

# *Project Manual*

Including Specifications  
for Construction of

## *Building Remodeling*

# **3121 McClelland Blvd.**

Joplin, Missouri

### *Owner*

Cherry Tree Lane, LLC  
P.O. Box 3592 Joplin MO 64803

### *Architect*

# Hunter & Millard

ARCHITECTS, INC.

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### *Architect's Job Number*

1523

### *Date of Issue*

January 11, 2016

SET #

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# Invitation & Instructions to Bidders ----- 00102

Building Remodeling  
3121 McClelland Blvd. Joplin Missouri

Owner: Cherry Tree Lane, LLC  
P.O. Box 3592 Joplin MO 64803

**1. Bid Date and Time:** Sealed bids for "Building Remodeling at 3121 McClelland Blvd." will be received by the Owner until 2 PM on Thursday February 11<sup>th</sup>, 2016 at the offices of the Architect, Hunter & Millard Architects, Inc., 3323 E. 32<sup>nd</sup> Street, Suite B, Joplin, Missouri.

Bidding documents shall not be accepted by fax or e-mail. Bids will be opened publicly and read aloud. The Owner will notify the successful Bidder later. A Bid Tabulation sheet will be sent to each Bidder. The Owner reserves the right to reject any or all bids.

**2. This project is open to all interested general contractor bidders.** Those firms interested in bidding on the project should contact Amanda Powell, office manager of the Architect, to be listed on the plan holders list as a bidder.

**3. Construction Documents** (drawings and project manual) will be furnished to the General Contractors in .pdf format. No 'hard copies' will be furnished. General Contractors seeking the construction documents can contact Amanda Powell via email ([amanda@hunterandmillard.com](mailto:amanda@hunterandmillard.com)) for a dropbox link to access the construction documents.

The construction documents will be furnished to a number of plan rooms and blueprinting service companies. Those companies that provide printing services will be able to provide construction documents at a lower cost than the Architect's office can provide.

- Tri-State Area Contractor's Association Plan Room, Joplin, MO
- Springfield Blueprint
- USA Printing Joplin, Mo

## **4. Bidding:**

- **Bid Bond:** Bids shall be accompanied by certified check, cashiers check, or Bid Bond, equal to 5% of the amount of proposal. Checks shall be payable to "Cherry Tree Lane LLC
- **Withdrawing Bids:** No bids may be withdrawn after the scheduled time for receiving bids for a period of at least 30 consecutive days.
- **Performance and Payment Bond:** will be required for this project.

**5. Proposal:** Proposal Documents: Proposal documents must be enclosed in a sealed envelope bearing the Contractor's name and addressed to the Owner, and further endorsed with the title, " Building Remodeling at 3121 McClelland Blvd., Joplin Missouri."

- **Proposal Form:** The name of the Bidder shall be filled in the blank left for this purpose on the Proposal. the place of residence of each Bidder must be given. When a firm is a Bidder, the member of the firm who signs the firm name to the Proposal should state, in addition, the title of the office this member holds with the

Instructions  
00102-1



firm. All prices in the Proposal shall be stated in words and figures. Bids shall state the price of all labor and material required for the complete execution of the work in full conformity with the Plans and Specifications. Additional items of work offered by the Bidder will not be considered without receiving approval from the Architect prior to the Bid Opening.

**6. Alternate Bids:** Each Bidder shall bid all alternates included (if any) in the Bid Form, except that should he desire not to bid an alternate he may insert the words "no bid" in the space provided for prices for such alternate. However, when a bidder writes "no bid" for one or more alternates he thereby waives any claim to the contract award if that alternate (or those alternates) becomes the basis for determining the low bid and/or the contract award. If an alternate price called involves no change in price, Bidder shall so indicate by writing the words "no change" in the space provided.

**7. Familiarity with Conditions:** Prior to the submission of the Proposal, the Bidder shall make and shall be deemed to have made a careful examination of the Plans and Specifications, Proposal For, Contract Agreement, visited the site of the work, examined carefully the location, informed themselves by their independent research of the difficulties to be encountered and judged for themselves the accessibility of the work and all attending circumstances affecting the costs of doing the work or the time required for its completion, and obtained all information required to make an intelligent proposal. Bidders shall rely exclusively upon their own estimates, investigations, and other data which are necessary for full information upon which the proposal may be based. It is mutually agreed that submission of a proposal will be evidence that the Bidder has made the examination and investigations required herein.

