SPECIFIC ATIONS

Riverside Concession / Storage Building

300 Davis Street, Taylor, PA

Owner:

Riverside School District

300 Davis Street, Taylor, PA

Architect:

C. Allen Mullins architect ARCHITECTS | PLANNERS

606 North Main St, Wilkes-Barre PA. 18705

T |570 | 824.3320 F |570 | 606.4966

www.camarchus.com



For Construction September 20, 2022

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SECTION 00100 - NOTICE TO BIDDERS

From: Riverside School District (Owner)

300 Davis Street Taylor, PA

To: All Invited Bidders

Project: Riverside High School Library Renovations

300 Davis Street

Taylor, PA

BRIEF DESCRIPTION OF WORK

You are invited to bid on a new concession / storage building (to include site work) at Riverside School District at 300 Davis Street, Taylor, Lackawanna County, PA. The building footprint is 1,280 SF one story Pole Building, wood trusses and slab on grade construction.

INFORMATION FOR BIDDERS

Questions from bidders regarding the building work shall be directed to Rick Malcolm at CAM architect (rmalcolm@camarchus.com or (570) 824-3320 x 103. **No Bidder questions should be sent exclusively to the Owner.** All questions from subcontractors and suppliers MUST be routed through the Bidder.

CONDITIONS

- Type of Bid: Stipulated Sum.
- **Bid Receiver:** Bidders shall submit a completed Bid Form via email to the Owner (William Drazdowski <u>WDrazdowski@riversidesd.com</u>) <u>E-mail Subject line</u> please place "BID Concession / Storage Building
- Bid Time and Date: All Bids are due by 4:00 PM (EST) on October 14, 2022.
- Bid Opening: Private
- **Bid Withdrawal:** All proposals shall remain firm for sixty (60) days following opening of Bids.
- Contract: The contractor awarded the work will be offered an AIA contract, A101-2007, Standard Form of Agreement Between Owner and Contractor, where basis of payment is a STIPULATED SUM. The Contract will be written to retain 10% for final payment and each subsequent request for payment.
- Rejection of Bid: The Owner requires that all Bids shall comply with the bidding requirements specified in the Instructions to Bidders. The Owner may at their discretion waive informalities in Bids, but is not obligated to do so, nor does it represent that it will do so. Under no circumstances will the Owner waive any informality that, by such waiver, would give one Bidder a substantial advantage or benefit not enjoyed by all other Bidders. No Bidder may withdraw his Bid before sixty days after the actual date of the opening thereof, unless a mistake to error is claimed by the Bidder in accordance with the Instructions to Bidders. The Owner reserves the right to reject any or all Bids.

NOTICE TO BIDDERS 00100 - 1

BIDDING DOCUMENTS

Documents may be obtained at in PDF format from the Architect website as follows. All contractors and sub-contractor are responsible for all printing and copying expenses.

Architects File Access - Login Details:

http://files.camarchus.com/owncloud/index.php/login

Username: CAM Password: 606

The Bid Documents are as follows:

Project Manual (CAM architect) dated 9/20/2022. Architectural drawings (CAM architect) dated 9/20/2022. MEP Drawings (Design Management Group) dated 9/20/2022

END OF SECTION 00100

NOTICE TO BIDDERS 00100 - 2

SECTION 00300 - INSTRUCTIONS TO BIDDERS

Project to be bid as multiple primes with General Contractor (GC) to oversee and coordinate with MEP contractors.

The Instructions to Bidders of this Contract is the American Institute of Architects Standard, AIA Document No. A701, Instructions to Bidders, 1997 Edition, note eight (8) articles, seven (7) pages, which document is hereby specifically made a part of the Contract Documents with the same force and effect as though set forth in full. Copy of the Instructions to Bidders is attached.

PRE-BID CONFERENCE

A recommended (non-mandatory) Pre-Bid Conference and Inspection will be held at the jobsite on September 29. Additional site visit requests can be made by contacting the Architect (although not guaranteed to be at the convenience of bidders).

PROJECT SCHEDULE

- A. Issue Notice to Bidders & Release of For Construction Set: September 20, 2022.
- B. Pre-Bid Conference: October 4, 2022 at 2:00 PM.
- C. Last day to receive RFI's: October 7, 2022.
- D. Receive Bids: October 14, 2022.
- E. Selection & Award Contracts/LOI: October 17, 2022.
- F. Construction Start: November
- G. Substantial Completion: March/April 2023.

PERFORMANCE BOND AND LABOR AND MATERIAL PAYMENT BOND

No Performance and Labor and Material Payment Bonds is required.

BID SECURITY

No Bid Security is required.

CONSTRUCTION DIRECTIVES

- A. The Contractor shall submit a site logistics plan showing its staging area, location of office/storage trailers, dumpster location, lay down area and vehicle parking area to be approved by the Architect.
- B. The Contractor shall keep all existing roadways and building access open at all times.
- C. The Contractor to adhere to Taylor Municipality Construction regulations (Dumpsters locations, etc).

SPECIAL CONDITIONS

- A. Permit fees to be paid by the Contractor. Contractor is to obtain building permits from the Municipality of Taylor.
- B. Contractor to provide certificate of liability in accordance with the requirements of the Supplementary Conditions.
- C. Form of contract is AIA101-2007 Standard Form of Agreement Between Owner and Contractor, with 10% retainage.
- D. All contractors must file No-Lien Stipulations or Waiver of Liens shall be filed in accordance with local legal practice, prior to the commencement of any work on the

project. Provide copies to the Owner.

- E. Owner will require the following as part of the closeout documents:
 - a. Original Stamped Permit Plans
 - b. Copy of Building Permit
 - c. Original stamped permit inspection card with all sign-offs
 - d. As built plans that are reproducible
 - e. Final punch lists signed off by all parties

END OF SECTION 00300

SECTION 00400 - BID FORM - ELECTRICAL

BID FORM:	Electrical - (Contract for Renovations.	
PROJECT:		hool Concession / Storago reet, Taylor, PA	e Building
DATE:			
Proposal of			(hereinafter called "Bidder")
To Riverside	School District	(hereinafter called "Own	er")
Ladies & Gen	tlemen:		
new concess conditions sur proposes to fu with the Contr incurred (incl Documents of Bidder acknow and Drawings	ion building lo rounding the p irnish all labor ract Document uding all appl f which this Providedges receipt as listed on the	ocated at 300 Davis Stre roposed project, including and materials and supplies, at the prices stated belicable taxes) in performing oposal is a part.	Contract for Building Renovation Work for a et, Taylor, PA and being familiar with the the availability of materials and labor, hereby s and to complete the project in accordance ow. These prices are to cover all expenses ng the work required under the Contract ed Project Manual (including Specifications) er Sheet, attached Drawing & Specification.
Adde	endum No.	Addendum Date]
shown on the Enter		the Owner as soon as he	ne Work described in the Specifications and executes such Contract for the sum of
\$ Enter	Amount in wo	ds (this governs):	

PRICE BREAKDOWN:

Insert a value for each line item. Do NOT enter statements such as 'included' instead of a number. The total sum of the Price Breakdown shall equal the total Stipulated Sum.

Division	Item	Value (Dollars)
		, ,
DIV 26	Electrical Devices & Wiring	\$
DIV 26	Electrical Panels & associated work	\$
DIV 26	Lighting Fixtures	\$
DIV 26	Overhead & General Conditions	\$
	TOTAL	\$

ALTERNATES:

The undersigned further agrees to adjust the lump sum amount in accordance with alternates affecting the Work. Each Alternate elected by the Owner shall cause The Lump Sum Bid to be adjusted by the addition or deduction quote for each Alternate so elected as follows:

Alternate No.	Item Description	Add / Deduct from Base Bid	Amount (Dollars)
01			
02			
03			
04			
05			

BID ACKNOWLEDGEMENT:

The undersigned agrees that if written notice of the acceptance of this bid is delivered to the undersigned within sixty (60) days after the opening thereof, or at any time thereafter before this bid is withdrawn, the undersigned agrees to execute and deliver a contract in the prescribed form within ten (10) days after the Contract is presented to him for signature.

The undersigned hereby certifies that his proposal is genuine and not a sham or collusive or made in the interest or in behalf of any person, firm or corporation not herein named; that the undersigned has not directly or indirectly induced or solicited any bidder to refrain from bidding and that the undersigned has not, in any manner, sought by collusion to secure for himself an advantage over any other Bidder.

Respectfully Submitted:	
(Firm Name)	
By:	
(Title)	
SEAL - (if bid is by a corporation)	
Complete whichever one of the following sentences is appropriate:	
1. (FIRMNAME)	
is a corporation organized under the laws of (STATE)	

with its principal office located at		
and ar	e the	
President and Secretary respectively of this organization.		
2. (FIRMNAME)		
is a co-partnership trading and doing business under this firm name with	n place of business	
located at		
The names and addresses of all of the partners comprising this business are:		
3	is an individual	
residing at		
and doing business under the name of (FIRM NAME)		
with his place of business located at		

END OF SECTION 00400

SECTION 00400 - BID FORM - GENERAL TRADES

BID FORM:	General Tra	des - Contract for Work.	
PROJECT:		hool Concession / Storag reet, Taylor, PA	e Building
DATE:			
Proposal of			(hereinafter called "Bidder")
To Riverside S	School District	(hereinafter called "Owr	ner")
Ladies & Gen	tlemen:		
new concessi conditions surr proposes to fu with the Contr incurred (inclu Documents of Bidder acknow and Drawings	on building lo rounding the p rnish all labor act Document uding all appl which this Providedges receip as listed on the	ocated at 300 Davis Streeroposed project, including and materials and supplieds, at the prices stated belicable taxes) in perform oposal is a part. The of the documents entitled the Contract Drawings Cover.	Contract for Building Renovation Work for a et, Taylor, PA and being familiar with the the availability of materials and labor, hereby as and to complete the project in accordance ow. These prices are to cover all expenses ing the work required under the Contract and Project Manual (including Specifications) or Sheet, attached Drawing & Specification.
Bidder acknow	vledges receip	ot of the following addend	a:
Adde	ndum No.	Addendum Date	
			ne Work described in the Specifications and executes such Contract for the sum of
\$	Amount in nun Amount in wor	nbers: rds (this governs):	

PRICE BREAKDOWN:

Insert a value for each line item. Do NOT enter statements such as 'included' instead of a number. The total sum of the Price Breakdown shall equal the total Stipulated Sum.

Division	Item	Value (Dollars)
DIV 00	Pole Building Shell	\$
DIV 03	Cast-in-Place Concrete	\$
DIV 06	Rough Carpentry	\$
DIV 06	Millwork & Countertops	\$
DIV 07	Thermal and Moisture Protection	\$
DIV 08	Windows & Glazing	\$
DIV 08	Doors & Hardware	\$
DIV 09	Drywall	\$
DIV 09	Flooring Finishes & Base	\$
DIV 09	Ceilings	\$
DIV 09	Painting	\$
DIV 10	Specialties	\$
DIV 00	Misc.	\$
DIV 01	Overhead & General Conditions	\$
	TOTAL	\$

ALTERNATES:

The undersigned further agrees to adjust the lump sum amount in accordance with alternates affecting the Work. Each Alternate elected by the Owner shall cause The Lump Sum Bid to be adjusted by the addition or deduction quote for each Alternate so elected as follows:

Alternate No.	Item Description	Add / Deduct from Base Bid	Amount (Dollars)
01	Closed Cell Spray Insulation		
02			
03			
04			
05			

BID ACKNOWLEDGEMENT:

The undersigned agrees that if written notice of the acceptance of this bid is delivered to the undersigned within sixty (60) days after the opening thereof, or at any time thereafter before this bid is withdrawn, the undersigned agrees to execute and deliver a contract in the prescribed form within ten (10) days after the Contract is presented to him for signature.

The undersigned hereby certifies that his proposal is genuine and not a sham or collusive or made in the interest or in behalf of any person, firm or corporation not herein named; that the undersigned has not directly or indirectly induced or solicited any bidder to refrain from bidding and that the undersigned has not, in any manner, sought by collusion to secure for himself an advantage over any other Bidder.

Respectfully Su	bmitted:	
	(Firm Name)	
By:		
(Title	e)	

SEAL - (If bid is by a corporation)	
Complete whichever one of the following sentences is appropriate:	
1. (FIRMNAME)	
is a corporation organized under the laws of (STATE)	
with its principal office located at	
and	are the
President and Secretary respectively of this organization.	
2. (FIRMNAME)	
is a co-partnership trading and doing business under this firm name v	
located at	
The names and addresses of all of the partners comprising this busin	
3	is an individual
residing at	
and doing business under the name of (FIRM NAME)	
with his place of business located at	

END OF SECTION 00400

BID FORM: Mechanical - Contract for Work.

PROJECT: Riverside School Concession / Storage Building 300 Davis Street, Taylor, PA

DATE: (hereinafter called "Bidder")

To Riverside School District. (hereinafter called "Owner")

Ladies & Gentlemen:

The Bidder is in compliance with your Invitation to Bid, Contract for Building Renovation Work for a new concession building located at 300 Davis Street, Taylor, PA and being familiar with the conditions surrounding the proposed project, including the availability of materials and labor, hereby proposes to furnish all labor and materials and supplies and to complete the project in accordance with the Contract Documents, at the prices stated below. These prices are to cover all expenses incurred (including all applicable taxes) in performing the work required under the Contract Documents of which this Proposal is a part.

Bidder acknowledges receipt of the documents entitled Project Manual (including Specifications) and Drawings as listed on the Contract Drawings Cover Sheet, attached Drawing & Specification.

Bidder acknowledges receipt of the following addenda:

SECTION 00400 - BID FORM - MECHANICAL

Addendum No.	Addendum Date

<u>STIPULATED SUM:</u> Bidder agrees to perform all of the Work described in the Specifications and shown on the Drawings for the Owner as soon as he executes such Contract for the sum of

Enter Amount in numbers:	
\$	
Enter Amount in words (this governs):	

PRICE BREAKDOWN:

Insert a value for each line item. Do NOT enter statements such as 'included' instead of a number. The total sum of the Price Breakdown shall equal the total Stipulated Sum.

Division	Item	Value (Dollars)
DIV 23	Ductwork	\$
DIV 23	Mechanical Units	\$
DIV 23	Mechanical Piping	\$
DIV 23	Overhead & General Conditions	\$
	TOTAL	\$

ALTERNATES:

The undersigned further agrees to adjust the lump sum amount in accordance with alternates affecting the Work. Each Alternate elected by the Owner shall cause The Lump Sum Bid to be adjusted by the addition or deduction quote for each Alternate so elected as follows:

Alternate No.	Item Description	Add / Deduct from Base Bid	Amount (Dollars)
01			
02			
03			
04			
05			

BID ACKNOWLEDGEMENT:

The undersigned agrees that if written notice of the acceptance of this bid is delivered to the undersigned within sixty (60) days after the opening thereof, or at any time thereafter before this bid is withdrawn, the undersigned agrees to execute and deliver a contract in the prescribed form within ten (10) days after the Contract is presented to him for signature.

The undersigned hereby certifies that his proposal is genuine and not a sham or collusive or made in the interest or in behalf of any person, firm or corporation not herein named; that the undersigned has not directly or indirectly induced or solicited any bidder to refrain from bidding and that the undersigned has not, in any manner, sought by collusion to secure for himself an advantage over any other Bidder.

Respectfully Submitted:	
(Firm Name)	
By:	
(Title)	
SEAL - (if bid is by a corporation)	
Complete whichever one of the following sentences is appropriate:	
1. (FIRMNAME)	
is a corporation organized under the laws of (STATE)	

with its principal office located at	
and ar	e the
President and Secretary respectively of this organization.	
2. (FIRMNAME)	
is a co-partnership trading and doing business under this firm name with	n place of business
located at	
The names and addresses of all of the partners comprising this busines	
3	is an individual
residing at	
and doing business under the name of (FIRM NAME)	
with his place of business located at	

END OF SECTION 00400

SECTION 00400 - BID FORM - FIRE PROTECTION

BID FORM:	Plumbing -	Contract for Work.		
PROJECT:		hool Concession / Stora reet, Taylor, PA	age Building	
DATE:			-	
Proposal of				(hereinafter called "Bidder")
To Riverside S	School District	t. (hereinafter called "Ov	vner")	
<u>Ladies & Gen</u>	tlemen:			
new concessi conditions suri proposes to fu with the Contrincurred (included) Documents of Bidder acknow and Drawings	on building lorounding the purnish all labor act Document uding all applications which this Proviedges receip as listed on the	ocated at 300 Davis St roposed project, includir and materials and supp ts, at the prices stated b licable taxes) in perfor oposal is a part.	reet, Taylor, Fing the availabilities and to come low. These parting the world tled Project Mover Sheet, attentions.	Building Renovation Work for a PA and being familiar with the ity of materials and labor, hereby aplete the project in accordance prices are to cover all expenses is required under the Contract anual (including Specifications) ached Drawing & Specification.
Adde	endum No.	Addendum Date		
				cribed in the Specifications and ch Contract for the sum of
\$	Amount in nur Amount in wo	nbers: rds (this governs):		

PRICE BREAKDOWN:

Insert a value for each line item. Do NOT enter statements such as 'included' instead of a number. The total sum of the Price Breakdown shall equal the total Stipulated Sum.

Division	Item	Value (Dollars)
DIV 22	Plumbing Fixtures	\$
DIV 22	Plumbing Water Heaters, Equip, etc.	
DIV 22	Plumbing – Piping Materials	\$
DIV 22	Plumbing - Labor	\$
		· ·
DIV 22	Overhead & General Conditions	\$
	TOTAL	\$

ALTERNATES:

The undersigned further agrees to adjust the lump sum amount in accordance with alternates affecting the Work. Each Alternate elected by the Owner shall cause The Lump Sum Bid to be adjusted by the addition or deduction quote for each Alternate so elected as follows:

Alternate No.	Item Description	Add / Deduct from Base Bid	Amount (Dollars)
01			
02			
03			
04			
05			

BID ACKNOWLEDGEMENT:

The undersigned agrees that if written notice of the acceptance of this bid is delivered to the undersigned within sixty (60) days after the opening thereof, or at any time thereafter before this bid is withdrawn, the undersigned agrees to execute and deliver a contract in the prescribed form within ten (10) days after the Contract is presented to him for signature.

The undersigned hereby certifies that his proposal is genuine and not a sham or collusive or made in the interest or in behalf of any person, firm or corporation not herein named; that the undersigned has not directly or indirectly induced or solicited any bidder to refrain from bidding and that the undersigned has not, in any manner, sought by collusion to secure for himself an advantage over any other Bidder.

Respectfully Submitted:	
(Firm Nai	ne)
By:	<u> </u>
(Title)	
SEAL - (if bid is by a corporation)	
Complete whichever one of the fo	ollowing sentences is appropriate:
1. (FIRMNAME)	

is a corporation organized under the laws of (STATE)	
with its principal office located at	
and	are the
President and Secretary respectively of this organization.	
2. (FIRMNAME)	
is a co-partnership trading and doing business under this firm name \boldsymbol{v}	vith place of business
located at	
The names and addresses of all of the partners comprising this busin	ess are:
3	is an individual
residing at	
and doing business under the name of (FIRM NAME)	
with his place of business located at	

END OF SECTION 00400

SECTION 00700 - GENERAL CONDITIONS

The General Conditions for this Contract is the American Institute of Architects' Standard Document, AIA Document A201, General Conditions of the Contract for Construction, 1997 Edition, 14 articles, 38 pages, hereinafter referred to as the AIA General Conditions, which document is hereby specifically made a part of the Contract Documents with the same force and effect as though set forth in full. Copies of the General Conditions for the Contract are available via the Architect.

