

PROJECT MANUAL FOR
SHADE PAVILLION
at
KINGS HIGHWAY ELEMENTARY SCHOOL

125 Post Road East
WESTPORT, CONNECTICUT

Westport Board of Education/ Town of Westport
Request for Proposal #24-004 BOE

OWNER

Westport Board of Education/ Town of Westport
110 Myrtle Avenue
Westport, Connecticut 06880
Contact: Ted Hunyadi
203-341-1271

August 10, 2023

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REQUEST FOR PROPOSAL INVITATION

1. Notice is given hereby that: **The Board of Education/ Town of Westport** will accept sealed proposals for: **Design, furnish, deliver, and install a shade pavilion at Kings Highway Elementary School, Westport, Connecticut complete with foundations according to the drawings and specifications.**
 - A. Any sizes or Estimate of Quantities as shown on the attached sheets and/or drawings are approximate and are not guaranteed in any respect. Prospective Bidders are to visit the site to verify scope of the work, measurements, quantities, etc. prior to bidding. The Board of Education reserves the right at all times to increase or decrease the amount of work if deemed in the best interest of the Westport Board of Education.
 - B. Lump sum price is to include all labor, materials, permits, etc. required to properly engineer, supply and install the complete shade pavilion, including but not limited to the following:
 1. All plans, drawings, and specifications as required for permits, approvals, and construction, including structural engineering.
 2. Local agency's approvals of drawings and specifications prior to construction and installation.
 3. Delivery to site
 4. Site & pier layout
 5. Reinforced concrete foundations, including all required excavations.
 6. Final grading of areas specified
 7. Site clean-up
 8. Synthetic grass surface installation
2. Contract documents may be examined at the office of:

Philip H. Cerrone III, Architect
421 Meadow Street
Fairfield, Connecticut
203/333-2066
4. Inquiries should be addressed to Mr. Ted Hunyadi, Thunyadi@westportps.org, who will be the Town Representative for the project. Tel: (203) 341-1271.
5. The Bidder must not discriminate, nor permit discrimination, against any person on the grounds of race, color, national origin, religion, sex, handicap, or veteran status, in their employment practices, in any of their contractual arrangements, in all service and accommodations they offer to the public, and in any of their other business operations.
6. It is a national policy to provide minority and women's business enterprises (M and WBEs) the maximum opportunity to participate in activities carried out under public funding and to award a fair share of contracts to M and WBEs.

7. It shall be the responsibility of potential bidders to visit the site and make their own evaluation of the work. Site review and building access may be gained by contacting Mr. Ted Hunyadi, (203) 341-1271.
8. The successful bidder MUST secure all required permits prior to commencing work on the site and MUST obtain a certificate of occupancy prior to receiving the final payment. Upon application for a building permit the Town of Westport will waive the cost of the permit, exclusive of the State of CT Education Fee.
9. Contractor must submit a Construction Schedule as part of the Bid. Note that time is of the essence.
10. Award of the project is contingent upon funding & zoning approval by the applicable boards of the Westport Board of Educations and the Town of Westport.

INSTRUCTION TO BIDDERS**1. THE WORK**

Design, furnish, deliver, and install a shade pavilion at Kings Highway Elementary School, Westport, Connecticut complete with foundations according to the drawings and specifications.

- A. Prospective bidders may bid on one or all of the options as outlined in this document. It is the intent of the Board of Education to award one of the options. Said award will be based on the most cost-effective proposal in conjunction with other considerations.
- B. Note that Bidder's must submit, with his bid, descriptive literature and specifications pertaining to the new Relocatable classrooms which are being proposed.

2. RIGHT TO ACCEPT / REJECT

- A. After the reserves of all factors, terms, and conditions, including price, the Chief Financial Officer of the Board of Education of the Town of Westport reserves the right to reject any and all bids, or any portion, or waive defects in the same, or accept any proposal deemed to be in the best interest of the Town of Westport, Connecticut

3. QUESTIONS

- A. Questions concerning conditions and specifications should be directed to Mr. Ted Hunyadi, Telephone: (203)341-1271. Inquiries must reference date of bid opening and requisition or contract number and must be received no later than five (5) business days prior to date of bid opening. Failure to comply with these conditions will result in the bidder waiving his right to dispute the bid specifications and conditions.

4. PRICES

- A. Prices quoted must be firm, for acceptance by the Town of Westport, for a period of ninety (90) days. Price shall include all applicable duties. Bidders shall be required to deliver awarded items at prices quoted in their original bid.
- B. The price(s) and amount of the bid will have been arrived at independently and without consultation, communication or agreement with any other contractor, bidder or potential bidder.

5. PAYMENT PROCEDURES

- A. No voucher, claim, or charge against the Westport Board of Education shall be paid without the approval of the Chief Financial Officer for correctness and legality. Appropriate checks shall be drawn by the Chief Financial Officer of the Bd of Education for approved claims or charges

6. THE CONTRACTOR

- A. The Contractor for the work described shall thoroughly familiarize himself with the requirements of all specifications, and the actual physical conditions of various job sites. The submission of a proposal shall be considered as evidence that the Contractor has examined the actual job conditions, requirements, and specifications. Any claim for labor, equipment, or materials required, of difficulties encountered which could have been foreseen had such an examination been carefully made will not be recognized.

7. AWARD OF BIDS

- A. Contracts and purchases will be made or entered into with the lowest responsible bidder meeting specifications, except as otherwise specified in the invitation. If more than one item is specified in the invitation, the Westport Board of Education/ Town of Westport reserves the right to determine the low bidder on an individual basis or on the basis of all items included in the Invitation for Bids, unless otherwise expressed by the Town.

8. TERMS AND CONDITIONS OF BID

- A. In order to receive consideration, make bids in strict accordance with the following:
- B. Make bids upon the forms provided, properly signed and with all items filled out. Do not change the wording of the bid form, and do not add words to the bid form. Unauthorized conditions, limitations, or provisions attached to the bid may be cause for rejection of the bid. If alterations by erasure or interlineations are made for any reason, explain over such erasure or interlineations with a signed statement from the bidder.

9. OSHA

- A. The bidder must certify all equipment must comply to all regulations and conditions stipulated under the Williams-Steiger Occupational Safety and Health Act of 1971, as amended. The successful bidder must further certify that all items furnished under the project will conform to and comply with Federal and State of Connecticut OSHA standards.

Successful bidder must agree to indemnify and hold harmless the Westport Board of Education/Town of Westport for any and all damages that may be assessed against the Town.

10. FEDERAL, STATE, AND LOCAL LAWS

- A. All applicable Federal, State and local laws, rules and regulations of all authorities having jurisdiction over the locality of the project shall apply to the contracted are deemed to be included herein.

11. CONFLICT OF INTEREST

- A. No officer or employee or member of any elective or appointive board, commission, or committee of the town, whether temporary or permanent, shall have or acquire any financial interest gained from a successful bid, direct or indirect, aggregating more than a hundred dollars (\$100), in any project, matter, contract or business within his/her jurisdiction or the jurisdiction of the board, commission or committee of which he is a member. Nor shall the officer/employee/member have any financial interest, direct or indirect, aggregating more than a hundred dollars (\$100) in any contract or proposed contract for materials or services to be furnished or used in connection with any project, jurisdiction of the board, commission or committee of which he/she is a member.

12. SCOPE OF WORK / SITE INSPECTION

- A. The bidder declares that the scope of the work has been thoroughly reviewed and any questions resolved (see below for name and number of individual to contact for questions).
- B. If applicable, the bidder further declares that the site has been inspected as called for in the specifications.

