
**NEW ANIMAL SHELTER
225 MAPLE AVENUE
MONTVILLE, CT 06353**

S/P+A PROJECT #22.130

DATE: December 1, 2023

The following changes to the Drawings and Project Specifications shall become a part of the Drawings and Project Specifications; superseding previously issued Drawings and Project Specifications to the extent modified by Addendum #2.

General Information:

- The deadline for RFIs was Tuesday, November 28, 2023, 10:00am.
- See attached RFI log. (3)

New Specifications:

- SECTION 061600, SHEATHING has been added and is attached as part of this addendum. (3)

Changes to the Specifications:

- TABLE OF CONTENTS:

- Page 1, Division 01 – General Requirements, Section 017823, Pages, revise “8” to read “7”.
- Page 2, Division 06 – Wood, Plastics and Composites, add the following:

“Section 061600 Sheathing 3”

- SUPPLEMENTARY INSTRUCTIONS TO BIDDERS:

- Page 4, Articles 9.2 and 9.4, delete in their entirety.
- Page 5:
 - Article 9.9, add to the end the following:
“Refer to Section 015000 “Temporary Facilities and Controls” for additional information.”
 - Article 9.11, delete in its entirety.

- SECTION 013100, PROJECT MANAGEMENT AND COORDINATION:

- Page 1, Article 1.2.A.4., delete in its entirety.
- Page 6, Article 1.8, delete in its entirety.

- SECTION 014000, QUALITY REQUIREMENTS, Page 3, Article 1.7.B.1., delete in its entirety.

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- SECTION 015000, TEMPORARY FACILITIES AND CONTROLS:
 - Page 2, Article 2.2.A., delete last sentence and following six (6) subparagraphs and add to the end the following:

“Refer to Supplementary Instructions to Bidders for additional information.”
 - Page 3, Article 2.2.C., add to the end the following:

“Refer to Supplementary Instructions to Bidders for additional information.”
 - Page 4:
 - Article 3.2.D.1., delete in its entirety.
 - Articles 3.2.E. and .H., delete in their entirety.
 - Page 5, Article 3.2.I., revise to read as follows:

“Electronic Communication Service: Regardless of availability of Owner’s service, the Contractor shall maintain at his expense secure and reliable WiFi wireless connection to internet with provisions for access by Architect, the Owner’s staff, Municipal Officials or Inspectors, and all subcontractors.”
 - Page 6, Article 3.3.E., delete in its entirety.
 - Page 7, Article 3.4.F. and .K., delete in their entirety.
 - SECTION 017823, OPERATION AND MAINTENANCE DATA has been deleted in its entirety. A new SECTION 017823 has been added and is attached as part of this addendum. (7)
 - SECTION 088000, GLAZING, Page 9, Part 2, add the following:

“2.18 MANUFACTURERS

 - A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - 1. Cardinal Glass Industries
 - 2. DuPont™ Building Innovations
 - 3. Oldcastle BuildingEnvelope
 - 4. PPG Industries, Inc.
 - 5. Viracon, Inc.
 - 6. Substitutions: Under provisions of Section 012500 “Substitution Procedures”.
 - SECTION 095113, ACOUSTICAL PANEL CEILINGS, Page 3, Article 2.3.A., revise to read as follows:

“A. Basis-of-Design Product:

 - 1. Armstrong World Industries, Inc.; Ultima Health Zone
 - 2. Classification: Provide panels complying with ASTM E 1264 for type, form, and pattern as follows:
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- a. Type and Form: Type IV, mineral base with membrane-faced overlay; Form 2 water felted; with vinyl overlay on face, back, and sealed edges.
 - b. Pattern: E (lightly textured).
3. Color: White.
 4. LR: Not less than 0.86.
 5. NRC: Not less than 0.70.
 6. CAC: Not less than 38.
 7. Edge/Joint Detail: Square Lay-In.
 8. Thickness: $\frac{3}{4}$ -inch.
 9. Modular Size: 24 by 24 inches.”
- SECTION 102600, WALL AND DOOR PROTECTION:
 - Page 1:
 - Article 1.2.A.2., delete in its entirety.
 - Article 1.3.C., delete in its entirety.
 - Article 1.3.D.2., delete in its entirety.
 - Articles 1.4.C. and .D., delete in their entirety.
 - Page 2, Articles 1.8.A.1. and .2., deleted in their entirety.
 - Page 3, Articles 2.1.A., .C., and .E., deleted in their entirety.
 - Page 4:
 - Article 2.3, delete in its entirety.
 - Article 3.1.B.1., delete in its entirety.
 - Page 5:
 - Article 3.3.A.1., delete in its entirety.
 - Article 3.3.B., delete in its entirety.

Changes to the Drawings:

- DRAWING A910, SIGNAGE DETAILS, FINISH SCHEDULE & CASEWORK DETAILS, Finish Schedule & General Finish Notes, revise all instances of “EP” to read “EPOXY”.

The bid date remains unchanged by this addendum.

The addendum consists of sixteen (16) pages of 8½” x 11” text.

End of Addendum #2



SILVER PETRUCELLI + ASSOCIATES
 3190 Whitney Avenue | Hamden CT 06518
 311 State Street | New London CT 06320

BID RFI LOG

Project: **New Animal Shelter - Montville**
 State Project/Bid #: _____
 S/P+A Project #: **22.130**

RFI Deadline: **11/28/23, 10a**
 Bids Due: **12/05/23, 10a**

RFI #	QUESTION	DATE RECEIVED	RESPONSE	ADDENDUM # ISSUED
001	Regarding "Montville Animal Shelter" project, could you confirm that the scale of 1":1000' on the cover sheets is correct? It shows that Site Area are around 3,500SF. On C-300, I see a site with almost 150,000 SF area and a rectangle building with almost 3,500SF area. Please clarify.	11/02/23	Scale on cover sheet is incorrect. Refer to graphic scale on Drawing C300.	2
002	Would you kindly advise if this project requires DAS Pre-Qualification?	11/17/23	Project does not require DAS prequalification.	2
003	What is the starting date for the project?	11/21/23	As indicated on the Bid Form.	2
004	Please clarify the extend of survey you are requiring. Do you want a survey of the entire 11-acre Town owned parcel or just the building area?	11/21/23	No survey is required.	1
005	Do you want final as built survey a. of just the foundation? b. project area only? c. property improvement of 11-acre parcel?	11/21/23	a. Yes. b. Yes. c. No.	1
006	Is testing agency costs by the owner? If not provide a list of special inspections to be carried by the general contractor.	11/21/23	Testing agency costs are by Owner.	2
007	Can the job super be in charge of the quality control or should we have a separate quality control person full time on site?	11/21/23	Job super is in charge of quality control.	2
008	Can we use the owner's toilets in existing building or carry separate temporary toilets?	11/21/23	Temporary sanitary facilities are required per Section 015000.	2
009	Are we to carry field computer, printer and internet and phone service in trailer for the owner/Architect?	11/21/23	No computer or peripherals are required however secure wi-fi is. Refer to Addendum #2.	2
010	Are we to carry a project sign? If so, please provide size and list of names to be included.	11/21/23	Project sign is not required.	2
011	Are we to carry pest control? If so, please provide exact specification.	11/21/23	Pest control is not required.	2
012	Please provide limits of temporary fence for the project.	11/21/23	Temporary fence is to be installed at the 'limit of mapping' indicated on the Site Plan.	2
013	You have a spec section 329300 Plants but nothing has been provided.	11/21/23	Refer to Addendum #1.	1
014	Please provide specifications and details for 24 LF of timber guardrail shown on drawing C100.	11/21/23	Refer to Addendum #1 for revised drawings.	1
015	Please provide Kawneer model numbers for the basis-of-design storefront and entrance doors as several products meet the specifications.	11/21/23	Storefront: Trifab 451UT Framing System Doors: 500T Insulpour Thermal Entrances	1
016	Specification section 084113-2.3-A-3 calls for the glazing plane to be front, while drawings A600 depicts center plane. Which is correct?	11/21/23	Center plane is correct.	1
017	Glass type GL-13, listed in specification 088000-2.14-H, is indicated as tinted but a tint color is not provided. Referencing specification section 088000-2.2-B & 088000-2.2-C, the tint color is listed as "selected by Architect and Owner from manufacturer's full range". As different tints and tin types have varying price points, can a more specific range be provided for balanced pricing?	11/21/23	Gray and bronze tint ranges.	1
018	Glass type GL-13, listed in specification 088000-2.14-H, is indicated to receive a low-e coating on the #3 surface, but no product is listed. Please provide desired products.	11/21/23	Provide manufacturer's standard. Refer to Addendum #2.	2
019	The door schedule on drawing A900 indicates door 100 to be an aluminum door with a type B frame. Type B frame indicates a 6" frame header which is not offered. Our option would be to stack 2" mullions to achieve the 6" height, but there will be seams visible. Please confirm the stacking is acceptable. If not, please provide alternate direction/detail.	11/21/23	Door 100 frame to be Type C.	1