SECTION 00750 - SUPPLEMENTARY CONDITIONS

The general conditions of this contract are the American Institute of Architects Document No. A201-2007, "General Conditions of the Contract for Construction", as modified by the Supplementary General Conditions below. The document is hereby specifically made a part of the contract documents with the same force and effect as though set forth in full.

SUPPLEMENTARY GENERAL CONDITIONS

CONTRACTOR SHALL BE RESPONSIBLE FOR THE FOLLOWING:

- 1. Contractor and their subcontractors are required to conform to COVID-19 guideline requirements from the state and CDC for preventing other employees and building occupants of infection.
- 2. Contractor must agree to non-discrimination requirements of the DCED and other state and federal requirements, and execute the non-discrimination clause.
- 3. Disposing of all debris in a proper manner at an approved site in accordance with all local, state and federal regulations governing the removal of construction materials.
- 4. Compliance with all OSHA requirements and regulations and provide all safety devices, temporary enclosures, barricades, fences, warning lines, material safety data sheets, electrical protection, etc. as required for this type of work. Contractor is solely responsible for compliance.
- 5. Covering and protecting all openings and potential hazards, etc. for the protection of persons and property.
- 6. A Stipulation Against Liens shall be executed and properly recorded at the Lackawanna County Courthouse by the contractor prior to mobilization.
- 7. Payment of all permits, sales taxes, wage taxes and any other taxes which may be applicable.
- 8. Correction of any faulty work
- 9. Costs of investigation, testing and reports if the owner or architect find what appears to be defective or improper work
- 10. Compliance with all State and Federal labor laws
- 11. Notifying the owner of any asbestos discovered during the course of the work, prior to removing or disrupting it in any way
- 12. Verifying all dimensions, quantities and conditions shown on plans or included in the specifications
- 13. Bringing to the attention of the owner, any and all deficiencies discovered in the course of the work

- 14. Ensuring that the specified products, or approved equals, are furnished and installed in accordance with the design intent and manufacturer's requirements
- 15. Providing daily reports by email to rmalcolm@camarchus.com by the end of each working day; no later than 10:00 am the following calendar day. The report is to include a minimum of one picture, number of men on site, a brief description of the work being performed that day, and any significant problems that arise.
- 16. Repairs of any damages caused by this contractor to the interior or exterior of the building, grounds, or to the contents of the building
- 17. Performance of work during normal working hours, unless otherwise approved by the Owner.
- 18. Proper preparation, inspection, and repair of existing surfaces to receive new materials
- 19. Cleaning of the work area and grounds on a daily basis. Housekeeping is the responsibility of every prime contractor and subcontractor on the project. If housekeeping fails to meet standards acceptable to the Architect/Owner, measures will be taken to correct the conditions, and the prime contractor will be backcharged for costs.
- 20. Securing and paying for all licenses, permits and fees required for the proper execution and completion of this work, including any code inspection or review fees.
- 21. Using materials that are all provided by the <u>same manufacturer</u>, so that components are all compatible with each other.
- 22. The Contractor is responsible for keeping the building openings secure.

CONTRACTORS INSURANCE

The contractor shall not commence work until he has obtained all insurance required hereunder, and such insurance has been approved by the owner.

The Owner, Architect. and Commonwealth shall be named as <u>additionally insured</u> on all policies. Contractor shall take out and maintain during the life of this contract, statutory Workmen's Compensation and Employers Liability Insurance for all of his employees to be engaged in work on Project under this Contract, and in case any such work is sublet, Contractor shall require his subcontractors similarly to provide Workmen's Compensation and Employer's Liability Insurance for all latter's employees to be engaged in such work. Employer's Liability Insurance shall cover each employee in the amount of not less than One Million Dollars (\$1,000,000.00) for any one accident.

AUTOMOBILE INSURANCE:

Contractor, and all of his subcontractors shall carry automobile insurance covering licensed vehicles. Insurance shall have the following minimum policy limits:

1. Person Injury - \$1,000,000.00 per person \$2,000,000.00 per accident

- 2. Property Damage \$1,000,000.00 per accident \$2,000,000.00 policy aggregate
- Contractor and all of his subcontractors shall carry comprehensive automobile insurance covering non-owned vehicles and hired cars. Insurance shall have the same limits as immediately above.

COMPREHENSIVE GENERAL PUBLIC LIABILITY AND PROPERTY DAMAGE INSURANCE:

Contractor and all of his subcontractors shall maintain policy of comprehensive general public liability and property damage insurance with following minimum policy limits

- 1. Personal Injury \$250,000.00 per person for injury and death in a single occurrence \$1,000,000.00 per occurrence for injury or death of more then (1) person in a single occurrence
- 2. Property Damage \$ 500,000.00 for a single occurrence of property damage

All policies shall be open to inspection by Owner. If Contractor or any of his subcontractors fails to effect or maintain insurance as required, Owner may insure his own interest and charge cost thereof to Contractor.

Bodily injury and property damage coverage under both Comprehensive General and Automobile Insurance policies shall include the "Occurrence" basis wording, which means any event or continuous or repeated exposure to conditions which unexpectedly cause injury during the policy period.

Comprehensive General Liability policies shall include Standard Broad Form property damage endorsement for the Contractor, his subcontractors, and any and all other tradesmen engaged on the project.

Each Contractor agrees to assist in every manner possible in the reporting and investigating of any accident, and upon request, to cooperate with all interested Insurance Carriers in the handling of any claim, by securing and giving evidence and obtaining the attendance of witnesses, as required for any claim or suit.

SUBMITTALS

Submit two copies of manufacturer's current literature, specifications, warranties and details, along with shop drawings, approved by the manufacturer, prior to starting any work.

END OF SECTION 00750

SECTION 00800 - REQUEST FOR INTERPRETATION

Use this form to request information during the Bidding period, but not less than $\underline{\text{three}}$ working days prior to the Bid due Date/Time.

To:	Attention: Richard Malcolm, AIA (CAM architect)
Email:	rmalcolm@camarchus.com
Date of Reque	est:
Prime Contrac	xt:
Company:	
REQUEST: (a	ttach additional pages if necessary):

END OF SECTION 00800

SECTION 01027 - APPLICATIONS FOR PAYMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements governing the Contractor's Applications for Payment.
 - Coordinate the Schedule of Values and Applications for Payment with the Contractor's Construction Schedule, Submittal Schedule, and List of Subcontracts.
 - 2. All schedules and applications for payment shall be submitted to the Contractor for approval and processing by the Architect and Owner.
- B. Related Sections: The following Sections contain requirements that relate to this Section.
 - 1. Schedules: The Contractor's Construction Schedule and Submittal Schedule are specified in Division 1 Section "Submittals."

1.3 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the Schedule of Values with preparation of the Contractors' Construction Schedule.
 - 1. Correlate line items in the Schedule of Values with other required administrative schedules and forms, including:
 - a. Contractor's Construction Schedule.
 - b. Application for Payment forms, including Continuation Sheets.
 - c. List of subcontractors.
 - d. Schedule of alternates.
 - e. List of products.
 - f. List of principal suppliers and fabricators.
 - g. Schedule of submittals.
 - 2. Submit the Schedule of Values to the architect at the earliest possible date but no later than 7 days before the date scheduled for submittal of the initial Applications for Payment.
 - 3. Subschedules: Where Work is separated into phases requiring separately phased payments, provide subschedules showing values correlated with each phase of payment.

- B. Format and Content: Use the Project Manual table of contents as a guide to establish the format for the Schedule of Values. Provide at least one line item for each Specification Section. Where an item of Work appears in more than one Specification Section, provide a line item for each Specification Section it appears in.
 - 1. Identification: Include the following Project identification on the Schedule of Values:
 - a. Project name and location.
 - b. Name of the Architect.
 - c. Contractor's name and address.
 - d. Date of submittal.
 - 2. Arrange the Schedule of Values in tabular form with separate columns to indicate the following for each item listed:
 - a. Related Specification Section or Division.
 - b. Description of Work.
 - c. Name of subcontractor.
 - d. Name of manufacturer or fabricator.
 - e. Name of supplier.
 - f. Change Orders (numbers) that affect value.
 - g. Dollar value.
 - 1) Percentage of Contract Sum to nearest one-hundredth percent, adjusted to total 100 percent.
 - 3. Provide a breakdown of the Contract Sum in sufficient detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with the Project Manual table of contents. Break principal subcontract amounts down into several line items.
 - 4. Round amounts to nearest whole dollar; the total shall equal the Contract Sum.
 - 5. Provide a separate line item in the Schedule of Values for each part of the Work where Applications for Payment may include materials or equipment, purchased or fabricated and stored, but not yet installed.
 - Differentiate between items stored on-site and items stored off-site.
 Include requirements for insurance and bonded warehousing, if required.
 - 6. Provide separate line items on the Schedule of Values for initial cost of the materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
 - 7. Schedule Updating: Update and resubmit the Schedule of Values prior to the next Applications for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.

1.4 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment shall be consistent with previous applications and payments as certified by the Architect and paid for by the Owner.
 - 1. The initial Application for Payment, the Application for Payment at time of Substantial Completion, and the final Application for Payment involve additional requirements.
- B. Payment-Application Times: Each progress-payment date is indicated in the Agreement. The period of construction Work covered by each Application for Payment is the period indicated in the Agreement.
- C. Payment-Application Forms: Use AIA Document G702 and Continuation Sheets G703 as the form for Applications for Payment.
- D. Application Preparation: Complete every entry on the form. Include notarization and execution by a person authorized to sign legal documents on behalf of the Contractor. The Architect will return incomplete applications without action.
 - 1. Entries shall match data on the Schedule of Values and the Contractor's Construction Schedule. Use updated schedules if revisions were made.
 - 2. Include amounts of Change Orders and Construction Change Directives issued prior to the last day of the construction period covered by the application.
- E. Transmittal: Submit 3 signed and notarized original copies of each Application for Payment to the Architect.
 - 1. Transmit each copy with a transmittal form listing attachments and recording appropriate information related to the application, in a manner acceptable to the Architect.
- F. Initial Application for Payment: Administrative actions and submittals, that must precede or coincide with submittal of the first Application for Payment, include the following:
 - 1. List of subcontractors.
 - 2. List of principal suppliers and fabricators.
 - 3. Schedule of Values.
 - 4. Contractor's Construction Schedule (preliminary if not final).
 - 5. Schedule of principal products.
 - 6. Submittal Schedule (preliminary if not final).
 - 7. List of Contractor's staff assignments.
 - 8. List of Contractor's principal consultants.
 - 9. Copies of building permits.
 - 10. Copies of authorizations and licenses from governing authorities for performance of the Work.
 - 11. Initial progress report.
 - 12. Report of preconstruction meeting.
 - 13. Certificates of insurance and insurance policies.
 - 14. Performance and payment bonds.
 - 15. Data needed to acquire the Owner's insurance.
 - 16. Initial settlement survey and damage report, if required.
- G. Application for Payment at Substantial Completion: Following issuance of the

Certificate of Substantial Completion, submit an Application for Payment.

- 1. This application shall reflect Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
- 2. Administrative actions and submittals that shall precede or coincide with this application include:
 - a. Warranties (guarantees) and maintenance agreements.
 - b. Test/adjust/balance records.
 - c. Maintenance instructions.
 - d. Meter readings.
 - e. Startup performance reports.
 - f. Final cleaning.
 - g. Application for reduction of retainage and consent of surety.
 - h. Advice on shifting insurance coverages.
 - i. Final progress photographs.
 - j. List of incomplete Work, recognized as exceptions to Architect's Certificate of Substantial Completion.
 - k. Certification and Partial Release of Liens, executed and notarized by the Contractor and major subcontractors.
- H. Final Payment Application: Administrative actions and submittals that must precede or coincide with submittal of the final Application for Payment include the following:
 - 1. Completion of Project closeout requirements.
 - 2. Completion of items specified for completion after Substantial Completion.
 - 3. Ensure that unsettled claims will be settled.
 - 4. Ensure that incomplete Work is not accepted and will be completed without undue delay.
 - 5. Transmittal of required Project construction records to the Owner.
 - 6. Proof that taxes, fees, and similar obligations were paid.
 - 7. Removal of temporary facilities and services.
 - 8. Removal of surplus materials, rubbish, and similar elements.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01027

SECTION 01030 - ALTERNATES

PART 1) - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. This Section includes administrative and procedural requirements governing Alternates.

1.3 DEFINITIONS

- A. Definition: An alternate is an amount proposed by bidders and stated on the Bid Form for certain work defined in the Bidding Requirements that may be added to or deducted from the Base Bid amount if the Owner decides to accept a corresponding change in either the amount of construction to be completed, or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.
 - 1. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate the Alternate into the Work. No other adjustments are made to the Contract Sum.

1.4 PROCEDURES

- A. Coordination: Modify or adjust affected adjacent Work as necessary to completely and fully integrate that Work into the Project.
 - 1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not mentioned as part of the Alternate.
- B. Notification: Immediately following the award of the Contract, notify each party involved, including all Prime Contractors, Subcontractors, Suppliers, etc., in writing, of the status of each alternate. Indicate whether alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated modifications to alternates.
- C. Execute accepted alternates under the same conditions as other Work of this Contract.
- D. Schedule: A "Schedule of Alternates" is included at the end of this Section. Specification Sections referenced in the Schedule contain requirements for materials necessary to achieve the Work described under each alternate.

ALTERNATES 01030 - 1

PART 2) - PRODUCTS (Not Applicable)

PART 3) - EXECUTION

3.1 SCHEDULE OF ALTERNATES (See Bid Form For Add & Deduct Alternates)

END OF SECTION 01030

ALTERNATES 01030 - 2

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SECTION 01035 - MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements for handling and processing contract modifications.
- B. Related Sections: The following Sections contain requirements that relate to this Section:
 - 1. Division 1 Section "Submittals" for requirements for the Contractor's Construction Schedule.
 - 2. Division 1 Section "Applications for Payment" for administrative procedures governing Applications for Payment.

1.3 MINOR CHANGES IN THE WORK

A. The Architect will issue supplemental instructions authorizing minor changes in the Work, not involving adjustment to the Contract Sum or Contract Time, on AIA Form G710, Architect's Supplemental Instructions.

1.4 CHANGE ORDER PROPOSAL REQUESTS

- A. Owner-Initiated Proposal Requests: The Architect will issue a detailed description of proposed changes in the Work that will require adjustment to the Contract Sum or Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
 - 1. Proposal requests issued by the Architect are for information only. Do not consider them as an instruction either to stop work in progress or to execute the proposed change.
 - 2. Within 1 day of receipt of a proposal request, submit an estimate of cost necessary to execute the change to the Architect for approval.
 - a. Include a list of quantities of work items, labor unit rates and (separate) material costs, with the total amount of purchases to be made. Where requested, all necessary detail to substantiate costs and quantities to the satisfaction of the Architect.
 - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - c. Include a statement indicating the effect the proposed change in the Work will

have on the Contract Time.

- B. Contractor-Initiated Proposals: When latent or unforeseen conditions require modifications to the Contract, the Contractor may propose changes by submitting a request for a change to the Architect.
 - Include an <u>entitlement statement</u> outlining the reasons for the change and the effect
 of the change on the Work. The entitlement statement provides reasoning for the
 contractor's entitlement to additional compensation, including relevant discussion of
 contracted scope of work or responsibility. Indicate the effect of the proposed
 change on the Contract Sum and Contract Time.
 - Include a list of quantities of work items, labor unit rates and (separate) material
 costs, with the total amount of purchases to be made. Where requested, all
 necessary detail to substantiate costs and quantities to the satisfaction of the
 Architect.
 - 3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - 4. Comply with requirements in Section "Substitutions" if the proposed change requires substitution of one product or system for a product or system specified.
- C. Proposal Request Form: Use AIA Document G709 for Change Order Proposal Requests.

1.5 CONSTRUCTION DIRECTIVE

- A. Construction Directive: When the Owner or Architect and the Contractor disagree on the terms of a Proposal Request, the Architect may issue a Construction Directive via email. The Directive instructs the Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order if contractor entitlement is determined.
 - 1. The Construction Directive contains a complete description of the change in the Work. It also designates the method to be followed to determine change in the Contract Sum or Contract Time.
- B. Documentation: Maintain detailed records on a time and material basis of work required by the Directive.
 - 1. After completion of the change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

1.6 CHANGE ORDER PROCEDURES

- A. Upon the Owner's approval of a Proposal Request, the Architect will issue a Change Order for signatures of the Owner and the Contractor on AIA Form G701.
- B. Supplementary Conditions: Change Order Percentage allowances for Contractor's overhead and profit will be 8%.

PART 2 - PRODUCTS (Not Applicable)

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PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01035

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SECTION 01040 - COORDINATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative and supervisory requirements necessary for coordinating construction operations including, but not necessarily limited to, the following:
 - 1. General project coordination procedures.
 - 2. Conservation.
 - 3. Coordination Drawings.
 - 4. Administrative and supervisory personnel.
 - 5. Cleaning and protection.
- B. Related Sections: The following Sections contain requirements that relate to this Section:
 - 1. Division 1 Section "Project Meetings" for progress meetings, coordination meetings, and preinstallation conferences.
 - 2. Division 1 Section "Submittals" for preparing and submitting the Contractor's Construction Schedule.
 - 3. Division 1 Section "Materials and Equipment" for coordinating general installation.
 - 4. Division 1 Section "Contract Closeout" for coordinating contract closeout.

1.3 COORDINATION

- A. The contractor is required to maintain a designated individual (superintendent or foreman) on site that has full authority to speak and act, without delay or hesitation, on behalf of the contractor. The Contractor shall coordinate construction operations included in various Sections of these Specifications to assure efficient and orderly installation of each part of the Work. Coordinate construction operations included under different Sections that depend on each other for proper installation, connection, and operation.
 - 1. Schedule construction operations in the sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
 - 2. Coordinate installation of different components to assure maximum accessibility for required maintenance, service, and repair.
 - 3. Make provisions to accommodate items scheduled for later installation.
- B. Where necessary, prepare memoranda for distribution to each subcontractor involved, outlining special procedures required for coordination. Include such items as required notices, reports, and attendance at meetings.

COORDINATION 01040 - 1

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- 1. Prepare similar memoranda for the Architect where coordination of their work is required.
- C. Administrative Procedures: The Contractor shall coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and assure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
 - 1. Preparation of schedules.
 - 2. Installation and removal of temporary facilities.
 - 3. Delivery and processing of submittals.
 - 4. Progress meetings.
 - 5. Project closeout activities.
- D. Conservation: The Contractor shall coordinate construction operations to assure that operations are carried out with consideration given to conservation of energy, water, and materials.
 - 1. Salvage materials and equipment involved in performance of, but not actually incorporated in, the Work.

1.4 SUBMITTALS

- A. Coordination Drawings: The Contractor shall prepare coordination drawings where careful coordination is needed for installation of products and materials fabricated by separate entities. Prepare coordination drawings where limited space availability necessitates maximum utilization of space for efficient installation of different components.
 - 1. Show the relationship of components shown on separate Shop Drawings.
 - 2. Indicate required installation sequences.
 - 3. Comply with requirements contained in Section "Submittals."
- B. Every Prime contractor is required to maintain a designated individual (superintendent or foreman) on site that has full authority to speak and act, without delay or hesitation, on behalf of the contractor. Staff Names: Within 15 days of commencement of construction operations, submit a list of the Contractor's designated individual and all principal staff assignments, including the superintendent and other personnel in attendance at the Project Site. Identify individuals and their duties and responsibilities. List their addresses and telephone numbers.
 - 1. Post copies of the list in the Project meeting room, the temporary field office, and each temporary telephone.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

COORDINATION 01040 - 2

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3.1 GENERAL COORDINATION PROVISIONS

- A. Inspection of Conditions: Require the Installer of each major component to inspect both the substrate and conditions under which Work is to be performed. Do not proceed until unsatisfactory conditions have been corrected in an acceptable manner.
- B. Coordinate temporary enclosures with required inspections and tests to minimize the necessity of uncovering completed construction for that purpose.

