 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 Construction Administrator will prepare a Certificate of Acceptance. If the Work is incomplete, the Construction Administrator 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'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 Construction Administrator 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 Construction Administrator 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 Construction Administrator for the Owner's records.
- E. Record Sample Submitted:** Immediately prior to Substantial Completion, the Contractor shall meet with the Construction Administrator, Architect 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 Construction Administrator 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

3.1 CLOSEOUT PROCEDURES

- A. Operation and Maintenance Instructions:** Arrange for each Installer of equipment that requires regular maintenance to meet with the Owner's personnel to provide instruction in proper operation and maintenance. Provide instruction by manufacturer's representatives if installers are not experienced in operation and maintenance procedures. Include a detailed review of the following items:
 1. Maintenance manuals.
 2. Record documents.
 3. Spare parts and materials.
 4. Tools.
 5. Lubricants.
 6. Fuels.
 7. Identification systems.
 8. Control sequences.
 9. Hazards.
 10. Cleaning.

11. Warranties and bonds.
 12. Maintenance agreements and similar continuing commitments.
- B.** As part of instruction for operating equipment, demonstrate the following procedures:
1. Startup.
 2. Shutdown.
 3. Emergency operations.
 4. Noise and vibration adjustments.
 5. Safety procedures.
 6. Economy and efficiency adjustments.
 7. Effective energy utilization.

3.2 FINAL CLEANING

- A. General:** The General Conditions require general cleaning during construction. Regular site cleaning is included in Division 01 Section 01 50 00 "Temporary Facilities and Controls."
- B. Cleaning:** Employ professional cleaners for final cleaning. Clean each surface or unit to the condition expected in a normal, commercial building cleaning and maintenance program. Comply with manufacturer's instructions.
1. Complete the following cleaning operations before requesting inspection for Certification of Substantial Completion and Certification of Occupancy.
 2. Interior:
 - a. Remove labels that are not permanent labels.
 - b. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other substances that are noticeable vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials. Remove paint spots; wash and polish glass.
 - c. Clean exposed interior hard-surfaced finishes to a dust-free condition, free of stains, films, and similar foreign substances. Restore reflective surfaces to their original condition. Leave concrete floors broom clean. Vacuum carpeted surfaces.
 - d. Wash washable surfaces of mechanical, electrical equipment and fixtures and replace filters, clean strainers on mechanical equipment. Remove excess lubrication and other substances. Clean plumbing fixtures to a sanitary condition. Clean light fixtures and lamps.
 - e. Clean and polish finish hardware.
 - f. Clean and polish tile and other glazed surfaces.
 - g. Clean floors; wax and buff resilient tile. Clean vinyl or rubber base.
 - h. Vacuum and/or dust walls, ceilings, lighting fixtures, ceiling diffusers and other wall and ceiling items.
 - i. Remove defacements, streaks, fingerprints and erection marks.
 3. Exterior:
 - a. Clean the site, including landscape development areas, of rubbish, litter, and other foreign substances. Sweep paved areas broom clean; remove stains, spills, and other foreign deposits. Rake grounds that are neither paved nor planted, to a smooth, even-textured surface.
 - b. Clean exposed exterior hard-surfaced finishes to a dust-free condition, free of stains, films, and similar foreign substances.

- c. Clean roofs, gutters and downspouts.
 - d. Remove waste and surplus materials, rubbish and construction equipment and facilities from the site, and deposit it legally elsewhere.
 - e. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other substances that are noticeable vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials. Remove paint spots; wash and polish glass.
- C. Pest Control:** Engage an experienced, licensed exterminator to make a final inspection and rid the work of rodents, insects, and other pests. Provide results of final inspection in writing.
- D. Removal of Protection:** Remove temporary protection and facilities installed for protection of the Work during construction.
- E. Compliance:** Comply with regulations of authorities having jurisdiction and safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on the Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from the site and dispose of lawfully.
1. Where extra materials of value remain after completion of associated Work, they become the Owner's property. Dispose of these materials as directed by the Construction Administrator.
 2. Leave building clean and ready for occupancy. If the Contractor fails to clean up, the Owner may do so, with the cost charged to the Contractor. The Owner will issue a credit change order to cover the costs.

END OF SECTION 01 77 00

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including Division 00 General Conditions 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 operation and maintenance manuals, including the following:
 - 1. Preparing and submitting operation and maintenance manuals for building operating systems and equipment.
 - 2. Preparing and submitting instruction manuals covering the care, preservation, and maintenance of architectural products and finishes.
- B. **Related Sections:** The following Sections contain requirements that relate to this Section:
 - 1. Division 01 Section 01 33 00 "Submittal Procedures" specifies preparation of Shop Drawings and Product Data.
 - 2. Division 01 Section 01 75 00 "Starting and Adjusting" specifies instruction of the Owner and Agency operating personnel in the operation and maintenance of building systems and equipment and the general requirements for starting-up equipment and systems.
 - 3. Division 01 Section 01 77 00 "Closeout Procedures" specifies general closeout requirements.
 - 4. Division 01 Section 01 78 30 "Warranties and Bonds" specifies requirements for submittal of warranties and bonds.
 - 5. Appropriate Sections of Divisions 02 through 49 specify special operation and maintenance data requirements for specific pieces of equipment or building operating systems.

1.3 QUALITY ASSURANCE

- A. **Maintenance Manual Preparation:** In preparation of maintenance manuals, use personnel thoroughly trained and experienced in operation and maintenance of equipment or system involved.
 - 1. Where maintenance manuals require written instructions, use personnel skilled in technical writing where necessary for communication of essential data.
 - 2. Where maintenance manuals require drawings or diagrams, use draftsmen capable of preparing drawings clearly in an understandable format.
- B. **Instructions for the Owner and Agency Personnel:** The Construction Manager must use experienced instructors thoroughly trained and experienced in operation and maintenance of equipment or system involved, to instruct the Owner's operation and maintenance personnel.
- C. **Commissioning (Cx) Coordination:** The Commissioning process requires detailed O&M documentation. The Contractor must submit O&M manuals to the Construction Administrator for review and approval by Commissioning Agent (CxA).

1.4 SUBMITTALS

- A. **Submittal Schedule:** Comply with the following schedule for submitting operation and maintenance manuals:
 - 1. Before Substantial Completion, when each installation that requires operation and maintenance manuals is nominally complete, submit **four (4)** draft copies of each manual to the Owner's Representative, Commissioning Agent (CxA), Agency Representative, and Architect for review. Include a complete index or table of contents of each manual.

- a. The Owner's Representative will return **one (1)** copy of the draft with comments within **twenty - one (21)** calendar days of receipt.
 - b. Submit **four (4)** copies of data in final form at least **twenty-one (21)** calendar days before final inspection. The Owner's Representative will return **one (1)** copy within **twenty-one (21)** calendar after final inspection, with comments.
 2. After final inspection, make corrections or modifications to comply with the Commissioning Agent's (CxA), Architect's, and Agency Representative's comments. Submit final copies to the Owner's Representative within **twenty-one (21)** calendar days of receipt of the Commissioning Agent's (CxA), Architect's, and Agency Representative's comments.
- B. Form of Submittal:** Prepare operation and maintenance manuals in the form of an instructional manual for use by the Owner's operating personnel. Organize into suitable sets of manageable size. Where possible, assemble instructions for similar equipment into a single binder.
1. **Binders:** For each manual, provide heavy-duty, commercial-quality, 3-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, sized to receive **8-1/2-by-11- inch** paper. Provide a clear plastic sleeve on the spine to hold labels describing contents. Provide pockets in the covers to receive folded sheets.
 - a. Where **two (2)** or more binders are necessary to accommodate data, correlate data in each binder into related groupings according to the Project Manual table of contents. Cross-reference other binders where necessary to provide essential information for proper operation or maintenance of the piece of equipment or system.
 - b. Identify each binder on front and spine, with the printed title "OPERATION AND MAINTENANCE MANUAL," Project title or name, and subject matter covered. Indicate volume number for multiple volume sets of manuals.
 2. **Dividers:** Provide heavy paper dividers with celluloid-covered tabs for each separate section. Mark each tab to indicate contents. Provide a typed description of the product and major parts of equipment included in the section on each divider.
 3. **Protective Plastic Jackets:** Provide protective, transparent, plastic jackets designed to enclose diagnostic software for computerized electronic equipment.
 4. **Text Material:** Where maintenance manuals require written material, use the manufacturer's standard printed material. If manufacturer's standard printed material is not available, provide specially prepared data, neatly typewritten, on **8-1/2-by-11-inch, 20-lb/sq ft** white bond paper.
 5. **Drawings:** Where maintenance manuals require drawings or diagrams, provide reinforced, punched binder tabs on drawings and bind in with text.
 - a. Where oversize drawings are necessary, fold drawings to the same size as text pages and use as a foldout.
 - b. If drawings are too large to be used practically as a foldout, place the drawing, neatly folded, in front or rear pocket of binder. Insert a typewritten page indicating drawing title, description of contents, and drawing location at the appropriate location in the manual.

1.5 MANUAL CONTENT

- A.** In each manual include information specified in the individual Specification Section and the following information for each major component of building equipment and its controls:
1. **General system or equipment description.**
 2. **Design factors and assumptions.**
 3. **Copies of applicable shop drawings and product data.**
 4. **System or equipment identification, including:**
 - a. **Name of manufacturer.**
 - b. **Model number.**

- c. **Serial number of each component.**
 5. **Operating instructions.**
 6. **Emergency instructions.**
 7. **Wiring diagrams.**
 8. **Inspection and test procedures.**
 9. **Maintenance procedures and schedules.**
 10. **Precautions against improper use and maintenance.**
 11. **Copies of warranties.**
 12. **Repair instructions including spare parts listing.**
 13. **Sources of required maintenance materials and related services.**
 14. **Manual index.**
- B.** Organize each manual into separate sections for each piece of related equipment. As a minimum, each manual shall contain a title page; a table of contents; copies of product data, supplemented by drawings and written text; and copies of each warranty, bond, and service contract issued.
1. **Title Page:** Provide a title page in a transparent, plastic envelope as the first sheet of each manual. Provide the following information:
 - a. **Subject matter covered by the manual.**
 - b. **Name and address of the Project.**
 - c. **Date of submittal.**
 - d. **Name, address, and telephone number of the Construction Manager.**
 - e. **Name and address of the Architect and Owner's Representative.**
 - f. **Cross-reference to related systems in other operation and maintenance manuals.**
 2. **Table of Contents:** After title page, include a typewritten table of contents for each volume, arranged systematically according to the Project Manual format. Include a list of each product included, identified by product name or other appropriate identifying symbol and indexed to the content of the volume.
 - a. Where a system requires more than one volume to accommodate data, provide a comprehensive table of contents for all volumes in each volume of the set.
 3. Provide a general information section immediately following table of contents, listing each product included in the manual, identified by product name. Under each product, list the name, address, and telephone number of the subcontractor or Installer and the maintenance subcontractor. Clearly delineate the extent of responsibility of each of these entities. Include a local source for replacement parts and equipment.
 4. **Product Data:** Where the manuals include manufacturer's standard printed data, include only sheets that are pertinent to the part or product installed. Mark each sheet to identify each part or product included in the installation. Where the Project includes more than one (1) item in a tabular format, identify each item, using appropriate references from the Contract Documents. Identify data that is applicable to the installation, and delete references to information that is not applicable.
 5. **Written Text:** Prepare written text to provide necessary information where manufacturer's standard printed data is not available, and the information is necessary for proper operation and maintenance of equipment or systems. Prepare written text where it is necessary to provide additional information or to supplement data included in the manual. Organize text in a consistent format under separate headings for different procedures. Where necessary, provide a logical sequence of instruction for each operation or maintenance procedure.

6. **Drawings:** Provide specially prepared drawings where necessary to supplement manufacturer's printed data to illustrate the relationship of component parts of equipment or systems or to provide control or flow diagrams. Coordinate these drawings with information contained in project record drawings to assure correct illustration of the completed installation.
 - a. Do not use original Record Documents as part of operation and maintenance manuals.
7. **Warranties and/or Bonds:** Provide a copy of each warranty and/or bond in the appropriate manual for the information of the Owner's operating personnel. Provide written data outlining procedures to follow in the event of product failure. List circumstances and conditions that would affect validity of warranty or bond.

