Administered by University of Maine System
Office of Strategic Procurement
Request for Bid (RFB)

RFB #051-17

Greenhouse

University of Maine at Presque Isle

Response <u>Deadline</u> Date/Time: December 7th, 2016. 2:00 PM

Response Submission Information:
University of Maine System
Office of Strategic Procurement
37 College Avenue
Gorham, ME 04038
Attn: Rachel Piper – Director of Strategic Procurement

Response Contact Information:

Strategic Sourcing Manager: Rachel Piper
Email: rachel.piper@maine.edu Phone: (207) 780-5633

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SECTION 1

1.0 General Information

1.1 Purpose

The University of Maine at Presque Isle (UMPI), Located in Presque Isle, Maine, is seeking bids to provide Design and Manufacturing services as defined in this document. This document provides instructions for submitting bids, the procedure and criteria by which the Provider(s) will be selected, and the contractual terms which will govern the relationship between the University and the awarded Respondent(s).

The faculty in the biology department and cooperative extension have obtained seed-funding for the installation of a greenhouse on the UMPI campus. It will serve three main purposes: research, teaching and extension outreach activities.

1.2 Definition of Parties

The University of Maine System will hereinafter be referred to as the "University." Respondents to the RFB shall be referred to as "Respondent(s)" or "respondent(s)". The Respondent to whom the Contract is awarded shall be referred to as the "Contractor."

1.3 Bid Pricing

Refer to **Appendix B** for specific bid instructions/requirements.

1.4 Evaluation Criteria

Award will be made to the low respondent provided that all other requirements are satisfactorily met, including receipt of bid as outlined in **Appendix B**.

The University will NOT seek a best and final offer (BAFO) from any Respondent in this procurement process. All Respondents are expected to provide their best value pricing with the submission of their response. Respondents will NOT be given another opportunity to modify pricing once submitted.

1.5 Bid Submission

A SIGNED copy of this bid document must be submitted to the Office of Strategic Procurement as follows:

1. Completion of **Appendix A**. **Appendix A** must be SIGNED as part of the submission.
2. Completion of **Appendix B**. **Appendix B** must be SIGNED as part of the submission.
3. Bid submission will be submitted electronically to the Email provided in the Contact section of the cover page of this document.
4. Electronic submission must be received by the required Response Deadline/Time reflected on the cover page of this document.

5. Respondent may attached company bid to their submission as supporting information. Respondent is still required to complete **Appendix C**.

SECTION 2

2.0 Bid Terms

2.1 Payment Terms

Payment shall be made upon submittal of an electronic invoice to the University by the Contractor on a net 30 basis unless discount terms are offered. In the event there is a discrepancy with the invoice, payment terms shall be effective starting on the date the discrepancy is resolved, for only that portion of the invoice that is disputed. Invoices must include a purchase order number.

2.2 Pricing:

All prices quoted shall remain firm for the entire term of the agreement.

2.3 Invoices

Unless otherwise specified in an attachment hereto, invoices and questions regarding invoices will be directed to:

University of Maine System
Accounts Payable
PO Box 533
Bangor, ME 04402

Phone: 207-581-2692
Fax: 207-581-2698
Email: UMAP@maine.edu

2.4 Contact – Post Award

Unless otherwise specified in an attachment hereto, the awarded respondent will Email any notice to the person(s) listed below. This person will serve as receipt of the delivery of the product / service.

Contact Name: David L. Berry, Project Engineer
Email: dberry@dirigoae.com
Telephone: (207) 225-3040

2.5 Product / Service Delivery

The following detail the product / service delivery requirements to the awarded respondent. As part of the submission of the bid the awarded respondent is committing to these requirements.

Delivery: Must be received by **May 15, 2017**.

Other: Vendor is required to deliver all license / maintenance keys and documentation necessary to support the usage and record of the University of Maine System acquisition within the delivery date/time specified above.

2.6 Order of Precedence

In the event of any conflicts among the bid documents the following order of precedence shall apply:

A. This Request for Bid (RFB).
B. Appendix A – University of Maine System Bid Vendor Page
C. Appendix B – Debarment, Performance and Non-Collusion Certification
D. Appendix C - Pricing
E. Respondent Attachments, as required.