3.2 CLEANING AND PROTECTION

- A. Clean and protect construction in progress and adjoining materials in place, during handling and installation. Apply protective covering where required to assure protection from damage or deterioration at Substantial Completion.
- B. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to assure operability without damaging effects.
- C. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period. Where applicable, such exposures include, but are not limited to, the following:
 - 1. Excessive static or dynamic loading.
 - 2. Excessive internal or external pressures.
 - 3. Excessively high or low temperatures.
 - Thermal shock.
 - 5. Excessively high or low humidity.
 - 6. Air contamination or pollution.
 - 7. Water or ice.
 - 8. Solvents.
 - 9. Chemicals.
 - 10. Light.
 - 11. Radiation.
 - 12. Puncture.
 - 13. Abrasion.
 - 14. Heavy traffic.
 - 15. Soiling, staining, and corrosion.
 - 16. Bacteria.
 - 17. Rodent and insect infestation.
 - 18. Combustion.
 - 19. Electrical current.
 - 20. High-speed operation.
 - 21. Improper lubrication.
 - 22. Unusual wear or other misuse.
 - 23. Contact between incompatible materials.
 - 24. Destructive testing.
 - 25. Misalignment.
 - 26. Excessive weathering.
 - 27. Unprotected storage.
 - 28. Improper shipping or handling.

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29. Theft.

30. Vandalism.

END OF SECTION 01040

COORDINATION 01040 - 4

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SECTION 01045 - CUTTING AND PATCHING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for cutting and patching.
- B. Related Sections: The following Sections contain requirements that relate to this Section:
 - 1. Division 1 Section "Coordination" for procedures for coordinating cutting and patching with other construction activities.
 - 2. Refer to other Sections for specific requirements and limitations applicable to cutting and patching individual parts of the Work.
 - a. Requirements of this Section apply to mechanical and electrical installations. Refer to Division 15 and 16 Sections for other requirements and limitations applicable to cutting and patching mechanical and electrical installations.

1.3 SUBMITTALS

- A. Cutting and Patching Proposal: Prior to cutting and patching operations contractor must notify Architect what work will be performed and shall contact the services of a Professional Engineer to do any drawings or calculations associated with the work for review by Architect and Owner. Submit a proposal describing procedures well in advance of the time cutting and patching will be performed if the Owner requires approval of these procedures before proceeding. Request approval to proceed. Include the following information, as applicable, in the proposal:
 - 1. Describe the extent of cutting and patching required. Show how it will be performed and indicate why it cannot be avoided.
 - 2. Describe anticipated results in terms of changes to existing construction. Include changes to structural elements and operating components as well as changes in the building's appearance and other significant visual elements.
 - 3. List products to be used and firms or entities that will perform Work.
 - 4. Indicate dates when cutting and patching will be performed.
 - Utilities: List utilities that cutting and patching procedures will disturb or affect. List utilities that will be relocated and those that will be temporarily out-of-service. Indicate how long service will be disrupted.

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- 6. Where cutting and patching involves adding reinforcement to structural elements, submit details and engineering calculations showing integration of reinforcement with the original structure.
- 7. Approval by the Architect to proceed with cutting and patching does not waive the Architect's right to later require complete removal and replacement of unsatisfactory work.

1.4 QUALITY ASSURANCE

- A. Requirements for Structural Work: Do not cut and patch structural elements in a manner that would change their load-carrying capacity or load-deflection ratio.
 - 1. Obtain Architect's approval of the cutting and patching proposal before cutting and patching the following structural elements:
 - a. Bearing and retaining walls.
 - b. Structural concrete.
 - c. Structural steel.
 - d. Lintels.
 - e. Structural decking.
 - f. Miscellaneous structural metals.
 - g. Equipment supports.
 - h. Piping, ductwork, vessels, and equipment.
- B. Operational Limitations: Do not cut and patch operating elements or related components in a manner that would result in reducing their capacity to perform as intended. Do not cut and patch operating elements or related components in a manner that would result in increased maintenance or decreased operational life or safety.
 - 1. Obtain Architect's approval of the cutting and patching proposal before cutting and patching the following operating elements or safety related systems:
 - a. Primary operational systems and equipment.
 - b. Air or smoke barriers.
 - c. Water, moisture, or vapor barriers.
 - d. Membranes and flashings.
 - e. Fire protection systems.
 - f. Noise and vibration control elements and systems.
 - g. Control systems.
 - h. Communication systems.
 - i. Conveying systems.
 - j. Electrical wiring systems.
 - k. Operating systems of special construction in Division 13 Sections.
- C. Visual Requirements: Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in the Architect's opinion, reduce the building's aesthetic qualities. Do not cut and patch construction in a manner that would result in visual evidence of cutting and patching. Remove and replace construction cut and patched in a visually unsatisfactory manner.

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- 1. If possible retain the original Installer or fabricator to cut and patch the exposed Work listed below. If it is impossible to engage the original Installer or fabricator, engage another recognized experienced and specialized firm.
 - a. Processed concrete finishes.
 - b. Masonry.
 - c. Metalwork.
 - d. Matched-veneer woodwork.
 - e. Firestopping.
 - f. Gypsum drywall.
 - g. Tile work.
 - h. Finished flooring.
 - i. Carpeting.
 - j. HVAC enclosures, cabinets, or covers.

1.5 WARRANTY

A. Existing Warranties: Replace, patch, and repair material and surfaces cut or damaged by methods and with materials in such a manner as not to void any warranties required or existing.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

A. Use materials identical to existing materials. For exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible if identical materials are unavailable or cannot be used. Use materials whose installed performance will equal or surpass that of existing materials.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Examine surfaces to be cut and patched and conditions under which cutting and patching is to be performed before cutting. If unsafe or unsatisfactory conditions are encountered, take corrective action before proceeding.
 - Before proceeding, meet at the Project Site with parties involved in cutting and patching, including mechanical and electrical trades. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding. Contractor shall notify Architect in writing prior to any cutting. Contractor responsible for cutting to arrange meeting of all project coordinators, Architect, and Owner prior to cutting.

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3.2 PREPARATION

- A. Temporary Support: Provide temporary support of work to be cut.
- B. Protection: Protect existing construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of the Project that might be exposed during cutting and patching operations.
- C. Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
- D. Avoid cutting existing pipe, conduit, or ductwork serving the building but scheduled to be removed or relocated until provisions have been made to bypass them.

3.3 PERFORMANCE

- A. General: Employ skilled workmen to perform cutting and patching. All cutting and Patching must be completed in accordance with OSHA's Respirable Crystalline Silica standard. Proceed with cutting and patching at the earliest feasible time and complete without delay.
 - 1. Cut existing construction to provide for installation of other components or performance of other construction activities and the subsequent fitting and patching required to restore surfaces to their original condition.
- B. Cutting: Cut existing construction using methods least likely to damage elements retained or adjoining construction. Where possible, review proposed procedures with the original Installer; comply with the original Installer's recommendations.
 - 1. In general, where cutting, use hand or small power tools designed for sawing or grinding, not hammering and chopping. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
 - 2. To avoid marring existing finished surfaces, cut or drill from the exposed or finished side into concealed surfaces.
 - 3. Cut through concrete and masonry using a cutting machine, such as a Carborundum saw or a diamond-core drill.
 - 4. Comply with requirements of applicable Division 2 Sections where cutting and patching requires excavating and backfilling.
 - 5. Where services are required to be removed, relocated, or abandoned, by-pass utility services, such as pipe or conduit, before cutting. Cut-off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal the remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after by-passing and cutting.
- C. Patching: Patch with durable seams that are as invisible as possible. Comply with specified tolerances.

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- 1. Where feasible, inspect and test patched areas to demonstrate integrity of the installation.
- 2. Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
- 3. Where removing walls or partitions extends one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform color and appearance. Remove existing floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
 - a. Where patching occurs in a smooth painted surface, extend final paint coat over entire unbroken surface containing the patch after the area has received primer and second coat.
- 4. Patch, repair, or rehang existing ceilings as necessary to provide an even-plane surface of uniform appearance.

3.4 CLEANING

A. Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty, and similar items. Thoroughly clean piping, conduit, and similar features before applying paint or other finishing materials. Restore damaged pipe covering to its original condition.

END OF SECTION 01045

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SECTION 01050 - FIELD ENGINEERING

PART 1) - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. General: This Section specifies administrative and procedural requirements for fieldengineering services to be performed by the General Contractor, including, but not limited to, the following:
 - 1. Land survey work.
 - 2. Civil-engineering services.
 - 3. Damage surveys.
- B. Related Sections: The following Sections contain requirements that relate to this Section:
 - 1. Division 1 Section "Coordination Multiple Prime Contracts" for procedures for coordinating field engineering with other construction activities.
 - 2. Division 1 Section "Project Closeout" for submitting Project Record Documents and recording of Owner-accepted deviations from indicated lines and levels.

1.3 SUBMITTALS

- A. Certificates: Submit a certificate signed by the land surveyor or professional engineer certifying the location and elevation of improvements.
- B. Project Record Documents: Submit a record of Work performed and record survey data as required under provisions of "Submittals" and "Project Closeout" Sections.

1.4 QUALITY ASSURANCE

A. Surveyor Qualifications: Engage a land surveyor registered in the state where the Project is located, to perform required land-surveying services.

PART 2) - PRODUCTS (Not Applicable)

FIELD ENGINEERING 01050 - 1

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PART 3) - EXECUTION

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3.1 EXAMINATION

- A. Verify layout information shown on the Drawings, in relation to the property survey and existing benchmarks, before proceeding to lay out the Work. Locate and protect existing benchmarks and control points. Preserve permanent reference points during construction. Verify accuracy of drawings, benchmarks, and existing conditions. Verify topographic data on drawings with existing conditions.
 - 1. Do not change or relocate benchmarks or control points without prior written approval. Promptly report lost or destroyed reference points or requirements to relocate reference points because of necessary changes in grades or locations.
 - 2. Promptly replace lost or destroyed Project control points. Base replacements on the original survey control points.
- B. Establish and maintain a minimum of 2 permanent benchmarks on the site, referenced to data established by survey control points.
 - 1. Record benchmark locations, with horizontal and vertical data, on Project Record Documents.
- C. Existing Utilities and Equipment: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities and other construction.
 - 1. Prior to construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping.

3.2 PERFORMANCE

- A. Work from lines and levels established by the property survey. Establish benchmarks and markers to set lines and levels at each story of construction and elsewhere as needed to locate each element of the Project. Calculate and measure required dimensions within indicated or recognized tolerances. Do not scale Drawings to determine dimensions.
 - 1. Advise entities engaged in construction activities of marked lines and levels provided for their use.
 - 2. As construction proceeds, check every major element for line, level, and plumb.
- B. Surveyor's Log: Maintain a surveyor's log of control and other survey work. Make this log available for reference.
 - 1. Record deviations from required lines and levels, and advise the Architect when deviations that exceed indicated or recognized tolerances are detected. On Project Record Drawings, record deviations that are accepted and not corrected.
 - 2. On completion of foundation walls, major site improvements, and other work

FIELD ENGINEERING 01050 - 2

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- requiring field-engineering services, prepare a certified survey showing dimensions, locations, angles, and elevations of construction and sitework.
- C. Site Improvements: Locate and lay out site improvements, including pavements, stakes for grading, fill and topsoil placement, utility slopes, and invert elevations.
- D. Building Lines and Levels: Locate and lay out batter boards for structures, building foundations, column grids and locations, floor levels, and control lines and levels required for mechanical and electrical work.
- E. Existing Utilities: Furnish information necessary to adjust, move, or relocate existing structures, utility poles, lines, services, or other appurtenances located in or affected by construction. Coordinate with local authorities having jurisdiction.

END OF SECTION 01050

FIELD ENGINEERING 01050 - 3

SECTION 01200 - PROJECT MEETINGS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements for project meetings, including, but not limited to, the following:
 - 1. Preconstruction conferences.
 - 2. Preinstallation conferences.
 - 3. Progress meetings.
 - 4. Coordination meetings.
- C. Related Sections: The following Sections contain requirements that relate to this Section:
 - 1. Division 1 Section "Coordination" for procedures for coordinating project meetings with other construction activities.
 - 2. Division 1 Section "Submittals" for submitting the Contractor's Construction Schedule.

1.3 PRECONSTRUCTION CONFERENCE

- A. The Contractor shall schedule a preconstruction conference before starting construction, at a time convenient to the the Architect, but no later than 7 days after execution of the Agreement. Hold the conference at the Project Site or another convenient location. Conduct the meeting to review responsibilities and personnel assignments.
- B. Attendees: Authorized representatives of the Architect, all Prime Contractors and their superintendents; major subcontractors; suppliers; and other concerned parties shall attend the conference. All participants at the conference shall be familiar with the Project and authorized to conclude matters relating to the Work.
- C. Agenda: Discuss items of significance that could affect progress, including the following:
 - 1. Tentative construction schedule.
 - 2. Critical work sequencing.
 - 3. Designation of responsible personnel.
 - 4. Procedures for processing field decisions and Change Orders.
 - 5. Procedures for processing Applications for Payment.
 - 6. Distribution of Contract Documents.
 - 7. Submittal of Shop Drawings, Product Data, and Samples.
 - 8. Preparation of record documents.

- 9. Use of the premises.
- 10. Office, work, and storage areas.
- 11. Equipment deliveries and priorities.
- 12. Safety procedures.
- 13. First aid.
- 14. Security.
- 15. Housekeeping.
- 16. Working hours.

1.4 PREINSTALLATION CONFERENCES

- A. Conduct a preinstallation conference at the Project Site before each construction activity that requires coordination with other construction.
- B. Attendees: The Installer and representatives of manufacturers and fabricators involved in or affected by the installation, and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise the Architect of scheduled meeting dates.
 - 1. Review the progress of other construction activities and preparations for the particular activity under consideration at each preinstallation conference, including requirements for the following:
 - a. Contract Documents.
 - b. Options.
 - c. Related Change Orders.
 - d. Purchases.
 - e. Deliveries.
 - f. Shop Drawings, Product Data, and quality-control samples.
 - g. Review of mockups.
 - h. Possible conflicts.
 - i. Compatibility problems.
 - i. Time schedules.
 - k. Weather limitations.
 - I. Manufacturer's recommendations.
 - m. Warranty requirements.
 - n. Compatibility of materials.
 - o. Acceptability of substrates.
 - p. Temporary facilities.
 - g. Space and access limitations.
 - r. Governing regulations.
 - s. Safety.
 - t. Inspecting and testing requirements.
 - u. Required performance results.
 - v. Recording requirements.
 - w. Protection.
 - 2. Record significant discussions and agreements and disagreements of each conference, and the approved schedule. Promptly distribute the record of the meeting to everyone concerned, including the Architect.
 - 3. Do not proceed with the installation if the conference cannot be successfully

concluded. Initiate whatever actions are necessary to resolve impediments to performance of Work and reconvene the conference at the earliest feasible date.

1.5 PROGRESS MEETINGS

- A. The Contractor will conduct bi-weekly progress meetings at the Project Site.
- B. Attendees: In addition to representatives of the Owner and the Architect, all Prime Contractors, subcontractors, suppliers, or other entities concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the conference shall be familiar with the Project and authorized to conclude matters relating to the Work.
- C. Agenda: Review and correct or approve minutes of the previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to the status of the Project.
 - 1. Contractor's Construction Schedule: Review progress since the last meeting. Determine where each activity is in relation to the Contractor's Construction Schedule, whether on time or ahead or behind schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to insure that current and subsequent activities will be completed within the Contract Time.
 - 2. Review the present and future needs of each entity present, including the following:
 - a. Interface requirements.
 - b. Time.
 - c. Sequences.
 - d. Status of submittals.
 - e. Deliveries.
 - f. Off-site fabrication problems.
 - g. Access.
 - h. Site utilization.
 - i. Temporary facilities and services.
 - j. Hours of work.
 - k. Hazards and risks.
 - I. Housekeeping.
 - m. Quality and work standards.
 - n. Change Orders.
 - o. Documentation of information for payment requests.
- D. Reporting: After each meeting the Contractor will distribute minutes of the meeting to each party present and to parties who should have been present.
 - 1. Schedule Updating: The General Contractor shall revise the Contractor's Construction Schedule after each progress meeting where revisions to the schedule have been made or recognized. Deliver the revised schedule to the Architect no later than 3 days after the meeting for inclusion in the minutes.

1.6 COORDINATION MEETINGS

- A. The Contractor shall conduct project coordination meetings at regular intervals convenient for all parties involved. Project coordination meetings are in addition to specific meetings held for other purposes, such as regular progress meetings and special preinstallation meetings.
- B. Request representation at each meeting by every party currently involved in coordination or planning for the construction activities involved.
- C. Record meeting results and distribute copies to everyone in attendance, the Architect and to others affected by decisions or actions resulting from each meeting.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01200

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SECTION 01300 - SUBMITTALS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for submittals required for performance of the Work, including the following:
 - 1. Submittal schedule.
 - 2. Daily construction reports.
 - 3. Shop Drawings.
 - 4. Product Data.
 - 5. Samples.
 - 6. Quality assurance submittals.
- B. Administrative Submittals: Refer to other Division 1 Sections and other Contract Documents for requirements for administrative submittals. Such submittals include, but are not limited to, the following:
 - 1. Permits.
 - 2. Applications for Payment.
 - 3. Performance and payment bonds.
 - 4. Insurance certificates.
 - 5. List of subcontractors.
- C. Related Sections: The following Sections contain requirements that relate to this Section:
 - 1. Division 1 Section "Applications for Payment" specifies requirements for submittal of the Schedule of Values.
 - 2. Division 1 Section "Coordination" specifies requirements governing preparation and submittal of required Coordination Drawings.
 - 3. Division 1 Section "Project Meetings" specifies requirements for submittal and distribution of meeting and conference minutes.
 - 4. Division 1 Section "Quality Control" specifies requirements for submittal of inspection and test reports.
 - 5. Division 1 Section "Contract Closeout" specifies requirements for submittal of Project Record Documents and warranties at project closeout.

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1.3 DEFINITIONS

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- A. Coordination Drawings show the relationship and integration of different construction elements that require careful coordination during fabrication or installation to fit in the space provided or to function as intended.
 - 1. Preparation of Coordination Drawings is specified in Division 1 Section "Coordination" and may include components previously shown in detail on Shop Drawings or Product Data.
- B. Field samples are full-size physical examples erected on-site to illustrate finishes, coatings, or finish materials. Field samples are used to establish the standard by which the Work will be judged.
- C. Mockups are full-size assemblies for review of construction, coordination, testing, or operation; they are not Samples.