**8. Interpretation of Plans and Specifications:** If any person contemplating submitting a bid for the proposed contract is in doubt as to the true meaning of any part of the plans, specifications, or other proposed contract documents, he may submit to the Architect a written request for an interpretation thereof. The person submitting such request will be responsible for its prompt delivery. An interpretation of the proposed documents will be made by Addendum duly issued at least two (2) days prior to bid date and a copy of such Addendum will be mailed or delivered to each person receiving a set of such documents. All requests for interpretation must be submitted to the Architect in ample time to be included in the above mentioned Addendum.

No request for interpretation or approval of materials or manufacturers of materials other than those specified will be accepted after this date. The Owner will not be responsible for any explanation or interpretation of the proposed documents. The Architect will be contacted when the Bidder has questions or is in doubt of the true meaning of the work and materials required by the Documents when the work or materials relate to architectural requirements.

**9. Bidder's Qualifications:** This project is to be bid by invited, qualified Contractors familiar with the type of construction required by this project. The General Contractor shall submit with his proposal for approval a list of major Subcontractors proposed for

performing work on this project, and after bid opening a full list of subcontractors may be requested by the Owner during the contractor selection phase. The Owner may make such investigations as he deems necessary to determine the ability of the Bidder to perform the Work, and the Bidder shall furnish to the Owner all such information and data for this purpose as the Owner may request. The Owner reserves the right to reject any Bid if the evidence submitted by, or investigation of, such Bidder fails to satisfy the Owner that such Bidder is properly qualified to carry out the obligations of the Agreement and to complete the work contemplated therein.

**10. Time of Completion of Construction:** The time of completion of construction of the Project shall be as specified by the Proposal and Contract agreement. The Bidder may not take exception to the time allowed to complete the work. Bids shall reflect the Bidder's price for providing all necessary labor, material, equipment, and supervision to fully complete the work from the date specified in the Notice to Proceed.

**11. Contractor Selection Process:**

- **The Owner reserves the right to reject any or all bids.** The Owner also reserves the right to waive informalities or minor irregularities in any bid.
- **Schedule of Values:** Owner may request a schedule of values indicating their bid by Divisions of Work during the Contractor selection process.
- **Estimated Work Completion Schedule:** The successful bidder will be asked to provide an estimated work completion schedule before work commences.
- **Owner has requested up to forty five (45) days to complete the contractor selection and approval process.** Due to owner's travel schedule process could take longer than the 'standard' thirty days. The Owner intends to be able to issue a Notice of Award in less than forty five (45) days.

**12. Pre-Bid Conference:** will be held at the project site at 12:30 PM on Thursday, February 4, 2016. General Contractor attendance is not mandatory, but encouraged.

**END OF INSTRUCTIONS TO BIDDERS 00102**

# Proposal

Date: \_\_\_\_\_

Time: \_\_\_\_\_

## Proposal of:

\_\_\_\_\_  
(herein called "Bidder")

and

\_\_\_\_\_  
(insert Corporation, Partnership, or Individual, as applicable)

existing under the laws of the State of \_\_\_\_\_

doing business as \_\_\_\_\_

to: Cherry Tree Lane, LLC.

The Bidder, in compliance with your invitation for bids for the construction of:

Building Remodeling at 3121 McClelland Blvd., Joplin Missouri

Having carefully examined the plans, specifications with related documents, the site of the proposed work, and being familiar with the premises and the conditions affecting the construction of the proposed project including the availability of materials and labor, hereby proposes to furnish all materials, supplies, and to construct the project in accordance with the Contract Documents, within the time set forth therein, and at the prices stated below.

The prices are to cover all expenses incurred in performing the work required under the Contract Documents, of which this proposal is a part.

Bidder hereby agrees to commence Work under this Contract on or before a date to be specified in a written "Notice to Proceed" by the Owner and to fully complete the project within the amount of calendar days as indicated on this Proposal Form.

Bidder acknowledges the receipt of the following **ADDENDA:** \_\_\_\_\_

**BASE PROPOSAL:** Bidder agrees to perform all of the work described in the specifications and as shown on the plans for the following prices:

**TOTAL BASE BID AMOUNT:**

\_\_\_\_\_ dollars (\$) )  
(amounts are to be shown in both words and figures. In case of discrepancy, the  
amounts shown in words will govern.)

**ALTERNATE NO. 1** (LED lighting)

If Alternate No. 1 is accepted (add/deduct):

\_\_\_\_\_ dollars (\$) )

**ALTERNATE NO. 2** (add two windows)

If Alternate No. 2 is accepted (add/deduct):

\_\_\_\_\_ dollars (\$) )

**ALTERNATE NO. 3** (add ONE wood file shelving unit)

If Alternate No. 3 is accepted (add/deduct):

\_\_\_\_\_ dollars (\$) )

**Calendar days to Substantially Complete the Work:** \_\_\_\_\_

Bidder understands that the Owner reserves the right to reject any or all bids and to waive any irregularities in the bidding.