13. **EXCEPTION TO SPECIFICATIONS**

- A. No protest regarding the validity or appropriateness of the specifications or of the Invitation for Bids will be considered, unless the protest is filed in writing with the Bd of Education Chief Financial Officer, prior to the closing date for the bids. All bid proposals rendered shall be considered meeting the attached specifications unless exceptions are noted on a separate page dated and signed by the bidder.

14. **UNLESS OTHERWISE NOTED**

- A. It will be assumed that all terms and conditions and specifications will be complied with and will be considered as part of the Bid Proposal.

15. **TAX EXEMPT**

- A. Federal Tax Exemption 06-75-0063-K. Exempt from State Sales Tax under State General Statutes Chapter 219-Section 12-412 Subsection A. No exemption certificates are required and none will be issued.

16. **OBLIGATION OF CONTRACTOR**

- A. The Contractor shall do all the work and furnish all the materials, tools, and appliances necessary or proper for performing and completing work required by this contract in a manner specified. All the work, labor, and materials to be done and furnished under this contract shall be done and furnished strictly pursuant to and in conformity with the specifications hereto attached and other directions of the Owner, as given from time to time during the progress of the work under the terms of the contract. The contractor shall complete all work to be done under this contract to the satisfaction of the Board of Education and in accordance with the specifications and drawings herein mentioned at the prices herein agreed upon.

17. **METHOD OF DOING WORK**

- A. The work must be started and done by the Contractor in such a manner as not to encounter delays to the traveling public owing to delays in doing the work. It must be pushed to completion with all possible speed and no inconvenience to traffic will be permitted where such inconvenience may be avoided.
- B. The Contractor shall conduct the work in such a manner so as not to interfere with or willfully annoy employees and officials of the Board of Education, employees of public utilities, residents adjacent to the work and general public.
- C. The Contractor shall employ only competent employees to do work and whenever the Owner shall notify the Contractor, in writing, that any employee on the work is, in the Owners opinion, incompetent, unfaithful, disorderly and otherwise unsatisfactory, such employee shall be discharged from the work and shall not again be employed on it.
- D. At the site of the work, the Contractor shall employ at all times while work is in progress, a construction superintendent or foreman who shall have full authority to act for the Contractor and who shall be acceptable by the Owner.

18. COMMENCEMENT, COMPLETION & SCHEDULE

- A. The Contractor to whom this contract shall be awarded shall commence work on the premises as soon as possible. Work shall continue to progress on the project every normal working day after commencement. The Contractor shall submit start and completion dates as part of the bid submitted. All work must be completed and a certificate of occupancy obtained prior to November 1, 2022. Time is of the essence.

19. EXAMINATION OF DOCUMENTS AND SITE OF WORK

- A. Before submitting a bid, each bidder shall examine the Drawings carefully, shall read the Specifications and all other proposed Contract Documents, and shall visit the site of the Work. Each bidder shall be fully informed prior to bidding as to existing conditions and limitations under which the Work is to be performed, and shall include in the bid a sum to cover the cost of items necessary to perform the Work set forth in the proposed Contract Documents. No allowance will be made to a bidder because of lack of such examination or knowledge. The submission of a bid will be considered conclusive evidence that the bidder has made such examination.
- B. Bidders must examine for themselves the plans, profiles, detail drawings, specifications, etc. and the location of the proposed work, and must exercise their judgment as to the nature and difficulty of the whole proposed undertaking. The Contractor must assume all risk or variance in any computation or statement by the contract, by whomsoever made and must agree to furnish all tools, machinery, material and labor to clean up, all debris and to complete fully the said work in accordance with the plans and contained either in the specifications or in any of the drawings but omitted from the other will be considered an essential part of the work. The Contractor whose bid is accepted will be responsible for every loss or error arising from ignorance concerning the requirements of the work of the difficulties to be encountered.
- C. Bidders, if requested, must be able to present satisfactory evidence that they have been regularly engaged in the business of constructing such work as they propose to execute and that they are fully prepared with the necessary capital, materials, and machinery to conduct the work to be contracted for the satisfaction of the Board of Education and to begin work promptly when ordered.
- D. The Board of Education, or its designated representative, reserves the right to reject any proposal in whole or in part offering equipment and/or materials and/or construction proposals, which in his/her opinion does not meet the quality standards desired. Such decision will be considered final and not subject to further recourse.
- E. In connection with the execution of the bid, subsequent purchase orders and/or contracts, the Contractor shall not discriminate against any employee or applicant for employment because of age, race, religion, color, sex, or natural origin.
- F. The Westport Board of Education reserves the right to require the successful bidder(s) to enter into such security arrangements and/or written contracts as deemed necessary by the of Westport Board of Education to protect the Board of Education's property and goods and interests.

- G. The award of any contract resulting from the bid will be contingent on the acceptance and approval by State and local authorities of the final drawings to be submitted by the successful bidder.

20. **EXECUTION OF AGREEMENT**

- A. The form of Agreement that the successful bidder will be required to execute will be decided by the Owner.
- B. The bidder to whom the Contract is awarded, must sign and deliver required copies to the Owner within seven (7) business after notice of award and receipt of Agreement forms from the Owner.
- C. At or prior to delivery of the signed Agreement, the bidder to whom the contract is awarded shall deliver to the Owner those Certificates of Insurance required by the Contract Documents and such Labor and Materials Payment Bonds and Performance Bonds as required by the Owner.
- D. Bonds and Certificates of Insurance shall be approved by the Owner before the successful bidder may proceed with the work. Failure or refusal to provide Bonds or Certificates of Insurance in a form satisfactory to the Owner shall subject the successful bidder to loss of time from the allowable construction period equal to the time of delay in furnishing the required material.

21. **INTERPRETATION OF CONTRACT DOCUMENTS PRIOR TO BIDDING**

- A. Any person contemplating submitting a bid for the construction of the Work is in doubt as to the true meaning of any part of the proposed Contract Documents, or finds discrepancies in or omissions from any part of the proposed Contract Documents, he/she may submit to the person responsible a written request for interpretation thereof not later than seven days before bids will be opened. The person submitting the request shall be responsible for its prompt delivery.
- B. Interpretation of correction of proposed Contract Documents will be made only by Addendum and will be mailed or delivered to each general contract bidder of record. The Owner will not be responsible for any other explanations or interpretations of the proposed Contract Documents.

22. **LIABILITY OF CONTRACTOR**

- A. The Contractor shall at all times safely guard the Owner's property from injury or loss in connection with this contract. The Contractor shall at all times safely guard and protect the work and that of adjacent property (as provided by law and the contract documents) from damage. The Contractor shall take all responsibility for the work and take precautions for preventing injuries to persons and property in or about the work. The Contractor shall assume the defense of and indemnify and save harmless the Owner and its officers, agents, and employees from all claims relating to labor and materials furnished for the work, to inventions, patents, and patent rights used in doing the work, or in consequence of any improper materials, implements, or labor used therein and to any act, omission or neglect of the Contractor and his/her employees therein.

- B. The Contractor shall conduct the work in such a manner as to interfere as little as possible with travel on the highways and observe all ordinances and statutes relating to obstructing the highway. The Contractor shall provide railing or suitable barricades as good safe practice requires as outlined in the latest revised edition of the Manual of Accident Prevention in Construction published by the Associated General Contractors of America and as required by the Owner to prevent accidents or injury to persons, vehicles, or animals.
- C. Signs warning the public of construction in the near vicinity shall be maintained at a reasonable distance from either end of the location of active construction or hazardous condition arising therefrom. All barricades, machinery and other hazards or obstructions to the public use of the highway shall be brightly and properly lighted at night.