1.6 MATERIAL AND FINISHES MAINTENANCE MANUAL

- A. Submit **four (4)** copies of each manual, in final form, on material and finishes to the Owner's Representative for distribution. Provide **one (1)** section for architectural products, including applied materials and finishes. Provide a second section for products designed for moisture protection and products exposed to the weather.
 1. Refer to individual Specification Sections for additional requirements on care and maintenance of materials and finishes.
- B. **Architectural Products:** Provide manufacturer's data and instructions on care and maintenance of architectural products, including applied materials and finishes.
 1. **Manufacturer's Data:** Provide complete information on architectural products, including the following, as applicable:
 - a. Manufacturer's catalog number.
 - b. Size.
 - c. Material composition.
 - d. Color.
 - e. Texture.
 - f. Reordering information for specially manufactured products.
 2. **Care and Maintenance Instructions:** Provide information on care and maintenance, including manufacturer's recommendations for types of cleaning agents to be used and methods of cleaning. Provide information on cleaning agents and methods that could prove detrimental to the product. Include manufacturer's recommended schedule for cleaning and maintenance.
- C. **Moisture Protection and Products Exposed to the Weather:** Provide complete manufacturer's data with instructions on inspection, maintenance, and repair of products exposed to the weather or designed for moisture-protection purposes.
 1. **Manufacturer's Data:** Provide manufacturer's data giving detailed information, including the following, as applicable:
 - a. **Applicable standards.**
 - b. **Chemical composition.**
 - c. **Installation details.**
 - d. **Inspection procedures.**
 - e. **Maintenance information.**
 - f. **Repair procedures.**

1.7 EQUIPMENT AND SYSTEMS MAINTENANCE MANUAL

- A.** Submit **four (4)** copies of each manual, in final form, on equipment and systems to the Owner's Representative for distribution. Provide separate manuals for each unit of equipment, each operating system, and each electric and electronic system.
1. Refer to individual Specification Sections for additional requirements on operation and maintenance of the various pieces of equipment and operating systems.
- B. Equipment and Systems:** Provide the following information for each piece of equipment, each building operating system, and each electric or electronic system.
1. **Description:** Provide a complete description of each unit and related component parts, including the following:
 - a. **Equipment or system function.**
 - b. **Operating characteristics.**
 - c. **Limiting conditions.**
 - d. **Performance curves.**
 - e. **Engineering data and tests.**
 - f. **Complete nomenclature and number of replacement parts.**
 2. **Manufacturer's Information:** For each manufacturer of a component part or piece of equipment, provide the following:
 - a. **Printed operation and maintenance instructions.**
 - b. **Assembly drawings and diagrams required for maintenance.**
 - c. **List of items recommended to be stocked as spare parts.**
 3. **Maintenance Procedures:** Provide information detailing essential maintenance procedures, including the following:
 4. **Operating Procedures:** Provide information on equipment and system operating procedures, including the following:
 - a. **Startup procedures.**
 - b. **Equipment or system break-in.**
 - c. **Routine and normal operating instructions.**
 - d. **Regulation and control procedures.**
 - e. **Instructions on stopping.**
 - f. **Shutdown and emergency instructions.**
 - g. **Summer and winter operating instructions.**
 - h. **Required sequences for electric or electronic systems.**
 - i. **Special operating instructions.**
 5. **Servicing Schedule:** Provide a schedule of routine servicing and lubrication requirements, including a list of required lubricants for equipment with moving parts.
 6. **Controls:** Provide a description of the sequence of operation and as-installed control diagrams by the control manufacturer for systems requiring controls.
 7. **Identification Drawings:** Provide each Subcontractor's Identification Drawings.
 - a. Provide as-installed, color-coded, piping diagrams, where required for identification.
 8. **Valve Tags:** Provide charts of valve-tag numbers, with the location and function of each valve.
 9. **Circuit Directories:** For electric and electronic systems, provide complete circuit directories of panel boards, including the following:

- a. Controls.
- b. Communication.

C. Electronic Media:

1. For equipment which requires maintenance by operational personnel, provide a professionally developed **DVD** for the use of maintenance training for the facility. Each **DVD** will be accompanied by a written index which can be utilized to find any specific item of information by time or place on the **DVD**.
2. The Construction Manager is responsible for this production. This **DVD** will be provided to the Owner's Representative at the same time as the delivery of the other maintenance material.
3. The **DVD** must be able to be edited for future changes to the equipment and modifications as they occur.

1.8 COMMISSIONING RECORD AND TESTING DATA MANUAL

The Contractor shall cooperate with Commissioning Agent (CxA) in the preparation of a separate Manual dedicated to documenting the Commissioning process which will include all certifications and testing data and some repeating of O&M data. Description of this Manual is found in Section 01 91 00 Commissioning and shall be prepared by the Commissioning Agent (CxA).

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01 78 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 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 Construction Administrator 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.	07 <u>54 19</u>	Polyvinyl-Chloride (PVC) Roofing, Base Flashing and Insulation: 30 year unlimited, materials and installation [the manufacturer's no dollar limit (NDL) warranty], and; 2 year General Contractor's warranty for installation.
2.	07 <u>92 00</u>	Exterior - Interior Caulking and Sealants: 5 year, material and workmanship.
3.	07 <u>62 00</u>	Metal Flashing and Sheet Metal: 20 year, material and workmanship.

- H. Submit certification that finish materials are fire rated as specified.
- I. Form of Warranty: Warranties shall be submitted in following format:

Warranty

Commissioner:
Department of Administrative Services
DAS Commissioner's Office
450 Columbus Boulevard, Suite 1501
Hartford, CT 06103

Project Number: BI-RD-311
Project Title: O'NEILL CENTER ROOF REPLACEMENT NATATORIUM
WESTERN CONNECTICUT STATE UNIVERSITY

I (We) hereby warranty

the _____ work on the referenced project for a _____ years
period of _____

from _____, 20 _____ against failures of workmanship and materials in accordance
with the requirements of _____, _____, _____, of the Specifications.
Section _____, Page _____, Paragraph _____

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:** _____

- J. Bonds shall be by approved Surety Companies, made out to the Commissioner, Department of Administrative Services on companies' standard form.
- K. 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.
- L. Bonds shall be by approved Surety Companies, made out to the Commissioner, Department of Administrative Services, on company's standard form.
- M. 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'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.
- 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 Construction Administrator, 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 DESCRIPTION

- A. Scope of work includes the removal of existing roofing assembly and its associated components down to concrete deck, inspection and repair of damaged deck, and removal of other items as called for on the Drawings.

1.2 SPECIAL UNIT PRICES

- A. Unit prices for certain work of this section are listed in Specification Section 012000 – Contract Considerations - Unit Price Schedule. Unit prices listed are for work performed beyond the Base Bid Amount. The actual quantity used shall be verified by the General Contractor and the Construction Administrator.
- B. The Base Bid shall include patching of damaged or defective concrete decking above and beyond that which is shown on the drawings.
 - 1. Base Bid is to include **100** square feet of concrete deck patching.

1.3 RELATED WORK

- A. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.
 - 1. Section 01 74 19 Construction Waste Management
 - 2. Section 06 10 53 Misc. Rough Carpentry
 - 3. Section 07 62 00 Sheet Metal Flashing & Trim
 - 4. Section 07 01 50.23 Roof Removal

1.4 QUALITY ASSURANCE

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

1.5 PROTECTION, HANDLING, AND STORAGE

- A. Protect the building, building occupants, landscaping, site work, and building contents against all risks associated with this work.
- B. The Contractor is solely responsible for the water-tight integrity of the roof, window openings, and adjacent building components at all times during the construction.
- C. Repair any damage to original conditions caused by this work to the satisfaction of the Owner using mechanics skilled in the appropriate trade.
- D. Provide protection at all windows as required. Vision at windows may be obstructed only within the scheduled work areas. Remove protection only as work areas are completed, prior to relocating to a new area.

1.6 SUBMITTALS

- A. General: Refer to Section 01 33 00 Submittal Procedure
- B. Provide for approval a detailed plan of the demolition process, equipment to be used, and any materials required to complete the work.
- C. Submit a schedule indicating proposed methods and sequence of operations for selective removals and demolition of Work prior to commencement of operations.
- D. Include procedures and details for protection of interior and exterior building finishes.

1.7 TEMPORARY CONTROL

- A. Every effort must be made to control noise, dust, and debris.
- B. It is recognized that, in certain areas of operation, noise abatement is impracticable. The Contractor shall, however, make every effort to correct inordinately noisy equipment, the correction of which would result from repair, lubrication, or maintenance.
- C. During removals, controlled dampening to reduce dust generation and airborne particulate matter will be permitted.
 - 1. The Contractor will be held fully responsible for water penetration into the building and any damage to finishes and contents resulting therefrom.
- D. Debris, of whatever nature, resulting from the operation of the Work must be contained. Any scattering of other soil on roof, sills, paving, equipment, vehicles or the like must be thoroughly cleaned up and disposed of each day.

1.8 SECURITY

- A. Provide security and facilities to protect Work, and existing facilities, and Owner's operations from unauthorized entry, vandalism, or theft.
- B. Coordinate with Owner's security program.

PART 2 - PRODUCTS

2.1 CONCRETE PATCH

- A. Sakrete - Fast Setting Cement Patcher is a preblended, fast setting mixture of special cementitious materials, additives and sand. Sets in 20 minutes. Use for the rapid repair of concrete or masonry substrates.

PART 3 - EXECUTION

3.1 SURFACE CONDITIONS

- A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.
- B. Contractor is to coordinate the Work of this Section with all other trades prior to any demolition.

3.2 DEMOLITION

- A. By careful study of the Contract Documents, determine the location and extent of selective demolition to be performed.
- B. In company with the Owner, visit the site and verify the extent and location of selective demolition required.
 - 1. Carefully identify limits of selective demolition.
 - 2. Mark interface surfaces as required to enable workmen also to identify items to be removed and items to be left in place and intact.
- C. Prepare and follow an organized plan for demolition and removal of items.
 - 1. Shut off, cap, and otherwise protect existing public utility lines in accordance with the requirements of the public agency or utility having jurisdiction, if applicable.
 - 2. Completely remove items scheduled to be so demolished and removed, leaving surfaces clean, solid, and ready to receive new materials specified elsewhere.
 - 3. In all activities, comply with pertinent regulation of governmental agencies having jurisdiction.
 - 4. Demolished material shall be considered to be property of the Contractor and shall be completely removed from the job site.
 - 5. Use means necessary to prevent dust from becoming a nuisance to the public, to neighbors, and to other work being performed on or near the site.

3.3 REFUSE AND DEBRIS

- A. Contractor shall notify the Owner's representative at least **48 hours** in advance of exact locations for refuse receptacle areas, chute locations, equipment set-up areas, and the like in order to permit the owner to make provisions to have these areas available to the Contractor.
- B. Contractor has responsibility to dispose of all refuse from the removal work as part of his Contract obligations.
 - 1. Contractor shall make sure that no more than **two (2) containers of refuse of 40 cubic yards** maximum size are allowed to accumulate and remain on the Owner's premises.
 - 2. In the event that the Owner's operation of his facilities prohibits making these exact locations available for the Contractor's use, alternate locations shall be mutually agreed upon.
- C. **Contractor to cover all dumpsters.**

3.4 REPLACEMENTS

- A. In the event of demolition of items not scheduled to be demolished, promptly replace such items to the acceptance of the Architect and at no additional cost to the Owner.

3.5 SCHEDULE / SALVAGEABLE MATERIALS

- A. Existing wood blocking to remain for reuse if in sound condition.
- B. Existing sheet metal counter flashing to remain for reuse if in sound condition.
- C. Existing roof drains to remain for reuse if in sound condition.

END OF SECTION 02 41 00

PART 1 - GENERAL

1.1 DESCRIPTION

A. The principal items of Work are related to providing miscellaneous blocking for roofing related items such as flashing, edge detail, curbs, sheet metal and including any incidental work necessitated by these operations and such other work as may be called for by the Drawings.

B. Related Work Specified Elsewhere:

- | | | |
|----|----------------------|----------------------------------|
| 1. | Section 07 01 50.23: | Roofing Removal |
| 2. | Section 07 22 00: | Roofing Insulation |
| 3. | Section 07 54 19: | Polyvinyl-Chloride (PVC) Roofing |
| 4. | Section 07 62 00: | Sheet Metal Flashing and Trim |

1.2 UNIT PRICES

A. Unit prices for certain work of this section are listed in Specification Section 012000 – Contract Considerations - Unit Price Schedule. Unit prices listed are for work performed beyond the Base Bid Amount. The actual quantity used shall be verified by the General Contractor and the Construction Administrator.

B. The Base Bid shall include new and replacement of wood blocking above and beyond that which is shown on the drawings – size and profile to match existing.

1. Base Bid is to include additional **100** linear feet (any size)

1.3 QUALITY ASSURANCE

A. Lumber Grading Rules and Wood Species to be in conformance with Products Standards, PS 1 and PS 2.

B. Grading Rules of following associations apply to materials furnished under this Section:

1. Southern Pine Inspection Bureau (SPIB).
2. West Coast Lumber Inspection Bureau (WCLIB)
3. Western Wood Products Association (WWPA)

C. Grade Marks:

1. Identify lumber of official grade mark. Grade stamp to contain symbol of grading agency certified by Board of Review, American Lumber Standards Committee, mill number or name, grade of lumber, specie or species grouping or combination designation, rules under which graded & where applicable, and condition of seasoning at time of manufacture.

D. Reference Standards:

1. American Society for Testing and Materials (ASTM):
 - a. D1761-88 Standard Test Methods for Mechanical Fasteners in Wood.

- 2. Wood for framing to be #2 Douglas Fir Larch – size as noted on Drawings or to match existing. (E = 1,700,000 psi; Fb = 1,450 psi)
- C. Plywood: 3/4-inch thick, C-D Ext-APA.