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020	Please confirm the opening opposite door 100, in Vestibule 100, is to be type SF15. There are several questions regarding the round opening marked SF3. a. As drawn, we cannot utilize the system drawn as there are issues both with the bending, and the configuration to be able to glaze it. An alternate product that can be bent and configured for glazing would be Kawneer's Encore system. This product can be found at https://www.kawneer.us/products/storefront-framing/encore-framing-system/ . Please confirm if this is acceptable to utilize at this location. If not, please provide direction. b. The details indicate a subsill around the entirety of the opening. This would not be possible as this application would not shed water like a typical storefront system. We recommend a framing only install with full perimeter sealant and a wet sealed glazing system to ensure no water infiltration. Please confirm this is acceptable. c. The perimeter flashing indicated cannot be bent by our vendors to the radius without damaging the metal. We have not found a suitable substitute for this. Please provide direction.	11/21/23	Both windows in Vestibule 100 are SF1. a. The Encore framing system is acceptable. b. This would be acceptable. c. Refer to Addendum #1 for drawing revisions.	1
021	Retractable Stairs: a. Do you want a lock for the door panel? b. Do you want 2-hour fire rated door panel with lock?	11/21/23	a. No lock. b. No rating is required.	1
022	Do you need the guillotine cover to be insulated to meet LEED requirement?	11/24/23	No.	2
023	Is there any chance the project bid due date will be or could be extended?	11/24/23	Bid due date will not be extended.	2
024	Corner guards and impact-resistant wall coverings are mentioned in the specifications but not included anywhere in the drawings. Could you specify which walls and corners require protection?	11/27/23	Impact-resistant wall coverings are not required. Corner guard are to be installed at exposed corners in the corridor at the bathroom and leading to the kennel corridor.	2
ALL RFIs BELOW WERE RECEIVED PAST THE DEADLINE HOWEVER IN THE BEST INTEREST OF THE OWNER, REPOSSES HAVE BEEN PROVIDED.				
025	Specification section 01 31 00-6 section 1.8 Project Website: Section lists the need and requirement for a project website with some software no longer available. Is this section still relevant and is it required for this project?	11/28/23	Project website is not required.	2
026	Specification section 01 50 00-2 section 2.2 Temporary Facilities: Item 3 states a private toilet and drinking water supply are required, is this relevant or is a standard temporary toilet ok for the project? Item 4 states a coffee machine and supplies are required is this relevant or required.	11/28/23	Private toilet and coffee machine/supplies are not required. Refer to Addendum #2.	2
027	Specification 01 50 00-5 section 3.2 subsection I: Please confirm if a desktop computer required for this project or will the architect have their own?	11/28/23	Refer to RFI #009.	2
028	Specification 01 50 00-7 section 3.4 subsection F: Please confirm if pest control require for this project?	11/28/23	Refer to RFI #011.	2
029	Specification 01 50 00-7 section 3.4 subsection K: Please confirm if a covered walkway is necessary and or required for this project?	11/28/23	Covered walkway is not required.	2
030	What is the project duration?	11/28/23	Contractor to provide where indicated on Bid Form.	2
031	The spec for the ceiling tile was for Ceramaguard unperforated in a 2x2. Although, this tile is only available in 2x4. Please clarify how to proceed weather it be with another tile or etc.	11/28/23	Refer to Addendum #2.	2
032	Please clarify if there will be epoxy floors inside of the kennels.	11/28/23	Yes, as indicated in the Finish Schedule on Drawing A910. Kennel corridor includes kennels.	2
033	Specification 122113 requires horizontal blinds. Construction note C1 on A110 also requires blinds. Detail 2/A600 shows a window shade. Please clarify this conflict.	11/28/23	Horizontal blinds are correct. Disregard depiction & note in Detail 2/A600.	2
034	We contacted Vibra-Conn to evaluate the seismic restraint requirements and they replied with the following: This project is a seismic design CAT B as indicated on S001 drawing. This does not require seismic restraint.	11/30/23	If this has to do with seismic restraint of mechanical systems, then yes, this is correct.	2