23. **ASSIGNMENTS**

- A. The Contractor shall not sublet, sell, transfer, assign or otherwise dispose of the contract or any portion thereof or of the work provided for therein, or of his/her right, title, interest therein, to any person, firm, partnership or corporation without the written consent of the Owner. If any part of the work is sublet, sold, transferred, assigned or otherwise disposed of, the Contractor will not be relieved of any responsibility in connection therewith.
- B. The Contractor may not sublet a total of work in excess of 25% of the original total contract value.

24. **EXTRA WORK**

- A. The Owner shall notify the Contractor, in writing, of the necessity of such extra work, stipulating its character and extent. Upon receipt of such notification, the Contractor shall advise the Owner, in writing, of the compensation, whether unit price or lump sum as requested, for which he proposes to perform the extra work required. The Owner may accept the compensation proposed by the Contractor, or if the Owner considers the prices submitted to be excessive, the Owner may order the work done on a "Cost Plus" basis. In either case, the character and extent of the extra work together with the accepted basis of compensation shall be communicated to the Contractor by means of a change order which, when signed by the Contractor and the Owner, shall become part of the contract.
- B. Unforeseen work made necessary by changes in plan or work necessary to complete the improvements for which no price is provided in the contract, shall be done in accordance with the requirements of the specifications and as directed by the Owner.

25. **RIGHT OF OWNER TO TERMINATE CONTRACT**

- A. If the work to be done under this contract shall be abandoned, or if at any time the Owner is of the opinion that the Contractor is willfully violating any of the conditions of this contract or is not executing said contract in good faith or that the work is unnecessarily delayed and will not be finished within the prescribed time, the Owner may notify the Contractor and Surety, in writing to that effect. If the Contractor does not, within five (5) business days thereafter, take such measures as will, in the judgment of the Owner, insure the satisfactory completion of the work aforesaid, the Owner shall have the power to notify the Contractor to discontinue all work or any portion thereof, under this contract. A copy of this contract shall go to the surety.

- B. Thereupon the Contractor shall cease to continue said work, on such part thereof as the Owner shall designate. The Owner shall thereupon have the power to place such and so many persons as deemed proper, by contract or otherwise, to work at and complete the work herein described and to use such materials, tools, and appliances found upon the work or to procure other materials, tools, and appliances for the completion of the same and charge the expenses of said labor, materials, tools, and appliances to the Contractor; and the expense so charged shall be deducted and paid by the Owner out of such money as may be then due, or may at

any time thereafter grow due to the Contractor under and by virtue of this agreement, or any part thereof; and in case the expense so charged is less than the sum which would have been payable under this contract if the same had been completed by the Contractor, the Contractor shall be entitled to receive the difference; and in case greater, the Contractor shall pay amount of such excess so due.

26. **CHANGE ORDERS**

The maximum amount of general conditions, overhead, and profit that will be permitted on any change order is a total of 15% including sub-contractor general conditions, overhead, and profit

27. **DRAWINGS AND SPECIFICATIONS**

Drawings and Specifications: In the event of a conflict between the drawings and specifications, the more stringent description shall take precedence.

INSURANCE REQUIREMENTS
Vendors/Contractors/Users of Town of Westport Properties

The Vendor/Contractor/User of Town of Westport Property shall purchase and maintain for the life of the contract, from a company or companies with an A.M. Best rating of A- (VII) or better, insurance as required below. Such insurance will protect the Westport Board of Education and the Town of Westport from claims set forth below which may arise out of or result from the Vendor/Contractor/User of Town of Westport Property obligation under the contract, whether such obligations are those of the Vendor/Contractor/User of Town of Westport Property or those of a subcontractor or any person or entity directly or indirectly employed by said Vendor/Contractor/User of Town of Westport Property or by anyone for whose acts said Vendor/Contractor/User of Town of Westport Property may be liable.

A. Workers Compensation:

Vendor/Contractor/User of Town of Westport Property shall provide workers compensation insurance required by law with employers liability limits for at least the amounts of liability for bodily injury by accident of \$ 500,000 each accident and bodily injury by disease of \$500,000.including a waiver of subrogation. If the work is on the water, the Longshore and Harbor Workers Compensation Act coverage is required.

B. Commercial General Liability Insurance:

Vendor/Contractor/User of Town of Westport Property shall provide commercial general liability insurance policy with an edition date of 1986 or later including products and completed operations. Limits should be at least: Bodily injury & property damage with an occurrence limit of \$1,000,000: Personal & advertising injury limit of \$1,000,000 per occurrence: General aggregate limit of \$2,000,000 (other than products and completed operations): Products and completed operations aggregate limit of \$2,000,000. Coverage will continue three years after the completion of the work.

- The policy shall name Westport Board of Education and the Town of Westport as an additional insureds and include ISO Form CG 2010 (07/04) and CG 2037 (07/04).
- Such coverage will be provided on an occurrence basis and will be primary and shall not contribute in any way to any insurance or self-insured retention carried by Westport Board of Education and/or the Town of Westport.
- The policy shall contain a waiver of liability in favor of the Westport Board of Education and the Town of Westport.
- Such coverage shall contain a broad form contractual liability endorsement or wording within the policy form to comply with the hold harmless and indemnity provision of the contract
- A per project aggregate limit of liability endorsement shall apply for any construction contract.
- Deductible and self-insured retentions shall be declared and are subject to the approval of the Westport Board of Education and/or the Town of Westport.

C. Commercial Automobile Insurance:

Vendor/Contractor/User of Town of Westport Property shall provide commercial automobile insurance for any owned autos (symbol 1 or equivalent) in the amount of \$1,000,000 each accident covering bodily injury and property damage on a combined single limit basis. Such coverage shall also include hired and non-owned automobile coverage. Policy shall name Westport Board of Education and the Town of Westport as additional insureds.

D. Umbrella or Excess Liability Insurance:

Vendor/Contractor/User of Town of Westport Property shall provide an umbrella or excess liability policy in excess (without restriction or limitation) of those limits and coverages described in items (A) through (C). Such policy shall contain limits of liability in the amount of \$5,000,000 each occurrence and \$5,000,000 in the aggregate.

E. Errors & Omissions Insurance:

If the agreement is for professional services, the Vendor/Contractor/User of Town of Westport Property shall provide errors & omissions insurance for liability resulting from the negligent performance of professional duties or operations. Such policy shall contain limits of liability in the amount of \$1,000,000 each occurrence and \$3,000,000 in the aggregate. The policy shall name Westport Board of Education, the Town of Westport, and the Architect as additional insureds.

F. Educators Errors & Omissions Insurance:

If the agreement is for educational services, the Vendor/Contractor/User of Town of Westport Property shall provide educator errors & omissions for liability resulting arising out of any breach of duty, neglect, error, misstatement, or omission committed in the course of their duties. Such policy shall contain limits of liability in the amount of \$1,000,000 each occurrence and \$1,000,000 in the aggregate. The policy shall name Westport Board of Education and the Town of Westport as additional insureds.

G. Contractors Pollution Liability:

If the agreement includes work involving abatement, removal, clean-up or handling of any pollutant or hazardous material, the Vendor/Contractor/User of Town of Westport Property shall provide pollution liability insurance, including products and completed operations and contractual liability coverage of not less than \$5,000,000 each occurrence and \$5,000,000 in the aggregate for this project. The policy shall name Westport Board of Education and the Town of Westport as additional insureds and waive subrogation in favor of Westport Board of Education and the Town of Westport.