1.4 SUBMITTAL PROCEDURES

- A. Coordination: Coordinate preparation and processing of submittals with performance of construction activities. Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay.
 - 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 - 2. Coordinate transmittal of different types of submittals for related elements of the Work so processing will not be delayed by the need to review submittals concurrently for coordination.
 - a. The Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until all related submittals are received.
 - 3. Processing: To avoid the need to delay installation as a result of the time required to process submittals, allow sufficient time for submittal review, including time for resubmittals.
 - a. Allow 1 week for initial review. Allow additional time if the Architect must delay processing to permit coordination with subsequent submittals.
 - b. If an intermediate submittal is necessary, process the same as the initial submittal.
 - c. Allow 1 week for reprocessing each submittal.
 - d. No extension of Contract Time will be authorized because of failure to transmit submittals to the Architect sufficiently in advance of the Work to permit processing.
- B. Submittal Preparation: Place a permanent label or title block on each submittal for identification. Indicate the name of the entity that prepared each submittal on the label or title block.

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1. Provide a space approximately 4 by 5 inches (100 by 125 mm) on the label or beside the title block on Shop Drawings to record the Contractor's review and approval markings and the action taken.

- 2. Include the following information on the label for processing and recording action taken.
 - a. Project name.
 - b. Date.

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- c. Name and address of the Architect.
- d. Name and address of the Contractor.
- e. Name and address of the subcontractor.
- f. Name and address of the supplier.
- g. Name of the manufacturer.
- h. Number and title of appropriate Specification Section.
- i. Drawing number and detail references, as appropriate.
- C. Submittal Transmittal: Package each submittal appropriately for transmittal and handling. Transmit each submittal from the Contractor to the Architect using a transmittal form. The Architect will not accept submittals received from sources other than the Contractor.
 - On the transmittal, record relevant information and requests for data. On the form, or separate sheet, record deviations from Contract Document requirements, including variations and limitations. Include Contractor's certification that information complies with Contract Document requirements. The Contractor shall be required to secure a Shop Drawings Stamp / Sticker which shall have thereon the following:

() APPROVED () NOT APPRO

This stamp constitutes a representation to the Owner and Architect/Engineer that the Contractor has determined and verified all quantities, field measurements, dimensions, field construction criteria, materials, catalogue numbers and similar data or he has checked and coordinated each Shop Drawing or Sample with the requirements of the work of the contract Documents.

PROJECT:	
CONTRACTOR:	
DATE:	BY

2. Transmittal Form: Use AIA Document G810.

1.5 SUBMITTAL SCHEDULE

- A. After development and acceptance of the Contractor's Construction Schedule, contractor shall prepare a complete schedule of submittals. Submit the schedule within 10 days of the date required for submittal of the Construction Schedule.
 - 1. Coordinate Submittal Schedule with the list of subcontracts, Schedule of Values, and the list of products as well as the Contractor's Construction Schedule.
 - 2. Prepare the schedule in chronological order. Provide the following information:
 - a. Scheduled date for the first submittal.

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- b. Related Section number.
- c. Submittal category (Shop Drawings, Product Data, or Samples).
- d. Name of the subcontractor.
- e. Description of the part of the Work covered.
- f. Scheduled date for resubmittal.
- g. Scheduled date for the Architect's final release or approval.
- B. Distribution: Following response to the initial submittal, print and distribute copies to the Architect, subcontractors, and other parties required to comply with submittal dates indicated. Post copies in the Project meeting room and field office.
 - 1. When revisions are made, distribute to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in construction activities.
- C. Schedule Updating: Revise the schedule after each meeting or activity where revisions have been recognized or made. Issue the updated schedule to the Architect following each progress meeting.

1.6 DAILY CONSTRUCTION REPORTS

- A. Prepare a daily construction report recording the following information concerning events at the site, and submit via email to rmalcolm@camarchus.com no later than 10:00 a.m. on the following work day:
 - 1. List of subcontractors at the site.
 - 2. Count of personnel at the site.
 - 3. Brief Description of Activities
 - 4. Significant Events.
 - 5. Stoppages, delays, shortages, and losses.
 - 6. Construction Equipment on Site

1.7 SHOP DRAWINGS

- A. Submit newly prepared information drawn accurately to scale. Highlight, encircle, or otherwise indicate deviations from the Contract Documents. Do not reproduce Contract Documents or copy standard information as the basis of Shop Drawings. Standard information prepared without specific reference to the Project is not a Shop Drawing.
- B. Shop Drawings include fabrication and installation Drawings, setting diagrams, schedules, patterns, templates and similar Drawings. Include the following information:
 - 1. Dimensions.
 - 2. Identification of products and materials included by sheet and detail number.
 - 3. Compliance with specified standards.
 - 4. Notation of coordination requirements.
 - 5. Notation of dimensions established by field measurement.

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- 6. Sheet Size: Except for templates, patterns and similar full-size Drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches (215 by 280 mm) but no larger than 36 by 48 inches (890 by 1220 mm).
- 7. Submittal: Submit 8 blue- or black-line prints. The Architect will retain 2 prints and return the remainder.
- 8. Do not use Shop Drawings without an appropriate final stamp indicating action taken.

1.8 PRODUCT DATA

- A. Collect Product Data into a single submittal for each element of construction or system. Product Data includes printed information, such as manufacturer's installation instructions, catalog cuts, standard color charts, roughing-in diagrams and templates, standard wiring diagrams, and performance curves.
 - 1. Mark each copy to show applicable choices and options. Where printed Product Data includes information on several products that are not required, mark copies to indicate the applicable information. Include the following information:
 - a. Manufacturer's printed recommendations.
 - b. Compliance with trade association standards.
 - c. Compliance with recognized testing agency standards.
 - d. Application of testing agency labels and seals.
 - e. Notation of dimensions verified by field measurement.
 - f. Notation of coordination requirements.
 - 2. Do not submit Product Data until compliance with requirements of the Contract Documents has been confirmed.
 - 3. Submittals: Submit 6 copies of each required submittal. The Architect will retain 3 and will return the others marked with action taken and corrections or modifications required.
 - a. Unless noncompliance with Contract Document provisions is observed, the submittal may serve as the final submittal.
 - 4. Distribution: Furnish copies of final submittal to installers, subcontractors, suppliers, manufacturers, fabricators, and others required for performance of construction activities. Show distribution on transmittal forms.
 - a. Do not proceed with installation until a copy of Product Data is in the Installer's possession.
 - b. Do not permit use of unmarked copies of Product Data in connection with construction.

1.9 SAMPLES

A. Submit full-size, fully fabricated Samples cured and finished as specified and physically identical with the material or product proposed. Samples include partial sections of

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manufactured or fabricated components, cuts or containers of materials, color range sets, and swatches showing color, texture, and pattern.

- 1. Mount or display Samples in the manner to facilitate review of qualities indicated. Prepare Samples to match the Architect's sample. Include the following:
 - a. Specification Section number and reference.
 - b. Generic description of the Sample.
 - c. Sample source.

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- d. Product name or name of the manufacturer.
- e. Compliance with recognized standards.
- f. Availability and delivery time.
- 2. Submit Samples for review of size, kind, color, pattern, and texture. Submit Samples for a final check of these characteristics with other elements and a comparison of these characteristics between the final submittal and the actual component as delivered and installed.
 - a. Where variation in color, pattern, texture, or other characteristic is inherent in the material or product represented, submit at least 3 multiple units that show approximate limits of the variations.
 - b. Refer to other Specification Sections for requirements for Samples that illustrate workmanship, fabrication techniques, details of assembly, connections, operation, and similar construction characteristics.
 - c. Refer to other Sections for Samples to be returned to the Contractor for incorporation in the Work. Such Samples must be undamaged at time of use. On the transmittal, indicate special requests regarding disposition of Sample submittals.
 - d. Samples not incorporated into the Work, or otherwise designated as the Owner's property, are the property of the Contractor and shall be removed from the site prior to Substantial Completion.
- 3. Preliminary Submittals: Submit a full set of choices where Samples are submitted for selection of color, pattern, texture, or similar characteristics from a range of standard choices.
 - a. The Architect will review and return preliminary submittals with the Architect's notation, indicating selection and other action.
- 4. Submittals: Except for Samples illustrating assembly details, workmanship, fabrication techniques, connections, operation, and similar characteristics, submit 3 sets. The Architect will return one set marked with the action taken.
- 5. Maintain sets of Samples, as returned, at the Project Site, for quality comparisons throughout the course of construction.
 - a. Unless noncompliance with Contract Document provisions is observed, the submittal may serve as the final submittal.
 - b. Sample sets may be used to obtain final acceptance of the construction associated with each set.

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- B. Distribution of Samples: Prepare and distribute additional sets to subcontractors, manufacturers, fabricators, suppliers, installers, and others as required for performance of the Work. Show distribution on transmittal forms.
 - 1. Field samples are full-size examples erected on-site to illustrate finishes, coatings, or finish materials and to establish the Project standard.
 - a. Comply with submittal requirements to the fullest extent possible. Process transmittal forms to provide a record of activity.

1.10 QUALITY ASSURANCE SUBMITTALS

- A. Submit quality-control submittals, including design data, certifications, manufacturer's instructions, manufacturer's field reports, and other quality-control submittals as required under other Sections of the Specifications.
- B. Certifications: Where other Sections of the Specifications require certification that a product, material, or installation complies with specified requirements, submit a notarized certification from the manufacturer certifying compliance with specified requirements.
 - 1. Signature: Certification shall be signed by an officer of the manufacturer or other individual authorized to sign documents on behalf of the company.
- C. Inspection and Test Reports: Requirements for submittal of inspection and test reports from independent testing agencies are specified in Division 1 Section "Quality Control."

1.11 ARCHITECT'S ACTION

- A. Except for submittals for the record or information, where action and return is required, the Architect will review each submittal, mark to indicate action taken, and return promptly.
 - 1. Compliance with specified characteristics is the Contractor's responsibility.
- B. Action Stamp: The Architect will stamp each submittal with a uniform, action stamp. The Architect will mark the stamp appropriately to indicate the action taken, as follows:
 - 1. Final Unrestricted Release: When the Architect marks a submittal "Reviewed," the Work covered by the submittal may proceed provided it complies with requirements of the Contract Documents. Final payment depends on that compliance.
 - 2. Final-But-Restricted Release: When the Architect marks a submittal "Furnished As Corrected," the Work covered by the submittal may proceed provided it complies with notations or corrections on the submittal and requirements of the Contract Documents. Final payment depends on that compliance.
 - 3. Returned for Resubmittal: When the Architect marks a submittal "Revise and Resubmit," do not proceed with Work covered by the submittal, including purchasing, fabrication, delivery, or other activity. Revise or prepare a new submittal according to the notations; resubmit without delay. Repeat if necessary to obtain different action mark.

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- a. Do not use, or allow others to use, submittals marked "Revise and Resubmit" at the Project Site or elsewhere where Work is in progress.
- 4. Rejected: When the Architect marks a submittal "Rejected", do not proceed with Work covered by the submittal, and do not resubmit the same product or other item. This action indicates that the product is not acceptable.
- C. Unsolicited Submittals: The Architect will return unsolicited submittals to the sender without action.

PART 2 - PRODUCTS (Not Applicable) PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01300

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SECTION 01400 - QUALITY CONTROL

PART 1) - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for quality-control services.
- B. Quality-control services include inspections, tests, and related actions, including reports performed by Owner, by independent agencies, and by governing authorities. They do not include contract enforcement activities performed by Architect.
- C. Inspection and testing services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with Contract Document requirements.
- D. Requirements of this Section relate to customized fabrication and installation procedures, not production of standard products.
 - 1. Specific quality-control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
 - 2. Specified inspections, tests, and related actions do not limit Contractor's quality-control procedures that facilitate compliance with Contract Document requirements.
 - 3. Requirements for Owner to provide quality-control services required by Architect, or authorities having jurisdiction are not limited by provisions of this Section.
- E. Related Sections: The following Sections contain requirements that relate to this Section:
 - 1. Division 1 Section "Cutting and Patching" specifies requirements for repair and restoration of construction disturbed by inspection and testing activities.
 - 2. Division 1 Section "Submittals" specifies requirements for development of a schedule of required tests and inspections.

1.3 RESPONSIBILITIES

- A. Unless otherwise indicated as the responsibility of another identified entity, Contractor will provide inspections, tests, and other quality-control services specified elsewhere in the Contract Documents and required by authorities having jurisdiction.
- B. Retesting: The Contractor is responsible for the cost of retesting where results of

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inspections, tests, or other quality-control services prove unsatisfactory and indicate noncompliance with Contract Document requirements, regardless of whether the original test was Contractor's responsibility.

- 1. The cost of retesting construction, revised or replaced by the Contractor, is the Contractor's responsibility where required tests performed on original construction indicated noncompliance with Contract Document requirements.
- C. Associated Services: Cooperate with agencies performing required inspections, tests, and similar services, and provide reasonable auxiliary services as requested. Notify the agency sufficiently in advance of operations to permit assignment of personnel. Auxiliary services required include, but are not limited to, the following:
 - 1. Provide access to the Work.
 - 2. Furnish incidental labor and facilities necessary to facilitate inspections and tests.
 - 3. Take adequate quantities of representative samples of materials that require testing or assist the agency in taking samples.
 - 4. Provide facilities for storage and curing of test samples.
 - 5. Deliver samples to testing laboratories.
 - 6. Provide the agency with a preliminary design mix proposed for use for materials mixes that require control by the testing agency.
 - 7. Provide security and protection of samples and test equipment at the Project Site.
- D. Coordination: Coordinate the sequence of activities to accommodate required services with a minimum of delay. Coordinate activities to avoid the necessity of removing and replacing construction to accommodate inspections and tests.
 - 1. The Contractor is responsible for scheduling times for inspections, tests, taking samples, and similar activities.

1.4 SUBMITTALS

- A. Unless the Contractor is responsible for this service, the independent testing agency shall submit a certified written report, in duplicate, of each inspection, test, or similar service to the Architect. If the Contractor is responsible for the service, submit a certified written report, in duplicate, of each inspection, test, or similar service through the Contractor.
 - 1. Submit additional copies of each written report directly to the governing authority, when the authority so directs.
 - 2. Report Data: Written reports of each inspection, test, or similar service include, but are not limited to, the following:
 - a. Date of issue.
 - b. Project title and number.
 - c. Name, address, and telephone number of testing agency.
 - d. Dates and locations of samples and tests or inspections.
 - e. Names of individuals making the inspection or test.
 - f. Designation of the Work and test method.
 - g. Identification of product and Specification Section.
 - h. Complete inspection or test data.

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- i. Test results and an interpretation of test results.
- j. Ambient conditions at the time of sample taking and testing.
- k. Comments or professional opinion on whether inspected or tested Work complies with Contract Document requirements.
- I. Name and signature of laboratory inspector.
- m. Recommendations on retesting.

PART 2) - PRODUCTS (Not Applicable)

PART 3) - EXECUTION

3.1 REPAIR AND PROTECTION

- A. General: Upon completion of inspection, testing, sample taking and similar services, repair damaged construction and restore substrates and finishes. Comply with Contract Document requirements for Division 1 Section "Cutting and Patching."
- B. Protect construction exposed by or for quality-control service activities, and protect repaired construction.
- C. Repair and protection is Contractor's responsibility, regardless of the assignment of responsibility for inspection, testing, or similar services.

END OF SECTION 01400

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SECTION 01420 - REFERENCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 DEFINITIONS

- A. General: Basic Contract definitions are included in the Conditions of the Contract.
- B. "Approved": The term "approved," when used in conjunction with Architect's action on Contractor's submittals, applications, and requests, is limited to Architect's duties and responsibilities as stated in the Conditions of the Contract.
- C. "Directed": Terms such as "directed," "requested," "authorized," "selected," "approved," "required," and "permitted" mean directed by Architect, requested by Architect, and similar phrases.
- D. "Indicated": The term "indicated" refers to graphic representations, notes, or schedules on Drawings; or to other paragraphs or schedules in Specifications and similar requirements in the Contract Documents. Terms such as "shown," "noted," "scheduled," and "specified" are used to help the user locate the reference.
- E. "Regulations": The term "regulations" includes laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, as well as rules, conventions, and agreements within the construction industry that control performance of the Work.
- F. "Furnish": The term "furnish" means to supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
- G. "Install": The term "install" describes operations at Project site including unloading, temporary storage, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
- H. "Provide": The term "provide" means to furnish and install, complete and ready for the intended use.
- I. "Installer": An installer is Contractor or another entity engaged by Contractor, as an employee, subcontractor, or contractor of lower tier, to perform a particular construction operation, including installation, erection, application, and similar operations.
- J. The term "experienced," when used with the term "installer," means having successfully completed a minimum of five previous projects similar in size and scope to this Project; being familiar with the special requirements indicated; and having complied with requirements of authorities having jurisdiction.

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REFERENCES 01420 - 1

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- 1. Using a term such as "carpentry" does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to tradespeople of the corresponding generic name.
- K. "Project site" is the space available for performing construction activities, either exclusively or in conjunction with others performing other work as part of Project. The extent of Project site is shown on the Drawings and may or may not be identical with the description of the land on which Project is to be built.
- J. "Architect" for this project is CAM Architect

1.3 INDUSTRY STANDARDS

- A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.
- B. Publication Dates: Comply with standards in effect as of the date of the Contract Documents, unless otherwise indicated.
- C. Conflicting Requirements: Where compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to Architect for a decision before proceeding.
 - Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of the requirements. Refer uncertainties to Architect for a decision before proceeding.
- D. Copies of Standards: Each entity engaged in construction on Project must be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.
 - Where copies of standards are needed to perform a required construction activity, obtain copies directly from the publication source and make them available on request.
- E. Abbreviations and Names: Abbreviations and acronyms are frequently used in the Specifications and other Contract Documents to represent the name of a trade association, standards-developing organization, authorities having jurisdiction, or other entity in the context of referencing a standard or publication. The following abbreviations and acronyms, as referenced in the Contract Documents, mean the associated names. Names and addresses are subject to change and are believed, but are not assured, to be

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accurate and up-to-date as of the date of the Contract Documents.