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035	I don't see any fire alarm devices on the electrical drawings or specs. A sprinkler system is vaguely mentioned in the mechanical specs. Can you confirm there is no fire alarm devices? a. Drawing E-600 calls out the size of secondary wire from the pole mounted utility transformer to the ATS. Is the electrical contractor responsible for conduit and wire or just conduit? b. Please verify there is no fire alarm.	11/30/23	a. Electrical contractor shall be responsible for the conduit and trenching since is considered service lateral from overhead system. Confirm with Eversource and utility manual. b. There is no fire alarm as it is not required by code.	2
036	is CHRO required for this project? If yes, please provide the SBE/MBE percentage.	11/30/23	CHRO is not required.	2
037	Does the epoxy floor go out into the unheated area of the kennels? (3109 Kennel Corr.)	11/30/23	No. Exterior portion of kennels is exposed/brushed concrete.	2
038	Is Building permit fees waived or by the contractor?	11/30/23	Permit fees are by the Contractor per SIB, 9.13.	2
039	Is Builder's Risk Insurance required? If yes, please provide policy limit?	11/30/23	Builder's Risk insurance is not required. Refer to SGC for insurance requirements.	2
040	Please provide specifications for the 061600 Sheathing for the plywood deck assembly as shown on A510.	11/30/23	Refer to Addendum #2.	2
041	The spec section 124813 calls for a floor mat. Are we to include or a misprint?	11/30/23	Entrance mat to be included at each of the exterior doors.	2
042	The instructions are no clear if a bid bond is required. Can you clarify if a 5% bid bond is required with the bid.	12/01/23	Bid bond is 5% as indicate on the Bid Form.	2

SECTION 061600 - SHEATHING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:

- 1. Roof sheathing.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.

- 1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated plywood complies with requirements. Indicate type of preservative used and net amount of preservative retained.

1.4 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer.

- B. Evaluation Reports: For following products, from ICC-ES:

- 1. Wood-preservative-treated plywood.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Stack panels flat with spacers beneath and between each bundle to provide air circulation. Protect sheathing from weather by covering with waterproof sheeting, securely anchored. Provide for air circulation around stacks and under coverings.

PART 2 - PRODUCTS

2.1 WOOD PANEL PRODUCTS

- A. Thickness: As needed to comply with requirements specified, but not less than thickness indicated.

- B. Factory mark panels to indicate compliance with applicable standard.

2.2 PRESERVATIVE-TREATED PLYWOOD

- A. Preservative Treatment by Pressure Process: AWP A U1; Use Category UC2 for interior construction not in contact with ground, Use Category UC3b for exterior construction not in contact with ground, and Use Category UC4a for items in contact with ground.

1. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium.
- B. Mark plywood with appropriate classification marking of an inspection agency acceptable to authorities having jurisdiction.
- C. Application: Treat items indicated on Drawings and plywood in contact with masonry or concrete or used with roofing, flashing, vapor barriers, and waterproofing.

2.3 ROOF SHEATHING

- A. Plywood Roof Sheathing: DOC PS 1, Exposure 1 sheathing.
 1. Nominal Thickness: Not less than 5/8-inch unless otherwise indicated.

2.4 FASTENERS

- A. General: Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture.
 1. For roof sheathing, provide fasteners of Type 304 stainless-steel.
- B. Nails, Brads, and Staples: ASTM F 1667.
- C. Power-Driven Fasteners: Fastener systems with an evaluation report acceptable to authorities having jurisdiction, based on ICC-ES AC70.
- D. Screws for Fastening Sheathing to Wood Framing: ASTM C 1002.

2.5 MISCELLANEOUS MATERIALS

- A. Adhesives for Field Gluing Panels to Wood Framing: Formulation complying with ASTM D 3498 that is approved for use with type of construction panel indicated by manufacturers of both adhesives and panels.
 1. Adhesives shall have a VOC content of 70 g/L or less.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Do not use materials with defects that impair quality of sheathing or pieces that are too small to use with minimum number of joints or optimum joint arrangement. Arrange joints so that pieces do not span between fewer than three (3) support members.
- B. Cut panels at penetrations, edges, and other obstructions of work; fit tightly against abutting construction unless otherwise indicated.
- C. Securely attach to substrate by fastening as indicated, complying with the following:
 1. Table 2304.9.1, "Fastening Schedule," in the ICC's International Building Code.
 2. ICC-ES evaluation report for fastener.

- D. Use common wire nails unless otherwise indicated. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections. Install fasteners without splitting wood.
- E. Coordinate roof sheathing installation with flashing and joint-sealant installation so these materials are installed in sequence and manner that prevent exterior moisture from passing through completed assembly.
- F. Do not bridge building expansion joints; cut and space edges of panels to match spacing of structural support elements.
- G. Coordinate sheathing installation with installation of materials installed over sheathing so sheathing is not exposed to precipitation or left exposed at end of the workday when rain is forecast.

3.2 WOOD STRUCTURAL PANEL INSTALLATION

- A. General: Comply with applicable recommendations in APA Form No. E30, "Engineered Wood Construction Guide," for types of structural-use panels and applications indicated.
- B. Fastening Methods: Fasten panels as indicated below:
 - 1. Roof Sheathing:
 - a. Glue and screw to wood framing.
 - b. Space panels 1/8-inch apart at edges and ends.

END OF SECTION 061600

SECTION 017823 - OPERATION AND MAINTENANCE DATA

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for preparing operation and maintenance manuals, including the following:

1. Operation and maintenance documentation directory.
2. Emergency manuals.
3. Systems and equipment operation manuals.
4. Systems and equipment maintenance manuals.
5. Product maintenance manuals.

- B. Related Sections:

1. Section 013300 "Submittal Procedures" for submitting copies of submittals for operation and maintenance manuals.
2. Divisions 02 through 49 Sections for specific operation and maintenance manual requirements for the Work in those Sections.

1.3 DEFINITIONS

- A. System: An organized collection of parts, equipment, or subsystems united by regular interaction.

- B. Subsystem: A portion of a system with characteristics similar to a system.

1.4 CLOSEOUT SUBMITTALS

- A. Manual Content: Operations and maintenance manual content is specified in individual specification sections, and as reviewed and approved at the time of Section submittals. Submit reviewed manual content formatted and organized as required by this Section.

1. Architect will comment on whether content of operation and maintenance submittals is acceptable.
2. Where applicable, clarify and update reviewed manual content to correspond to revisions and field conditions.