As to the insurance required, the insurer(s) and/or their authorized agents shall provide Westport Board of Education with certificates of insurance prior to execution of the contract by Westport Board of Education and the successful bidder, describing the coverage and prior to 30 days of any renewal. The certificate will include a copy of the additional insured and contractual liability endorsements.

END OF SECTION

SECTION 01085
APPLICABLE STANDARDS

PART ONE - GENERAL

1.1 DESCRIPTION

Work Included:

Throughout the Contract Documents, reference is made to codes and standards which establish qualities and types of workmanship and materials, and which establish methods for testing and reporting on the pertinent characteristics.

Where materials or workmanship are required by these Contract Documents to meet or Exceed the specifically named codes or standards, it is the Contractor's responsibility to provide materials and workmanship which meet or exceed the specifically named code or standard.

It is also the Contractor's responsibility, when so required by the Contract Documents or by written request from the Architect, to deliver to the Architect all required proof that the materials or workmanship, or both, meet or exceed the requirements of the specifically named code or standard. Such proof shall be in the form required to be copies of a certified report of tests conducted by a testing agency approved for that purpose by the Architect.

1.2 QUALITY ASSURANCE

Familiarity with pertinent codes and standards: In procuring all items used in this work, it is the Contractor's responsibility to verify the detailed requirements of the specifically named codes and standards and to verify that the items procured for use in this work meet or exceed the specified requirements.

Rejection of non-complying items: The Architect reserves the right to reject items incorporated into the work which fail to meet the specified minimum requirements. The Architect further reserves the right, and without prejudice to other recourse the Architect may take, to accept non-complying items subject to an adjustment in the Contract Amount as approved by the Architect and the Owner.

Applicable standards: Listed in these Specifications include, but are not necessarily limited to, standards produced by the following agencies and organizations:

1. ACI American Concrete Institute, Box 18150, Redford Station, Detroit, MI 48219.
2. AISC American Institute of Steel Construction, Inc., 1221 Avenue of the Americas, New York, NY 10020.
3. ANSI American National Standards Institute
4. ASTM American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19111.
5. NEC National Electrical Code (see NFPA).
6. NEMA National Electrical Manufacturers Association, 155 East 44th Street, New York, NY 10017.
7. NFPA National Fire Protection Association, 470 Atlantic Avenue, Boston, MA 02210.
8. SDI Steel Deck Institute, 135 Addison Avenue, Elmhurst, IL 60125.
9. TCA Tile Council of America, Inc., P.O. Box 326, Princeton, NJ 08540.
10. UL Underwriter's Laboratories, Inc., 207 East Ohio Street, Chicago, IL 60611.
11. Fed. Specs. and Fed. Standards
Specifications Sales (3FRI), Building 197 Washington Navy Yard, General Services Administration, Washington, DC 20407.
12. BC State of Connecticut, Basic Building Code.
13. CDOT State of Connecticut Department of Transportation - Standard Specification for Road, Bridges and Incidental Construction.
14. NBFU National Bureau of Fire Underwriters.
15. ASME American Society of Mechanical Engineers, United Engineering Center, 345 East 47th Street, New York, NY 10017.
16. ASHRAE American Society of Heating, Refrigerating, and Air Conditioning Engineers, 345 East 47th Street, New York, NY 10017.
17. SMACNA Sheet Metal and Air Conditioning Contractors National Association, Inc., 1611 North Kent Street, Arlington, VA 22209.

18. AMCA Air Moving and Conditioning Association, 205 West Touhy Avenue, Park Ridge, IL.
19. ADA Americans with Disabilities Act
20. NCAA National Collegiate Athletic Association
21. UFAS Uniform Federal Accessibility Standards
22. CT Connecticut
23. IBC International Building Code
24. BSF State of Connecticut Bureau of School Facilities
25. Applicable Codes
 - 2022 Connecticut State Building Code including the following:
 - Connecticut Supplement, 2018
 - 2021 International Building Code
 - 2021 International Existing Building Code
 - 2021 International Energy Code
 - 2021 International Fire Code
 - 2022 Connecticut State Fire Safety Code
 - ICC/ANSI A117.1 – 2017
 - 2022 Connecticut State Fire Prevention Code

END OF SECTION

SECTION 01300
SUBMITTALS & SUBSTITUTIONS

PART ONE - GENERAL

1.1 DESCRIPTION

Work Included:

Wherever possible throughout the Contract Documents the minimum acceptable quality of workmanship and materials has been defined by manufacturer's name and catalogue number, reference to recognized industry and government standards, or description of required attributes and performance.

To ensure that the specified products are furnished and installed in accordance with design intent, procedures have been established for advance submittal of design data and for their review by the Architect.

Make all submittals required by the Contract Documents, and revise and resubmit as necessary to establish compliance with the specified requirements.

Related Work Described Elsewhere: Individual requirements for submittals are described in pertinent other Sections of these Specifications.

1.2 QUALITY ASSURANCE

Coordination of Submittals: Prior to each submittal, carefully review and coordinate all aspects of each item being submitted and verify that each item and the submittal for it conforms in all respects with the requirements of the Contract Documents. By affixing the Contractor's signature to each submittal, certify that this coordination has been performed.

Certificates of Compliance:

Certify that all materials used in the work comply with all specified provisions thereof, certification shall not be construed as relieving the Contractor from furnishing satisfactory materials if, after tests are performed on selected samples, the material is found to not meet specified requirements.

1.3 SUBMITTALS

Make all submittals of shop drawings, samples, requests for substitution and other items in strict accordance with this Section.

PART TWO - PRODUCTS

2.1 SUBMITTAL SCHEDULE

General: Compile a complete and comprehensive schedule of all submittals anticipated to be made during progress of the work. Include a list of each type of item for which Contractor's Drawings, Shop Drawings, Certificates of Compliance, Material Samples, Guarantees, or other types of submittals are required.

2.2 SHOP DRAWINGS AND COORDINATION DRAWINGS

Shop Drawings:

- a. Scale and Measurements: Make all shop drawings accurately to a scale sufficiently large to show all pertinent aspects of the item and its methods of connection to the work.
- b. Type of prints required: Electronic submittals with the approved stamp and signature of the contractor on them.
- c. Reproduction of reviewed shop drawings: Printing and distribution of reviewed shop drawings for the Architect's use will be by the Contractor.

2.3 MANUFACTURER'S LITERATURE

General: Where contents of submitted literature from manufacturers includes data not pertinent to the submittal, clearly indicate which portion of the contents is being submitted for review.

Number of Copies Required: Submit the number of copies which are required to be returned plus one copy which will be retained by the Architect.

2.4 SAMPLES

Accuracy of Samples: Samples shall be of the precise article proposed to be furnished.

Number of Samples Required: Unless otherwise specified, submit all samples in the quantity which is required to be returned plus one which will be retained by the Architect.

Reuse of Samples: In situations specifically so approved by the Architect, the Architect's retained sample may be used in the construction as one of the installed items.

Rejected Sample: Rejected samples will not be returned. A letter of rejection will be issued.

2.5 COLORS AND PATTERNS

Unless the precise color and pattern is specifically described in the Contract Documents, and whenever a choice of color or pattern is available in a specified product, submit accurate color and pattern charts to the Architect for review and selection.

2.6 SUBSTITUTIONS

Approval Required:

- a. The Contract is based on the standards of quality established in the Contract Documents.
- b. All products proposed for use, including those specified by required attributes and performance shall require approval by the Architect before being incorporated into the work.
- c. Do not substitute materials, equipment, or methods unless such substitution has been specifically approved for this work by the Architect.