The Bidder agrees that his bid shall be good and may not be withdrawn for a period of thirty (30) calendar days after the scheduled closing time for receiving bids.

The Bidder agrees, if awarded the Contract, to complete the Project within the number of days which is set forth in this Proposal. The Bidder further agrees to commence construction no later than 10 days from date of receiving Notice to Proceed.

ATTEST Respectfully submitted,

by \_\_\_\_\_  
Name of Company submitting Proposal      Authorized Agent      Date

(seal) (if bid by a corporation)

Bidder's Address: \_\_\_\_\_

# Notice of Award

to: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Project:  
Building Remodeling  
3121 McClelland Blvd. Joplin Missouri

Owner: Cherry Tree Lane, LLC  
P.O. Box 3592 Joplin MO 64803

The **OWNER** has considered the **BID** submitted by you for the above described **WORK** in response to its **INSTRUCTIONS TO BIDDERS**.

You are hereby notified that your **BID** has been accepted for items in the amount of:  
\_\_\_\_\_

You are required to return an acknowledged copy of this **NOTICE OF AWARD** to the **OWNER**.

Dated this \_\_\_\_ day of \_\_\_\_\_, .

By \_\_\_\_\_  
Owner  
By \_\_\_\_\_  
Owner

## Acceptance of Notice

Receipt of the above **NOTICE OF AWARD** is hereby acknowledged this \_\_\_\_ day of \_\_\_\_\_, .

By \_\_\_\_\_  
Title \_\_\_\_\_

# Notice to Proceed

Project:  
Building Remodeling  
3121 McClelland Blvd. Joplin Missouri

Owner: Cherry Tree Lane, LLC  
P.O. Box 3592 Joplin MO 64803

To: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Date: \_\_\_\_\_

You are hereby notified to commence **WORK** in accordance with the **AGREEMENT** dated \_\_\_\_\_, \_\_\_\_\_, on or before \_\_\_\_\_, \_\_\_\_\_, and you are to complete the **WORK** within \_\_\_\_\_ consecutive calendar days thereafter.

The **date of completion** of all **WORK** is therefore \_\_\_\_\_, \_\_\_\_\_.

By \_\_\_\_\_, Owner

By \_\_\_\_\_, Owner

# Acceptance of Notice

Receipt of the above **NOTICE TO PROCEED** is hereby acknowledged.

By \_\_\_\_\_ this the \_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

By \_\_\_\_\_ Title \_\_\_\_\_

# **General Conditions ----- 00700**

Attached is the General Conditions of the Contract for Construction, AIA Document A201.





# AIA<sup>®</sup> Document A201<sup>™</sup> – 2007

## General Conditions of the Contract for Construction

for the following PROJECT:

*(Name and location or address)*

THE OWNER:

*(Name, legal status and address)*

THE ARCHITECT:

*(Name, legal status and address)*

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

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## **ARTICLE 1 GENERAL PROVISIONS**

### **§ 1.1 Basic Definitions**

#### **§ 1.1.1 The Contract Documents**

The Contract Documents are enumerated in the Agreement between the Owner and Contractor (hereinafter the Agreement) and consist of the Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of the Contract, other documents listed in the Agreement and Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive or (4) a written order for a minor change in the Work issued by the Architect. Unless specifically enumerated in the Agreement, the Contract Documents do not include the advertisement or invitation to bid, Instructions to Bidders, sample forms, other information furnished by the Owner in anticipation of receiving bids or proposals, the Contractor's bid or proposal, or portions of Addenda relating to bidding requirements.

#### **§ 1.1.2 The Contract**

The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the Contractor and the Architect or the Architect's consultants, (2) between the Owner and a Subcontractor or a Sub-subcontractor, (3) between the Owner and the Architect or the Architect's consultants or (4) between any persons or entities other than the Owner and the Contractor. The Architect shall, however, be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of the Architect's duties.

#### **§ 1.1.3 The Work**

The term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project.

#### **§ 1.1.4 The Project**

The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by the Owner and by separate contractors.

#### **§ 1.1.5 The Drawings**

The Drawings are the graphic and pictorial portions of the Contract Documents showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules and diagrams.

#### **§ 1.1.6 The Specifications**

The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, systems, standards and workmanship for the Work, and performance of related services.