- B. Format: Submit operations and maintenance manuals in the following format:

1. Two (2) thumb drives. Enable review comments on draft submittals.
2. Two (2) paper copies. Include a complete operation and maintenance directory. Enclose title pages and directories in clear plastic sleeves. Architect will return both copies to be given to the Owner.

- C. Initial Manual Submittal: Submit draft copy of each manual at least thirty (30) days before commencing demonstration and training. Architect will comment on whether general scope and content of manual are acceptable.
- D. Final Manual Submittal: Submit each manual in final form prior to requesting inspection for Substantial Completion and at least fifteen (15) days before commencing demonstration and training. Architect will return copy with comments.
 - 1. Correct or modify each manual to comply with Architect's comments. Submit copies of each corrected manual within fifteen (15) days of receipt of Architect's comments and prior to commencing demonstration and training.
- E. Comply with Section 017700 "Closeout Procedures" for schedule for submitting operation and maintenance documentation.

1.5 FORMAT OF OPERATION AND MAINTENANCE MANUALS

- A. Manuals, Electronic Files: Submit manuals in the form of a multiple file composite electronic PDF file for each manual type required.
 - 1. Electronic Files: Use electronic files prepared by manufacturer where available. Where scanning of paper documents is required, configure scanned file for minimum readable file size.
 - 2. File Names and Bookmarks: Bookmark individual documents based on file names. Name document files to correspond to system, subsystem, and equipment names used in manual directory and table of contents. Group documents for each system and subsystem into individual composite bookmarked files, then create composite manual, so that resulting bookmarks reflect the system, subsystem, and equipment names in a readily navigated file tree. Configure electronic manual to display bookmark panel on opening file.
- B. Manuals, Paper Copy: Submit manuals in the form of hard copy, bound and labeled volumes.
 - 1. Binders: Heavy-duty, three-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, sized to hold 8½-by-11-inch paper; with clear plastic sleeve on spine to hold label describing contents and with pockets inside covers to hold folded oversize sheets.
 - a. If two (2) or more binders are necessary to accommodate data of a system, organize data in each binder into groupings by subsystem and related components. Cross-reference other binders if necessary to provide essential information for proper operation or maintenance of equipment or system.
 - b. Identify each binder on front and spine, with printed title "OPERATION AND MAINTENANCE MANUAL," Project title or name, subject matter of contents, and indicate Specification Section number on bottom of spine. Indicate volume number for multiple-volume sets.
 - 2. Dividers: Heavy-paper dividers with plastic-covered tabs for each section of the manual. Mark each tab to indicate contents. Include typed list of products and major components of equipment included in the section on each divider, cross-referenced to Specification Section number and title of Project Manual.
 - 3. Protective Plastic Sleeves: Transparent plastic sleeves designed to enclose diagnostic software storage media for computerized electronic equipment. Enclose title pages and directories in clear plastic sleeves.
 - 4. Supplementary Text: Prepared on 8½-by-11-inch white bond paper.

5. Drawings: Attach reinforced, punched binder tabs on drawings and bind with text.
 - a. If oversize drawings are necessary, fold drawings to same size as text pages and use as foldouts.
 - b. If drawings are too large to be used as foldouts, fold and place drawings in labeled envelopes and bind envelopes in rear of manual. At appropriate locations in manual, insert typewritten pages indicating drawing titles, descriptions of contents, and drawing locations.