"Or Equal":

- a. Where the phrase "or equal" or "or equal as approved by the Architect" occurs in the Contract Documents, do not assume that materials, equipment, or methods will be approved as equal unless the items has been specifically approved for this work by the Architect.
- b. The decision of the Architect shall be final.

PART THREE - EXECUTION

3.1 IDENTIFICATION OF SUBMITTALS

General: Consecutively number all submittals. Accompany each submittal with a Letter of Transmittal containing all pertinent information required for identification and checking of submittals.

Identify each sample and shop drawing with the project name. Contractors name, producer name and brand and the specification section number.

Re-submittals: When material is resubmitted for any reason, transmit under a new Letter of Transmittal.

3.2 COORDINATION OF SUBMITTALS

General: Prior to submittal for approval use all means necessary to fully coordinate all material including, but not necessarily limited to:

1. Determine and verify all interface conditions, catalog numbers, and similar data.
2. Coordinate with other trades as required.
3. Clearly indicate all deviations from requirements of the Contract Documents.

Grouping Submittals: Unless otherwise specified, make all submittals in groups containing all associated items to ensure that information is available for checking each item when it is received. Partial submittals may be rejected as not complying with the provisions of the Contract Documents and the Contractor shall be strictly liable for all delays so occasioned.

3.3 TIMING OF SUBMITTALS

General: Make all submittals far enough in advance of scheduled dates for installation to provide all time required for reviews, for securing necessary approvals, for possible revisions and re-submittals, and for placing orders and securing delivery.

Architect's review time: In scheduling, allow at least ten calendar days for review by the Architect following his receipt of the submittal.

Delays: Delays caused by tardiness in receipt of submittals will not be an acceptable basis for extension of the contract completion date.

3.4 ARCHITECT'S REVIEW

General: Review by the Architect shall not be construed as a complete check; but only that the general method of construction and detailing is satisfactory. Review shall not relieve the Contractor from responsibility for errors which may exist.

Revisions: Make all revisions required by the Architect. If the Contractor considers any required revision to be a change, he shall so notify the Architect as provided for under "Changes" in the General Conditions. Show each drawing revision by number, date, and subject in a revision block on the drawing. Make only those revisions directed or approved by the Architect.

3.5 CONTRACTORS REVIEW

The Contractor MUST review, approve and sign the shop drawings prior to submittal to the Architect. The Contractor is responsible for quantities, dimensions and verification of field conditions.

3.6 RESUBMITTALS

When any shop drawing or sample is required to be submitted more than two times for review the Contractor shall pay the cost for the Engineer and/or architect to review the additional submittals. The Architect/Engineer will bill the Owner for the extra cost and the Owner will backcharge the contractor for this expense.

END OF SECTION

01300-4

QUALITY CONTROL
SECTION 01400PART 1 - GENERAL

1.1 LABORATORY TESTING

The Owner will select and pay costs of all initial tests and reports listed in the various Sections.

1.2 QUALIFICATION OF LABORATORY

The construction inspection and materials testing laboratory selected will substantially comply with the basic requirements of ASTM E329-77, "Recommended Practice for Inspection and Testing Agencies for Concrete, Steel, and Bituminous Materials as Used in Construction" and will submit to the Architect a copy of the report of inspection of their facilities made by the Materials Reference Laboratory of the National Bureau of Standards during the most recent tour of such inspection, together with a memorandum stating steps taken to remedy deficiencies reported by this inspection.

Testing machines and instrumentation employed by the laboratory shall be calibrated at intervals not exceeding 12 months by devices of accuracy traceable to the National Bureau of Standards; and the laboratory will submit to the Architect applicable documentation of calibration.

1.3 AUTHORITY AND DUTIES OF THE LABORATORY

The Laboratory will not be authorized to revoke, alter, relax, enlarge, or release any requirements of the Contract Documents or to approve or accept any portion of the work. When it appears that the material furnished or work performed by the Contractor fails to fulfill Contract Document requirements, the laboratory will promptly direct the attention of the Architect and the Contractor to such deficiencies.

Results of all testing specified will be documented in report form and 4 copies of each report will be issued promptly and directly to the Architect for review and distribution.

1.4 RESPONSIBILITIES AND DUTIES OF CONTRACTOR

The use of laboratory services shall in no way relieve the Contractor of his responsibility to furnish materials and construction in full compliance with the requirements of the Contract Documents.

To facilitate testing services, the Contractor shall cooperate with the laboratory and secure and deliver to the Architect or to the laboratory, without extra cost to the Owner,

Preliminary representative samples of the materials he proposes to use and which are required to be tested.

Furnish such casual labor and all facilities which are necessary to obtain and handle samples at the project and to facilitate the specified inspections.

Advise the laboratory sufficiently in advance of operations to allow for completion of tests and for the assignment of personnel.

Provide and maintain for the sole use of the laboratory adequate facilities for safe storage and proper curing of such test specimens which must remain on the project site prior to testing.

Pay the laboratory for such tests or inspections as are performed exclusively for the Contractor's convenience, and for such retests as may be occasioned by initial nonconformance of the materials with the Contract Documents.

END OF SECTION

SECTION 01500
TEMPORARY FACILITIES

PART ONE - GENERAL

1.1 DESCRIPTION

Work Included: Temporary facilities and controls required for this work include, but are not necessarily limited to:

1. Enclosures such as tarpaulins, barricades, and canopies including those required to provide a separation between the area of construction and the remaining areas.
2. All pertinent safety regulations; ladders, planks, hoists, barricades, and similar items normally furnished by the individual trades in execution of their own portions of the work.
3. Temporary electricity for construction.
4. Temporary sanitary (toilet) facilities
5. Construction fence around the perimeter of the construction area. Minimum 5ft high.

1.2 PRODUCT HANDLING

Use all means necessary to maintain temporary facilities and controls in proper and safe condition throughout progress of the work.

PART TWO - PRODUCTS

2.1 UTILITIES

General: All temporary facilities shall be subject to the Architect's approval and shall be provided by the contractor as required.

Electricity: Electrical contractor shall furnish and install all necessary temporary wiring, as required to provide adequate power and artificial lighting at all points where required for work and safety.

2.2 ENCLOSURES

Furnish, install and maintain for the duration of construction all required scaffolds, tarpaulins, barricades, canopies, warning signs, steps, bridges, platforms, and other temporary construction necessary for proper completion of the work in compliance with all safety and other regulations.

Furnish and install a construction fence around the perimeter of the construction area. Fence to be a minimum of 5 ft high.

PART THREE - EXECUTION

3.1 MAINTENANCE AND REMOVAL

Maintain all temporary facilities and controls as long as needed for the safe and proper completion of the work. Remove all facilities at the completion of the project.

END OF SECTION

01500-1

SECTION 01710
CLEANING

PART ONE - GENERAL

1.1 DESCRIPTION

Work Included: Throughout the construction period, maintain the building and site in a standard of cleanliness as described in this Section.

Related Work Described Elsewhere: In addition to standards described in this Section, comply with all requirements for cleaning up as described in various other sections of these Specifications.

1.2 QUALITY ASSURANCE

Inspection: Conduct daily inspection, to verify that requirements of cleanliness are being met.

Codes and Standards: In addition to the standards described in this Section, comply with all pertinent requirements of governmental agencies having jurisdiction.

PART TWO - PRODUCTS

2.1 CLEANING MATERIALS AND EQUIPMENT

Provide all required personnel, equipment, and materials needed to maintain the specified standard of cleanliness.

2.2 COMPATIBILITY

Use only the cleaning materials and equipment, which are compatible with the surface being cleaned, as recommended by the manufacturer of the material.