2.2 FASTENERS

- A. Rough Hardware shall conform to the following Federal Specifications:
 - 1. Screws: FF-S-111D, Screws, Wood.
 - 2. Nails: FF-N-105B (3), Nails, Wires, Brads, and Staples.
 - a. Nails for securing materials with nominal 1-inch thickness or less shall be 8d (22-inch) Cement or Zinc Coated common nail.
 - b. Nails for securing members between nominal 1-inch thickness and nominal 2-inch thickness shall be 10d (3-inch) Cement or Zinc Coated Common Nail.
 - c. Use stainless steel fasteners at all pressure treated wood.
- B. Fasteners for securement to masonry shall be: TAPPERS as produced by Powers Fasteners, 2 Powers Lane, Brewster, New York, NY 10509; or Triangle Fastener Corporation, 1925 Preble Avenue, Pittsburgh, Pennsylvania 15233; or Secure Fastener & Tool Company Inc., 401 Meadow Lane, Carlstadt, New Jersey 07072.
 - 1. Fasteners shall be long enough to penetrate the masonry or concrete not less than 1-inch, Phillips flat-head, type 304 stainless steel.
- C. Fasteners for assembling wood equipment bases, curbs and alike shall be No. 12 by 3 inch flat-headed wood screws, type 304 stainless steel.

PART 3 - EXECUTION

3.1 GENERAL

- A. Once exposed, the securement of all wood blocking to remain should be inspected to confirm the minimum fastening requirements are met. If these criteria are not met, additional securement should be added as needed. This is to be included in the Base Bid.
- B. Blocking and nailers shown on the Drawings are shown generically to indicate the intended purpose. Select the proper thickness for each piece to allow blocking to be placed in the proper configuration
- C. No cutting or dipping shall be done on any new or existing roofing on buildings not to be reroofed hereunder.
- D. Where removals are made, all existing nails will be removed, not driven.
 - 1. In instances where nails have been rusted to the point that the shaft breaks in removal attempts, it will be permitted to drive them.

3.2 WORKMANSHIP

- A. Replace existing deteriorated wood blocking as directed or determined by the Construction Administrator.

3.3 BLOCKING/NAILERS

- A. Height of perimeter blocking shall match the total thickness of the insulation boards or as shown on the Drawings.
 - 1. Blocking depicted elsewhere in the Drawings is shown generically, to indicate the intended purpose. Contractor is responsible for selecting proper thickness of each piece of pieces to allow blocking to be placed in a configuration to achieve the intent indicated by the Drawings.
- B. Secure blocking to existing wood blocking, decking or masonry with fasteners at not over 24-inches on centers.
 - 1. Pre-drill holes through base course of blocking and into the concrete, using only carbide-tipped drills designed for the purpose.
 - 2. Fastener length shall be selected to provide minimum embedment of 1 1/4 inch.
 - 3. Countersink Phillips flat head fasteners to be flush with the surface of the wood member being fastened.
 - 4. Counter bore hex head fasteners to below the surface of the wood member being fastened.
 - 5. Secure blocking to blocking at 8-inch centers.
 - 6. Where blocking is over 8 inches wide, use 2 rows of fasteners, staggered 12 inches on center.
- C. Each piece of blocking shall have not less than 2 fasteners.
- D. Space pieces of blocking so that the ends are not tightly butted, and so the gap between them does not exceed 1/8-inch.
- E. Where blocking is more than one layer, stagger the joints between layers.

3.4 GROUTING

- A. Where required to provide an even solid substrate for wood blocking, set blocking in a bed of full grout working it into place, extruding excess mortar from under the blocking.
- B. Remove excess grout and secure blocking to substrate with specified fasteners.

3.5 EQUIPMENT BASES AND SUPPORTS

- A. Coordinate with other Sections of the Specifications.
- B. Fabricate curbs as detailed and install so that tops of bases to receive equipment are level.
- C. Where cutting of the lumber is required, the freshly cut ends, before assembly, shall be treated with preservative as required above.
- D. Ensure curb height is a minimum of 8-inches above finished roof. This will require

increasing the height of the curb as noted on the Drawings.

- E.** Contractor is to include in his price, all material and equipment necessary to raise the curb including electrical and ductwork extensions.

3.6 CLEANING UP

- A.** Keep the premises in neat, safe, and orderly condition at all times during execution of the Work, free from accumulation of sawdust, out-ends, and debris.

- B.** Sweeping: At the end of each working day, and more often if necessary, thoroughly sweep surfaces where refuse from this portion of the Work has settled.

1. Remove refuse to the area of the job site set aside for its storage.
2. Upon completion of this portion of the Work, thoroughly broom clean all surfaces

END OF SECTION 06 10 53

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PART 1 - GENERAL

1.1 DESCRIPTION

- A.** The Work involves the complete removal of existing roofing and related flashings down to decking, cleaning of decking, disposal of removed materials, protection of all roofing over which traffic from these operations will move and any additional related work as specified or noted on the Drawings.
- B.** Related Work Specified Elsewhere:
1. Section 06 10 53: Miscellaneous Rough Carpentry
 2. Section 07 22 00: Roofing Insulation
 3. Section 07 54 19: Polyvinyl-Chloride (PVC) Roofing
 4. Section 07 62 00: Sheet Metal Flashing and Trim

1.2 QUALITY ASSURANCE

- A.** Foreman Qualifications: The foreman of the crew performing roof removals must be a qualified roofing journeyman with at least five (5) years experience in membrane roofing replacement including associated removals.

1.3 JOB CONDITIONS

- A.** Existing Conditions:
1. Portions of the decking may be unsound. The Contractor will exercise whatever measures he deems necessary to preclude injury to personnel, or equipment falling through any of the suspect areas, the limits of which cannot be defined until roofing removals have been made. The Contractor shall hold the Owner and Architect harmless from any claims resulting from traffic across unsound areas of decking that have not been adequately protected. Heavy equipment may not be allowed on roofs.
 2. Contractor to provide protection board (1-inch rigid insulation overlaid with 1/2-inch plywood) over roof areas to help distribute weight evenly.
 3. Provide alternative drainage acceptable to owner to remove water from the roof should drains become clogged during construction.
- B.** Protection:
1. Provide traffic ways, erect barriers, fences, guard rails, enclosures, chutes, and the like to protect personnel, existing roofs, structures, vehicles, utilities, and landscaping.
 2. **Building is occupied.** Days and hours of operation are Tuesday and Friday 7:45 a.m. to 4 p.m., Thursday 9:15 a.m. to 5:30 p.m. and Saturday 8:00 a.m. to 12:30 p.m. Contractor is to take all necessary precautions to protect occupants and materials inside the building during the Work.
- C.** Maintaining Traffic:

1. Ensure minimum interference with roads, streets, drives, and adjacent facilities.
 2. Do not close or obstruct drives, fire lanes, parking areas, rails, alleys or passageways without prior permission from the Owner.
- D. Test cuts:
1. Test cuts of the existing roofing membrane have been taken and materials tested for asbestos content. See Section 00 30 00.

PART 2 - PRODUCTS

(Not Applicable)

PART 3 - EXECUTION

3.1 SCHEDULING

- A. Coordinate with Section 06 10 53, 07 22 00, 07 54 19 and 07 62 00. **Ensure that no more roofing is removed in any one day that can be properly protected and made watertight at the close of Work each day.** No exception to this requirement will be made.
- B. **Roofs on which work is being done must be secured from the weather at the close of each day's work.**
1. **The Contractor assumes any real or incidental damages that occur from improper securement or termination.**

3.2 CUTTING

- A. Care must be taken when cutting materials free that existing materials scheduled to remain are not damaged.

3.3 REMOVALS

- A. Removal of existing roofing and insulation shall be complete, down to the decking.
1. All existing nails, fasteners, etc. will be removed.
- B. Materials resulting from these operations must be removed from the roofs. No stacking will be permitted without special permission.
- C. Remove all curbs, mechanical units, and other units scheduled for demolition.
1. Patch openings with specified materials to match existing.
 2. Only full planks, slabs, or tiles are to be used.
 3. Ensure deck is level and acceptable for roofing system specified.
 4. Any existing wood blocking found to be sound and in good condition can remain.

3.4 DISPOSAL

- A.** Receptacle locations will be coordinated with the Owner's representative.
- B.** Receptacles are to be removed from the site as soon as they are filled and disposed of off the premises.
 - 1.** Arrangements can be made for a stand-by receptacle.
- C.** The Contractor is to follow all State, Federal and local codes and regulations regarding the handling and disposal of hazardous materials.

3.5 CLEANING

- A.** As soon as removals are made, the roof decking surfaces shall be swept clean.
- B.** All dust and debris resulting from these operations that might have fallen or been blown onto buildings, roofs, Owner's equipment, apparatus, and the grounds must be thoroughly cleaned up at the end of each day's work.
 - 1.** No accumulations will be permitted.

END OF SECTION 07 01 50.23

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PART 1 - GENERAL

1.1 DESCRIPTION

- A.** Contractor is to provide all labor, materials, tools, and equipment and supervision necessary to install protection board and rigid polyisocyanurate insulation board adhesively attached to existing concrete decking, including all saddles, crickets, cants, tapered edge strips, and any incidental work necessitated by these operations and such other work as may be called for by the Drawings.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A.** Section 06 10 53: Miscellaneous Rough Carpentry
- B.** Section 07 01 50.23: Roof Removal
- C.** Section 07 54 19: Polyvinyl-Chloride (PVC) Roofing
- D.** Section 07 62 00: Sheet Metal Flashing and Trim

1.3 QUALITY ASSURANCE

- A.** Federal Specification (FS):
1. FS HH-I-1972/2 Faced Polyisocyanurate Thermal Insulation Board.
- B.** Insulation shall meet Class-C fire rating for assembly specified.
- C.** American Society for Testing and Materials (ASTM):
1. ASTM 1621 - 73 Test Method for Compressive Properties of Rigid Cellular Plastics.
 2. ASTM E 84-01 Test Method for Surface Burning Characteristics of Building Materials.
 3. ASTM D2126 – 87 Test Method for Response of Rigid Cellular Plastics to Thermal and Humid Aging.
 4. ASTM C236 - 89 Test Method for Steady-State Thermal Performance of Building Assemblies by Means of a Guarded Hot Box.
 5. ASTM C273 Shear Test in Flat wise Plane of Flat Sandwich Constructions or Sandwich Cores.
 6. ASTM C 578 Preformed, Cellular Polystyrene Thermal Insulation.
 7. D1623 Tensile and Tensile Adhesion Properties of Rigid Cellular Plastics.
 8. FM 4450 Approval Standard for Class 1 Insulated Steel Deck Roofs.

9. UL 1256 Fire Test of Roof Deck Constructions

- D. FM requirements: Provide insulation, protection board, fasteners and adhesives as part of a total roof assembly system meets the requirements specified under the roofing membrane Section 07 53 23.
 - E. When reroofing, inspect the existing steel deck securement and, if necessary, fasten the deck per FM 1-28, Wind Design, prior to installation of the above-deck components. Verify design and method of securement with Architect prior to any repair work.
1. See Section 05 31 00 Metal Deck for deck fastening.

1.4 SUBMITTALS

- A. Comply with pertinent provisions of Section 01 33 00 Submittal Procedures
- B. Product Data: Provide data on all products - characteristics, performance criteria and limitations of insulation.
- C. Manufacturer's Instructions: Indicate special environmental conditions and techniques required for installation.
- D. Manufacturer's Certificate: Certify that all products meet or exceed specified requirements.
- E. Provide samples (8-inch x 8-inch) of protection board, rigid insulation, and roofing membranes.
- F. Shop drawing showing insulation layout from material manufacturer.

1.5 DELIVERY, HANDLING AND STORAGE

- A. Deliver in manufacturer's original unopened containers with labels intact and legible, indicating name, thermal conductance, production date and/or product code.
- B. Materials must be stored under cover to protect them from the weather, in an area where the temperature is within the limits specified by the manufacturer.
 - 1. Polyethylene films will not be permitted as protective covering for the insulation.
 - a. Should the material be received from the manufacturer protectively wrapped in polyethylene film, this film, if undamaged will be permitted. Should the film have or develop ruptures, tear, or otherwise be damaged, it will be removed and the material otherwise protected.
 - b. When stored outdoors, insulation shall be stacked on pallets or dunnage at least four inches above ground level and covered as outlined above.
 - 2. Tarpaulins or other "non-sweating" coverings will be used.
- C. All materials shall be stored to comply with fire and safety regulations.