Appendix A – University of Maine System Bid Vendor Page

RFB #051-17
Greenhouse UMPI

Organization Name:	
Chief Executive – Name/Title:	
Telephone:	
Fax:	
Email:	
Headquarters Street Address:	
Headquarters City/State/Zip:	
Lead Point of Contact for Quote – Name/Title:	
Telephone:	
Fax:	
Email:	
Street Address:	
City/State/Zip:	

1. This pricing structure contained herein will remain firm for a period of 90 days from the date and time of the quote deadline date.
2. No personnel currently employed by the University or any other University agency participated, either directly or indirectly, in any activities relating to the preparation of the Respondent's response.
3. No attempt has been made or will be made by the Respondent to induce any other person or firm to submit or not to submit a response.
4. The undersigned is authorized to enter into contractual obligations on behalf of the above-named organization.
5. By submitting a response to a Request for Bid, bid or other offer to do business with the University your entity understands and agrees that:
    a. The Agreement provisions in **Section 1.2.1.2** of this document will not be modified and are thereby incorporated into any agreement entered into between University and your entity; that such terms and condition shall control in the event of any conflict with such agreement; and that your entity will not propose or demand any contrary terms;
    b. The above Agreement provisions in **Section 1.2.1.2** of this document will govern the interpretation of such agreement notwithstanding the expression of any other term and/or condition to the contrary;
    c. Your entity agrees that the resulting Agreement will be the entire agreement between the University (including University's employees and other End Users) and Respondent and in the event that the Respondent requires terms of use agreements or other agreements, policies or understanding, whether on an order form, invoice, website, electronic, click-through, verbal or in writing, with University's employees or other End Users, such agreements shall be null, void and without effect, and the terms of the Agreement shall apply.
    d. Your entity will identify at the time of submission which, if any, portion or your submitted materials are entitled to "trade secret" exemption from disclosure under Maine's Freedom of Access Act; that failure to so identify will authorize UMS to conclude that no portions are so exempt; and that your entity will defend, indemnify and hold harmless UMS in any and all legal actions that seek to compel UMS to disclose under Maine's Freedom of Access Act some or all of your submitted materials and/or contract, if any, executed between UMS and your entity.

Continued - Appendix A – University of Maine System Response Cover Page

To the best of my knowledge all information provided in the enclosed response, both programmatic and financial, is complete and accurate at the time of submission.

Date: _____

_____

Name and Title (Printed)

_____

Authorized Signature

Appendix B – Debarment, Performance and Non-Collusion Certification

University of Maine System
DEBARMENT, PERFORMANCE and NON-COLLUSION CERTIFICATION
RFB #051-17
Greenhouse - UMPI

By signing this document, I certify to the best of my knowledge and belief that the aforementioned organization, its principals and any subcontractors named in this proposal:

a. Are not presently debarred, suspended, proposed for debarment, and declared ineligible or voluntarily excluded from bidding or working on contracts issued by any governmental agency.
b. Have not within three years of submitting the proposal for this contract been convicted of or had a civil judgment rendered against them for:
    i. Fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a federal, state or local government transaction or contract.
    ii. Violating Federal or State antitrust statutes or committing embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
    iii. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or Local) with commission of any of the offenses enumerated in paragraph (b) of this certification; and
    iv. Have not within a three (3) year period preceding this proposal had one or more federal, state or local government transactions terminated for cause or default.
c. Have not entered into a prior understanding, agreement, or connection with any corporation, firm, or person submitting a response for the same materials, supplies, equipment, or services and this proposal is in all respects fair and without collusion or fraud. The above mentioned entities understand and agree that collusive bidding is a violation of state and federal law and can result in fines, prison sentences, and civil damage awards.

Failure to provide this certification may result in the disqualification of the Respondent's proposal, at the University's discretion.

Date: _____

_____
Name and Title (Printed)

_____
Authorized Signature

Appendix C – Pricing

Respondents are required to submit all costs associated with the stated product / service.

INSTRUCTIONS TO BIDDERS: Complete the attached bid form, and attach any product information that the university may find useful in evaluating your bid.