#### **§ 1.1.7 Instruments of Service**

Instruments of Service are representations, in any medium of expression now known or later developed, of the tangible and intangible creative work performed by the Architect and the Architect's consultants under their respective professional services agreements. Instruments of Service may include, without limitation, studies, surveys, models, sketches, drawings, specifications, and other similar materials.

#### **§ 1.1.8 Initial Decision Maker**

The Initial Decision Maker is the person identified in the Agreement to render initial decisions on Claims in accordance with Section 15.2 and certify termination of the Agreement under Section 14.2.2.

### **§ 1.2 Correlation and Intent of the Contract Documents**

**§ 1.2.1** The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.



**§ 1.2.2 Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.**

**§ 1.2.3 Unless otherwise stated in the Contract Documents, words that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.**

### **§ 1.3 Capitalization**

Terms capitalized in these General Conditions include those that are (1) specifically defined, (2) the titles of numbered articles or (3) the titles of other documents published by the American Institute of Architects.

### **§ 1.4 Interpretation**

In the interest of brevity the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an," but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

### **§ 1.5 Ownership and Use of Drawings, Specifications and Other Instruments of Service**

**§ 1.5.1** The Architect and the Architect's consultants shall be deemed the authors and owners of their respective Instruments of Service, including the Drawings and Specifications, and will retain all common law, statutory and other reserved rights, including copyrights. The Contractor, Subcontractors, Sub-subcontractors, and material or equipment suppliers shall not own or claim a copyright in the Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with this Project is not to be construed as publication in derogation of the Architect's or Architect's consultants' reserved rights.

**§ 1.5.2** The Contractor, Subcontractors, Sub-subcontractors and material or equipment suppliers are authorized to use and reproduce the Instruments of Service provided to them solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. The Contractor, Subcontractors, Sub-subcontractors, and material or equipment suppliers may not use the Instruments of Service on other projects or for additions to this Project outside the scope of the Work without the specific written consent of the Owner, Architect and the Architect's consultants.

### **§ 1.6 Transmission of Data in Digital Form**

If the parties intend to transmit Instruments of Service or any other information or documentation in digital form, they shall endeavor to establish necessary protocols governing such transmissions, unless otherwise already provided in the Agreement or the Contract Documents.

## **ARTICLE 2 OWNER**

### **§ 2.1 General**

**§ 2.1.1** The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Owner shall designate in writing a representative who shall have express authority to bind the Owner with respect to all matters requiring the Owner's approval or authorization. Except as otherwise provided in Section 4.2.1, the Architect does not have such authority. The term "Owner" means the Owner or the Owner's authorized representative.

**§ 2.1.2** The Owner shall furnish to the Contractor within fifteen days after receipt of a written request, information necessary and relevant for the Contractor to evaluate, give notice of or enforce mechanic's lien rights. Such information shall include a correct statement of the record legal title to the property on which the Project is located, usually referred to as the site, and the Owner's interest therein.

### **§ 2.2 Information and Services Required of the Owner**

**§ 2.2.1** Prior to commencement of the Work, the Contractor may request in writing that the Owner provide reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract. Thereafter, the Contractor may only request such evidence if (1) the Owner fails to make payments to the Contractor as the Contract Documents require; (2) a change in the Work materially changes the Contract Sum; or (3) the Contractor identifies in writing a reasonable concern regarding the Owner's ability to make payment when due. The Owner shall furnish such evidence as a condition precedent to commencement or continuation of the Work or the portion of the Work affected by a material change. After the Owner furnishes the evidence, the Owner shall not materially vary such financial arrangements without prior notice to the Contractor.



**§ 2.2.2** Except for permits and fees that are the responsibility of the Contractor under the Contract Documents, including those required under Section 3.7.1, the Owner shall secure and pay for necessary approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities.

**§ 2.2.3** The Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the site. The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work.

**§ 2.2.4** The Owner shall furnish information or services required of the Owner by the Contract Documents with reasonable promptness. The Owner shall also furnish any other information or services under the Owner's control and relevant to the Contractor's performance of the Work with reasonable promptness after receiving the Contractor's written request for such information or services.

**§ 2.2.5** Unless otherwise provided in the Contract Documents, the Owner shall furnish to the Contractor one copy of the Contract Documents for purposes of making reproductions pursuant to Section 1.5.2.

**§ 2.3 Owner's Right to Stop the Work**

If the Contractor fails to correct Work that is not in accordance with the requirements of the Contract Documents as required by Section 12.2 or repeatedly fails to carry out Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Section 6.1.3.