D. Adhesive

1. Review the applicable Material Safety Data Sheet for complete safety information prior to use.
2. The foam produced is an organic material. It must be considered as combustible and may constitute a fire hazard. The foam adhesive must not be left exposed or unprotected. Shield from heat and sparks.
3. Do not smoke during application.
4. Use with adequate ventilation. Avoid breathing vapors. Wear a NOSH-approved supplied air respirator while spraying. Proper safety training is essential for all persons involved in the installation process. If inhaled, remove to fresh air and administer oxygen if breathing is difficult. Consult a physician immediately.
5. Avoid contact with eyes. Safety glassed or goggles are required. If splashed in eyes, immediately flush eyes with plenty of clean water for at least 15 minutes. Contact a physician immediately.
6. Avoid contact with skin. Wear long sleeves and pants. Wash thoroughly after handling. In case of contact with skin, thoroughly wash affected area with soap and water. Do not eat, drink or smoke when using this product. Avoid breathing vapors. Use only outdoors or in a well ventilated area. Wear protective gloves, eye protection and an organic vapor respirator. Contaminated work clothing must not be allowed out of the workplace. Store locked up. Dispose of container in accordance with local, regional and national regulations.
7. Job site storage temperatures in excess of 90°F (32°C) may affect product shelf life. Should the components be stored at temperatures lower than 70°F (20°C), restore to room temperature prior to use. Do not allow to freeze (storage below 0°F (-18°C) for at least 3 days).
8. Use spray booths, wind screens and lower spray pressure when spraying in windy conditions.
9. All air intake vents on roofs must be closed during application of adhesives.
10. **KEEP OUT OF THE REACH OF CHILDREN.**

1.6 JOB CONDITIONS

- A. Board insulation shall not be installed when weather conditions are such that the deck is wet or when there is no assurance the insulation will be protected by the end of the day.
- B. Insulation which has been wet or is wet will not be used.

1.7 WARRANTIES AND GUARANTEES

PROJECT NO.: BI-RD-311

- A. As part of the "Full System Warranty" supplied by the membrane manufacturer and noted under Section 07 53 23
- B. For all PVC Roofing Assemblies, the use of insulation by others is not acceptable when a roof membrane system warranty is specified. The use of protection board by others may not be acceptable when a roof membrane system warranty is specified.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Polyisocyanurate insulation

1. Acceptable Manufacturers:

- a. Carlisle SynTec (Basis of Design) SecurShield HD Composite - top
P.O. Box 7000 SecurShield Polyisocyanurate -
Carlisle, PA 17013 bottom
- b. Soprema Sopraiso
310 Quadral Drive Densdeck Prime
Wadsworth, OH 44281
- c. Sika Corporation Sarnatherm ISO Coated Glass
100 Dan Road Facer
Canton, MA 02021 Densdeck Prime

2. Polyisocyanurate Insulation is flat (non-tapered) rigid-roof insulation panel composed of a closed-cell polyisocyanurate foam core bonded on each side medium weight organic/ inorganic facing. Insulation must be approved for direct application adhered to vapor barrier over concrete deck.

Thermal Resistance (Long Term Thermal Resistance)	LTTTR 5.7 per inch min.
Top layer	2.5 inches
Bottom layer	3.0 inches (Staggered joints)
Board Size Mechanically fastened	4-foot x 8-foot
Compressive Strength	Minimum 25 psi
Edges	Square Edges
Facing	Factory applied skin of glassed-reinforced on both sides.

B. Cover board

1. Acceptable Manufacturers:

- | | | |
|----|-----------------------------------|--------------------------|
| a. | Carlisle SynTec (Basis of Design) | SecurShield HD Composite |
| b. | Soprema | Densdeck Prime |
| c. | Sika | Densdeck Prime |

2. Composite is a unique composite insulation panel comprised of ½" high-density polyiso cover board laminated to SecurShield rigid polyiso roof insulation. Product to be for commercial roofing projects that require high thermal efficiency combined with maximum durability.

2.2 MISCELLANEOUS

- A. Tapered** for slope at cricket or where shown on the Drawings and as needed to make a smooth transition between surfaces to be a high density laminated board.
- B.** Insulation with a 1/2-inch per foot minimum slope made of a same material, specification and manufacturer as base insulation.

2.3 ADHESIVE

- A.** Low rise, two component polyurethane adhesive, VOC compliant, all purpose, foamable adhesive that contains no solvents and sets in minutes.
- B.** Product: Insulation – Carlisle, Flexible Fast low-rise foam adhesive – basis of design.
- C.** Specifications: Fast Adhesive is packaged in 15 and 50 gallon drums. Viscosity 250 (CPS @ 25 deg C). Mixing ratios by volume 1:1 Part A to Part B
- D.** STORAGE: Fast Adhesive should be stored in a clean dry location and protected from environmental exposure and out of direct sunlight. Fast Adhesive can be stored without temperature restrictions. When used during cold weather, Fast Adhesive should be conditioned to a min temp of 14 F.
- E.** Shelf life is twelve (12) months from the date of manufacture when unopened and properly stored.

2.4 VAPOR BARRIER

- A.** Vapor Barrier - 40-mil composite consisting of 35 mils of self-adhering rubberized asphalt laminated to a 5-mil woven polypropylene film. Size: 244 square foot roll (39" x 75').
- B.** Product – Carlisle VapAir Seal 725TR – basis of design.
- C.** Primer – GavGrip III Prime

PART 3 - EXECUTION

3.1 SURFACE PREPARATION

- A. Thoroughly clean off the existing deck, sweeping off all particulate matter.
 - 1. Remove all existing asphalt or laitance from the deck which would adversely affect the installation and setting of insulation boards.
- A. Apply primer to concrete decking in accordance with manufacturer's specifications at a total rate of 0.45 gal/square.
- B. The concrete surface shall be completely dry. Dryness shall be determined by a qualified owner's representative. The surface shall have a smooth finish and be free of voids, spalled areas, sharp protrusions, loose aggregate, laitance and form-release agents.
- C. Perform an adhesion test prior to installation of vapor barrier.
- D. In the event of rain, concrete must be allowed to dry before the application of primer.
- E. Artificial drying methods such as torches are not acceptable.
- F. Ensure vapor barrier is installed over decking and terminates up vertical ends a minimum of 2 inches above insulation to form a tight seal with roofing membrane.
- G. Patch any holes or defects in the existing decking using the specified material as per the manufacturer's specifications.
- H. Install insulation boards as per manufacturer's specifications in two layers with staggered joint with protection board on top (and bottom if detailed as such). **Top insulation board to be minimum 2 1/2-inch thick.**
 - 1. All joints shall be closely butted with gaps no more than 1/4".
 - 2. Neatly scribe all cuts at vertical projection.
 - 3. Install top layer so as to break longitudinal and end joints to the board below.
- I. FM approvals for adhesive patterns at field, perimeter and corner depends upon the individual project building velocity pressures as determined by the most current ASCE Design Calculation Document. Contractor is to contact the membrane manufacturer for these Patterns and for Approved insulation patterns for Warranty Wind Rider Projects.
 - 1. Also, see Section 07 54 19 for additional information on FM requirements.
 - 2. Ensure any whole or partial insulation board that falls within the calculated perimeter or corner, has the increased securement applied over the entire board.

3. Manufacturer to provide specified Warranty Wind Riders to select roofing project as required by the project specifications or negotiated by the building owner or its designee. Warranty Wind Riders are limited to predetermined wind speeds and/or wind uplift pressures.
- J. Adhesive is applied directly to the properly prepared vapor barrier, dry (not damp), clean substrate which is defined as, but is not limited to: free of dirt; dust; debris; oils; loose and/or embedded gravel; unadhered coatings; deteriorated existing membrane; any other contaminants that may result in a surface that is not sound or is un-even and affects the adhesive to the substrate and insulation board.
- K. Adhesive ribbon size is one-half ($\frac{1}{2}$ ") inch minimum to three-quarter ($\frac{3}{4}$ ") inch or that additional amount of adhesive and ribbon size to provide positive contact between the substrate and the Approved thermal insulation or cover board (rigid board). On-site applicator must make job-specific application determinations to ensure manufacturer's acceptable bonded boards.
- L. The FM Approvals Field Roof Area pattern is twelve (12") inches o.c. FM Approvals Perimeter and Corner Patterns depend upon the individual project building velocity pressures as determined by the most current ASCE Design Calculation Document. Contact manufacturer for these Patterns and for Approved insulation adhesive patterns for Warranty Wind Rider Projects.
 1. See details on Drawings for additional information on adhesive patterns.
- M. Install crickets and saddles of tapered insulation where shown on the drawings and wherever necessary to divert water and provide positive slope to drains and gutters.

3.2 CLEANING

- A. Daily clean-up and removal from the site of all wrappings, empty containers, loose particles of insulation board, nails, fasteners, discs or plates, and other debris is required.

END OF SECTION 07 22 00

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PART 1 - GENERAL

1.1 DESCRIPTION

- A. Work involves new Re-Roof with Polyvinyl-Chloride (PVC) roofing membrane. Provide all labor, materials, tools and equipment and supervision necessary for reattachment of decking as necessary, adhesively attached insulation and cover board, fully adhered 80 mil thick white PVC membrane including flashings, accessories as specified herein and as indicated on drawings in accordance with manufacturer's current specifications and details for FM Global approval and **30 year warranty**.

1. New Roof Assembly:
Single Ply PVC white membrane 80 mil fully adhered to ½ inch cover board on 5.5 inches Polyisocyanate Insulation, adhesively attached to vapor barrier on concrete decking.

Existing Roof Assembly to be removed down to concrete decking:
Single Ply TPO membrane mechanically attached to 3 ½" extruded polystyrene rigid insulation mechanically attached to concrete decking.

- B. Related Work Specified Elsewhere:

- | | | |
|----|----------------------|-------------------------------|
| 1. | Section 06 10 53: | Miscellaneous Rough Carpentry |
| 2. | Section 07 01 50.23: | Roofing Removal |
| 3. | Section 07 22 00: | Roofing Insulation |
| 4. | Section 07 62 00: | Sheet Metal Flashing and Trim |

1.2 SUPPLEMENTAL BID

- A. Number 1: Work involves installation of PVC membrane to existing Kalwall skylights along perimeter of roof with all associated flashing, sheet metal, fasteners, and ribs as per details.

1.3 QUALITY ASSURANCE

- A. Submit certification by the manufacturer of the system materials used that these Specifications and Drawing Details are acceptable to them for the deck and surfacing to which they are to be applied.
1. For manufacturer's systems proposed, if any details in these Drawings or Specifications are not acceptable to the manufacturer, submit corresponding details proposed for the particular application, together with the manufacturer's reasons for not accepting the conditions depicted in the Specifications or Drawings. No alternate details will be considered without evidence of valid objections on the part of the manufacturer to the Contract requirements.
2. There shall be no deviation made from this Specification without prior written approval by the manufacturer; submit such approval to the Architect.
- B. Applicator qualifications: Approved by the manufacturer for type of system and warranty specified prior to the bidding period and throughout the installation and able to present a copy of his certification upon request by the Architect or Owner.

1. Applicator must have installed at least five roofs of the same materials and methods specified for this project that have been guaranteed for twenty years by the manufacturer of the product that will be used in the Work.
 2. Use skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- C. Manufacturer's Qualifications: Must have a minimum of 20-years' experience manufacturing PVC roofing membranes. Provide a factory trained technician for final inspection of the roofing system. Provide a warranty upon satisfactory installation of the roofing system.
- D. Inspection: Upon completion of the installation, an inspection shall be made by a representative of the manufacturer in order to ascertain that the roofing system has been installed according to their published specifications and details.
- E. ASTM G53 (Accelerated Weathering Tests)
- F. ASTM G21 (Fungal Resistance Tests)
- G. FM Listing – **New PVC Roof**
1. The specified roofing assemblies must be rated by Factory Mutual Global (FMG) to meet or exceed the factored uplift pressures outlined in FMG Property Loss Prevention Data Sheet 1-28, and comply with FMG Property Loss Prevention Data Sheet 1-29 for enhancements at the perimeter and corners.
 2. Provide insulation, membrane, base flashings, and component materials that meet requirements of a roofing system that is listed in FM's "Approval Guide" for Class 1 or noncombustible construction, as applicable. Identify materials with FM markings.
 3. Contractor to complete FM Global form 2688 and submit to FM Global for compliance of system proposed prior to the start of any Work.

Carlisle - RoofNav design number: 400838-0-0 – basis of design
 4. FM Global should be notified at least two weeks prior to the start date of the installation of the roof to conduct a field evaluation.
 5. Edge Securement: Low-slope membrane roof systems metal edge securement, except gutters, shall be installed and designed in accordance with ANSI/SPRI ES-1 for a wind speed as noted.
 6. Design Requirements:
 - a. Ground Surface Roughness (Exposure): **C**
 - b. Building Configuration: Partially Enclosed Buildings
 - c. Occupancy Category: **II**
 - d. Importance Factor: **1.00**
 - e. Building Descriptions:

Height (feet): **32'-0" above grade**

Roof Area: **6,900 square feet**

Perimeter: **5.9'**

Corner: **5.9' x 5.9'**

- f. Wind speed at project site – **95 mph**
- g. Wind Pressure Ratings: Final roofing systems to meet or exceed the following design requirements per FM Global Loss Prevention Data 1-28, 1-29 and 1-49:

Zone 1 (field): **35 psf**

Zone 2 (perimeter): **53 psf**

Zone 3 (corners): **75 psf**

- h. Wind Uplift Ratings: Final roofing systems to meet or exceed the following design requirements per FM Global Loss Prevention Data 1-28, 1-29 and 1-49:

Zone 1 (field): **FM Approved 1-75**

Zone 2 (perimeter): **FM Approved 1-120**

Zone 3 (corners): **FM Approved 1-165**

1.4 PRE-INSTALLATION CONFERENCE

- A. Convene two weeks prior to commencing work of this section to review preparation and installation procedures, coordinating and scheduling required with related work.