Item No.	BASE BID	LUMP SUM PRICE
1.	30'x80'gable-style greenhouse, per base scope of work outlined in RFP	
ALTERNATES		
A1.	Interior wall system, including framing, doors and panels, as shown on drawings	
A2.	Exhaust fans and frames	
A3.	Horizontal air flow/circulation fans and frames	
A4.	LP gas fired unit heaters	
A5.	Climate control system	
A6.	De-stratification fans	
A7.	Benching	
UNIT PRICING		**UNIT PRICE**
U1.	Travel costs to and from project site for consultation with university, Engineer, and/or erector	Per trip
U2.	Daily rate on-site, including meals and accommodations	Per day

Appendix D – Additional Bidding Reference Documents

INSTRUCTIONS TO BIDDERS: Carefully examine and include in your bid the scope of work described in the attached documents:

1. Specification 01 31 23 – Greenhouse
2. Drawing A0.1 – Schedules
3. Drawing A1.1 – Greenhouse RFB Dimensional Drawing and Equipment Layout
4. Drawing A2.1 – Building Section

SECTION 01 31 23

GREENHOUSE SPECIFICATION

PART 1 - GENERAL

1.1 DESCRIPTION

A. Provide the greenhouse structures and included equipment listed herein, of the size and dimensions indicated on the drawings. Finished size of greenhouses may vary slightly, as approved by Engineer, to accommodate manufacturer's standard dimensions, but shall not be less than the area indicated.

B. Manufacturer to furnish materials and equipment necessary for the greenhouse system described in this section and contract drawings.

C. No fabrication of the structure or ordering of equipment shall be done until drawings and equipment have been approved. Foundation dimensions shall conform to approved greenhouse drawings.

D. If no drawings are available, state size of project and dimensions of structure in this section.

1.2 QUALITY ASSURANCE

A. Standards: Comply with National Greenhouse Manufacturer's Associated standards, 2010 Edition and these specifications

1.3 SUBMITTALS

A. General: Comply with provisions of Section 01 33 00 of these specifications

B. Product data: Within 30 days after award of the Contract, submit: manufacturer's product specifications, technical product data, and standard data and installation recommendations for each component.

C. Shop Drawings: Submit shop drawings for fabrication and installation of greenhouse, including the following:

1. Elevations
2. Detail section of typical framing members
3. Hardware, mounting heights
4. Anchorage and reinforcements
5. Glazing details
6. Placement of all components for heating, cooling and ventilation

7. Structural loading reactions on the foundation
8. Structural loading limits of the framing structure

1.4 DESIGN CRITERIA

A. Submit structural calculations for greenhouse structure, signed and sealed by a Professional Engineer for review. The owner's Engineer will use this information to develop the foundation design.

B. Structural Performance: Except as noted, and as minimum, conform to the requirements and recommendations of both the "Standard for Design Loads in Greenhouse Structures" and its "Commentary" published by the National Greenhouse Manufacturers Association, 2010 Edition (NGMA Standards). Aluminum members shall be designed in accordance with the Aluminum Association's design manual "Specifications for Aluminum Structures." Compliance with Maine Uniform Building and Energy Code is also required.

1. Exception: The local code enforcement officer has reduced the snow-loading capacity requirement to 40 PSF (ground) for this project.

C. Design Loads

1. Design structure to carry the following loads:
    a. Dead Load : Structure and equipment
    b. Snow Load: 40 lbs. / sq. ft.
    c. Wind Load: 120 mph, Exposure Category II
    d. Special Loads : (If Applicable)
    e. Applicable Building Code (MUBEC except as noted above)
2. Load Combinations
    a. D.L. + S.L.
    b. D.L. + W. L.
    c. D.L. + ½ S.L. + W.L. or (½ W.L. + S.L.)

D. Engineering Certification

1. Provide written structural analysis prepared and certified by a Licensed Professional Engineer in the state of Maine, that the greenhouse meets all of the above loads (greenhouse only).

1.5 DELIVERY, STORAGE AND HANDLING

A. Shipping is F.O.B. Presque Isle. Packaging to be sufficient to protect products during transit.

1.6 NOT USED

1.7 WARRANTY

A. Manufacturer's Warranty: Manufacturer agrees to repair or replace any greenhouse components that fail in materials with a period of three (3) years of project completion.