AA	Aluminum Association 900 19th St., NW, Suite 300 Washington, DC 20006 www.aluminum.org	(202) 862-5100
AABC	Associated Air Balance Council 1518 K St., NW, Suite 503 Washington, DC 20005 www.aabchq.com	(202) 737-0202
AAMA	American Architectural Manufacturers Association 1827 Walden Office Sq., Suite 104 Schaumburg, IL 60173-4268 www.aamanet.org	(847) 303-5664
AAN	American Association of Nurserymen (See ANLA)	
AASHTO	American Association of State Highway and Transportation Officials 444 North Capitol St., NW, Suite 249 Washington, DC 20001 www.aashto.org	(202) 624-5800
AATCC	American Association of Textile Chemists and Colorists P.O. Box 12215 One Davis Dr. Research Triangle Park, NC 27709-2215 www.aatcc.org	(919) 549-8141
ABMA	American Bearing Manufacturers Association (Formerly: Anti-Friction Bearing Manufacturers Association) 1200 19th St., NW, Suite 300 Washington, DC 20036-2401 www.abma-dc.org	(202) 429-5155
ABMA	American Boiler Manufacturers Association 950 North Glebe Rd., Suite 160 Arlington, VA 22203-1824 www.abma.com	(703) 522-7350

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ACI	American Concrete Institute P.O. Box 9094 Farmington Hills, MI 48333-9094 www.aci-int.org	(248) 848-3700
ACIL	ACIL: The Association of Independent Scientific, Engineering, and Testing Firms 1629 K St., NW, Suite 400 Washington, DC 20006 www.acil.org	(202) 887-5872
ACPA	American Concrete Pipe Association 222 West Las Colinas Blvd., Suite 641 Irving, TX 75039-5423 www.concrete-pipe.org	(972) 506-7216
ADC	Air Diffusion Council 104 South Michigan Ave., Suite 1500 Chicago, IL 60603	(312) 201-0101
AEIC	Association of Edison Illuminating Companies 600 N. 18th St. P.O. Box 2641 Birmingham, AL 35291-0992 www.aeic.org	(205) 250-2530
AFBMA	Anti-Friction Bearing Manufacturers Association (See ABMA)	
AFPA	American Forest and Paper Association (Formerly: National Forest Products Association) 1111 19th St., NW, Suite 800 Washington, DC 20036 www.afandpa.org	(800) 878-8878 (202) 463-2700
AGA	American Gas Association 1515 Wilson Blvd. Arlington, VA 22209 www.aga.com	(703) 841-8400
AHA	American Hardboard Association 1210 W. Northwest Hwy Palatine, IL 60067-1897	(847) 934-8800
AHAM	Association of Home Appliance Manufacturers 20 N. Wacker Dr., Suite 1231	(312) 984-5800
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	1111	CODE CONCOL DIOTINO	#	BOILDING
#		Chicago, IL 60606 www.aham.org		
	Al	Asphalt Institute P.O. Box 14052 Lexington, KY 40512-4052 www.asphaltinstitute.org		(606) 288-4960
	AIA	The American Institute of A 1735 New York Ave., NW Washington, DC 20006-52 www.aia.org		(202) 626-7300
	AIA	American Insurance Assoc 1130 Connecticut Ave., NV Washington, DC 20036		(202) 828-7100
	AIHA	American Industrial Hygien Association 2700 Prosperity Ave., Suite Fairfax, VA 22031 www.aiha.org		(703) 849-8888
	AISC	American Institute of Steel Construction One East Wacker Dr., Suite Chicago, IL 60601-2001 www.aisc.web.com	∋ 3100	(800) 644-2400 (312) 670-2400
	AISI	American Iron and Steel In 1101 17th St., NW, Suite 1 Washington, DC 20036-47 www.steel.org	300	(202) 452-7100
	AITC	American Institute of Timber Construction 7012 S. Revere Pkwy, Suit Englewood, CO 80112 www.aitc-glulam.org		(303) 792-9559
	ALA	American Laminators Asso (See LMA)	ciation	
	ALCA	Associated Landscape Cor	ntractors of	(800) 395-2522
		America 150 Elden St., Suite 270 Herndon, VA 20170-4831 www.alca.org		(703) 736-9666
	ALI	Associated Laboratories, Ir	nc.	(214) 565-0593

P.O. Box 152837

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п	Dallas, TX 75315 www.assoc-labs.com	
ALSC	American Lumber Standards Committee P.O. Box 210 Germantown, MD 20875	(301) 972-1700
AMCA	Air Movement and Control Association International, Inc. 30 W. University Dr. Arlington Heights, IL 60004-1893 www.amca.org	(847) 394-0150
ANLA	American Nursery and Landscape Association (Formerly: American Association of Nurserymen) 1250 Eye St., NW, Suite 500 Washington, DC 20005 www.anla.org	(202) 789-2900
ANSI	American National Standards Institute 11 West 42nd St., 13th Floor New York, NY 10036-8002 www.ansi.org	(888) 267-4783 (212) 642-4900
AOAC	AOAC International 481 N. Frederick Ave., Suite 500 Gaithersburg, MD 20877 www.aoac.org	(301) 924-7077
AOSA	Association of Official Seed Analysts P.O. Box 81152 Lincoln, NE 68501-1152 www.zianet.com/AOSA	(402) 476-3852
APA	APA-The Engineered Wood Association (Formerly: American Plywood Association) P.O. Box 11700 Tacoma, WA 98411-0700 www.apawood.org	(253) 565-6600
APA	Architectural Precast Association P.O. Box 08669 Fort Myers, FL 33908-0669 www.archprecast.org	(941) 454-6989
API	American Petroleum Institute 1220 L St., NW, Suite 900 Washington, DC 20005-8029 www.api.org	(202) 682-8000

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ARI	Air-Conditioning and Refrigeration Institute 4301 Fairfax Dr., Suite 425 Arlington, VA 22203 www.ari.org	(703) 524-8800
ARMA	Asphalt Roofing Manufacturers Association Center Park 4041 Powder Mill Rd., Suite 404 Calverton, MD 20705 www.asphaltroofing.org	(301) 348-2002
ASA	Acoustical Society of America 500 Sunnyside Blvd. Woodbury, NY 11797 //asa.aip.org	(516) 576-2360
ASC	Adhesive and Sealant Council 1627 K St., NW, Suite 1000 Washington, DC 20006-1707 www.ascouncil.org	(202) 452-1500
ASCA	Architectural Spray Coaters Association 895 Doncaster Dr. West Deptford, NJ 08066	(609) 848-6120
ASCE	American Society of Civil Engineers World Headquarters 1801 Alexander Graham Bell Dr. Reston, VA 20191-4400 www.asce.org	(800) 548-2723 (703) 295-6000
ASHES	American Society for Healthcare Environmental Services Division of the American Hospital Association One North Franklin, Suite 2700	(312) 422-3860
ASHRAE	Chicago, IL 60606 American Society of Heating, Refrigerating and	(800) 527-4723
	Air-Conditioning Engineers 1791 Tullie Circle, NE Atlanta, GA 30329-2305 www.ashrae.org	(404) 636-8400
ASLA	American Society of Landscape Architects	(202) 898-2444
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636 Eye St., NW Washington, DC 20001-3736 www.asla.org ASME American Society of Mechanical (800) 843-2763 **Engineers** 345 East 47th St. (212) 705-7722 New York, NY 10017-2392 www.asme.org **ASPA** American Sod Producers Association (See TPI) **ASPE** American Society of Plumbing (805) 495-7120 **Engineers** 3617 Thousand Oaks Blvd., Suite 210 Westlake Village, CA 91362-3649 **ASQ** American Society for Quality (800) 248-1946 611 East Wisconsin Ave. (414) 272-8575 Milwaukee, WI 53201-3005 www.asq.org **ASSE** American Society of Sanitary (440) 835-3040 Engineering 28901 Clemens Rd. Westlake, OH 44145 www.asse-plumbing.org **ASTM** American Society for Testing and (610) 832-9500 Materials 100 Barr Harbor Dr. West Conshohocken, PA 19428-2959 www.astm.org **ATIS** Alliance for Telecommunications (202) 628-6380 **Industry Solutions** (Formerly: Exchange Carriers Standards Association) 1200 G St., NW, Suite 500 Washington, DC 20005 www.atis.org **AWCI** Association of the Wall and Ceiling (703) 534-8300 Industries--International 803 West Broad St., Suite 600 Falls Church, VA 22046 www.awci.org **AWCMA** American Window Covering Manufacturers Association

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(See WCMA)

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AWI	Architectural Woodwork Institute 1952 Isaac Newton Sq. West Reston, VA 20190 www.awinet.org	(800) 449-8811 (703) 733-0600
AWPA	American Wood-Preservers' Association P.O. Box 5690 Granbury, TX 76049 www.awpa.com	(817) 326-6300
AWPB	American Wood Preservers' Bureau (This organization is now defunct.)	
AWS	American Welding Society 550 NW LeJeune Rd. Miami, FL 33126 www.amweld.org	(800) 443-9353 (305) 443-9353
AWWA	American Water Works Association 6666 W. Quincy Ave. Denver, CO 80235 www.awwa.org	(800) 926-7337 (303) 794-7711
BAC	Brick Association of the Carolinas (Formerly: Brick Association of North Carolina) P.O. Box 13290 Greensboro, NC 27415-3290 www.gobrick.com	(800) 622-7425 (336) 273-5566
ВНМА	Builders Hardware Manufacturers Association 355 Lexington Ave., 17th Floor New York, NY 10017-6603	(212) 661-4261
BIA	Brick Industry Association 11490 Commerce Park Dr. Reston, VA 22091-1525 www.bia.org	(703) 620-0010
BIFMA	The Business and Institutional Furniture Manufacturer's Association International 2680 Horizon Dr., SE, Suite A1 Grand Rapids, MI 49546-7500 www.bifma.com	(616) 285-3963
CAGI	Compressed Air and Gas Institute c/o Thomas Associates, Inc. 1300 Sumner Ave. Cleveland, OH 44115-2851	(216) 241-7333
#		

RIVERSIDE SCHOOL DISTRICT – CONCESSION / STORAGE BUILDING #					
#	www.taol.com/cagi				
CAUS	Color Association of the United States 409 W. 44th St. New York, NY 10036-4402	(212) 582-6884			
СВМА	Certified Ballast Manufacturers Association 355 Lexington Ave., 17th Floor New York, NY 10017 www.certbal.org	(212) 661-4261			
ccc	Carpet Cushion Council P.O. Box 546 Riverside, CT 06878-0546	(203) 637-1312			
CDA	Copper Development Association Inc. 260 Madison Ave., 16th Floor New York, NY 10016-2401 www.copper.org	(800) 232-3282 (212) 251-7200			
CFFA	Chemical Fabrics & Film Association, Inc. c/o Thomas Associates, Inc. 1300 Sumner Ave. Cleveland, OH 44115-2851 www.taol.com/cffa	(216) 241-7333			
CGA	Compressed Gas Association 1725 Jefferson Davis Hwy, Suite 1004 Arlington, VA 22202-4102 www.cganet.com	(703) 412-0900			
CISCA	Ceilings and Interior Systems Construction Association 1500 Lincoln Hwy, Suite 202 St. Charles, IL 60174 www.cisca.org	(630) 584-1919			
CISPI	Cast Iron Soil Pipe Institute 5959 Shallowford Rd., Suite 419 Chattanooga, TN 37421 www.cispi.org	(423) 892-0137			

CLFMI Chain Link Fence Manufacturers

Institute

9891 Broken Land Pkwy, Suite 300 Columbia, MD 21046 www.baileadership.com

(301) 596-2584

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#	CPA	Composite Panel Association (Formerly: National Particleboard Association) 18928 Premiere Ct. Gaithersburg, MD 20879-1569 www.pbmdf.com	(301) 670-0604
	CPPA	Corrugated Polyethylene Pipe Association	(800) 510-2772
		3621 Secor Rd., Suite 320 Toledo, OH 436046	(419) 241-2221
	CRI	www.cppa-info.org Carpet and Rug Institute 310 S. Holiday Ave. Dalton, GA 30722-2048 www.carpet-rug.com	(800) 882-8846 (706) 278-3176
	CRSI	Concrete Reinforcing Steel Institute 933 N. Plum Grove Rd. Schaumburg, IL 60173-4758 www.crsi.org	(847) 517-1200
	CSSB	Cedar Shake and Shingle Bureau 515 116th Ave., NE, Suite 275 Bellevue, WA 98004-5294 www.cedarbureau.org	(206) 453-1323
	СТІ	Ceramic Tile Institute of America 12061 West Jefferson Blvd. Culver City, CA 90230-6219	(310) 574-7800
	СТІ	Cooling Tower Institute P.O. Box 73383 Houston, TX 77273 www.cti.org	(281) 583-4087
	DASMA	Door and Access Systems Manufacturers Association, International (Formerly: National Association of Garage Door Manufacturers) c/o Thomas Associates, Inc. 1300 Sumner Ave. Cleveland, OH 44115-2851 www.taol.com/dasma	(216) 241-7333
	DHI	Door and Hardware Institute (Formerly: National Builders Hardware Association) 14170 Newbrook Dr.	(703) 222-2010

RIVERSIDE SCHOOL DISTRICT – CONCESSION / STORAGE BUILDING #						
#	Chantilly, VA 20151-2223 www.dhi.org					
DIPRA	Ductile Iron Pipe Research Association 245 Riverchase Pkwy East, Suite O Birmingham, AL 35244 www.dipra.org	(205) 402-8702				
DLPA	Decorative Laminate Products Association (Dissolved in 1995 - Now part of KCMA.)					
ECSA	Exchange Carriers Standards Association (See ATIS)					
EIA	Electronic Industries Association 2500 Wilson Blvd. Arlington, VA 22201 www.eia.org	(703) 907-7500				
EIMA	EIFS Industry Members Association 3000 Corporate Center Dr., Suite 270 Morrow, GA 30260-4116 www.eifsfacts.com	(800) 294-3462 (770) 968-7945				
EJMA	Expansion Joint Manufacturers Association 25 N. Broadway Tarrytown, NY 10591-3201 www.ejma.org	(914) 332-0040				
ETL	ETL Testing Laboratories, Inc. (Now part of ITS)					
FCI	Fluid Controls Institute c/o Thomas Associates, Inc 1300 Sumner Ave. Cleveland, OH 44115-2851 www.taol.com/fci	(216) 241-7333				
FCICA	Floor Covering Installation Contractors Association P.O. Box 948 Dalton, GA 30722-0948	(706) 226-5488				
FGMA	Flat Glass Marketing Association (See GANA)					

#
REFERENCES

FM Factory Mutual System

(781) 762-4300

	RIVERS	#	BUILDING
#		1151 Boston-Providence Tnpk. P.O. Box 9102 Norwood, MA 02062-9102 www.factorymutual.com	
	GA	Gypsum Association 810 First St., NE, Suite 510 Washington, DC 20002 www.usg.com	(202) 289-5440
	GANA	Glass Association of North America (Formerly: Flat Glass Marketing Association) 2945 Southwest Wanamaker Dr., Suite A Topeka, KS 66614 www.glasswebsite.com/gana	(913) 266-7013
	GRI	Geosynthetic Research Institute 475 Kedron Ave. Folsom, PA 19033 www.drexel.edu/gri	(610) 522-8440
	HEI	Heat Exchange Institute c/o Thomas Associates, Inc. 1300 Sumner Ave. Cleveland, OH 44115-2851 www.taol.com/hei	(216) 241-7333
	HI	Hydraulic Institute 9 Sylvan Way Parsippany, NJ 07054-3802	(888) 786-7744 (973) 267-9700
	HI	Hydronics Institute Division of Gas Appliance Manufacturers Association P.O. Box 218 35 Russo Pl. Berkeley Heights, NJ 07922 www.gamanet.org	(908) 464-8200
	НМА	Hardwood Manufacturers Association (Formerly: Southern Hardwood Lumber Manufacturers	(412) 829-0770

Manufacturers Association)

400 Penn Center Blvd., Suite 530 Pittsburgh, PA 15235-5605

www.hardwood.org

HPVA Hardwood Plywood and Veneer

Association

1825 Michael Farraday Dr.

P.O. Box 2789

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(703) 435-2900

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#	Reston, VA 22195-0789 www.hpva.org	
IAS	International Approval Services Division of Canadian Standards Association 8501 East Pleasant Valley Rd. Cleveland, OH 44131 www.iasapprovals.org	(216) 524-4990
IBD	Institute of Business Designers (Now part of IIDA)	
ICC	International Code Council 5203 Leesburg Pike #708 Falls Church, VA 22041 www.intlcode.org	(703) 931-4533
ICEA	Insulated Cable Engineers Association P.O. Box 440 South Yarmouth, MA 02664 www.icea.net	(508) 394-4424
IEC	International Electrotechnical	(888) 267-4783
	Commission (Available from ANSI) 11 West 42nd St., 13th Floor New York, NY 10036-8002 www.ansi.org	(212) 642-4900
IEEE	Institute of Electrical and	(800) 678-4333
	Electronics Engineers 345 E. 47th St. New York, NY 10017-2394 www.ieee.org	(212) 705-7900
IESNA	Illuminating Engineering Society of North America 120 Wall St., 17th Floor New York, NY 10005-4001 www.iesna.org	(212) 248-5000
IGCC	Insulating Glass Certification Council P.O. Box 9 Henderson Harbor, NY 13651	(315) 938-7444
IIDA	International Interior Design	(800) 888-4432
	Association 341 Merchandise Mart Chicago, IL 60654-1104	(312) 467-1950

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RIVERSIDE SCHOOL DISTRICT - CONCESSION / STORAGE BUILDING #			
#		www.iida.com	
	ILI	Indiana Limestone Institute of America Stone City Bank Building, Suite 400 Bedford, IN 47421 www.iliai.com	(812) 275-4426
	IMSA	International Municipal Signal Association	(800) 723-4672
		P.O. Box 539 165 E. Union St. Newark, NY 14513 www.imsasafety.org	(315) 331-2182
	INCE	Institute of Noise Control Engineering P.O. Box 3206, Arlington Branch Poughkeepsie, NY 12603 www.ince.org	(914) 462-4006
	IRI	HSB Industrial Risk Insurers P.O. Box 5010 85 Woodland St. Hartford, CT 06102-5010 www.industrialrisk.com	(800) 520-7300 (860) 520-7300
	ISA	ISA - International Society for Measurement and Control P.O. Box 12277 67 Alexander Dr. Research Triangle Park, NC 27709 www.isa.org	(919) 549-8411
	ISEA	Industrial Safety Equipment Association 1901 N. Moore St., Suite 808 Arlington, VA 22209 www.safetycentral.org/isea	(703) 525-1695
	ISS	Iron and Steel Society 410 Commonwealth Dr. Warrendale, PA 15086-7512 www.issource.org	(412) 776-1535
	ITS	Intertek Testing Services	(800) 345-3851 (607) 753-6711

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(607) 753-6711

(Formerly: Inchcape Testing Services)

P.O. Box 2040

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F		3933 US Route 11 Cortland, NY 13045-7902 www.itsglobal.com	
	KCMA	Kitchen Cabinet Manufacturers Association (Formerly: National Kitchen Cabinet Association) 1899 Preston White Dr. Reston, VA 22191 www.kema.org	(703) 264-1690
	LGSI	Light Gage Structural Institute P.O. Box 560746 The Colony, TX 75056	(972) 625-4560
	LIA	Lead Industries Association, Inc. 295 Madison Ave., Suite 808 New York, NY 10017 www.leadinfo.com	(800) 422-5323 (212) 578-4750
	LMA	Laminating Materials Association (Formerly: American Laminators Association) 116 Lawrence St. Hillsdale, NJ 07642-2730 www.lma.org	(201) 664-2700
	LPI	Lightning Protection Institute 3335 N. Arlington Heights Rd., Suite E Arlington Heights, IL 60004-7700 www.lightning.org	(800) 488-6864 (847) 577-7200
	МВМА	Metal Building Manufacturers Association c/o Thomas Associates, Inc. 1300 Sumner Ave. Cleveland, OH 44115-2851 www.taol.com/mbma	(216) 241-7333
	MCAA	Mechanical Contractors Association of America 1385 Piccard Dr. Rockville, MD 20850-4329 www.mcaa.org	(301) 869-5800
ŧ	MFMA	Maple Flooring Manufacturers Association (Formerly: Wood and Synthetic	(847) 480-9138

REFERENCES

		:	#	
#		Flooring Institute) 60 Revere Dr., Suite 500 Northbrook, IL 60062 www.maplefloor.com		
	MFMA	Metal Framing Manufacturers Association 401 N. Michigan Ave. Chicago, IL 60611	•	(312) 644-6610
	MHIA	Material Handling Industry Association		(800) 345-1815
		8720 Red Oak Blvd., Suite 20 Charlotte, NC 28217-3957 www.mhia.org	01	(704) 676-1190
	MIA	Marble Institute of America 30 Eden Alley, Suite 301 Columbus, OH 43215 www.marble-institute.com		(614) 228-6194
	MIA	Masonry Institute of America 2550 Beverly Blvd. Los Angeles, CA 90057 www.masonryinstitute.org		(213) 388-0472
	ML/SFA	Metal Lath/Steel Framing Ass 8 South Michigan Ave., Suite Chicago, IL 60603		(312) 456-5590
	MRCA	Midwest Roofing Contractors Association 4840 W. 15th St., Suite 1000 Lawrence, KS 66049 www.mrca.org		(913) 843-4888
	MSS	Manufacturers Standardization of the Valve and Fittings Industry 127 Park St., NE Vienna, VA 22180-4602 www.mss-hq.com	on Society	(703) 281-6613
	NAA	National Arborist Association P.O. Box 1094 Amherst, NH 03031-1094 www.natlarb.com		(800) 733-2622 (603) 673-3311
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NAAMM

REFERENCES 01420 - 17

National Association of Architectural

8 South Michigan Ave., Suite 1000

Metal Manufacturers

(312) 322-0405

RIVERSIDE SCHOOL DISTRICT - CONCESSION / STORAGE BUILDING #			
#		Chicago, IL 60603 www.gss.net/naamm	
	NAAMM	North American Association of Mirror Manufacturers (See GANA) 2945 Southwest Wanamaker Dr., Suite A Topeka, KS 66614 www.glasswebsite.com/naamm	(913) 266-7013
	NACE	NACE International (Formerly: National Association of Corrosion Engineers) P.O. Box 218340 Houston, TX 77218-8340	(281) 492-0535 (281) 492-8254
	NAGDM	National Association of Garage Door Manufacturers (See DASMA)	
	NAIMA	North American Insulation Manufacturers Association (Formerly: Thermal Insulation Manufacturers Association) 44 Canal Center Plaza, Suite 310 Alexandria, VA 22314 www.naima.org	(703) 684-0084
	NAMI	National Accreditation & Management Institute, Inc. P.O. Box 366 207 S. Washington St. Berkeley Springs, WV 25411	(304) 258-5100
	NAPA	National Asphalt Pavement Association NAPA Building 5100 Forbes Blvd. Lanham, MD 20706-4413 www.hotmix.org	(888) 468-6499 (301) 731-4748
	NBHA	National Builders Hardware	

NAPA	National Asphalt Pavement Association	(888) 468-6499
	NAPA Building	(301) 731-4748

Association (See DHI)

NBGQA National Building Granite Quarries (800) 557-2848

Association, Inc.