PART THREE - EXECUTION

3.1 PROGRESS CLEANING

Retain all stored items in an orderly arrangement allowing maximum access, not impeding drainage or traffic, and providing the required protection of materials.

Do not allow the accumulation of scrap, debris, water material and other items not required for construction of this work.

Maintain the site and building in a neat and orderly condition at all times.

Daily, and more often if necessary, inspect the structures and pick up all scrap, debris, and waste material. Remove all such items to the place designated for their storage.

As required preparatory to installation of succeeding materials, clean the structures or pertinent portions thereof to the degree of cleanliness recommended by the manufacturer of the succeeding materials, using all equipment and materials required to achieve the required cleanliness.

3.2 FINAL CLEANING

General: Prior to completion of the work, remove from the job site all tools, surplus materials, equipment, scrap, debris, and waste.

Site: Unless otherwise specifically directed by the Architect, broom clean all paved areas on the site directly adjacent to the area of construction. Completely remove all resultant debris.

Exterior: Visually inspect all exterior surfaces and remove all traces of soil, waste materials, smudges, and other foreign matter. Remove all traces of splashed materials from adjacent surfaces.

Interior: Visually inspect all interior surfaces and remove all traces of soil, waste material, smudges, and other foreign matter. Remove all traces of splashed materials from adjacent surfaces. Remove all paint droppings, spots, stains, and dirt from finished surfaces. Leave area "Broom Clean".

Windows: Wash and clean all windows. Remove all stickers on glass.

END OF SECTION

01710-2

SECTION 01730
OPERATION AND MAINTENANCE DATA

PART ONE - GENERAL

1.1 DESCRIPTION

Work Included: To aid in the continued instruction of operating and maintenance personnel, and to provide a positive source of information regarding the products incorporated in the work, furnish and deliver the data described in this Section and in pertinent Sections of these Specifications.

Related Work Described Elsewhere:

Make all submittals in strict accordance with the provisions of Sections 01300.

Required contents of submittals may also be amplified in the pertinent other Sections.

1.2 QUALITY ASSURANCE

In preparation of data required by this Section, use only personnel who are thoroughly trained and experienced in operation and maintenance of the described items, completely familiar with the requirements of this Section, and skilled in technical writing to the degree needed for communicating the essential data.

1.3 SUBMITTALS

Manual: Submit three copies of all manuals to the Architect prior to the final acceptance of the work.

PART TWO - PRODUCTS

2.1 INSTRUCTION MANUALS

General: Submit instruction and maintenance manuals in the electronically with front cover that clearly identifies the manual.

Contents: Include at least the following information in all manuals:

- a. Name and model number of equipment.
- b. Complete instructions regarding operation and maintenance of all equipment involved, including lubrication, disassembly, and reassembly.
- c. Complete nomenclature and part number of all replacement parts, name, and address of nearest vendor, and all other pertinent data regarding procurement procedure.
- d. Copy of all guarantees and warranties issued.
- e. Such other data as required in pertinent other Sections of these specifications.

PART THREE - EXECUTION

3.1 INSTRUCTION MANUALS

All manuals shall be prepared to make the Owner aware of all required maintenance of equipment.

END OF SECTION

SECTION 01800
PROJECT CLOSEOUT

PART ONE - GENERAL
CLEAN-UP

Remove all temporary utilities including the construction fence from the site.

At substantial completion of the project clean all surfaces, remove all labels, clean the construction area of the site and remove all debris from the site.

GUARANTEE & WARRANTY

In addition to the warranty & guarantees stipulated in the general conditions the following shall apply;

Warrant and guaranty all work for a period of one year from the date of the certificate of occupancy obtained from the Town of Westport, CT. This shall include all work performed by subcontractors, and material supplied by subcontractors.

Guaranty the building, including the roof of the modular classroom building to be watertight and free of leaks for a period of ten years from the date of the final payment.

Guaranty the roof and walls area of the existing school building where the new conduits are installed on or through, are watertight and the contractor shall guaranty that they will remain watertight and free of leaks for a period of five years from the date of the final payment.

MAINTENANCE MANUALS

Submit three copies of maintenance and operating manuals that specify full details for care and maintenance of all new equipment and visible surfaces.

SIESMIC DOCUMENTATION

Provide documentation from a CT licensed structural engineer that the modular classrooms are properly anchored to the foundation system in accordance with all codes and regulations, including all seismic requirements.

CONNECTICUT STATE DEPARTMENT OF EDUCATION FORMS

Provide fully executed Connecticut Department of Education (SDE) Siesmic Certification Forms for Ceiling Systems, Structural Systems, Mechanical Systems and Electrical Systems. Modification or substitution of the SDE forms will not be acceptable.

Provide fully executed SDE Acoustical Performance Certification. No modifications or substitution will be accepted.

END OF SECTION
01800-1

SECTION 03300
CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to the work of this section. Refer to Section 13122 for additional information.

1.2 DESCRIPTION

Furnish all labor, materials, tools, equipment, transportation and services to complete all concrete work. Scope of work to include foundation for modular building and new concrete stairs. Contractor must verify the height of the foundation piers prior to submitting a bid.

1.3 STANDARDS

Applicable portions of the following codes and standards are hereby made part of this specification in their entirety as though fully set forth herein.

ACI 301-96 *"Standard Specification for Structural Concrete."*

ACI 318-95 *"Building Code Requirements For Reinforced Concrete"* and commentary.

ACI 315-80 *"Details and Detailing of Concrete Reinforcement."*

1.4 DELIVERY, STORAGE, AND HANDLING

Reinforcing steel shall be stored off of the ground on wood sleepers.

1.5 Install concrete pier foundation system at new location for modular units. Provide foundation plan prepared by Structural Engineer based on structural system of existing modular units.

PART 2 - PRODUCTS

2.1 MATERIALS

Concrete shall be in accordance with ASTM C94-80 *"Standard Specification for Ready-Mixed Concrete."*

Cement: ASTM C150 TYPE I or II. Only one brand of cement shall be used.

Normal weight aggregates: ASTM C33, aggregates shall be from a single source.

Air entraining admixtures: ASTM C260.

Water-reducing and retarding: ASTM C494, and containing not more than 1% chloride

Mix water shall be clean, fresh, and potable.

Non-shrink grout: Five Star Grout.

2.2 PROPORTIONING

Concrete compressive strength at 28 days: 3000 psi for footings & foundations.

Concrete proportions shall be selected in accordance with ACI 211.1-89.

All concrete shall be air-entrained, except concrete for interior slab-on-grade. Total air content shall be not less than 4% and not more than 8% by volume.

Water-cement ratio shall not exceed 0.50.

Maximum slump:

5 inches for all other concrete.

Minimum slump:

2 inches.

The nominal maximum size of coarse aggregate shall be not larger than:

1. 1/5 the narrowest dimension between sides of forms
2. 3/4 the minimum clear spacing between reinforcing bars.

Calcium chloride shall not be used.

PART 3 - EXECUTION

3.1 FORMWORK

Forms shall result in a final structure that conforms to shapes, lines, and dimensions as required by the design drawings and specifications.

Forms shall be substantial and sufficiently tight to prevent leakage of mortar.

Before placing the reinforcing steel or the concrete, the surface of the forms shall be covered with an acceptable form release coating material that will effectively prevent absorption of moisture, prevent bond with the concrete, and not stain the concrete surfaces.

Clean forms prior to concrete placement. Remove all chips, wood, sawdust, dirt, rubbish, or other debris.

Chamfer strips shall be placed in the corners of forms to produce beveled edges on surfaces exposed to view.