1. Failures include, but are not limited to the following:
    a. Failure to meet performance requirements
    b. Structural failures including excessive deflection and water leakage
    c. Faulty operation of sashes, doors and hardware
    d. Deterioration of materials and finishes beyond normal weathering
    e. Failure of translucent panels

PART 2 - PRODUCTS

2.1 GREENHOUSE

The greenhouse shall be clearspan aluminum or steel construction free of interior columns. Quality standard shall be National Series E as manufactured by National Greenhouse Company, 6 Industrial Drive, Pana, IL 62557. 800-228-9639

A. Materials

1. Aluminum
    a. Extrusions
        - Primary Framing: Alloy 6061-T6 or 6063-HS
        - Secondary Framing: Alloy 6063-T6 or 6063-HS
    b. Sheet: Alloy 3003-H14
    c. Plates: Alloy 6061-T6 or 6063 – HS
    d. Welding: AWS D1.2/D1.2M “Structural Welding Code – Aluminum”
2. Steel
    a. Plates, Shapes, Bars: ASTM A36/A36M
    b. Steel Tubing: ASTM A500, cold-formed steel tubing
    c. Steel Pipe: ASTM A53/A53M Schedule 40 (standard weight)
    d. Finish: Hot-dipped galvanized

Greenhouse manufacturer’s extruded metal posts (side, gable, partition, end and corner) truss framing, rafters and purlins. All frame members will be visible. Design shall provide for uniform and set pattern, conforming to spacing indicated. Where design requirements can be met through use of manufacturer’s standard components, such components shall be utilized.

1. Connections: Galvanized bolts and pre-punched plates with all field connections to be bolted.
2. Posts: Truss posts shall extend in each case from structure eave to concrete level as indicated. Provide channel for gables and cross partitions, extending from concrete to rafters and attached with galvanized bolts. A post top cap will accept the heel joint of the truss. Provide with foot pieces for setting, properly punched or drilled to receive fittings for attaching aluminum sills, purlins, gutters, rafters, etc. as applicable.
3. Anchor Bolts: Provide stainless steel “Hilti” expandable type anchor bolts or epoxy type anchors. Provide complete with nuts and washers.
4. Rafters: Provide rafters extending from eaves to ridges.
5. Trusses: Trusses will be factory welded and one piece. Trusses to be connected to columns by a post cap bearing on top of the column. No gusset plate connections with bolts in vertical shear will be allowed. Truss members and connecting plates shall be sized to meet required design

criteria.

6. Knee bracing in the plane of the truss and column line is to be allowed in order to meet loading criteria.
7. Roof Purlins: Provide purlins for roof, bolted by means of (2) hot dipped galvanized bolts to top chord. Roof purlins will be set on top of top chord of truss. No "T" lug attachment of roof purlins to truss top chord will be allowed. Vertical framework girts: provide 2" x 4" channel girts for sidewalls, gables and partitions if applicable. Prefabricate all purlins and girts for attachment of glazing bars and connecting lugs.
8. Wall Sills: Seat an extruded aluminum wall sill on all foundations. Sill shall be capable of receiving either side sash of fixed glazing as required.
9. Condensation System: Provide system of integral gutters in roof framing and glazing bars designed to collect condensation and weep moisture to the exterior. Under gutter drip channels shall collect gutter condensate.
10. Glazing Members: Provide extruded aluminum glazing bars held in place with stainless steel self-tapping screws. Place extruded aluminum glazing bars in the roof of sufficient size and mechanical properties to carry design loads specified. Bars shall be spaced to properly receive glass. Glass lite widths will divide the bay length into 3 lites maximum. The glass length will be from roof purlin to roof purlin or roof purlin to eave/vent header/ridge. Provide shoulders to receive roof glass and condensation grooves to conduct primary condensation to suitable disposal points. Bars shall extend in one piece from eave to ridge (on slopes without roof vents) and shall be supported by purlins.
11. Lapped Glass: roof single system shall apply as standard with 3/8" laps in all vertical and roof glass glazing except where 4 sided support is specified as described below.
12. All glass for roof, sides and gables shall be glazed into extrusions designed to provide four-sided support. Glass shall be laid on an EPDM glazing strip, which fits into a channel in the extrusions. This EPDM glazing strip shall have a special vertical shoulder to prevent the glass from contacting the bar. The top cap shall act as a clamp bar to firmly hold the glass in place with butyl tape forming the exterior seal. Ends and junctions of all caps shall be sealed with Dow 795 or GE Silproof silicone caulk applied in accordance with manufacturer's directions. Bar caps shall be held in place with #10 stainless steel screws with neoprene washers placed 2" from ends of caps and not over 9" apart.
13. Extruded aluminum glazing bars of sufficient size and section modulus to carry design loads specified shall be placed in gables, extending from the wall sill to gable rafter. Provide chamber on both top and bottom of bar for fastening purposes.
14. Gables and Partitions: Glass gables and partitions with fixed glass from sill to gable rafter, except at door openings, shall be constructed using extruded aluminum shapes as indicated on the drawings. Partition systems shall be designed and detailed to provide for different movement of greenhouse frames and supports anticipated under specified loading conditions.