1.5 SUBMITTALS

- A. Products data sheets on all materials proposed for use.
- B. Specimen copy of the manufacturer's roofing systems standard warranty.
- C. U. L. and F. M. compliance data.

1.6 DELIVERY, HANDLING AND STORAGE

- A. Deliver in manufacturer's original unopened containers with labels intact and legible.
 - 1. All materials shall be labeled with batch number or lot number.
- B. Materials must be stored under cover to protect them from the weather and in an area where the temperature is within the limits specified by the manufacturer.
 - 1. Adhesives shall be stored between 60°F and 80°F. Should they be exposed to lower temperatures, restore to room temperature for three to five days prior to use. Do not use materials damaged in handling or storage.

2. All cardboard containers should be stored in a DRY area.
 3. During cold weather, the Contractor is to deliver to the job site all flammable materials and adhesives for that day's work. No storage of these materials at the site will be permitted.
- C. All materials shall be stored to comply with fire and safety regulations.

1.7 JOB CONDITIONS

- A. Surfaces on which the roofing membrane system is to be applied shall be clean, smooth, dry, and free of fins, sharp edges, loose and foreign materials, oil and grease.
1. Roofing cement and metal counter flashing that may be on vertical surfaces shall be removed to the extent required to provide a plane surface, free of lumps or projections that would interfere with obtaining a good adhesive bond between new flashing membranes and the vertical surface.
 2. Before beginning work, a representative of the manufacturer shall examine the roof surfaces in order to ensure that the substrate is acceptable.
 3. All surface voids greater than ¼-inch wide shall be properly filled with an acceptable fill material.
- B. The Contractor is cautioned that the membrane may be incompatible with cooking fats and some chemicals. Special care is to be taken not to store materials on the roof where such chemicals exist.
1. The Contractor shall consult with the manufacturer regarding methods required to prevent unacceptable reactions between incompatible materials.
 2. Submit Manufacturer's information and shop drawings to the Architect.

1.8 SAFETY CONDITIONS

- A. The contractor shall be responsible for complying with all project-related safety and environmental requirements.
- B. Hot-air welding shall include heating the specified membrane ply using electric hot-air welding equipment. The contractor shall determine when and where conditions are appropriate to utilize hot-air welding equipment. When conditions are determined by the contractor to be unsafe to proceed, materials and methods shall be utilized to accommodate requirements and conditions.
- C. The contractor shall refer to product Safety Data Sheets (SDS) for health, safety, and environment related hazards, and take all necessary measures and precautions to comply with exposure requirements.

1.9 ENVIRONMENTAL CONDITIONS

- A. Monitor substrate temperature and material temperature, as well as all environmental conditions such as ambient temperature, moisture, sun, cloud cover, wind, humidity, and shade. Ensure conditions are satisfactory to begin work and ensure conditions remain satisfactory during the installation of specified materials. Materials and methods shall be adjusted as necessary to accommodate varying project conditions. Materials shall not be installed when conditions are unacceptable to achieve the specified results.

- B. Precipitation and dew point: Monitor weather to ensure the project environment is dry before, and will remain dry, during the application of roofing materials. Ensure all roofing materials and substrates remain above the dew point temperature as required to prevent condensation and maintain dry conditions.
- C. Hot-air Welding Application: Take all necessary precautions and measures to monitor conditions to ensure all environmental conditions are safe to proceed with the use hot-air welding equipment. Combustibles, flammable liquids and solvent vapors that represent a hazard shall be eliminated and primers shall be fully dry before proceeding with hot air welding operations.

1.10 SCHEDULING

- A. The Owner may be contracting for additional work with various contractors while roofing work is being performed.
- B. Submit schedule of operational sequences and materials handling methods proposed for the Work to the Architect and Owner for review and acceptance.
- C. Contractor to coordinate with building superintendent and Owner turning off of mechanical unit or air intake during application of roofing membrane adhesives.

1.11 GUARANTEE

- A. Refer to Section 01 78 30, "Warranties and Bonds".
- B. Contractor is to guarantee all work for installation for a **period of two (2) years** following Substantial Completion of the Work.
- C. Upon completion work furnish manufacturer's **30 Year** Full System Warranty with no dollar limit (NDL) covering workmanship and materials and installation insuring a watertight roofing system. Maximum wind speed coverage shall be peak gusts of 72 mph measured at 10 meters above ground level.
- D. Warranty should also cover leaks caused by accidental punctures up to 32 man-hours per year.
- E. For all PVC Roofing Assemblies, the use of some components such as insulation by others is not acceptable when a roof membrane system warranty is specified.
- F. Submit **(2) executed copies** of both the manufacturer and applicator warranties for the periods stipulated, starting from the date of substantial completion. **Each warranty must be signed by an authorized representative of the issuing company. All subcontractor's warranties shall also be signed by the Contractor**

PART 2 - PRODUCTS

2.1 NEW ROOF ASSEMBLIES

- A. The EPDM membrane system and all associated products and accessories shall be the same manufacturer and shall be specifically formulated for the applications and purposes for which proposed.
- B. Products and systems of the following manufacturers will be acceptable.

1. Carlisle SynTec (Basis of Design)
P. O. Box 7000
Carlisle, PA Sure-Flex PVC white
 1. 2. Soprema
310 Quadral Drive
Wadsworth, OH 44281 Sentinel PVC P200 white
 3. Sika Corporation
100 Dan Road
Canton, MA 02021 Sarnafil G410
- C. PVC Roofing membrane shall be **80 mil thick**, Polyester reinforced, thermoplastic polyvinyl chloride membrane with a smooth back underside.
1. Widths greater than 10 feet are acceptable; less than 10 feet will not be accepted.
 2. Include membrane seam details as required by manufacturer for **30 year** warranty and as shown on drawings.
- D. Flashings shall be white **PVC 80 mil** thick reinforced compounded PVC and furnished by the membrane manufacturer for the system chosen.
1. All flashing membrane including wall and curb flashing shall be cured **80 mil** thick PVC and furnished by the membrane manufacturer for the system chosen.
 - a. Carlisle Sure-Flex non-reinforced flashing
 - b. Soprema Sentinel PVC P200
 - c. Sika Corporation G459
 2. Include all flashing enhancements such as 2-ply corner details required by manufacturer for **30 year warranty** and as shown on drawings.

2.2 COMPOUNDS

- A. All compounds used in the Work shall be **low VOC** and furnished by the manufacturer of the membrane being used and specially formulated for the intended application.
1. Bonding adhesive shall be compatible with all materials to which the membranes are to be bonded:
 - a. Carlisle GAV-Grip Primer – membrane
Flexible Fast low rise foam - insulation
 - b. Soprema Sentinel S Bonding Adhesive
 - c. Sika Corporation Sarnacol 2170 VC
 2. Sealants to be UV stable polymeric sealant designed to seal all non-factory edges of PVC membranes and flashings.
 - a. Carlisle Water Cut-Off Mastic
Cut Edge Sealant

- b. Soprema Sentinel PVC Cut Edge Sealant
 - c. Sika Corporation Sikaflex – 1a
- 3. Compound for sealing pitch boxes and the like:
 - a. Carlisle Sure-Seal EPDM Pourable Sealer
 - b. Soprema xxxxxxxx
 - c. Sika Corporation Sarnafiller
- 4. Cleaning solvents by Membrane Manufacturer:
 - a. Carlisle PVC Membrane Cleaner
 - b. Soprema xxxxxxxxxxxx
 - c. Sika Corporation Seam Cleaner
- 5. Primer:
 - a. Carlisle CAV-GRIP
 - b. Soprema xxxxxxxxxxxx
 - c. Sika Corporation Sarnavap Self-Adhered Primer VC (low VOC compliant)

2.3 FASTENING COMPONENTS

- A. Securement Strips (RUSS) (Reinforced Universal Securement Strip): 45 mil thick clean, cured reinforced EPDM black membrane with laminated tape
 - 1. 6” wide Pressure-Sensitive RUSS is used horizontally or vertically at the base of walls, curbs, etc. in conjunction with Fastening Plates or Bars below the EPDM Deck membrane for additional membrane securement.
 - 2. 9” wide Pressure Sensitive RUSS used for perimeter membrane securement on sure seal mechanically fastened roofing systems and primary securement on metal retrofit roofing systems.
- B. PVC membrane to cover board:
 - 1. Primer: CAV-GRIP by Carlisle – basis of design.
 - 2. Adhesive: FAST Dual Tank Adhesive by Carlisle – basis of design.
- C. Insulation board:
 - 1. FAST Dual Tank Adhesive by Carlisle – basis of design.

2.4 EDGES AND TERMINATIONS

- A. Termination Bar: A 1" wide and 98 mil thick 6063-T6 extruded aluminum bar pre-punched 6" on center which incorporates a sealant ledge to support lap sealant and provide increased stability for membrane terminations.
 - 1. Fasteners for securement to wood shall be No. 8 by 1-1/4-inch stainless steel round head wood screws, or as manufactured by membrane supplier.
 - 2. Fasteners for securement to masonry shall be slotted hex washer head, 1/4-inch diameter by 1-3/4-inch long self-tapping screws as produced by the manufacturer by the roofing membrane being used or approved equal.
 - 3. Fasteners shall penetrate the masonry a minimum of 1-inch.

2.5 ACCESSORIES

- A. All accessories are to be supplied by the manufacturer of membranes being used. Pre-molded inside and outside corners to be used whenever possible.
- B. Field fabricated pipe seals may be used in lieu of prefabricated units and formed of the PVC sheet, following the system manufacturer's recommendations.
- C. Each fastener exposed to view in the finished work shall be provided with a gasket, not less than 1/16-inch thick, and fabricated of cured neoprene sized to snugly fit the fastener shank and extend beyond the head edge by not less than 1/8-inch.
- D. Clamping rings for securing prefabricated or field fabricated pipe seals, and elsewhere as required, shall be worm drive hose clamp all stainless steel, sized to fit the application.
- E. Liquid flashing and Sealant Pockets – LIQUISEAL.

2.6 MISCELLANEOUS

- A. Walkway pads shall be Pressure Sensitive with 3 rows of splice tape factory installed on bottom and manufactured and supplied by the roofing membrane manufacturer.
 - 1. Color to be black.
 - 2. Size: Pads 24-inch x 24-inch
 - a. Carlisle SynTec – Sure-Flex PVC Crossgrip Walkway Pads
 - b. Soprema – Flagon PVC Walkway
 - c. Sika Corporation – Sarnatred – V

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Applicator shall verify that the work done under related sections meets the following conditions:
 - 1. Roof drains and scuppers have been installed properly, or reconditioned, or replaced.
 - 2. Roof curbs, nailers, equipment supports, vents and other roof penetrations are

properly secured and prepared to receive new roofing materials.

3. All surfaces are smooth and free of dirt, debris and incompatible materials.
4. For concrete deck, verify that concrete substrate is dry and free of moisture. Verify that concrete curing compounds that will impair adhesion of roofing components to roof deck have been removed.
5. All roof surfaces shall be free of water, ice and snow.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Clean substrate of dust, debris, moisture, and other substances detrimental to roofing installation according to roofing system manufacturer's most current requirements. Remove sharp projections.
- B. Prevent materials from entering and clogging roof drains and flashings and from spilling or migrating onto surfaces of other construction. Remove roof drain plugs when no work is taking place or when rain is forecast.

3.3 ROOFING INSTALLATION, GENERAL

- A. Install roofing system according to product manufacturer's most current requirements including but not limited to roofing applicator handbook, product data sheets, specifications, and or relevant technical bulletins.
- B. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing system at end of workday or when rain is forecast. Remove and discard temporary seals before beginning work on adjoining roofing.
- C. For tie-in with existing roofing, install roofing and auxiliary materials to maintain weather tightness of transitions.

3.4 VAPOR-RETARDER AND INSULATION INSTALLATION

- A. Verify installation of vapor-retarder in accordance with Section 07 22 00.
- B. Coordinate installing roofing system components so insulation or roof boards are not exposed to precipitation or other sources of moisture.
- C. Comply with product manufacturer's most current requirements for installing insulation or roof boards as per outlined in Section 07 22 00.
- D. Install tapered insulation to conform to slopes indicated and provide drainage.

3.5 ROOFING MEMBRANE INSTALLATION

- A. The surface of the insulation or substrate shall be inspected by the manufacturer prior to installation of the roof membrane. The substrate shall be clean, dry, free from debris and smooth with no surface roughness or contamination. Broken, delaminated, wet or damaged insulation boards shall be removed and replaced.
- B. Accurately align roofing, and maintain uniform side and end laps of minimum dimensions required by manufacturer. Stagger end laps.