1220 L. St., NW, Suite 100-167

Washington, DC 20005

NCAC National Council of Acoustical (973) 564-5859

Consultants

66 Morris Ave., Suite 1A

		#	
#		Springfield, NJ 07081 www.ncac.com	
	NCCA	National Coil Coaters Association 401 N. Michigan Ave. Chicago, IL 60611 www.coilcoaters.org	(312) 321-6894
	NCMA	National Concrete Masonry Association 2302 Horse Pen Rd. Herndon, VA 20171-3499 www.ncma.org	(703) 713-1900
	NCPI	National Clay Pipe Institute P.O. Box 759 253-80 Center St. Lake Geneva, WI 53147 www.ncpi.org	(414) 248-9094
	NCRPM	National Council on Radiation	(800) 229-2652
		Protection and Measurements 7910 Woodmont Ave., Suite 800 Bethesda, MD 20814-3095 www.ncrp.com	(301) 657-2652
	NCSPA	National Corrugated Steel Pipe Association 1255 23rd St., NW, Suite 850 Washington, DC 20037 www.ncspa.org	(202) 452-1700
	NEBB	Natural Environmental Balancing Bureau 8575 Grovemont Circle Gaithersburg, MD 20877-4121 www.mcaa.org/nebb.htm www.nebb.org	(301) 977-3698
	NECA	National Electrical Contractors Association 3 Bethesda Metro Center, Suite 1100 Bethesda, MD 20814-3299 www.necanet.org	(301) 657-3110
	NEI	National Elevator Industry 185 Bridge Plaza North, Suite 310 Fort Lee, NJ 07024	(201) 944-3211
	NELMA	Northeastern Lumber Manufacturers	(207) 829-6901

REFERENCES 01420 - 19

Association

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272 Tuttle Rd. P.O. Box 87A Cumberland Center, ME 04021 www.nelma.org National Electrical Manufacturers **NEMA** (703) 841-3200 Association 1300 N 17th St., Suite 1847 Rosslyn, VA 22209 www.nema.org **NETA** InterNational Electrical Testing (303) 697-8441 Association P.O. Box 687 106 Stone St. Morrison, CO 80465-1526 www.electricnet.com/neta **NFPA National Fire Protection Association** (800) 344-3555 One Batterymarch Park (617) 770-3000 P.O. Box 9101 Quincy, MA 02269-9101 www.nfpa.org **NFPA National Forest Products Association** (See AFPA) National Fenestration Rating Council (301) 589-6372 Incorporated 1300 Spring St., Suite 500 Silver Spring, MD 20910

NFRC

www.nfrc.org

NGA

National Glass Association 8200 Greensboro Drive, 3rd Floor McLean, VA 22102-3881

NHLA

National Hardwood Lumber Association

P.O. Box 34518

Memphis, TN 38184-0518 www.natlhardwood.org

NIA

National Insulation Association (Formerly: National Insulation and

Abatement

Contractors Association)

99 Canal Center Plaza, Suite 222

Alexandria, VA 22314 www.insulation.org

NIAC

National Insulation and Abatement

REFERENCES

(703) 442-4890

(901) 377-1818

(703) 683-6422

	MACINO	#	DOILDING
#		Contractors Association (See NIA)	
	NKCA	National Kitchen Cabinet Association (See KCMA)	
	NLGA	National Lumber Grades Authority #406-First Capital Pl. 960 Quayside Dr. New Westminster, BC V3M 6G2 CANADA	(604) 524-2393
	NOFMA	National Oak Flooring Manufacturers Association P.O. Box 3009 Memphis, TN 38173-0009 www.nofma.org	(901) 526-5016
	NPA	National Parking Association 1112 16th Street, NW, Suite 300 Washington, DC 20036	(202) 296-4336 (800) 647-7275
	NPCA	National Paint and Coatings Association 1500 Rhode Island Ave., NW Washington, DC 20005-5597 www.paint.org	(202) 462-6272
	NRCA	National Roofing Contractors Association	(800) 323-9545
		O'Hare International Center	(847) 299-9070

NRCA	National Roofing Contractors Association	(800) 323-9545
	O'Hare International Center 10255 W. Higgins Rd., Suite 600 Rosemont, IL 60018-5607 www.roofonline.org	(847) 299-9070

National Ready Mixed Concrete Association 900 Spring St. Silver Spring, MD 20910 www.nrmca.org	(301) 587-1400
National Stone Association	(800) 342-1415
1415 Elliot Pl., NW	(202) 342-1100
Washington, DC 20007	

Washington, DC 20007 www.aggregates.org	
NSE International	(734) 760-8010

NOI IIILEITIALIONAI	(134) 103-0010
(Formerly: National Sanitation	
Foundation)	
3475 Plymouth Rd.	
Ann Arbor, MI 48105	

NRMCA

NSA

NSF

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#		www.nsf.org			
	NSSEA	National School Supply and Equipment Association	(800) 395-5550		
		8300 Colesville Rd., Suite 250 Silver Spring, MD 20910 www.nssea.org	(301) 495-0240		
	NTMA	National Terrazzo and Mosaic Association	(800) 323-9736		
		110 E. Market St., Suite 200-A Leesburg, VA 20176-3122 www.ntma.com	(703) 779-1022		
	NUSIG	National Uniform Seismic Installation Guidelines P.O. Box 0933 Alamo, CA 94507	(925) 555-6331		
	NWMA	National Woodwork Manufacturers Association (See NWWDA)			
	NWWDA	National Wood Window and Door Association	(800) 223-2301		
		(Formerly: National Woodwork Manufacturers Association) 1400 E. Touhy Ave. Des Plaines, IL 60018 www.nwwda.org	(847) 299-5200		
	PATMI	Powder Actuated Tool Manufacturers' Institute 1603 Boonslick Rd. St. Charles, MO 63301-2244	(314) 947-6610		
	PCA	Portland Cement Association 5420 Old Orchard Rd. Skokie, IL 60077-1083 www.portcement.org	(847) 966-6200		
	PCI	Precast/Prestressed Concrete Institute 175 W. Jackson Blvd. Chicago, IL 60604 www.pci.org	(312) 786-0300		
	PDCA	Painting and Decorating Contractors	(800) 332-7322		

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REFERENCES 01420 - 22

(703) 359-0826

of America

Fairfax, VA 22030

3913 Old Lee Hwy, Suite 33-B

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#		www.pdca.com	
	PDI	Plumbing and Drainage Institute 45 Bristol Dr., Suite 101 South Easton, MA 02375 //pdi-online.org	(800) 589-8956 (508) 230-3516
	PEI	Porcelain Enamel Institute 4004 Hillsboro Pike, Suite 224-B Nashville, TN 37215 www.porcelainenamel.com	(615) 385-5357
	PGI	PVC Geomembrane Institute/Technology Program University of Illinois-Urbana Champaign 205 N. Mathews Ave. 2215 Newmark Civil Engineering Lab Urbana, IL 61801 //pgi-tp.ce.vivc.edu	(217) 333-3929
	PIMA	Photographic and Imaging Manufacturers Association 550 Mamaroneck Ave., Suite 307 Harrison, NY 10528 www.pima.net	(914) 698-7603
	PPFA	Plastic Pipe and Fittings Association 800 Roosevelt Rd., Building C, Suite 20 Glen Ellyn, IL 60137-5833	(888) 314-6774 (630) 858-6540
	PPI	Plastics Pipe Institute (The Society of the Plastics Industry, Inc.) 1801 K St., NW, Suite 600K Washington, DC 20006 www.plasticpipe.org	(202) 974-5306
	RCMA	Roof Coatings Manufacturers Association Center Park 4041 Powder Mill Rd., Suite 404 Calverton, MD 20705 www.roofcoatings.org	(301) 348-2003
	RCSC	Research Council on Structural Connections Sargent & Lundy 55 E. Monroe St. Chicago, IL 60603	(312) 269-2424

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#	RFCI	Resilient Floor Covering Institute 966 Hungerford Dr., Suite 12-B Rockville, MD 20850-1714	(301) 340-8580
	RMA	Rubber Manufacturers Association 1400 K St., NW, Suite 900 Washington, DC 20005 www.rma.org	(800) 220-7620 (202) 682-4800
	SAE	SAE International 400 Commonwealth Dr. Warrendale, PA 15096-0001 For publications: Call (724) 776-4970 www.sae.org	(724) 776-4841
	SDI	Steel Deck Institute P.O. Box 25 Fox River Grove, IL 60021 www.sdi.org	(847) 462-1930
	SDI	Steel Door Institute 30200 Detroit Rd. Cleveland, OH 44145-1967 www.steeldoor.org	(440) 899-0010
	SEFA	Scientific Equipment and Furniture Association 7 Wildbird Lane Hilton Head Island, SC 29926 www.sefalabfurn.com	(843) 689-6878
	SEGD	Society for Environmental Graphic Design 401 F St., NW, Suite 333 Washington, DC 20001-2728	(202) 638-5555
	SGCC	Safety Glazing Certification Council P.O. Box 9 Henderson Harbor, NY 13651	(315) 938-7444
	SHLMA	Southern Hardwood Lumber Manufacturers Association (See HMA)	
	SIGMA	Sealed Insulating Glass Manufacturers Association 401 N. Michigan Ave. Chicago, IL 60611-4267	(312) 644-6610 x3279
	SJI	www.sigmaonline.org/sigma Steel Joist Institute 3127 10th Ave., North Ext.	(803) 626-1995

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SSPMA Sump and Sewage Pump Manufacturers
Association

P.O. Box 647

Northbrook, IL 60065-0647

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(847) 559-9233

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	STI	Steel Tank Institute 570 Oakwood Rd. Lake Zurich, IL 60047-1559 www.steeltank.com	(847) 438-8265
	SWI	Steel Window Institute c/o Thomas Associates, Inc. 1300 Sumner Ave. Cleveland, OH 44115-2851 www.taol.com/swi	(216) 241-7333
	SWPA	Submersible Wastewater Pump Association 1806 Johns Dr. Glenview, IL 60025-1657	(847) 729-7972
	SWRI	Sealant, Waterproofing and Restoration Institute 2841 Main St. Kansas City, MO 64108 www.swrionline.org	(816) 472-7974
	TCA	Tile Council of America P.O. Box 1787 Clemson, SC 29633 www.tileusa.com	(864) 646-8453
	TIMA	Thermal Insulation Manufacturers Association (See NAIMA)	
	TPI	Truss Plate Institute 583 D'Onofrio Dr., Suite 200 Madison, WI 53719	(608) 833-5900
	TPI	Turfgrass Producers International (Formerly: American Sod Producers Association) 1855-A Hicks Rd. Rolling Meadows, IL 60008 www.turfgrassod.org	(800) 405-8873 (847) 705-9898
	UFAC	Upholstered Furniture Action Council P.O. Box 2436 High Point, NC 27261	(910) 885-6085
	UL	Underwriters Laboratories Inc. 333 Pfingsten Rd. Northbrook, IL 60062 www.ul.com	(800) 704-4050 (847) 272-8800
	UNI	Uni-Bell PVC Pipe Association	(972) 243-3902
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REFERENCES

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#		2655 Villa Creek Dr., Suite 155 Dallas, TX 75234 members.aol.com/unibell	
	USITT	USITT: The American Association of Design and Production Professionals in the Performing Arts	(800) 938-7488
		6443 Ridings Rd. Syracuse, NY 13206-1111 www.culturenet.ca/usitt	(315) 463-6463
	USP	U.S. Pharmacopeia (Formerly: U.S. Pharmacopoeial Convention) 12601 Twinbrook Pkwy Rockville, MD 20852-1790 www.usp.org	(800) 227-8772 (301) 881-0666
	WA	Wallcoverings Association 401 N. Michigan Ave. Chicago, IL 60611-4267	(312) 644-6610
	WASTEC	Waste Equipment Technology Association 4301 Connecticut Ave. NW, Suite 300 Washington, DC 20008	(202) 244-4700
	WCLIB	West Coast Lumber Inspection Bureau P.O. Box 23145 Portland, OR 97281-3145	(800) 283-1486 (503) 639-0651
	WCMA	Window Covering Manufacturers Association (Formerly: American Window Covering Manufacturers Association) 355 Lexington Ave., 17th Floor New York, NY 10017-6603	(212) 661-4261
	WEF	Water Environment Federation (Formerly: Water Pollution Control Federation) 601 Wythe St. Alexandria, VA 22314-1994 www.wef.org	(800) 666-0206 (703) 684-2400
	WIC	Woodwork Institute of California P.O. Box 980247 West Sacramento, CA 95798-0247 www.wicnet.org	(916) 372-9943
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REFERENCES

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WMMPA Wood Moulding & Millwork Producers (800) 550-7889

Association

507 First St. (530) 661-9591

Woodland, CA 95695 www.wmmpa.com

WPCF Water Pollution Control Federation

(See WEF)

WRI Wire Reinforcement Institute (419) 425-9473

301 E. Sandusky St. Findlay, OH 45840 www.bright.net/~rreiter

WSC Water Systems Council (630) 545-1762

Building C, Suite 20 800 Roosevelt Rd. Glen Ellyn, IL 60137

WSFI Wood and Synthetic Flooring Institute

(See MFMA)

WWPA Western Wood Products Association (503) 224-3930

Yeon Building 522 SW 5th Ave.

Portland, OR 97204-2122

www.wwpa.org

F. Federal Government Agencies: Names and titles of Federal Government standards- or specification-developing agencies are often abbreviated. The following abbreviations and acronyms referenced in the Contract Documents indicate names of standards- or specification-developing agencies of the Federal Government. Names and addresses are subject to change and are believed, but are not assured, to be accurate and up-to-date as of the date of the Contract Documents.

CE Corps of Engineers (202) 761-0660

(U.S. Department of the Army) 20 Massachusetts Ave., NW Washington, DC 20314 www.usace.army.mil

CRD standards are available from:

U.S. Army Corps of Engineers (601) 634-2696

Waterways Experiment Station

Technical Report Distribution Section

Services Branch, TIC 3909 Halls Ferry Rd. Vicksburg, MS 39180-6199

CFR Code of Federal Regulations (202) 512-1800

(Available from the Government

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#	Printing Office) Washington, DC 20401 (Material is usually published first in the "Federal Register.") www.access.gpo.gov	
CPSC	Consumer Product Safety Commission East West Towers 4330 East-West Hwy Bethesda, MD 20814 www.cpcs.gov	(800) 638-2772 (301) 504-0990
CS	Commercial Standard (U.S. Department of Commerce) Government Printing Office Washington, DC 20402 For commercial standards, contact:	(202) 512-1800
	Ms. Brenda Umberger CS & PS Specialist c/o NIST Gaithersburg, MD 20899 www.nist.gov	(301) 975-4036
DOC	Department of Commerce 14th St. and Constitution Ave., NW Washington, DC 20230 www.doc.gov	(202) 482-2000
DOT	Department of Transportation 400 Seventh St., SW Washington, DC 20590 www.dot.gov	(202) 366-4000
EPA	Environmental Protection Agency 401 M St., SW Washington, DC 20460 www.epa.gov	(202) 260-2090
FAA	Federal Aviation Administration (U.S. Department of Transportation) 800 Independence Ave., SW Washington, DC 20591 www.faa.gov	(202) 366-4000
FCC	Federal Communications Commission 1919 M St., NW Washington, DC 20554 www.fcc.gov	(202) 418-0126
FDA	Food and Drug Administration 5600 Fishers Lane	(301) 443-1544

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(202) 401-0388

(202) 619-8925

(202) 708-5082

(215) 697-2179

(301) 975-2000

(202) 219-8148

(202) 512-1800

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Rockville, MD 20857

www.fda.gov

FHA Federal Housing Administration

(U.S. Department of Housing and Urban

Development)

451 Seventh St., SW Washington, DC 20410

www.hud.gov

FS Federal Specification Unit

(Available from GSA)

470 East L'Enfant Plaza, SW, Suite

8100

Washington, DC 20407

www.gsa.gov

GSA General Services Administration

F St. and 18th St., NW Washington, DC 20405

www.gsa.gov

MIL Military Standardization Documents

(U.S. Department of Defense)

Defense Automated Printing Service

700 Robbins Ave., Building 4D

Philadelphia, PA 19111 www.dodssp.daps.mil

NIST National Institute of Standards and

Technology

(U.S. Department of Commerce)

Building 101, #A1134,

Rte. I-270 and Quince Orchard Rd.