B. Fasteners:

1. Non-load bearing screws and bolts shall be 18-8 stainless steel or 2024-T4 aluminum. All structure fasteners shall be Grade 5, high strength, hot-dipped galvanized bolts.

C. Glazing Materials

1. Tempered clear float: NOT USED
2. Polycarbonate: Provide extruded polycarbonate sheets in sizes to match adjoining glass and in locations in which piping penetrations are required; color: clear with minimum light transmission of 80%.
3. Odd sized sloped cut glass in the gable walls may be annealed glass.

D. Setting Materials:

1. Non-metallic Shrinkage-Resistant Grout: Premixed non-metallic non-corrosive, non- staining product containing selected silica sands, Portland cement, shrinkage compensating agents, plastizing and water reducing agents complying with CE-CRD- C621.

E. Greenhouse Doors and Frames:

1. Provide heavy duty, tubular frame members fabricated with mechanical joints. Provide header framing over doors. Fabricate doors to facilitate replacement of glass or panels, without disassembly of stiles and rails. Provide snap-on extruded aluminum glazing stops, with exterior stops anchored for non-removal. Glaze door lights with ¼" tempered clear float glass glazed with captive plastic gaskets. Hardware preparation shall specifically allow installation of UMPI standard locksets, incorporating standard backsets and installation of lock cylinders.
2. Doors to be pre-hung in aluminum jambs with integral weather-strip and stops with 6" x ½" thresholds.
3. Doors, hinges, locksets, closers and panic devised to be supplied and installed by the greenhouse contractor.

F. Insect Screens

1. Provide aluminum frames with woven aluminum insect screen with 18x14 mesh. Screens will allow for rescreening of units in the field. Screens will have brushes at vent rack arm locations.
2. Screens to be provided for all openings not covered by translucent panels or doors.

G. ALTERNATE A1 – Interior Walls and Doors

1. As shown on Drawing A1.1, provide greenhouse translucent panel and frame system and doors to demise the greenhouse. Grades to match as stated in other parts of this specification.
2. BASE BID must include receiver channels and any other prep work in the main greenhouse frame system to accommodate installation of the interior walls and doors in the future.

2.2 EQUIPMENT

Use applicable sections for project requirements. List sizes and quantities in the

following sections or list design criteria. Each greenhouse installation is unique and the following sections outline possible equipment. Please contact a National/Nexus representative to assists you in the equipment design and layout.

A. Automated Roof Vents

1. Provide continuous sash at each side of ridge, designed to open out in a continuous operation from end to end and with a weather tight hinge and weather tight fit between sash and vent header.
2. Operation: provide rack and pinion apparatus to open sash with motor and controller. Controller shall be capable of operating automatically upon signal from the climate control system.
3. Wiring by others, but greenhouse supplier to provide wiring schematic.

B. ALTERNATE A2 - Exhaust Fans:

1. Fans will use heavy duty totally enclosed motors using 6 blade propellers and be AMCA approved.
    a. Size: 48" DIA, 115/230V-1PH, variable speed 0-10,000 CFM, direct drive with VFD, controllable by climate control system.
    b. Quantity: 2 EACH
    c. Includes frame kit compatible with proposed greenhouse structure
2. Wiring by others

C. Evaporative Pad System

1. NOT USED

D. Inlet Openings

1. Fresh-air intakes will have motorized louvers capable of automated operation upon signal from the climate control system.
    a. Size: 4 square feet
    b. Quantity: 4 Each
    c. Includes frame kit compatible with proposed greenhouse structure
2. Wiring by others

E. ALTERNATE A3 - Horizontal Air Flow/Circulation Fans

1. Circulation fans are required as shown on A1.1, mounted to greenhouse frame.
    a. Size: 12", 6-blade, direct-drive, 0-1300 CFM
    b. Quantity: 4 Each
    c. 120V/1PH, 1/8 HP
    d. Multispeed controllable by climate control system
    e. Multifan Model S4124E1, or approved equal
    f. Include frame kit compatible with proposed greenhouse structure
2. Wiring by others

F. ALTERNATE A4 - Heating System

1. LP-gas fired direct-vent heating units, suspended from greenhouse framing system
    a. Size: 50,000 BTU

b. Quantity: 2 Each
c. Capable of on/off operation upon signal from climate control system

2. Fuel-piping and wiring by others

G. Energy / Shade Curtains:

1. A truss to truss, push/pull system using a rack and pinion drive will be used. The curtain will have a slope/flat/slope profile following the roof line and creating and "attic" space above the middle of the house for energy efficiency. The curtain is to be supported by guidewires, no suspension hooks. No wire or cable drives are allowed. System shall be controllable by signal from the climate control system.