3.2 REINFORCEMENT

Reinforcing bars: ASTM A615 grade 60 except beam stirrups and column ties may be grade 40.

Reinforcement shall be maintained free from dust, mud, rust, oil or ice.

Fabrication and placement of reinforcing steel shall be in accordance with CRSI "*Manual of Standard Practice*" and CRSI "*Placing Reinforcing Bars*".

Reinforcing bars shall not be welded.

Minimum cover on reinforcement:

- | | | |
|----|---------------------------------------|------|
| 1. | concrete cast against earth: | 3" |
| 2. | concrete exposed to earth or weather: | |
| | #6 and larger | 2" |
| | #5 and smaller | 1½ " |
| 3. | interior surfaces: | |
| | slabs, walls, joists | ¾" |

Splices shall be lapped 40 bar diameters and securely tied.

Heat shall not be used to bend reinforcing bars.

Reinforcing steel shall be securely wired together at all intersections.

3.3 PRODUCTION OF CONCRETE

Concrete shall be batched, mixed and transported in accordance with ASTM C94 and ACI 304R-89.

Batching plant equipment and facilities shall conform to "*Certification of Ready Mixed Concrete Production Facilities*" of the National Ready Mixed Concrete Association.

Admixtures shall be charged into the mixer as solutions and shall be measured by means of an acceptable mechanical dispensing device. The liquid shall be considered a part of the mixing water.

If more than one admixture is used in the concrete, they shall be added separately.

Ready-mixed concrete trucks shall not be loaded in excess of their rated capacity.

3.4 PLACING

Do not pour concrete until forms and subgrade have been thoroughly cleaned and are free of frost, mud, ice, or water.

Convey concrete from truck to forms as rapidly as possible by methods which will prevent segregation or loss of ingredients. Place in forms as nearly as practicable to its final position.

When placement is started, carry on as a continuous operation until the placing of a section is complete. Cold joints are not permitted.

Consolidate concrete by mechanical vibration. Do not use vibrators to transport concrete in forms.

No concrete shall be placed in freezing weather or when freezing weather is forecast by Weather Bureau to occur within 36 hours, unless special measures and precautions are taken to heat the water and aggregates and to protect concrete from freezing after being placed.

No concrete shall be placed when the temperature is greater than 90 degrees F unless special measures are taken to cool the water and aggregate and to protect the concrete from rapid drying.

No concrete shall be placed during rain, sleet, or snow unless protection is provided. The maximum elapsed time between introduction of water and placing shall be one hour.

3.5 CURING AND PROTECTION

Concrete shall be maintained above 50 degrees F and in a moist condition for at least the first 7 days after placement.

In cold weather, concrete shall be protected in accordance with ACI 306R-88.

In hot weather, concrete shall be protected in accordance with ACI 305R-89.

3.6 FOUNDATION

All classroom units must be supported on concrete piers with bulb type footing at 42" below finished grade. Block and level method is acceptable. Anchor structure to meet all applicable seismic requirements.

All foundations must bear on suitable soil with the capacity to support the building load. Bearing capacity and design load to be determined by the Structural Engineer retained by the Modular Contractor.

END OF SECTION

PART ONE - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions and Division 1 Specification Sections, apply to this section.

1.2 SUMMARY

- A. A single fabric shade structure manufacturer shall be responsible for the design, wet-stamped engineering drawings, fabrication and supply of the fabric shade structure specified herein.

1.3 SUBSTITUTIONS

- A. To qualify as an approved equal, please submit the following manufacturer, installer and product documentation at least ten days prior to the bid:
 - a. Two full sets of fabric samples.
 - b. Detailed material and performance specifications for ALL fabric, steel, hardware and cables used in shade structure.
 - c. Two full sets of powder coating color metal “chips”.
 - d. List of at least 3 customer references within 50 miles of bid location.
 - e. Proof of compliance with all quality assurance criteria, as per Section 1.5.
 - f. Full set of drawings signed and sealed by a CT licensed Structural Engineer for the proposed structures.
 - g. Proof of installation competency and/or certification for type and size of structure specified.
 - h. List of any and all deviations from product specifications in Section 2.1.

1.4 QUALITY ASSURANCE

Fabrication and erection are limited to firms with proven specific area experience in the design, fabrication and erection of fabric shade structures and such firms shall meet the following minimum requirements. No substitutions shall be allowed for the following:

- A. A single shade structure manufacturer shall design, engineer and manufacture the shade structure.
- B. All manufacturers shall have at least 20 years’ experience in the design, engineering, manufacture and erection of fabric shade structures, engineered to requirements with similar scope and a successful construction record of in-service performance.
- C. The fabric shade structure contractor shall have a Corporate Quality Control program/manual, which describes their complete quality assurance program.
- D. Manufacturer must be IAS (International Accreditation Service) Certified.

1.5 WARRANTY

- A. The successful installer shall provide a 12-month warranty on all installation labor and materials.
- B. A supplemental warranty from the manufacturer shall be provided for a period of 10 years (prorated) on fabric and 10 years (non-prorated) on the structural integrity of the steel, from date of shade invoice.
- C. The warranty shall not deprive the Owner of other rights the Owner may have under the provisions of the Contract Documents and will be in addition to and run concurrent with other warranties made by the Contractor under requirements of the Contract Documents.

PART TWO – PRODUCTS

- 2.1 A. The structure(s) shall consist of:
(1) 4 Post HIP QRE 428 40' 0" x 30' 0" x 10' 0" entry height.
- B. The structures shall be manufactured by Shade Structures, Inc. d/b/a USA SHADE & Fabric Structures, or approved equal.
- C. Contact: Jon Jalbert
43 Main Street, Lower Level
Blackstone, MA 01504
(508) 688-7007
jjalbert@ultiplayus.com
- D. All structures designed per State of CT Building Code – Current Edition.
- E. All fabric shade structures shall be designed and engineered to meet the minimum of 115 mph “Ultimate” Wind Load, Risk Category II, Exposure C, and a Snow Load of 10 psf and Live Load of 5 pst. All fabric shade structures shall be engineered with a zero wind pass-through factor on the fabric.
- F. Steel:
1. All steel members of the fabric shade structure shall be designed in strict accordance with the requirements of the “American Institute of Steel Construction” (AISC) Specifications and the “American Iron and Steel Institute (AISI) Specifications for Cold-Formed Members and manufactured in an IAS (International Accreditation Service) accredited facility for Structural Steel Fabrication under appropriate building code.
 2. All connections shall have a maximum internal sleeving tolerance of .0625” using high-tensile strength steel sections with a minimum sleeve length of 6”.
 3. All non-hollow structural steel members shall comply to ASTM A-36. All hollow structural steel members shall be cold-formed, high-strength steel and comply with ASTM A-500-10, Grade B. All steel plates shall comply with ASTM A-572, Grade 50.
 4. All galvanized steel tubing shall be triple-coated for rust protection using an in-line electroplating coat process. All galvanized steel tubing shall be internally coated with zinc and organic coatings to prevent corrosion.
- G. Bolts:
1. All structural field connections of the shade structure shall be designed and made with high-strength bolted connections using ASTM A-325, Grade B.
 2. Where applicable, all stainless steel bolts shall comply with ASTM F-593, Allow Group 1 or 2. All bolt fittings shall include rubber washers for water-tight seal at the joints. All nuts shall comply with ASTM F-594, Allow Group 1 or 2.
- H. Welding:
1. All shop-welded connections of the fabric shade structure shall be designed and performed in strict accordance with the requirements of the “American Welding Society” (AWS) Specifications. Structural welds shall be made in compliance with the requirements of the “pre-qualified” welded joints, where applicable and by certified welders. No onsite or field welding shall be permitted.
 2. All full penetration welds shall be continuously inspected by an independent inspection agency and shall be tested to the requirements of appropriate building code.
- I. Powder Coating:

1. Galvanized steel tubing preparation prior to powder coating shall be executed in accordance with solvent cleaning SSPC-SP1. Solvents such as water, mineral spirits, xylol, and toluol, which are to be used to remove foreign matter from the surface. A mechanical method prior to solvent cleaning and prior to surface preparation, shall be executed according to Power Tool Cleaning SSPC-SP3, utilizing wire brushes, abrasive wheels, needle gun, etc.
2. Carbon structural steel tubing preparation prior to powder coating shall be executed in accordance with commercial blast cleaning SSPC-SP6 or NACE #3. A commercial blast cleaned surface, when viewed without magnification, shall be free of all visible oil, grease, dirt, mill scale, rust, coating, oxides, corrosion and other foreign material.
3. Powder coating shall be sufficiently applied (minimum 3 mils thickness) and cured at the recommended temperature to provide proper adhesion and stability to meet salt spray and adhesion tests, as defined by the American Society of Testing Materials.
4. Raw powder used in the powder coat process shall have the following characteristics:
 - a. Specific gravity: 1.68 +/- 0.05
 - b. Theoretical coverage: 14 +/- 4 ft²/mil
 - c. Mass loss during cure: <1%
 - d. Maximum storage temperature: 80°
 - e. Interpon 800 is a high-durability TGIC powder coating designed for exterior exposure. Tested against the most severe specifications, Interpon 800 gives significantly improved gloss retention and resistance to color change.
5. When the fabric shade structure(s) will be located within potentially corrosive environments such as (pools, reclaimed water irrigation, saltwater bodies, other standing bodies of water) hot dip galvanizing of carbon steel or rust protection undercoat primer will be required on all structures at USA Shade’s discretion. The rust protection primer shall be Sherwin-Williams POWDURA epoxy powder coating Z.R Primer and shall be applied to carbon steel in accordance with the manufacturer’s specifications. Primer should be fused only and then top coated with the selected powder coat to ensure proper intercoat adhesion. The primer’s attributes shall be:
 - a. Specific gravity (g/ml): 2.37
 - b. Coverage at 1.0 mil (ft²/lb): 81.6
 - c. Adhesion: ASTM D-3359 5B
 - d. Flexibility: ASTM D-552 Pass 1/8”
 - e. Pencil hardness: ASTM D-3363 H-2H
 - f. Impact resistance (in.lb): ASTM D-2794 Dir & Rev, 120 in-lbs.
 - g. Salt spray resistance: ASTM B-117 2000 hours
 - h. Humidity resistance: ASTM D-4585 2000 hours
 - i. 60° Gloss: ASTM D-523 50 ~ 70
 - j. Cure schedule (metal temp): 10 min @ 100°C (390°F)
25 min @ 135°C (275°F)
 - k. Film thickness range (mils): 2.0 ~ 3.0

J. Tension Cable: Steel wire rope cable is determined based on calculated engineering loads. Standard cabling is galvanized.

1. 0.25” (nominal) galvanized 7 x 19 strand core wire rope shall be used for tension loads up to 4,500 lbs.

2. 0.375" (nominal) galvanized 7 x 19 strand core wire rope shall be used for tension loads up to 9,000 lbs.
3. 0.5" (nominal) galvanized 6 x 19 strand core wire rope shall be used for tension loads up to 13,500 lbs.

K. Fabric Roof Systems:

1. UV Shade Fabric:
 - a. Shadesure shade fabric is made of a UV-stabilized, high-density polyethylene (HDPE) as manufactured by Multiknit (Pty) Ltd. HDPE mesh shall be a heat-stentered, three bar Rachel-knitted, lockstitch fabric with one monofilament and two tape yarns to ensure that the material will not unravel if cut. Raw fabric rolls shall be 9.8425 feet wide.
 - b. Fabric Properties:
 - Life Expectancy: minimum 8 years with continuous exposure to the sun
 - Fading: minimum fading after 5 years (3 years for Red)
 - Fabric Mass: 5.31 oz/yd² ~ 5.6 oz/yd² (180 gsm ~ 190 gsm)
 - Fabric Width: 9.8425 feet (3m)
 - Roll Length: 164.04 feet (50m)
 - Roll Dimensions: 62.99 inches x 16.5354 inches (160 cm x 42 cm)
 - Roll Weight: +/- 66 lbs +/- 30 kg)
 - Minimum Temp: -13°F (-25°C)
 - Maximum Temp: +176°F (80°C)
 - c. Fabric shall meet the following flame spread and fire propagation tests.
 - 1) ASTM E-84
 - 2) NFPA 701 Test Method 2
2. Stitching and Thread:
 - a. All sewing seams are to be double stitched.
 - b. The thread shall be GORE TENARA mildew-resistant sewing thread, manufactured from 100% expanded PTFE (Teflon). Thread shall meet or exceed the following:
 - 1) Flexible temperature range
 - 2) Very low shrinkage factor
 - 3) Extremely high strength, durable in outdoor climates
 - 4) Resists flex and abrasion of fabric
 - 5) Unaffected by cleaning agents, acid rain, mildew, salt water and is unaffected by most industrial pollutants.
 - 6) Treated for prolonged exposure to the sun
 - 7) Rot resistant

PART THREE – EXECUTION

3.1 INSTALLATION

- A. The installation of fabric shade structures shall be performed by manufacturer or manufacturer-approved contractor. All installation personnel must have experience in the erection of tensioned fabric structures.

- B. The installation shall comply with the manufacturer’s instructions for assembly, installation and Erection, per approved drawings.
- C. Concrete:
 - 1. Unless noted otherwise for footings and piers by the Project Engineer, the concrete specification for footings, piers, slabs, curbs and walkways shall meet a minimum of 2,500 psi at 28-day strength.
 - 2. Concrete work shall be executed in accordance with the latest edition of American Concrete Building Code ACI 318-14.
 - 3. Concrete specifications shall comply in accordance with the Section 03300 Cast-In-Place Concrete, detailed as per plans, and shall be as follows:
 - a. 28 days Strength $F'c = 2,500$ psi
 - b. Aggregate: HR
 - c. Slump: 3~ 5 inch
 - d. Portland Cement shall conform to C-150
 - e. Aggregate shall conform to ASTM C-33.
 - 4. All reinforcement shall conform to ASTM A-615 grade 60.
 - 5. Reinforcing steel shall be detailed, fabricated and placed in accordance with the latest ACI Detailing Manual and Manual of Standard Practice.
 - 6. Whenever daily ambient temperatures are below 80 degrees Fahrenheit, the contractor may have mix accelerators and hot water added at the batch plant (See Table 1).
 - 7. The contractor shall not pour any concrete when the daily ambient temperature is to be below 55 degrees Fahrenheit.

TABLE 1

Temperature Range	% Accelerator	Type Accelerator
75-80 degrees F	1%	High Early (non calcium)
70-75 degrees F	2%	High Early (non calcium)
Below 70 degrees F	3%	High Early (non calcium)

- D. Foundations
 - 1. All anchor bolts set in new concrete shall comply with ASTM F1554 GR 55.
 - 2. All anchor bolts shall be Hot-Dip Galvanized.
 - 3. Footings and full rebar cages shall be drilled or dug, set and poured as per manufacturer’s specifications.

END OF SECTION