Gaithersburg, MD 20899

www.nist.gov

OSHA Occupational Safety and Health

Administration

(U.S. Department of Labor) 200 Constitution Ave., NW Washington, DC 20210

www.osha.gov

PS Product Standard of NBS

(U.S. Department of Commerce) Government Printing Office Washington, DC 20402

For product standards, contact:

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REFERENCES 01420 - 30

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Ms. Brenda Umberger (301) 975-4036 CS & PS Specialist

c/o NIST

Gaithersburg, MD 20899

www.nist.gov

RUS Rural Utilities Service (202) 692-0187

(Formerly: Rural Electrification

Administration)

(U.S. Department of Agriculture) 14th St. and Independence Ave., SW

Washington, DC 20250

TRB Transportation Research Board, (202) 334-2934

National Research

Council

2101 Constitution Ave., NW Washington, DC 20418

www.nas.edu/trb

USDA U.S. Department of Agriculture (202) 720-8732

14th St. and Independence Ave., SW

Washington, DC 20250

www.usda.gov

USPS U.S. Postal Service (202) 268-2000

475 L'Enfant Plaza, SW Washington, DC 20260-0010

www.usps.gov

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01420

SECTION 01500 - TEMPORARY / CONSTRUCTION FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes requirements for construction facilities and temporary controls, including temporary utilities, support facilities, and security and protection. Each prime contractor is responsible for all of the provisions included herein unless specific contractor is identified.
- B. Temporary utilities include, but are not limited to, the following:
 - 1. Temporary electric power and light.
 - 2. Temporary heat.
 - 3. Ventilation.
 - 4. Sanitary facilities, including drinking water.
- C. Support facilities include, but are not limited to, the following:
 - 1. Storage Sheds.
 - 3. Dewatering facilities and drains.
 - 4. Temporary enclosures.
 - 5. Hoists.
 - 6. Temporary project identification signs and bulletin boards.
 - 7. Waste disposal services.
 - 8. Construction aids and miscellaneous services and facilities.
- D. Security and protection facilities include, but are not limited to, the following:
 - 1. Temporary fire protection.
 - 2. Barricades, warning signs, and lights.
 - Environmental protection.

1.3 QUALITY ASSURANCE

- A. Regulations: Comply with industry standards and applicable laws and regulations of authorities having jurisdiction including, but not limited to, the following:
 - 1. Building code requirements.
 - 2. Health and safety regulations.
 - 3. Utility company regulations.
 - 4. Police, fire department, and rescue squad rules.

- 5. Environmental protection regulations.
- B. Standards: Comply with NFPA 241 "Standard for Safeguarding Construction, Alterations, and Demolition Operations," ANSI A10 Series standards for "Safety Requirements for Construction and Demolition," and NECA Electrical Design Library "Temporary Electrical Facilities."
 - 1. Electrical Service: Comply with NEMA, NECA, and UL standards and regulations for temporary electric service. Install service in compliance with NFPA 70 "National Electric Code."
- C. Inspections: Arrange for authorities having jurisdiction to inspect and test each temporary utility before use. Obtain required certifications and permits.

1.4 PROJECT CONDITIONS

A. Conditions of Use: Keep temporary services and facilities clean and neat in appearance. Operate in a safe and efficient manner. Relocate temporary services and facilities as the Work progresses. Do not overload facilities or permit them to interfere with progress. Take necessary fire-prevention measures. Do not allow hazardous, dangerous, or unsanitary conditions, or public nuisances to develop or persist on-site.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. General: Provide materials suitable for use intended.
- B. Lumber and Plywood: Comply with requirements in Division 6 Section "Rough Carpentry."
 - 1. For job-built temporary shops, and sheds within the construction area, provide UL-labeled, fire-treated lumber and plywood for framing, sheathing, and siding.
 - 2. For signs and directory boards, provide exterior-type, Grade B-B high-density concrete form overlay plywood of sizes and thicknesses indicated.
 - 3. For safety barriers, sidewalk bridges, and similar uses, provide minimum 5/8-inch-(16-mm-) thick exterior plywood.
- C. Tarpaulins: Provide waterproof, fire-resistant, UL-labeled tarpaulins with flame-spread rating of 15 or less. For temporary enclosures, provide translucent, nylon-reinforced, laminated polyethylene or polyvinyl chloride, fire-retardant tarpaulins.
- E. Provide potable water approved by local health authorities.

2.2 EQUIPMENT

A. General: Provide new equipment. If acceptable to the CM, the Contractor may use undamaged, previously used equipment in serviceable condition. Provide equipment suitable for use intended.

- B. Electrical Outlets: Provide properly configured, NEMA-polarized outlets to prevent insertion of 110- to 120-Volt plugs into higher voltage outlets. Provide receptacle outlets equipped with ground-fault circuit interrupters, reset button, and pilot light for connection of power tools and equipment.
- C. Electrical Power Cords: Provide grounded extension cords. Use hard-service cords where exposed to abrasion and traffic. Provide waterproof connectors to connect separate lengths of electric cords if single lengths will not reach areas where construction activities are in progress. Do not exceed safe length-voltage ratio.
- D. Lamps and Light Fixtures: Provide general service incandescent lamps of wattage required for adequate illumination. Provide guard cages or tempered-glass enclosures where exposed to breakage. Provide exterior fixtures where exposed to moisture.
- E. Heating Units: Provide temporary heating units that have been tested and labeled by UL, FM, or another recognized trade association related to the type of fuel being consumed.
- F. Temporary Offices: Provide prefabricated or mobile units with lockable entrances. Provide heated and air-conditioned units.
- G. Temporary Toilet Units: Provide self-contained, single-occupant toilet units of the chemical, aerated recirculation, or combustion type. Provide units properly vented and fully enclosed with a glass-fiber-reinforced polyester shell or similar nonabsorbent material.
- H. Fire Extinguishers: Provide hand-carried, portable, UL-rated, Class A fire extinguishers for temporary offices and similar spaces. In other locations, provide hand-carried, portable, UL-rated, Class ABC, dry-chemical extinguishers or a combination of extinguishers of NFPA-recommended classes for the exposures.
 - 1. Comply with NFPA 10 and NFPA 241 for classification, extinguishing agent, and size required by location and class of fire exposure.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Use qualified personnel for installation of temporary facilities. Locate facilities where they will serve the Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required.

3.2 TEMPORARY UTILITY INSTALLATION

a. Sanitary and drinking facilities including temporary toilets are to be provided by the General Trades Contractor (GTC or GC). Provide toilet tissue, paper towels, paper cups, and similar disposable materials for each facility. Provide covered waste containers for used material. Toilets: Install self-contained toilet units. Shield toilets to ensure privacy. Use of pit-type privies will not be permitted. Drinking-Water Facilities: Provide

containerized, tap-dispenser, bottled-water drinking-water units, including paper supply.

- b. Temporary potable water is to be provided by the **Plumbing Contractor (PC)**. Adequate supply is to be provided for the cement mason and all trades, in a minimum of two convenient locations as approved by the CM.
- c. Temporary/construction power and lighting has been initially provided within the preexisting structure, and is to be maintained and expanded for all trades by the **Electrical Contractor**. This responsibility extends to one temporary construction trailer for each prime contractor.
- d. Temporary heating, ventilating, and air conditioning is to be provided by the **Mechanical Contractor (MC)**. Permanent HVAC equipment can be used by the MC for temporary (construction phase) hvac, but the equipment must be properly protected against dust, moisture, and any deleterious conditions to the satisfaction of the manufacturer. Warranty to be unaffected by its use.
- e. Comply with regulations and health codes for the type, number, location, operation, and maintenance of fixtures and facilities. Install where facilities will best serve the Project's needs.

3.3 SUPPORT FACILITIES INSTALLATION

- A. Locate Owner's field offices, storage sheds, and other temporary construction and support facilities for easy access.
 - 1. Maintain support facilities until near Substantial Completion. Remove prior to Substantial Completion.
- B. Provide incombustible construction for offices, shops, and sheds (if provided) located within the construction area or within 30 feet (9 m) of building lines. Comply with requirements of NFPA 241.
- C. Project Identification and Temporary Signs: Prepare project identification and other signs of size indicated. Install signs where indicated to inform the public and persons seeking entrance to the Project. Support on posts or framing of preservative-treated wood or steel. Do not permit installation of unauthorized signs.
 - 1. Project Identification Signs: Engage an experienced sign painter to apply graphics.
 - 2. Temporary Signs: Prepare signs to provide directional information to construction personnel and visitors.
- D. Collection and Disposal of Waste: Collect waste from construction areas and elsewhere daily. Comply with requirements of NFPA 241 for removal of combustible waste material and debris. Enforce requirements strictly. Do not hold materials more than 7 days during normal weather or 3 days when the temperature is expected to rise above 80 deg F (27 deg C). Handle hazardous, dangerous, or unsanitary waste materials separately from other waste by containerizing properly. Dispose of material lawfully.

3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Temporary Fire Protection: Until fire-protection needs are supplied by permanent facilities, install and maintain temporary fire-protection facilities of the types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 10 "Standard for Portable Fire Extinguishers" and NFPA 241 "Standard for Safeguarding Construction, Alterations, and Demolition Operations."
 - 1. Locate fire extinguishers where convenient and effective for their intended purpose, but not less than one extinguisher on each floor.
 - 2. Store combustible materials in containers in fire-safe locations.
 - 3. Maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire-protection facilities, stairways, and other access routes for fighting fires. Prohibit smoking in hazardous fire-exposure areas.
 - 4. Provide supervision of welding operations, combustion-type temporary heating units, and similar sources of fire ignition.
- B. Barricades, Warning Signs, and Lights: Comply with standards and code requirements for erection of structurally adequate barricades. Paint with appropriate colors, graphics, and warning signs to inform personnel and the public of the hazard being protected against. Where appropriate and needed, provide lighting, including flashing red or amber lights.
- C. Security Enclosure and Lockup: Install substantial temporary enclosure of partially completed areas of construction. Provide locking entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security.
 - 1. Storage: Where materials and equipment must be stored, and are of value or attractive for theft, provide a secure lockup. Enforce discipline in connection with the installation and release of material to minimize the opportunity for theft and vandalism.
- D. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations, and minimize the possibility that air, waterways, and subsoil might be contaminated or polluted or that other undesirable effects might result. Avoid use of tools and equipment that produce harmful noise. Restrict use of noise-making tools and equipment to hours that will minimize complaints from persons or firms near the site.

END OF SECTION 01500

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SECTION 01600 - MATERIALS AND EQUIPMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements governing the Contractor's selection of products for use in the Project.
- B. Related Sections: The following Sections contain requirements that relate to this Section:
 - 1. Division 1 Section "Submittals" specifies requirements for submittal of the Contractor's Construction Schedule and the Submittal Schedule.

1.3 DEFINITIONS

- A. Definitions used in this Article are not intended to change the meaning of other terms used in the Contract Documents, such as "specialties," "systems," "structure," "finishes," "accessories," and similar terms. Such terms are self-explanatory and have well-recognized meanings in the construction industry.
 - 1. "Products" are items purchased for incorporation in the Work, whether purchased for the Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
 - a. "Named Products" are items identified by the manufacturer's product name, including make or model number or other designation, shown or listed in the manufacturer's published product literature, that is current as of the date of the Contract Documents.
 - b. "Foreign Products," as distinguished from "domestic products," are items substantially manufactured (50 percent or more of value) outside the United States and its possessions. Products produced or supplied by entities substantially owned (more than 50 percent) by persons who are not citizens of, nor living within, the United States and its possessions are also considered to be foreign products.
 - 2. "Materials" are products substantially shaped, cut, worked, mixed, finished, refined or otherwise fabricated, processed, or installed to form a part of the Work.
 - 3. "Equipment" is a product with operational parts, whether motorized or manually operated, that requires service connections, such as wiring or piping.

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1.4 SUBMITTALS

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- A. Product List: Prepare a list showing products specified in tabular form acceptable to the Architect. Include generic names of products required. Include the manufacturer's name and proprietary product names for each item listed. Supply lead times for all items submitted.
 - 1. Coordinate product list with the Contractor's Construction Schedule and the Schedule of Submittals.
 - 2. Form: Prepare product list with information on each item tabulated under the following column headings:
 - a. Related Specification Section number.
 - b. Generic name used in Contract Documents.
 - c. Proprietary name, model number, and similar designations.
 - d. Manufacturer's name and address.
 - e. Supplier's and manufacturer's names, addresses and phone numbers.
 - f. Installer's name and address.
 - g. Projected delivery date or time span of delivery period.
 - 3. Initial Submittal: Within 30 days after date of commencement of the Work, submit 3 copies of an initial product list. Provide a written explanation for omissions of data and for known variations from Contract requirements.
 - a. At the Contractor's option, the initial submittal may be limited to product selections and designations that must be established early in the Contract period.
 - 4. Completed List: Within 60 days after date of commencement of the Work, submit 3 copies of the completed product list. Provide a written explanation for omissions of data and for known variations from Contract requirements.
 - 5. Architect's Action: The Architect will respond in writing to Contractor within 3 weeks of receipt of the completed product list. No response within this period constitutes no objection to listed manufacturers or products but does not constitute a waiver of the requirement that products comply with Contract Documents. The Architect's response will include a list of unacceptable product selections, containing a brief explanation of reasons for this action.

1.5 QUALITY ASSURANCE

- A. Source Limitations: To the fullest extent possible, provide products of the same kind from a single source.
 - 1. When specified products are available only from sources that do not, or cannot, produce a quantity adequate to complete project requirements in a timely manner, consult with the Architect to determine the most important product qualities before proceeding. Qualities may include attributes, such as visual appearance, strength, durability, or compatibility. When a determination has been made, select products

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- from sources producing products that possess these qualities, to the fullest extent possible.
- B. Compatibility of Options: When the Contractor is given the option of selecting between 2 or more products for use on the Project, the product selected shall be compatible with products previously selected, even if previously selected products were also options.
 - 1. Contractor is responsible for providing products and construction methods that are compatible with products and construction methods of other contractors.
 - 2. If a dispute arises over concurrently selectable, but incompatible products, the Architect will determine which products shall be retained and which are incompatible and must be replaced.
- C. Nameplates: Except for required labels and operating data, do not attach or imprint manufacturer's or producer's nameplates or trademarks on exposed surfaces of products that will be exposed to view in occupied spaces or on the exterior.
 - 1. Labels: Locate required product labels and stamps on concealed surfaces or, where required for observation after installation, on accessible surfaces that are not conspicuous.
 - 2. Equipment Nameplates: Provide a permanent nameplate on each item of service-connected or power-operated equipment. Locate on an easily accessible surface that is inconspicuous in occupied spaces. The nameplate shall contain the following information and other essential operating data:
 - a. Name of product and manufacturer.
 - b. Model and serial number.
- E. Standard Of Quality: The various materials and products specified in the specifications by name or description are given to establish a standard of quality and of cost for bid purposes. It is not the intent to limit the acceptance to any one material or product specified, but rather to name or describe it as the absolute minimum standard that is desired and acceptable. A material or product of lesser quality would not be acceptable. Where proprietary names are used, whether or not allowed by the words " or an equivalent", they shall be subject to equivalents only as approved by the Architect.

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products according to the manufacturer's recommendations, using means and methods that will prevent damage, deterioration, and loss, including theft.
 - 1. Schedule delivery to minimize long-term storage at the site and to prevent overcrowding of construction spaces.
 - 2. Coordinate delivery with installation time to assure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
 - 3. Deliver products to the site in an undamaged condition in the manufacturer's original sealed container or other packaging system, complete with labels and instructions

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- for handling, storing, unpacking, protecting, and installing.
- 4. Inspect products upon delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.
- 5. Store products at the site in a manner that will facilitate inspection and measurement of quantity or counting of units.
- 6. Store heavy materials away from the Project structure in a manner that will not endanger the supporting construction.
- 7. Store products subject to damage by the elements above ground, under cover in a weathertight enclosure, with ventilation adequate to prevent condensation. Maintain temperature and humidity within range required by manufacturer's instructions.

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION

- A. General Product Requirements: Provide products that comply with the Contract Documents, that are undamaged and new at the time of installation.
 - 1. Provide products complete with accessories, trim, finish, safety guards, and other devices and details needed for a complete installation and the intended use and effect.
 - 2. Standard Products: Where available, provide standard products of types that have been produced and used successfully in similar situations on other projects.
- B. Product Selection Procedures: The Contract Documents and governing regulations govern product selection. Procedures governing product selection include the following:
 - 1. Proprietary Specification Requirements: Where Specifications name only a single product or manufacturer, provide the product indicated. No substitutions will be permitted.
 - 2. Semiproprietary Specification Requirements: Where Specifications name 2 or more products or manufacturers, provide 1 of the products indicated. No substitutions will be permitted.
 - 3. Descriptive Specification Requirements: Where Specifications describe a product or assembly, listing exact characteristics required, with or without use of a brand or trade name, provide a product or assembly that provides the characteristics and otherwise complies with Contract requirements.
 - 4. Performance Specification Requirements: Where Specifications require compliance with performance requirements, provide products that comply with these requirements and are recommended by the manufacturer for the application indicated.
 - a. Manufacturer's recommendations may be contained in published product literature or by the manufacturer's certification of performance.
 - 5. Compliance with Standards, Codes, and Regulations: Where Specifications only require compliance with an imposed code, standard, or regulation, select a product that complies with the standards, codes, or regulations specified.

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- 6. Visual Matching: Where Specifications require matching an established Sample, the Architect's decision will be final on whether a proposed product matches satisfactorily.
 - a. Where no product available within the specified category matches satisfactorily and complies with other specified requirements, comply with provisions of the Contract Documents concerning "substitutions" for selection of a matching product in another product category.
- 7. Visual Selection: Where specified product requirements include the phrase "... as selected from manufacturer's standard colors, patterns, textures ..." or a similar phrase, select a product and manufacturer that complies with other specified requirements. The Architect will select the color, pattern, and texture from the product line selected.

PART 3 - EXECUTION

3.1 INSTALLATION OF PRODUCTS

- A. Comply with manufacturer's instructions and recommendations for installation of products in the applications indicated. Anchor each product securely in place, accurately located and aligned with other Work.
 - 1. Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.

END OF SECTION 01600

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SECTION 01700 - CONTRACT CLOSEOUT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for contract closeout including, but not limited to, the following:
 - 1. Inspection procedures.
 - 2. Project record document submittal.
 - 3. Operation and maintenance manual submittal.
 - 4. Submittal of warranties.
 - Final cleaning.
- B. Closeout requirements for specific construction activities are included in the appropriate Sections in Divisions 2 through 16.

1.3 SUBSTANTIAL COMPLETION

- A. Preliminary Procedures: Before requesting inspection for certification of Substantial Completion, complete the following. List exceptions in the request.
 - 1. In the Application for Payment that coincides with, or first follows, the date Substantial Completion is claimed, show 100 percent completion for the portion of the Work claimed as substantially complete.
 - a. Include supporting documentation for completion as indicated in these Contract Documents and a statement showing an accounting of changes to the Contract Sum.
 - b. If 100 percent completion cannot be shown, include a list of incomplete items, the value of incomplete construction, and reasons the Work is not complete.
 - 2. Advise the Owner of pending insurance changeover requirements.
 - 3. Submit specific warranties, workmanship bonds, maintenance agreements, final certifications, and similar documents.
 - 4. Obtain and submit releases enabling the Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
 - 5. Submit record drawings, maintenance manuals, damage or settlement surveys, property surveys, and similar final record information.
 - 6. Deliver tools, spare parts, extra stock, and similar items.

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- 7. Transmit keys to the Owner. Advise the Owner's personnel of changeover in security provisions.
- 8. Complete startup testing of systems and instruction of the Owner's operation and maintenance personnel. Discontinue and remove temporary facilities from the site, along with mockups, construction tools, and similar elements.
- 9. Complete final cleanup requirements, including touchup painting.
- 10. Touch up and otherwise repair and restore marred, exposed finishes.
- B. Inspection Procedures: On receipt of a request for inspection, the Architect will either proceed with inspection or advise the Contractor of unfilled requirements. The Architect will prepare the Certificate of Substantial Completion following inspection or advise the Contractor of construction that must be completed or corrected before the certificate will be issued.
 - 1. The Architect will repeat inspection when requested and assured that the Work is substantially complete.
 - 2. Results of the completed inspection will form the basis of requirements for final acceptance.