H. ALTERNATE A5 – Climate Control System

1. The climate control system will be specifically tailored to greenhouse use, and have the following attributes:
    a. Monitor and control
        i. Temperature (engage boilers, engage shade system, circulation pumps, and unit heaters)
        j. Air circulation and exchange (operate louvers, adjust fan speeds)
        k. Humidity (monitor and report only)
        l. Light (engage shade system, control grow lighting)
        m. Expandable for future control, including but not limited to:
            a. Carbon dioxide injection
            b. Irrigation
            c. Additional climate control zones
    b. Capable of trending all environmental inputs and provide data- logging/reporting capability
    c. Remote access by secure permissions
    d. Paging for alarm conditions
    e. De-activate airflow systems in the event of a fire alarm
    f. System will consist of a head-end to be located in the Office/Controls 101, and control two climate zones:
        - Zone 1: Classroom 100, Lab 102
        - Zone 2: Lab 103
    g. Design environment set-points
        - Temperature: 70°F at root mass (on bench), 55°F at foliage level
        - Relative Humidity: 70-85%

I. ALTERNATE A6 – Destratification Fans

1. Fans to be mounted to greenhouse framing system as shown on A1.1
    a. Size: 72" DIA, 9-Blade
    b. Multi-speed, reversible and controllable by climate control system
    c. 115V/1PH
    d. Dayton Model 7DX27, or approved equal
    e. Quantity: 3 EA
    f. Wiring by others

J. OTHER EQUIPMENT SUPPLIED BY OTHERS

1. The greenhouse will have an array of LED grow lights, supplied and installed by others
2. The irrigation system will be modular and fed from side-wall mounted hose bibs
3. A structural concrete knee wall will provide the base mounting platform for the greenhouse.

K. ALTERNATE A7 - Bench System

1. Bench systems will be as shown on Drawing A0.1
2. Benches will have leg supports made from 1 ½" square-galvanized tubing spaced on 6'0" intervals. The bench tops will consist of extruded aluminum perimeter sides (1" - 3" tall) with 1" square 18 ga. Cross pieces on 2/0" centers. Covering will be hot dipped ¾", #13 expanded metal. * Specify bench sizes and height.
3. Stationary Benches: Legs and top support rails shall be inset a minimum of 3" on each side and 6" on the ends to facilitate easier movement down aisles.
4. Rolling Benches: legs and top support rails shall be inset a minimum of 3" on each side and 6" on the ends to facilitate easier movement down aisles. Two runs of 1.315" roller pipe (14 ga) to allow for top and aisle movement.
5. Floor mounted Benches: legs sitting on top of a concrete floor shall have a 4" x 4" x ¼" welded foot plate with an anchor hole to anchor to the floor.
6. Above provided for representative information. Alternate bench construction systems are acceptable with approval from Engineer.

PART 3 - PART 3 EXECUTION

3.1 PREPARATION

A. Examine areas and conditions under which greenhouse work is to be installed. Notify contractor in writing of conditions detrimental to proper and timely installation of work.
B. Coordinate and furnish anchorages, setting diagrams, templates and directions for installation of anchorages. Coordinated delivery of such items to project.

3.2 ERECTION

A. Greenhouse erection to be performed by others. The university will be purchasing the greenhouse from the manufacturer, and then assigning responsibility to the contractor to coordinate, receive, unload, and erect the building.
B. Manufacturer's representative shall be available by phone during normal working hours for questions arising during erection. Allow 8 hours for phone consultation.
C. Manufacturer's representative shall visit the site at the start of erection to be an on-site technical resource for the erector.
D. Manufacturer's representative shall visit the site just prior to substantial completion of the project to inspect the installation, provide a punch list as needed, and issue warranty documentation.

3.3 INSTALLATION OF EQUIPMENT

A. Equipment to be installed by others, but greenhouse manufacturer's representative will provide a greenhouse structure that will accommodate the equipment structural loading, and assist in coordination and other technical concerns that arise during equipment installation.