- C. Apply roofing with side laps shingled with slope of roof deck where possible.
- D. Make sure seam areas are free of debris, dirt, and dust, overlap membrane sheets, and hot-air weld side and end laps of roofing and sheet flashings according to manufacturer's most current requirements to ensure a watertight seam installation.
 - 1. Verify in-field weld strength of seams a minimum of twice daily, repair seam sample areas.
 - 2. Test lap edges with probe to verify seam weld continuity.
 - 3. If any tears or voids in lapped seams are found repair using appropriate approved technique.
- E. Roller apply adhesive to the substrate with solvent-resistant rollers. Only the substrate area which can be completely covered with membrane in the same day's operations shall be coated with adhesive. Allow adhesive to dry completely.
- F. Coat underside of membrane and allow to dry slightly to produce strings when touched with a dry finger, the coated membrane shall be rolled onto the previously-coated substrate. Do not allow adhesive on the underside of the membrane to dry completely. The bonded sheet shall be pressed firmly in place with a minimum 100 lb steel, membrane roller.

3.6 BASE / FIELD FLASHING INSTALLATION

- A. Install all membrane and preformed flashings according to roofing system manufacturer's most current requirements.
- B. Install membrane base flashing by applying bonding adhesive to substrate and underside of membrane flashing at required rate. Do not apply to seam area of flashing.
- C. Flash field penetrations and inside/outside corners with appropriate prefab flashing components or by approved custom in-field fabrication technique.
- D. Firmly roll membrane flashing into the adhesive. Hot-air weld side and end laps to ensure a watertight seam installation.
- E. Terminate and seal top of membrane flashings and mechanically anchor to substrate by approved roofing detail. Extend membrane up and over top of parapet and secure to wood blocking as detailed.
- F. Spread continuous sealant bead leaving no gaps over deck drain flange at roof drains, and securely seal roofing in place with clamping ring.

3.7 WALKWAY INSTALLATION

- A. Install walkway product in locations indicated, adhere (except edges) to deck sheet, and hot-air weld edges.

3.8 FIELD QUALITY CONTROL

- A. Arrange for roofing system manufacturer's technical personnel to inspect roofing installation upon completion.
- B. Repair or remove and replace components of roofing system that do not comply with

specified requirements.

- C. Correct deficiencies in or remove roofing system that does not comply with requirements, repair substrates, and repair or reinstall roofing system to a condition free of damage and deterioration at time of Substantial Completion and according to warranty requirements.
- D. Additional testing and inspecting, at Contractor's expense, will be performed to determine if replaced or additional work complies with specified requirements.

3.9 PROTECTION

- A. Protect new roofing system from damage and wear during construction period. Inspect new roofing for damage if used during construction

3.10 CLEANING

- A. Daily clean-up and removal from the site, of all wrappings, empty containers, paper, tubes, loose particles and other debris resulting from these operations is required.

END OF SECTION 07 54 19

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PART 1 - GENERAL

1.1 DESCRIPTION

- A. The work includes installation of pre-fabricated metal coping system, counter flashing, and such other work as may be called for by the Drawings or incidental to and necessitated by these operations.

1.2 RELATED WORK SPECIFIED ELSEWHERE:

- A. Section 06 10 53: Miscellaneous Rough Carpentry
- B. Section 07 01 50.23: Roofing Removal
- C. Section 07 54 19: Polyvinyl-Chloride (PVC) Roofing
- D. Section 07 92 00: Joint Sealant

1.3 QUALITY ASSURANCE

- A. The Contractor must have been in the sheet metal business for not less than five (5) years, have a fully equipped sheet metal work shop, be a member firm of the Sheet Metal and Air Conditioning Contractors National Association, Inc., (SMACNA).
- B. Personnel engaged in and about the Work must be qualified sheet metal journeyman who may be assisted by sheet metal apprentices qualifying for their journeyman status.
- C. The foreman of the crew must have at least five (5) years of experience.
- D. Applicable Standards:
 - 1. American Society for Testing and Materials (ASTM).
 - 2. Sheet Metal and Air Conditioning Contractors National Association, Inc., (SMACNA).
- E. FM Global Listing: Provide insulation, membrane, base flashings, and component materials that meet requirements of a roofing system that is listed in FM's "Approval Guide" for Class 1 or noncombustible construction, as applicable. Identify materials with FM markings.
- F. Edge Securement: Low-slope membrane roof systems metal edge securement, except gutters, shall be installed and designed in accordance with ANSI/SPRI ES-1 for wind speed as noted under Section 07 54 19 and in compliance with FM Global Property Loss Prevention Data Sheet 1-49 Perimeter Flashing – approved assembly rated for 1-120 (33.1 psf).

1.5 JOB CONDITIONS

- A. The Contractor for the work of this Section is held to have carefully examined the Contract Documents and to have inspected the site and area of work to satisfy himself as to all conditions and the work of other trades that might affect the Work contemplated hereunder.
- B. Any discrepancy between the Contract Documents or any inconsistency between the Contract and actual conditions shall be brought to the Owner's and Architect's attention,

confirmed in writing, before starting the Work.

1.6 GUARANTEE

- A. See Section 01 78 30 – “Warranties and Bonds”.
- B. Guarantee all work against defects **3 (three) year in materials and workmanship and 3 (three) year general contractor’s warranty for installation** following Substantial Completion of the Work.
- C. Prefabricated scuppers, downspouts, roof edging, coping etc. – **20 year material warranty from manufacturer and 20 year Kynar finish and color warranty from manufacturer**
- D. Prefabricated coping – **20 year material warranty from manufacturer and 20 year Kynar finish and color warranty from manufacturer.**
- E. Prefabricated roof edge / fascia – **20 year material warranty from manufacturer and 20 year Kynar finish and color warranty from manufacturer.**

1.7 SUBMITTALS

- A. Comply with pertinent provisions of the General Requirement - Samples and Submittals, and Shop Drawings.
- B. Provide Shop Drawings for all sheet metal parts to be fabricated.
 - 1. Submit samples of material to be used. Size: 6-inch x 6-inch.
 - 2. Submit color samples on actual material size 6-inch x 6-inch.
- C. Provide manufacturer's technical data and shop drawings on products which are pre-fabricated.
- D. Contractor must obtain acceptance prior to fabrication or installation of any sheet metal work.

PART 2 - PRODUCTS

2.1 METALS

- A. Aluminum with Kynar finish for pre-fabricated Metal Fascia
- B. Metal termination bars shall be 1/8-inch thick by 1-inch wide type 302/304 stainless steel as per ASTM A167-83, pre-punched with 5/16-inch holes 8 inches on center, or as manufactured by the membrane supplier.

2.2 ALUMIMUM PREFABRICATED FASCIA, & CLEATS

- A. All products to be prefabricated and FM Global approved.
- B. All products to have Warranty for 20 years.
- C. All products to meet maximum wind uplift requirements for FM Global.

- D. Aluminum to conform to ASTM B209. Alloy and temper 3003-H-14.
 - 1. Continuous cleats: .063-inch thick or 20 ga steel
 - 2. Fascia: .063 inch thick
- E. Approved manufacturers:
 - 1. Metal-Era, 1600 Airport Road, Waukesha, WI 53188 - Basis of Design Perma-Tite Aluminum Extended Coping – Single Ply Version 0.050 in Aluminum Cover. 24 - ga Steel Cleat, Ext Aluminum Anchor Bar 4" face height, 120 mph,
 - 2. Hickman, P.O. Box 15005, Asheville, NC 28813-0005
 - 3. Versico Roofing Systems, PO Box 1289, Carlisle, PA
 - 4. Petersen Aluminum, 1005 Tonne Road, Elk Grove Village, IL 60007
- F. Aluminum shall be prefinished with Kynar Fluoropolymer. Color to be selected by Architect from manufacturer's standard selection.

2.3 GASKETS

- A. All fasteners exposed to view, except rivets and those fasteners furnished with their own rubber gaskets, shall be fitted with 1/16-inch thick cured neoprene gaskets. Gaskets shall be cut so as to fit the fastener shank tightly and extend not less than 1/16-inch beyond the fastener head.
 - 1. All exposed fasteners are to receive a bead of high sealant.

PART 3 - EXECUTION

3.1 SURFACE CONDITIONS

- A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.
- B. General area of existing sheet metal remaining to be patched or repaired will be as directed or determined by the Owner and/or Architect.

3.2 WORKMANSHIP

- A. General:
 - 1. Form sheet metal accurately and to the dimensions and shapes required, finishing molded and broken surfaces with true, sharp, and straight lines and angles and, where intercepting other members, coping to an accurate fit and soldering securely.
 - 2. Unless otherwise specifically permitted by the Architect turn hem exposed edges back ½-inch.
- B. Provide isolation membrane between pressure-treated wood and all aluminum materials.
- C. Form fabricate, and install sheet metal so as to adequately provide for expansion and contraction in the finished Work.

- D.** Weatherproofing:
 - 1. Finish work to be free from water leakage under ALL weather conditions. Correct any defects at no additional cost to the Owner.
 - 2. Make lock seam work flat and true to line, sweating full of solder.
 - 3. Make lock seams and lap seams, when soldered, at least 2-inch wide.
 - 4. Where lap seams are not soldered, lap according to pitch, but in no case less than 3-inch.
 - 5. Make flat and lap seams in the direction of flow.
- E.** Joints:
 - 1. Join parts with rivets where necessary for strength and stiffness.
 - 2. Provide suitable watertight expansion joints for runs of more than 20-feet, except where closer spacing is indicated on the Drawings or required for proper installation.
- F.** Nailing:
 - 1. Secure metal by means of clips or cleats, without nailing through the exterior metal.
 - 2. In general, space nails, rivets, and screws not more than 8-inch apart and, where exposed to the weather, use specified washers.

3.3 COPING (PREFABRICATED)

- A.** Ensure waterproofing membrane base sheet has been installed and extends beyond wood blocking and onto roofing.
- B.** Continuous cleats with butted joints. Fasten using specified nails at spacing not exceeding 6-inch centers.
- C.** Workmanship and methods employed for anchoring, joining, and allowance for expansion and contraction must conform to details shown, these specifications, and the specification of the manufacturer.
- D.** Position joints so that they occur no closer than 2-feet from a joint of the edge cleat.
- E.** Corners to be prefabricated.
- F.** All components shall be installed with lines, brakes and angles sharp and true with surfaces free from objectionable wave, warp, or buckle.
- G.** Install electrolytic isolation materials where required.

3.4 THERMAL MOVEMENT

- A.** Provisions for expansion and contraction in sheet metal shall be provided at not over 20-foot intervals, except at gutters which may not exceed 30 feet. Follow manufacturer's recommendations on prefabricated items.
- B.** Thermal movement at building tie-ins shall be compensated for by expansion joints as detailed.

- C.** No exception to the above details or specifications will be permitted.

3.5 CLEANING UP

- A.** All exposed new sheet metal shall be cleaned at the completion of installation. Grease and oil films, handling marks, contamination from steel wool, fitting and drilling debris shall be removed and the Work scrubbed clean. All new exposed metal surfaces shall be free of dents, creases, waves, scratch marks, and solder or welder marks.
- B.** Daily cleanup and removal from the site of all shavings, clippings, shearing, rivets, fasteners, and whatever other debris resulting from these operations is required.
- C.** Contractor is to unclog any downspouts and roof drains to ensure proper flow of rain water runoff from roof.

3.6 TESTS

- A.** Upon request of the Owner or the Architect, demonstrate by hose or standing water that the flashing and sheet metal are completely watertight.

END OF SECTION 07 62 00

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PART 1 - GENERAL

1.1 DESCRIPTION

- A. The Work generally involves the installation of new sealant and such other Work as may be necessitated by these operations and as shown on the Drawings.
- B. Related Work specified elsewhere:
 - 1. Section 07 62 00: Sheet Metal Flashing and Trim

1.2 QUALITY ASSURANCE

- A. SWI (Sealant and Waterproofers Institute) - Sealant and Caulking Guide Specifications.
- B. FS TT-230 - Sealing Compound, Silicone Rubber Base, Type II, Class B.
- C. ASTM 6290 Grade N5, Class 12.5.

1.3 DELIVERY, HANDLING AND STORAGE

- A. Deliver in manufacturer's original unopened containers with labels intact and legible.
- B. All materials shall be carefully handled and stored to prevent the intrusion of foreign materials, or exposure to temperatures exceeding 95 degrees F.

1.4 JOB CONDITIONS

- A. Joints shall be prepared as recommended by the manufacturer of the materials being used.
- B. Surfaces to which sealant is to be applied shall be dry, free from dust, oil, grease, loose particles or other deleterious materials which would reduce adhesion.
- C. Follow manufacturer's recommendations concerning weather limitations.

1.5 GUARANTEE

- A. Refer to Section 01 78 30, "Warranties and Bonds".
- B. Contractor is to guarantee all work against defects in materials and workmanship for a **period of five (5) years** following Substantial Completion of the Work.

PART 2 - PRODUCTS

2.1 SEALANT

- A. Masonry, glass and metal applications - A one-part silicone high-performance glazing and weatherproofing sealant/adhesive, non-sagging, non-staining, non-bleeding, color to match adjoining surfaces.

<u>MANUFACTURER</u>	<u>PRODUCT</u>
1. Dow Corning Corp: Midland, MI	795
2. General Electric:	L-123-1

3. Pecora Corp.: 895
165 Wambold Road
Harleysville, PA

- B. Hot pipe / chimney flue applications - A one-part silicone heat resistant sealant, non-sagging, non-staining, non-bleeding, (color usually red).