1.4 FINAL ACCEPTANCE

- A. Preliminary Procedures: Before requesting final inspection for certification of final acceptance and final payment, complete the following. List exceptions in the request.
 - 1. Submit the final payment request with releases and supporting documentation not previously submitted and accepted. Include insurance certificates for products and completed operations where required.
 - 2. Submit an updated final statement, accounting for final additional changes to the Contract Sum.
 - 3. Submit a certified copy of the Architect's final inspection list of items to be completed or corrected, endorsed and dated by the Architect. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance and shall be endorsed and dated by the Architect.
 - 4. Submit final meter readings for utilities, a measured record of stored fuel, and similar data as of the date of Substantial Completion or when the Owner took possession of and assumed responsibility for corresponding elements of the Work.
 - 5. Submit consent of surety to final payment.
 - 6. Submit a final liquidated damages settlement statement.
 - 7. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
- B. Reinspection Procedure: The Architect will reinspect the Work upon receipt of notice that the Work, including inspection list items from earlier inspections, has been completed, except for items whose completion is delayed under circumstances acceptable to the Architect.
 - Upon completion of reinspection, the Architect will prepare a certificate of final acceptance. If the Work is incomplete, the Architect will advise the Contractor of Work that is incomplete or of obligations that have not been fulfilled but are required

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for final acceptance.

- 2. If necessary, reinspection will be repeated.
- 1.5 RECORD DOCUMENT SUBMITTALS
 - A. General: Do not use record documents for construction purposes. Protect record documents from deterioration and loss in a secure, fire-resistant location. Provide access to record documents for the Architect's reference during normal working hours. All record documents are to be scanned and submitted to the Architect in electronic format.
 - B. Record Drawings: Maintain a clean, undamaged set of blue or black line white-prints of Contract Drawings and Shop Drawings. Mark the set to show the actual installation where the installation varies substantially from the Work as originally shown. Mark which drawing is most capable of showing conditions fully and accurately. Where Shop Drawings are used, record a cross-reference at the corresponding location on the Contract Drawings. Give particular attention to concealed elements that would be difficult to measure and record at a later date.
 - 1. Mark record sets with red erasable pencil. Use other colors to distinguish between variations in separate categories of the Work.
 - 2. Mark new information that is important to the Owner but was not shown on Contract Drawings or Shop Drawings.
 - 3. Note related change-order numbers where applicable.
 - 4. Organize record drawing sheets into manageable sets. Bind sets with durable-paper cover sheets; print suitable titles, dates, and other identification on the cover of each set.
 - C. Record Specifications: Maintain one complete copy of the Project Manual, including addenda. Include with the Project Manual one copy of other written construction documents, such as Change Orders and modifications issued in printed form during construction.
 - 1. Mark these documents to show substantial variations in actual Work performed in comparison with the text of the Specifications and modifications.
 - 2. Give particular attention to substitutions and selection of options and information on concealed construction that cannot otherwise be readily discerned later by direct observation.
 - 3. Note related record drawing information and Product Data.
 - 4. Upon completion of the Work, submit record Specifications to the Architect for the Owner's records.
 - D. Miscellaneous Record Submittals: Refer to other Specification Sections for requirements of miscellaneous record keeping and submittals in connection with actual performance of the Work. Immediately prior to the date or dates of Substantial Completion, complete miscellaneous records and place in good order. Identify miscellaneous records properly and bind or file, ready for continued use and reference. Submit to the Architect for the Owner's records.
 - E. Maintenance Manuals: Organize operation and maintenance data into suitable sets of manageable size. Bind properly indexed data in individual, heavy-duty, 2-inch (51-mm), 3-ring, vinyl-covered binders, with pocket folders for folded sheet information. Mark appropriate identification on front and spine of each binder. Include the following types of information:

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- 1. Emergency instructions.
- 2. Spare parts list.
- 3. Copies of warranties.
- 4. Wiring diagrams.
- 5. Recommended "turn-around" cycles.
- 6. Inspection procedures.
- 7. Shop Drawings and Product Data.
- 8. Fixture lamping schedule.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 CLOSEOUT PROCEDURES

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

3.2 FINAL CLEANING

- A. General: The General Conditions require general cleaning during construction. Regular site cleaning is included in Division 1 Section "Temporary Facilities and Controls."
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to the condition expected in a normal, commercial building cleaning and maintenance program. Comply with manufacturer's instructions.
 - Complete the following cleaning operations before requesting inspection for certification of Substantial Completion.
 - a. Remove labels that are not permanent labels.
 - b. Clean exposed exterior and interior finishes to a dust-free condition, free of stains, films, and similar foreign substances. Restore surfaces to their original

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- condition. Leave floors broom clean.
- c. Clean the site of rubbish, litter, and other foreign substances. Sweep paved areas broom clean; remove stains, spills, and other foreign deposits. Rake grounds that are neither paved nor planted to a smooth, even-textured surface.
- C. Removal of Protection: Remove temporary protection and facilities installed for protection of the Work during construction.
- D. Compliance: Comply with regulations of authorities having jurisdiction and safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on the Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from the site and dispose of lawfully.
 - 1. Where extra materials of value remain after completion of associated Work, they become the Owner's property.

END OF SECTION 01700

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SECTION 01730 - 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 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for operation and maintenance manuals, including the following:
 - 1. Preparing and submitting operation and maintenance manuals for building operating systems and equipment.
 - 2. Instruction of the Owner's operating personnel in the operation and maintenance of building systems and equipment.
- B. Related Sections: The following Sections contain requirements that relate to this Section:
 - 1. Division 1 Section "Submittals" specifies preparation of Shop Drawings and Product Data.
 - 2. Division 1 Section "Contract Closeout" specifies general requirements for submitting project record documents.
 - 3. Appropriate Sections of Divisions 2 through 16 specify special operation and maintenance data requirements for specific pieces of equipment or building operating systems.

1.3 QUALITY ASSURANCE

- A. Maintenance Manual Preparation: In preparation of maintenance manuals, use personnel thoroughly trained and experienced in operation and maintenance of equipment or system involved.
 - 1. Where maintenance manuals require written instructions, use personnel skilled in technical writing where necessary for communication of essential data.
 - 2. Where maintenance manuals require drawings or diagrams, use draftsmen capable of preparing drawings clearly in an understandable format.
- B. Instructions for the Owner's Personnel: Use experienced instructors thoroughly trained and experienced in operation and maintenance of equipment or system involved to instruct the Owner's operation and maintenance personnel.

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1.4 SUBMITTALS

- A. Submittal Schedule: Comply with the following schedule for submitting operation and maintenance manuals:
 - 1. Before Substantial Completion, when each installation that requires operation and maintenance manuals is nominally complete, submit 2 draft copies of each manual to the Architect for review, and one electronic copy to the Architect. Include a complete index or table of contents of each manual.
 - a. The Architect will return 1 copy of the draft with comments within 15 days of receipt.
 - 2. Submit 1 copy of data in final form at least 15 days before final inspection. The Architect will return this copy within 15 days after final inspection, with comments.
 - 3. After final inspection, make corrections or modifications to comply with the Architect's comments. Submit the specified number of copies of each approved manual to the Architect within 15 days of receipt of the Architect's comments.
- B. Form of Submittal: Prepare operation and maintenance manuals in the form of an instructional manual for use by the Owner's operating personnel. Hard copies and electronic copy of the Manuals are to be submitted. Organize into suitable sets of manageable size. Where possible, assemble instructions for similar equipment into a single binder.
 - 1. Binders: For each manual, provide heavy-duty, commercial-quality, 3-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, sized to receive 8-1/2-by-11- inch (115-by-280-mm) paper. Provide a clear plastic sleeve on the spine to hold labels describing contents. Provide pockets in the covers to receive folded sheets.
 - a. Where 2 or more binders are necessary to accommodate data, correlate data in each binder into related groupings according to the Project Manual table of contents. Cross-reference other binders where necessary to provide essential information for proper operation or maintenance of the piece of equipment or system.
 - b. Identify each binder on front and spine, with the printed title "OPERATION AND MAINTENANCE MANUAL," Project title or name, and subject matter covered. Indicate volume number for multiple volume sets of manuals.
 - 2. Dividers: Provide heavy paper dividers with celluloid-covered tabs for each separate Section. Mark each tab to indicate contents. Provide a typed description of the product and major parts of equipment included in the Section on each divider.
 - 3. Protective Plastic Jackets: Provide protective, transparent, plastic jackets designed to enclose diagnostic software for computerized electronic equipment.
 - 4. Text Material: Where maintenance manuals require written material, use the manufacturer's standard printed material. If manufacturer's standard printed material is not available, provide specially prepared data, neatly typewritten, on 8-1/2-by-11-inch (115-by-280-mm), 20-lb/sq. ft. (75-g/sq. m) white bond paper.

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- 5. Drawings: Where maintenance manuals require drawings or diagrams, provide reinforced, punched binder tabs on drawings and bind in with text.
 - a. Where oversize drawings are necessary, fold drawings to the same size as text pages and use as a foldout.
 - b. If drawings are too large to be used practically as a foldout, place the drawing, neatly folded, in front or rear pocket of binder. Insert a typewritten page indicating drawing title, description of contents, and drawing location at the appropriate location in the manual.

1.5 MANUAL CONTENT

- A. In each manual include information specified in the individual Specification Section and the following information for each major component of building equipment and its controls:
 - 1. General system or equipment description.
 - 2. Design factors and assumptions.
 - 3. Copies of applicable Shop Drawings and Product Data.
 - 4. System or equipment identification, including:
 - a. Name of manufacturer.
 - b. Model number.
 - c. Serial number of each component.
 - 5. Operating instructions.
 - 6. Emergency instructions.
 - 7. Wiring diagrams.
 - 8. Inspection and test procedures.
 - 9. Maintenance procedures and schedules.
 - 10. Precautions against improper use and maintenance.
 - 11. Copies of warranties.
 - 12. Repair instructions including spare parts listing.
 - 13. Sources of required maintenance materials and related services.
 - 14. Manual index.
- B. Organize each manual into separate Sections for each piece of related equipment. As a minimum, each manual shall contain a title page; a table of contents; copies of Product Data, supplemented by Drawings and written text; and copies of each warranty, bond, and service contract issued.
 - 1. Title Page: Provide a title page in a transparent, plastic envelope as the first sheet of each manual. Provide the following information:
 - a. Subject matter covered by the manual.
 - b. Name and address of the Project.
 - c. Date of submittal.
 - d. Name, address, and telephone number of the Contractor.
 - e. Name and address of the Architect.

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- f. Cross-reference to related systems in other operation and maintenance manuals.
- 2. Table of Contents: After title page, include a typewritten table of contents for each volume, arranged systematically according to the Project Manual format. Include a list of each product included, identified by product name or other appropriate identifying symbol and indexed to the content of the volume.
 - a. Where a system requires more than one volume to accommodate data, provide a comprehensive table of contents for all volumes in each volume of the set.
- 3. General Information: Provide a general information Section immediately following table of contents, listing each product included in the manual, identified by product name. Under each product, list the name, address, and telephone number of the subcontractor or Installer and the maintenance contractor. Clearly delineate the extent of responsibility of each of these entities. Include a local source for replacement parts and equipment.
- 4. Product Data: Where the manuals include manufacturer's standard printed data, include only sheets that are pertinent to the part or product installed. Mark each sheet to identify each part or product included in the installation. Where the Project includes more than one item in a tabular format, identify each item, using appropriate references from the Contract Documents. Identify data that is applicable to the installation, and delete references to information that is not applicable.
- 5. Written Text: Prepare written text to provide necessary information where manufacturer's standard printed data is not available, and the information is necessary for proper operation and maintenance of equipment or systems. Prepare written text where it is necessary to provide additional information or to supplement data included in the manual. Organize text in a consistent format under separate headings for different procedures. Where necessary, provide a logical sequence of instruction for each operation or maintenance procedure.
- 6. Drawings: Provide specially prepared drawings where necessary to supplement manufacturer's printed data to illustrate the relationship of component parts of equipment or systems or to provide control or flow diagrams. Coordinate these drawings with information contained in project record drawings to assure correct illustration of the completed installation.
 - a. Do not use original project record documents as part of operation and maintenance manuals.
- 7. Warranties, Bonds, and Service Contracts: Provide a copy of each warranty, bond, or service contract in the appropriate manual for the information of the Owner's operating personnel. Provide written data outlining procedures to follow in the event of product failure. List circumstances and conditions that would affect validity of warranty or bond.

1.6 EQUIPMENT AND SYSTEMS MAINTENANCE MANUAL

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- A. Submit 3 copies of each manual, in final form, on equipment and systems to the Architect for distribution. Provide separate manuals for each unit of equipment, each operating system, and each electric and electronic system.
 - 1. Refer to individual Specification Sections for additional requirements on operation and maintenance of the various pieces of equipment and operating systems.
- B. Equipment and Systems: Provide the following information for each piece of equipment, each building operating system, and each electric or electronic system.
 - 1. Description: Provide a complete description of each unit and related component parts, including the following:
 - a. Equipment or system function.
 - b. Operating characteristics.
 - c. Limiting conditions.
 - d. Performance curves.
 - e. Engineering data and field test reports as required on this Project.
 - f. Complete nomenclature and number of replacement parts.
 - 2. Manufacturer's Information: For each manufacturer of a component part or piece of equipment, provide the following:
 - a. Printed operation and maintenance instructions.
 - b. Assembly drawings and diagrams required for maintenance.
 - c. List of items recommended to be stocked as spare parts.
 - 3. Maintenance Procedures: Provide information detailing essential maintenance procedures, including the following:
 - a. Routine operations.
 - b. Troubleshooting guide.
 - c. Disassembly, repair, and reassembly.
 - d. Alignment, adjusting, and checking.
 - 4. Operating Procedures: Provide information on equipment and system operating procedures, including the following:
 - a. Startup procedures.
 - b. Equipment or system break-in.
 - c. Routine and normal operating instructions.
 - d. Regulation and control procedures.
 - e. Instructions on stopping.
 - f. Shutdown and emergency instructions.
 - g. Summer and winter operating instructions.
 - h. Required sequences for electric or electronic systems.
 - i. Special operating instructions.
 - 5. Servicing Schedule: Provide a schedule of routine servicing and lubrication requirements, including a list of required lubricants for equipment with moving parts.

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- 6. Controls: Provide a description of the sequence of operation and as-installed control diagrams by the control manufacturer for systems requiring controls.
- 7. Circuit Directories: For electric and electronic systems, provide complete circuit directories of panelboards, including the following:
 - a. Electric service.
 - b. Controls.
 - c. Communication.

1.7 MATERIAL AND FINISHES MAINTENANCE MANUAL

- A. Submit 3 copies of each manual, in final form, on material and finishes to the Architect for distribution. Provide one section for architectural products, including applied materials and finishes. Provide a second section for products designed for moisture protection and products exposed to the weather.
 - 1. Refer to individual Specification Sections for additional requirements on care and maintenance of materials and finishes.
- B. Architectural Products: Provide manufacturer's data and instructions on care and maintenance of architectural products, including applied materials and finishes.
 - 1. Manufacturer's Data: Provide complete information on architectural products, including the following, as applicable:
 - a. Manufacturer's catalog number.
 - b. Size.
 - c. Material composition.
 - d. Color.
 - e. Texture.
 - f. Reordering information for specially manufactured products.
 - 2. Care and Maintenance Instructions: Provide information on care and maintenance, including manufacturer's recommendations for types of cleaning agents to be used and methods of cleaning. Provide information on cleaning agents and methods that could prove detrimental to the product. Include manufacturer's recommended schedule for cleaning and maintenance.

1.8 INSTRUCTIONS FOR THE OWNER'S PERSONNEL

- A. Prior to final inspection, instruct the Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems. Provide instruction at mutually agreed upon times.
 - 1. For equipment that requires seasonal operation, provide similar instruction during other seasons.
 - 2. Use operation and maintenance manuals for each piece of equipment or system as the basis of instruction. Review contents in detail to explain all aspects of operation and maintenance.

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PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01730

SECTION 01740 - WARRANTIES

PART 1) - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for warranties required by the Contract Documents, including manufacturers standard warranties on products and special warranties.
 - 1. Refer to the General Conditions for terms of the Contractor's period for correction of the Work.
- C. Related Sections: The following Sections contain requirements that relate to this Section:
 - 2. Division 1 Section "Submittals" specifies procedures for submitting warranties.
 - 3. Division 1 Section "Contract Closeout" specifies contract closeout procedures.
 - 4. Certifications and other commitments and agreements for continuing services to Owner are specified elsewhere in the Contract Documents.
- D. Disclaimers and Limitations: Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor of the warranty on the Work that incorporates the products. Manufacturer's disclaimers and limitations on product warranties do not relieve suppliers, manufacturers, and subcontractors required to countersign special warranties with the Contractor.

1.3 WARRANTY REQUIREMENTS

- A. Related Damages and Losses: When correcting failed or damaged warranted construction, remove and replace construction that has been damaged as a result of such failure or must be removed and replaced to provide access for correction of warranted construction.
- B. Reinstatement of Warranty: When Work covered by a warranty has failed and been corrected by replacement or rebuilding, reinstate the warranty by written endorsement. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for depreciation.
- C. Replacement Cost: Upon determination that Work covered by a warranty has failed, replace or rebuild the Work to an acceptable condition complying with requirements of the Contract Documents. The Contractor is responsible for the cost of replacing or rebuilding defective Work regardless of whether the Owner has benefited from use of the Work through a portion of its anticipated useful service life.

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- D. Owner's Recourse: Expressed warranties made to the Owner are in addition to implied warranties and shall not limit the duties, obligations, rights, and remedies otherwise available under the law. Expressed warranty periods shall not be interpreted as limitations on the time in which the Owner can enforce such other duties, obligations, rights, or remedies.
 - 1. Rejection of Warranties: The Owner reserves the right to reject warranties and to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
- E. Where the Contract Documents require a special warranty, or similar commitment on the Work or part of the Work, the Owner reserves the right to refuse to accept the Work, until the Contractor presents evidence that entities required to countersign such commitments are willing to do so.

1.4 SUBMITTALS

- A. Submit written warranties to the Architect prior to the date certified for Substantial Completion. If the Architect's Certificate of Substantial Completion designates a commencement date for warranties other than the date of Substantial Completion for the Work, or a designated portion of the Work, submit written warranties upon request of the Architect.
 - When a designated portion of the Work is completed and occupied or used by the Owner, by separate agreement with the Contractor during the construction period, submit properly executed warranties to the Architect within 15 days of completion of that designated portion of the Work.
- B. When the Contract Documents require the Contractor, or the Contractor and a subcontractor, supplier or manufacturer to execute a special warranty, prepare a written document that contains appropriate terms and identification, ready for execution by the required parties. Submit a draft to the Owner, through the Architect, for approval prior to final execution.
- C. Form of Submittal: At Final Completion compile 2 copies of each required warranty properly executed by the Contractor, or by the Contractor, subcontractor, supplier, or manufacturer. Organize the warranty documents into an orderly sequence based on the table of contents of the Project Manual.
- D. Bind warranties and bonds in heavy-duty, commercial-quality, durable 3-ring, vinyl-covered loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch (115-by-280-mm) paper.
 - 1. Provide heavy paper dividers with celluloid covered tabs for each separate warranty. Mark the tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product, and the name, address, and telephone number of the Installer.
 - 2. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project title or name, and name of the Contractor.

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3. When warranted construction requires operation and maintenance manuals, provide additional copies of each required warranty, as necessary, for inclusion in each required manual.

PART 2) - PRODUCTS (Not Applicable)

PART 3) - EXECUTION (Not Applicable)

END OF SECTION 01740

WARRANTIES 01740 - 3