1.6 REQUIREMENTS FOR EMERGENCY, OPERATION, AND MAINTENANCE MANUALS

- A. Organization of Manuals: Unless otherwise indicated, organize each manual into a separate section for each system and subsystem, and a separate section for each piece of equipment not part of a system. Each manual shall contain the following materials, in the order listed:
 1. Title page.
 2. Table of contents.
 3. Manual contents.
- B. Title Page: Include the following information:
 1. Subject matter included in manual.
 2. Name and address of Project.
 3. Name and address of Owner.
 4. Date of submittal.
 5. Name and contact information for Contractor.
 6. Name and contact information for Architect.
 7. Names and contact information for major consultants to the Architect that designed the systems contained in the manuals.
 8. Cross-reference to related systems in other operation and maintenance manuals.
- C. Table of Contents: List each product included in manual, identified by product name, indexed to the content of the volume, and cross-referenced to Specification Section number in Project Manual.
 1. If operation or maintenance documentation requires more than one (1) volume to accommodate data, include comprehensive table of contents for all volumes in each volume of the set.
- D. Manual Contents: Organize into sets of manageable size. Arrange contents alphabetically by system, subsystem, and equipment. If possible, assemble instructions for subsystems, equipment, and components of one (1) system into a single binder.

1.7 EMERGENCY MANUALS

- A. Emergency Manual: Assemble a complete set of emergency information indicating procedures for use by emergency personnel and by Owner's operating personnel for types of emergencies indicated.
- B. Content: Organize manual into a separate section for each of the following:
 1. Type of emergency.
 2. Emergency instructions.
 3. Emergency procedures.

- C. Type of Emergency: Where applicable for each type of emergency indicated below, include instructions and procedures for each system, subsystem, piece of equipment, and component:
1. Fire.
 2. Flood.
 3. Gas leak.
 4. Water leak.
 5. Power failure.
 6. Water outage.
 7. System, subsystem, or equipment failure.
 8. Chemical release or spill.
- D. Emergency Instructions: Describe and explain warnings, trouble indications, error messages, and similar codes and signals. Include responsibilities of Owner's operating personnel for notification of Installer, supplier, and manufacturer to maintain warranties.
- E. Emergency Procedures: Include the following, as applicable:
1. Instructions on stopping.
 2. Shutdown instructions for each type of emergency.
 3. Operating instructions for conditions outside normal operating limits.
 4. Required sequences for electric or electronic systems.
 5. Special operating instructions and procedures.

1.8 SYSTEMS AND EQUIPMENT OPERATION MANUALS

- A. Systems and Equipment Operation Manual: Assemble a complete set of data indicating operation of each system, subsystem, and piece of equipment not part of a system. Include information required for daily operation and management, operating standards, and routine and special operating procedures.
1. Engage a factory-authorized service representative to assemble and prepare information for each system, subsystem, and piece of equipment not part of a system.
 2. Prepare a separate manual for each system and subsystem, in the form of an instructional manual for use by Owner's operating personnel.
- B. Content: In addition to requirements in this Section, include operation data required in individual Specification Sections and the following information:
1. System, subsystem, and equipment descriptions. Use designations for systems and equipment indicated on Contract Documents.
 2. Performance and design criteria if Contractor is delegated design responsibility.
 3. Operating standards.
 4. Operating procedures.
 5. Operating logs.
 6. Wiring diagrams.
 7. Control diagrams.
 8. Piped system diagrams.
 9. Precautions against improper use.
 10. License requirements including inspection and renewal dates.
- C. Descriptions: Include the following:
1. Product name and model number. Use designations for products indicated on Contract Documents.

2. Manufacturer's name.
3. Equipment identification with serial number of each component.
4. Equipment function.
5. Operating characteristics.
6. Limiting conditions.
7. Performance curves.
8. Engineering data and tests.
9. Complete nomenclature and number of replacement parts.

D. Operating Procedures: Include the following, as applicable:

1. Startup procedures.
2. Equipment or system break-in procedures.
3. Routine and normal operating instructions.
4. Regulation and control procedures.
5. Instructions on stopping.
6. Normal shutdown instructions.
7. Seasonal and weekend operating instructions.
8. Required sequences for electric or electronic systems.
9. Special operating instructions and procedures.