MANUFACTURER

PRODUCT

1.	Dow Corning Corp: Midland, MI	736
2.	Red Devil Pryor, OK	Industrial Grade Heat Resistant
3.	Rutland Fire Clay Company	500 Degree High Heat

2.2 ACCESSORIES

- A. Primer, non-staining type. Use primer as recommended by the sealant manufacturer for each particular sealant and substrate, with choice to be confirmed by adhesion test.
- B. Joint cleaner: non-corrosive and non-staining type, recommended by sealant manufacturer, compatible with joint forming materials.

PART 3 - EXECUTION

3.1 INSPECTION OF SURFACES

- A. Verify that work of other trades that might affect the work of this Section has been completed.
- B. Examine surfaces for inadequate anchorage, foreign materials, moisture, and whatever would prevent the execution and quality of sealant application.
- C. Do not proceed with the work of this Section until all defects are corrected.

3.2 SURFACE PREPARATION

- A. Concrete or other masonry surfaces to receive sealant shall be cleaned by wire brushing to remove all loose particles, laitance, efflorescence and loose mortar. Cut out existing sealant and backer material, grind masonry surfaces to remove all sealant residue.
1. All traces of existing sealant and backing material must be removed to a minimum of **1-inch** depth.
- B. All surfaces to receive primer, bond breaker, or sealant shall be clean, dry, and free of loose materials, dirt, dust, oil, frost, or bitumen.
- C. Replace existing, deteriorated, defective sealant as directed or determined by the Owner or Architect.

3.3 BACKER ROD INSTALLATION

- A. Install backer rod at joints where and as shown on the Drawings using a blunt instrument. Do not twist or puncture rod.

1. Install backer rod so that resulting sealant joint depth is 50% of joint width.

3.4 SEALANT

- A. Depth of sealants in joints, exclusive of backing, shall be as recommended by the sealant manufacturer unless otherwise indicated or specified.
- B. Application may be cartridge-type caulk gun or bulk-type caulk gun, either hand or air pressure activated.
 1. Run a bead slowly enough to be certain that entire cavity is filled from the bottom up. Air pockets or voids along edges are not acceptable.
 2. Neatly point or tool all sealants applied. Tooling with soap or detergent solutions is not allowed.
- C. Unless otherwise approved by the Architect, all work adjacent to sealants shall be protected by masking with pressure sensitive tape.
 1. Drop cloths shall be provided over all horizontal surfaces liable to receive droppings of sealant operations.

3.5 CLEANING UP

- A. Misapplied sealant and droppings shall be immediately removed by methods and materials recommended in writing from the manufacturer of the sealant used.
- B. After material is applied and tooled, the Contractor shall remove all masking and other protection, and clean up any remaining defacement caused by his work.
- C. Daily cleanup and removal from the site of all empty containers, bits of tape, scrapings, and whatever other debris results from these operations is required.

END OF SECTION 07 92 00

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PART 1 - GENERAL**1.1 DESCRIPTION**

- A. The work of this Section is primarily concerned with the replacement of existing clamping ring and domes on existing roof drains and associated operations as may be necessitated by these operations and called for on the Drawings.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 07 01 50.23: Roofing Removal
- B. Section 07 22 00: Roofing Insulation
- C. Section 07 54 19: Polyvinyl-Chloride (PVC) Roofing

1.3 QUALITY ASSURANCE

- A. Where licensing is required, General Contractor is to hire journeyman who hold valid licenses.
- B. Use skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- C. Contractor is to maintain roof drains in functional condition at the end of each workday.

1.4 REFERENCE STANDARDS

- A. American Society for Testing and Materials (ASTM):
1. A 48-76 Gray Iron Castings
 2. A 74-80, Cast Iron Soil Pipe and Fittings.
 3. C 564-70(76) Rubber Gaskets for Cast Iron Soil Pipe and Fittings.
 4. A33, A-210 Steel Piping
 5. ASTM 88 Copper Tubing
- B. ANSI/ASME A112.21.2M – Roof Drains
- C. ASA – 16 Pipe Fittings

1.5 DELIVERY, HANDLING AND STORAGE

- A. Handle products carefully to avoid damage to hubs, ends or roof drain components.
- B. Security for materials stored on the premises is the responsibility of the Contractor for the work of this Section.

1.6 SUBMITTALS

- A. Comply with Section 01341 – Samples and Submittals.

- B. Submit manufacturer's product data, including installation instructions for drains.

1.7 CODE REQUIREMENTS

- A. All work, equipment and materials under this Division of the Specifications shall comply strictly with the State of Connecticut State Building Code, U.L., N.E.M.A., O.S.H.A., N.F.P.A., Connecticut State Fire Safety Code, A.N.S.I., A.D.A, and with all requirements of all governmental departments having jurisdiction, and requirements of local utility companies. Requirements of the above shall take precedence over plans and specifications.

1.8 WARRANTY

- A. All parts of the work shall be guaranteed for a period of two (2) years from date of acceptance of the job by the Owner. If during that period of general guarantee, any part of the work installed fails, becomes unsatisfactory or does not function properly due to any fault in material or workmanship whether or not manufactured , or job built, each section shall, upon notice from the Owner, promptly proceed to repair or replace such faulty material or workmanship without expense to the Owner, including cutting, patching and painting, or other work involved, and including repair or restoration of any damaged sections of the premises resulting from such faults.
- B. In event that a repetition of any one defect occurs indicating the probability of further failure and which can be traced to faulty design, material or workmanship, then repairs or replacement shall not continue to be made, but the fault shall be remedied by a complete replacement of the entire defective unit.
- C. In addition to general guarantee, obtain and transmit to the Owner, any guarantees or warranties from manufactures of specialties, but only as a supplement to the general guarantee which will not be invalidated by same.

PART 2 - PRODUCTS

2.1 GENERAL

- A. All equipment and materials shall be new and of first quality, suitable for the purpose intended and conditions encountered.
- B. All work shall be performed in neat and workmanlike manner, with due regard for good practice and best finished appearance.
- C. All unsatisfactory work, equipment or materials shall be corrected or replaced at once, without cost to the Owner.
- D. Every part of the plumbing installation shall be tested with air as required by the Engineer and left in proper working order.
- E. If required during the course of the Work, the contractor shall furnish the electrical contractor with wiring schematics, at the proper time, for all Plumbing, or H.V.A.C. equipment and controls requiring connections.

2.2 DRAINS

- A. Roof drain parts shall match existing manufacturer:

1. Josam Company
525 West US HGWY 20
Michigan City, Indiana, 46360
2. Zurn Plumbing Products
1801 Pittsburgh Avenue
Erie, PA 16502
3. Tyler Pipe Industries (for Wade drains)
11721 HGWY 69 North
Tyler, TX 75706

B. Contractor to verify piping size(s) in field prior to bidding.

C. Drains shall be provided with deck clamp assembly and cast-iron vandal-proof dome.

2.3 PIPE INSULATION

A. Products shall be manufactured by: Manville, Owens-Corning, or Rubatex.

B. Insulate underside of all new roof drains bowls and new pipes continuous through hanger with vapor barrier insulation applied with insulation adhesive.

C. Fiberglass pipe wrap, 35-ft. roll x 3-inch wide, 1/2-inch thick, R = 3.0.

D. Insulation sheet – 1/2-inch thick 36-inch x 4-inch, R =3.0.

E. Contact adhesive as approved by insulation manufacturer.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine existing roof drains. Notify Architect of conditions that would adversely affect installation of parts or subsequent use. Do not proceed with work until unsatisfactory conditions are corrected.

B. General Contractor to demolished ceiling or walls as necessary to allow for connection of existing drain pipes and restore in like and kind. All connections must be verified by Construction Administrator, DAS or engineer/architect.

3.2 DRAINS – ROOF

A. Remove existing roof drain clamping ring and dome. Inspect and verify existing drain bowl is not damaged or defective.

B. Install new clamping as per manufacturer's specifications, secure in place with the deck clamp, and install any additional plumbing required to connect the new drain bowls with the existing drain lines.

C. Insulate underside of all new roof drains bowls and new pipes with vapor barrier insulation applied with insulation adhesive from interior to prevent condensation.

3.3 OTHER TESTING AND ADJUSTING

A. Provide personnel and equipment and arrange for and pay the costs of all tests and

inspections required by governmental agencies having jurisdiction.

- B. Contractor is to test all drain lines for proper flow to the nearest catch basin.
 - 1. Any clogged or defective drain lines will be reported to the Architect and Owner for review.
 - 2. Cleaning out of defective or clogged drain lines may be handled by the Owner by a separate contractor. Should the damaged or clogged drain line be the result of work under this Contract, the Contractor will compensate the Owner for all repairs necessary to correct the issue.

3.4 CLEANING

- A. Keep the roof clean of rubbish and unused materials. At the end of each day's work remove all rubbish, debris and surplus materials caused by the work of this Section.
- B. Repair any damaged ceiling or other interior surfaces scared during and/or by the work of this section to the satisfaction of the Owner and Architect.

END OF SECTION 22 14 26.13

Certificate Of Analysis

*Martin A. Benassi AIA Architect
2 Broadway
Hamden CT 06518*

08/27/2019
CS#: 199-393
Page 1 of 4

*Bulk sample(s) from Western Connecticut State University - O'Neill Center Natatorium, 181 White Street,
Danbury CT received from customer on 08/22/2019*

*Examination made by Polarized Light Microscopy (PLM) per EPA Appendix E to Subpart E of 40 CFR Part 763 and
EPA Test Method 600/R-93/116*

Sample Identification

*199-393-1 Off white/tan pliable roofing material (on brown
sticky glue on off white/tan pliable roofing material on brown
sticky glue with pink thick foam)/Test Cut #1*

Findings (Analyzed 08/27/2019)

*No Asbestos Detected
21% Non Fibrous Particles
79% Volatile on Ignition*

199-393-2 Brown sticky glue (from under #1)/Test Cut #1

*No Asbestos Detected
36% Non Fibrous Particles
64% Volatile on Ignition*

*199-393-3 Off white/tan pliable roofing material (from under
#2)/Test Cut #1*

*No Asbestos Detected
20% Non Fibrous Particles
80% Volatile on Ignition*

199-393-4 Brown sticky glue (from under #3)/Test Cut #1

*No Asbestos Detected
13% Non Fibrous Particles
87% Volatile on Ignition*

*199-393-5 Off white/tan pliable roofing material (on tan sticky
glue on off white/tan pliable roofing material on brown sticky
glue on off white/tan pliable roofing material on pink brittle glue
with pink thick foam)/Test Cut #2*

*No Asbestos Detected
21% Non Fibrous Particles
79% Volatile on Ignition*

Bulk sample(s) from Western Connecticut State University - O'Neill Center Natatorium, 181 White Street, Danbury CT received from customer on 08/22/2019

Examination made by Polarized Light Microscopy (PLM) per EPA Appendix E to Subpart E of 40 CFR Part 763 and EPA Test Method 600/R-93/116

Sample Identification

Findings (Analyzed 08/27/2019)

199-393-6 Tan sticky glue (from under #5)/Test Cut #2

*No Asbestos Detected
14% Non Fibrous Particles
86% Volatile on Ignition*

199-393-7 Off white/tan pliable roofing material (from under #6)/Test Cut #2

*No Asbestos Detected
25% Non Fibrous Particles
75% Volatile on Ignition*

199-393-8 Brown sticky glue (from under #7)/Test Cut #2

*No Asbestos Detected
21% Non Fibrous Particles
79% Volatile on Ignition*

199-393-9 Off white/tan pliable roofing material (from under #8)/Test Cut #2

*No Asbestos Detected
30% Non Fibrous Particles
70% Volatile on Ignition*

199-393-10 Pink brittle glue (from under #9)/Test Cut #2

*No Asbestos Detected
1% Non Fibrous Particles
99% Volatile on Ignition*

199-393-11 Brown/orange sticky glue (on pink thick foam)/Test Cut #3

*No Asbestos Detected
93% Non Fibrous Particles
7% Volatile on Ignition*

199-393-12 Black rubbery roofing material ()/Test Cut #3

*No Asbestos Detected
47% Non Fibrous Particles
53% Volatile on Ignition*

Bulk sample(s) from Western Connecticut State University - O'Neill Center Natatorium, 181 White Street, Danbury CT received from customer on 08/22/2019

Examination made by Polarized Light Microscopy (PLM) per EPA Appendix E to Subpart E of 40 CFR Part 763 and EPA Test Method 600/R-93/116

Sample Identification

199-393-13 Black sticky mastic (on beige/tan pliable self adhesive roofing material on off white/tan pliable roofing material on brown sticky glue)/Test Cut #3

Findings (Analyzed 08/27/2019)

*No Asbestos Detected
18% Non Fibrous Particles
82% Volatile on Ignition*

199-393-14 Beige/tan pliable self adhesive roofing material (from under #13)/Test Cut #3

*No Asbestos Detected
19% Non Fibrous Particles
81% Volatile on Ignition*

199-393-15 Off white/tan pliable roofing material (from under #14)/Test Cut #3

*No Asbestos Detected
27% Non Fibrous Particles
73% Volatile on Ignition*

199-393-16 Brown sticky glue (from under #15)/Test Cut #3

*No Asbestos Detected
22% Non Fibrous Particles
78% Volatile on Ignition*

199-393-17 Pink thick foam (from #1)/Test Cut #1

*No Asbestos Detected
2% Non Fibrous Particles
98% Volatile on Ignition*

199-393-18 Pink thick foam (from #5)/Test Cut #2

*No Asbestos Detected
1% Non Fibrous Particles
99% Volatile on Ignition*

199-393-19 Pink thick foam (from #11)/Test Cut #3

*No Asbestos Detected
2% Non Fibrous Particles
98% Volatile on Ignition*

**PARAMETERS
ASBESTOS PLM ANALYSIS
(Revised 6/2/19)**

1. *Materials which contain >1% asbestos (greater than 1%) by PLM (polarizing light microscopy) analysis are considered to be asbestos containing materials under EPA and the State of Connecticut Regulations. OSHA still regulates material with <1%. (Contact laboratory for information.) {Note: A more sensitive method is available called TEM (transmission electron microscopy). TEM may detect asbestos fibers that PLM cannot see, but the above agencies' enforcement is based on PLM analysis. Rules may differ for states other than Connecticut. It is best to check with the individual state. For example, New York State requires TEM confirmation of negative PLM results on floor tile}.*
2. *If no asbestos is detected in a sample, or if the asbestos content is less than 1 % by PLM, additional samples of the same material should be submitted for confirmation. Please check with the laboratory for guidance on the number of samples needed. Sample collection in Connecticut must be by a DPH Licensed Asbestos Inspector. Many other states also require licensing.*
3. *Floor Tile Mastic: Mastic under floor tile should be separately sampled by scraping some of the mastic from the floor to avoid contamination from the floor tile.*
4. *Although ChemScope, Inc. takes great effort to insure accuracy in the estimation of asbestos in the materials analyzed, no quantitation method is without some uncertainty. Based on independent calibration studies and comparison of ChemScope's quantitative results with NVLAP and AIHA, LAP programs we estimate our method uncertainty (MU) to be relatively small. The combined analytical uncertainty is calculated to be 0.65%. This means an estimate of 10% asbestos in a sample has an expanded MU (@95% Confidence Level, k=2) of +/- 6.5% and a probable bias of 0.3%.*
5. *The presence of non-asbestos components, which are recognized by the PLM analyst, are reported with the estimated amounts. This is not an exhaustive analysis for the non-asbestos materials since the primary purpose is to determine if asbestos is present and, if so, how much is present of each type of asbestos.*
6. *Results reported apply only to the sample(s) analyzed.*
7. *Special treatment of samples: Chem Scope, Inc. routinely uses gravimetric sample reduction techniques such as low temperature ashing or acid dissolution on samples like floor tile, roofing materials, glue dots, or high cellulose content samples prior to PLM analysis. These methods are used to aid in the PLM analysis and to provide better quantitative data. Layered samples, if possible, are analyzed separately as individual layers. However, in accordance with the method, if any layer contains >1% asbestos (greater than 1%) it is to be considered an asbestos containing material. All results are reported to the original sample basis.*
8. *Sample results are not corrected for blanks. Analytical blanks are run daily and if contamination is suspected the samples are rerun.*
9. *Chem Scope, Inc. performs "400 point" point counting when the asbestos content is visually estimated to be less than 10%. There is no additional charge for this analysis.*

The Scope of Accreditation referenced in this report applies to bulk asbestos fiber analysis by PLM (Polarized Light Microscopy).

Accreditation does not imply endorsement by NVLAP, NIST or any Federal or State Agency.

This report pertains only to the samples tested and may not be reproduced in part.

Condition of the samples at the time of receipt was acceptable unless otherwise noted on the Certificate of Analysis.

See test parameters above and on attached chain of custody form.

We would love to hear from you. Comments? Questions? Please call or email us at chem.scope@snet.net

ChemScope, Inc. is accredited by AIHA LAP, LLC LAB #100134

NVLAP Lab Code 101061-0.

Connecticut Department of Public Health (DPH) Approved Environmental Lab PH 0581


Rhode Island Department of Health - Asbestos Program Certification #PLM00070

Signature Signature Authorized Signature or Authorized Signature or Authorized Signature
(if applicable)

Analyst	Inspector	Suzanne Cristante Laboratory Director	Izabela Kremens Quality Manager	Daniel Sullivan President
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Section 50 60 00 FM Global Checklist for Roofing Systems

SAMPLE FM GLOBAL CHECKLIST FOR ROOFING SYSTEMS – page 1



CHECKLIST FOR ROOFING SYSTEM

CONTACT INFORMATION:		INDEX NUMBER:	
ROOFING CONTRACTOR (NAME & ADDRESS)		TELEPHONE NO.:	FAX:
		E-MAIL ADDRESS:	CONTACT:
CLIENT (NAME & ADDRESS)		TELEPHONE NO.:	FAX:
		E-MAIL ADDRESS:	CONTACT:

OVERVIEW OF WORK: *(Submit 1 form per roof area)*

Building Name & Number:			
Building Dimensions: Length:	ft/m;	Width:	ft/m;
		Height	ft/m.
Roof Slope:			
Parapet Height ,max (in./m):		Parapet Height ,min (in./m):	
Type of Work: <input type="checkbox"/> New Construction <input type="checkbox"/> Recover (New roof over existing Roofing System)			
<input type="checkbox"/> Reroof (New cover/remove existing roofing system to deck) <input type="checkbox"/> Other			
FM Approved RoofNav Assembly Numbers:			

ROOF SURFACING:

<input type="checkbox"/> None	
<input type="checkbox"/> Coating	<i>(Trade Name/Application Rate)</i>
<input type="checkbox"/> Granules	<i>(Application Rate)</i>
<input type="checkbox"/> Gravel/Slag	<i>(Application Rate)</i>
<input type="checkbox"/> Ballast: <input type="checkbox"/> Stone Size <input type="checkbox"/> Pavers <i>(Beveled or square edge);</i> <input type="checkbox"/> Other:	
Ballast Weight (psf): Field: Perimeter: Corners:	

ROOF COVER/MEMBRANE:
(Please provide ALL applicable details including trade name, type, number of plies, thickness, reinforced, adhesive)

<input type="checkbox"/> Panel:		<input type="checkbox"/> Through Fastened Metal
		<input type="checkbox"/> Standing Seam metal
		<input type="checkbox"/> Fiber Reinforced Plastic (FRP)
		<input type="checkbox"/> Other:
<input type="checkbox"/> Built Up Roofing (BUR)		
<input type="checkbox"/> Modified Bitumen		
<input type="checkbox"/> Single Ply:	<input type="checkbox"/> Adhered	<input type="checkbox"/> Fastened <input type="checkbox"/> Ballasted
<input type="checkbox"/> Spray Applied		
<input type="checkbox"/> Other:		

BASE SHEET:
(Please include Trade Name, Type, and Width)

<input type="checkbox"/> None	
Trade Name:	Width: <input type="checkbox"/> 36 in. <input type="checkbox"/> 1 meter (39 in.)
<input type="checkbox"/> Fastened	<input type="checkbox"/> Adhered
<input type="checkbox"/> Secured per RoofNav	OR <input type="checkbox"/> Per FM Global Loss Prevention Data Sheet 1-29
Comments:	
<input type="checkbox"/> Air Retarder	
<input type="checkbox"/> Vapor Retarder	

INSULATION

Layer	Trade Name	Thickness (In.)	Fastened	Adhered	Tapered
1. Top			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Next			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Next			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Next			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<input type="checkbox"/> Glass Fiber/Mineral Wool/Batt	<input type="checkbox"/> Facer Type/Vapor Barrier
<input type="checkbox"/> Thermal Barrier	

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SAMPLE FM GLOBAL CHECKLIST FOR ROOFING SYSTEMS – page 2

CHECKLIST FOR ROOFING SYSTEM



<input type="checkbox"/> Other:
<input type="checkbox"/> None

DECK:

(Please include manufacturer, type, yield strength, thickness/gage, etc.)

<input type="checkbox"/> Steel:	<input type="checkbox"/> LWIC (Form Deck):	<input type="checkbox"/> Cementitious Wood Fiber:
<input type="checkbox"/> Concrete: <input type="checkbox"/> Pre-cast panels or <input type="checkbox"/> Cast in Place		
<input type="checkbox"/> Wood		
<input type="checkbox"/> Fiber Reinforced Cement	<input type="checkbox"/> Fiber Reinforced Plastic	
<input type="checkbox"/> Gypsum: <input type="checkbox"/> Plank	<input type="checkbox"/> Poured	
<input type="checkbox"/> Other:		
Comments:		

ROOF STRUCTURE (Include Size, Gage, Etc.):

<input type="checkbox"/> Purlins <input type="checkbox"/> "C" OR <input type="checkbox"/> "Z"
<input type="checkbox"/> Joists <input type="checkbox"/> Wood OR <input type="checkbox"/> Steel
<input type="checkbox"/> Beams <input type="checkbox"/> Wood OR <input type="checkbox"/> Steel
<input type="checkbox"/> Other:
Spacing: Field: _____ Perimeter: _____ Corners: _____
Comments:

FASTENERS USED IN ROOF ASSEMBLY:

Roof Cover Fasteners: Trade Name: _____ Length: _____ Diameter: _____
Stress Plate/Batten:
Spacing: Field: <input checked="" type="checkbox"/> Perimeter: <input checked="" type="checkbox"/> Corners: <input checked="" type="checkbox"/>
Insulation Fasteners: Trade Name: _____ Type: _____
Size: _____ Stress Plate: _____
Spacing: Field: _____ Perimeter: _____ Corners: _____
Deck Or Roof Panels Fasteners:
Trade Name: _____ Type: _____
Length: _____ Size Washer: _____
If Weld: Size: _____ Weld: _____ Washer: _____
Deck Side Lap Fasteners: Field: <input checked="" type="checkbox"/> Perimeter: <input checked="" type="checkbox"/> Corners: <input checked="" type="checkbox"/>
Spacing: Field: <input checked="" type="checkbox"/> Perimeter: <input checked="" type="checkbox"/> Corners: <input checked="" type="checkbox"/>
Base Sheet Fasteners
Trade Name: _____ Type: _____
Head Diameter: _____ Length: _____
Spacing: (Attached Sketches as necessary)
Spacing Along Laps: Field: _____ Perimeter: _____ Corners: _____
No. Intermediate Rows: Field: _____ Perimeter: _____ Corners: _____
Spacing Along Intermediate Rows: Field: _____ Perimeter: _____ Corners: _____

PERIMETER FLASHING:

(Attach a detailed sketch of metal fascia, gravel stop, nailer, coping, etc.)

<input type="checkbox"/> FM Approved Flashing	<input type="checkbox"/> Per FM Global Loss Prevention Data Sheet 1-49
<input type="checkbox"/> Other:	Comments:

DRAINAGE:

For new construction: Has roof drainage been designed by a Qualified Engineer per FM Global Loss Prevention Data Sheet 1-54 and the local building code? <input type="checkbox"/> Yes <input type="checkbox"/> No (Attach details)
For re-roofing and recovering: will the roof drainage be changed from the original design (for example: drain inserts, drains covered or removed, new expansion joints, blocked or reduced scupper size)? <input type="checkbox"/> Yes <input type="checkbox"/> No
If yes, were the changes reviewed by a Qualified Engineer? <input type="checkbox"/> Yes <input type="checkbox"/> No (Attach details)
Is secondary (emergency) roof drainage provided per FM Global Data Sheet 1-54? <input type="checkbox"/> Yes <input type="checkbox"/> No (Attach details)

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SAMPLE FM GLOBAL CHECKLIST FOR ROOFING SYSTEMS – page 3

CHECKLIST FOR ROOFING SYSTEM



FM Global OFFICE REVIEW
 (Please leave blank for FM Global Office Review)

WIND:

Design Wind Speed: (mph)	Ground Terrain: <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D
Uplift Pressure in field: (psf)	Uplift Rating Required:
Adequate Uplift Rating Provided:	Adequate? <input type="checkbox"/> Yes <input type="checkbox"/> No

FIRE:

Internal Assembly Rating: <input type="checkbox"/> Class 1 <input type="checkbox"/> Class 2 <input type="checkbox"/> Non-Combustible	
External Fire Rating: <input type="checkbox"/> Class A <input type="checkbox"/> Class B <input type="checkbox"/> Class C <input type="checkbox"/> None	
Concealed Spaces? <input type="checkbox"/> Yes <input type="checkbox"/> No	Sprinklers below Roof? <input type="checkbox"/> Yes <input type="checkbox"/> No
Adequate? <input type="checkbox"/> Yes <input type="checkbox"/> No	

HAIL:

Hail Rating Needed? <input type="checkbox"/> SH <input type="checkbox"/> MH <input type="checkbox"/> None	Hail Rating Provided? <input type="checkbox"/> SH <input type="checkbox"/> MH <input type="checkbox"/> None
Adequate? <input type="checkbox"/> Yes <input type="checkbox"/> No	

COLLAPSE:

If standing seam, has collapse been reviewed? <input type="checkbox"/> Yes <input type="checkbox"/> No
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COMMENTS:

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End of Section 50 60 00 FM Global Checklist for Roofing Systems