E. Systems and Equipment Controls: Describe the sequence of operation, and diagram controls as installed.

F. Piped Systems: Diagram piping as installed, and identify color-coding where required for identification.

1.9 SYSTEMS AND EQUIPMENT MAINTENANCE MANUALS

A. Systems and Equipment Maintenance Manuals: Assemble a complete set of data indicating maintenance of each system, subsystem, and piece of equipment not part of a system. Include manufacturers' maintenance documentation, preventive maintenance procedures and frequency, repair procedures, wiring and systems diagrams, lists of spare parts, and warranty information.

1. Engage a factory-authorized service representative to assemble and prepare information for each system, subsystem, and piece of equipment not part of a system.
2. Prepare a separate manual for each system and subsystem, in the form of an instructional

B. Content: For each system, subsystem, and piece of equipment not part of a system, include source information, manufacturers' maintenance documentation, maintenance procedures, maintenance and service schedules, spare parts list and source information, maintenance service contracts, and warranty and bond information, as described below.

C. Source Information: List each system, subsystem, and piece of equipment included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual and drawing or schedule designation or identifier where applicable.

D. Manufacturers' Maintenance Documentation: Include the following information for each component part or piece of equipment:

1. Standard maintenance instructions and bulletins; include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data include more than one (1) item in a tabular format, identify each item using appropriate references from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.
 - a. Prepare supplementary text if manufacturers' standard printed data are not available and where the information is necessary for proper operation and maintenance of equipment or systems.
 2. Drawings, diagrams, and instructions required for maintenance, including disassembly and component removal, replacement, and assembly.
 3. Identification and nomenclature of parts and components.
 4. List of items recommended to be stocked as spare parts.
- E. Maintenance Procedures: Include the following information and items that detail essential maintenance procedures:
1. Test and inspection instructions.
 2. Troubleshooting guide.
 3. Precautions against improper maintenance.
 4. Disassembly; component removal, repair, and replacement; and reassembly instructions.
 5. Aligning, adjusting, and checking instructions.
- F. Maintenance and Service Schedules: Include service and lubrication requirements, list of required lubricants for equipment, and separate schedules for preventive and routine maintenance and service with standard time allotment.
1. Scheduled Maintenance and Service: Tabulate actions for daily, weekly, monthly, quarterly, semiannual, and annual frequencies.
 2. Maintenance and Service Record: Include manufacturers' forms for recording maintenance.
- G. Spare Parts List and Source Information: Include lists of replacement and repair parts, with parts identified and cross-referenced to manufacturers' maintenance documentation and local sources of maintenance materials and related services.
- H. Maintenance Service Contracts: Include copies of maintenance agreements with name and telephone number of service agent.
- I. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.
1. Include procedures to follow and required notifications for warranty claims.
- J. Drawings: Prepare drawings supplementing manufacturers' printed data to illustrate the relationship of component parts of equipment and systems and to illustrate control sequence and flow diagrams. Coordinate these drawings with information contained in record Drawings to ensure correct illustration of completed installation.
1. Do not use original project record documents as part of maintenance manuals.

1.10 PRODUCT MAINTENANCE MANUALS

- A. Product Maintenance Manual: Assemble a complete set of maintenance data indicating care and maintenance of each product, material, and finish incorporated into the Work.
- B. Content: Organize manual into a separate section for each product, material, and finish. Include source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds, as described below.
- C. Source Information: List each product included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual and drawing or schedule designation or identifier where applicable.
- D. Product Information: Include the following, as applicable:
 - 1. Product name and model number.
 - 2. Manufacturer's name.
 - 3. Color, pattern, and texture.
 - 4. Material and chemical composition.
 - 5. Reordering information for specially manufactured products.
- E. Maintenance Procedures: Include manufacturer's written recommendations and the following:
 - 1. Inspection procedures.
 - 2. Types of cleaning agents to be used and methods of cleaning.
 - 3. List of cleaning agents and methods of cleaning detrimental to product.
 - 4. Schedule for routine cleaning and maintenance.
 - 5. Repair instructions.
- F. Repair Materials and Sources: Include lists of materials and local sources of materials and related services.
- G. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.
 - 1. Include procedures to follow and required notifications for warranty claims.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 017823