**§ 2.4 Owner's Right to Carry Out the Work**

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a ten-day period after receipt of written notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such deficiencies. In such case an appropriate Change Order shall be issued deducting from payments then or thereafter due the Contractor the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Architect's additional services made necessary by such default, neglect or failure. Such action by the Owner and amounts charged to the Contractor are both subject to prior approval of the Architect. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner.

**ARTICLE 3 CONTRACTOR**

**§ 3.1 General**

**§ 3.1.1** The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Contractor shall be lawfully licensed, if required in the jurisdiction where the Project is located. The Contractor shall designate in writing a representative who shall have express authority to bind the Contractor with respect to all matters under this Contract. The term "Contractor" means the Contractor or the Contractor's authorized representative.

**§ 3.1.2** The Contractor shall perform the Work in accordance with the Contract Documents.

**§ 3.1.3** The Contractor shall not be relieved of obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Architect in the Architect's administration of the Contract, or by tests, inspections or approvals required or performed by persons or entities other than the Contractor.

**§ 3.2 Review of Contract Documents and Field Conditions by Contractor**

**§ 3.2.1** Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed and correlated personal observations with requirements of the Contract Documents.

**§ 3.2.2** Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as the



information furnished by the Owner pursuant to Section 2.2.3, shall take field measurements of any existing conditions related to that portion of the Work, and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Architect any errors, inconsistencies or omissions discovered by or made known to the Contractor as a request for information in such form as the Architect may require. It is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents.

**§ 3.2.3** The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, but the Contractor shall promptly report to the Architect any nonconformity discovered by or made known to the Contractor as a request for information in such form as the Architect may require.

**§ 3.2.4** If the Contractor believes that additional cost or time is involved because of clarifications or instructions the Architect issues in response to the Contractor's notices or requests for information pursuant to Sections 3.2.2 or 3.2.3, the Contractor shall make Claims as provided in Article 15. If the Contractor fails to perform the obligations of Sections 3.2.2 or 3.2.3, the Contractor shall pay such costs and damages to the Owner as would have been avoided if the Contractor had performed such obligations. If the Contractor performs those obligations, the Contractor shall not be liable to the Owner or Architect for damages resulting from errors, inconsistencies or omissions in the Contract Documents, for differences between field measurements or conditions and the Contract Documents, or for nonconformities of the Contract Documents to applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities.

### **§ 3.3 Supervision and Construction Procedures**

**§ 3.3.1** The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract, unless the Contract Documents give other specific instructions concerning these matters. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences or procedures, the Contractor shall evaluate the jobsite safety thereof and, except as stated below, shall be fully and solely responsible for the jobsite safety of such means, methods, techniques, sequences or procedures. If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely written notice to the Owner and Architect and shall not proceed with that portion of the Work without further written instructions from the Architect. If the Contractor is then instructed to proceed with the required means, methods, techniques, sequences or procedures without acceptance of changes proposed by the Contractor, the Owner shall be solely responsible for any loss or damage arising solely from those Owner-required means, methods, techniques, sequences or procedures.

**§ 3.3.2** The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors.

**§ 3.3.3** The Contractor shall be responsible for inspection of portions of Work already performed to determine that such portions are in proper condition to receive subsequent Work.

### **§ 3.4 Labor and Materials**

**§ 3.4.1** Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

**§ 3.4.2** Except in the case of minor changes in the Work authorized by the Architect in accordance with Sections 3.12.8 or 7.4, the Contractor may make substitutions only with the consent of the Owner, after evaluation by the Architect and in accordance with a Change Order or Construction Change Directive.

**§ 3.4.3** The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them.



### **§ 3.5 Warranty**

The Contractor warrants to the Owner and Architect that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Work, materials, or equipment not conforming to these requirements may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by the Architect, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

### **§ 3.6 Taxes**

The Contractor shall pay sales, consumer, use and similar taxes for the Work provided by the Contractor that are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect.

### **§ 3.7 Permits, Fees, Notices and Compliance with Laws**

**§ 3.7.1** Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the building permit as well as for other permits, fees, licenses, and inspections by government agencies necessary for proper execution and completion of the Work that are customarily secured after execution of the Contract and legally required at the time bids are received or negotiations concluded.

**§ 3.7.2** The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work.

**§ 3.7.3** If the Contractor performs Work knowing it to be contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.

### **§ 3.7.4 Concealed or Unknown Conditions**

If the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall promptly provide notice to the Owner and the Architect before conditions are disturbed and in no event later than 21 days after first observance of the conditions. The Architect will promptly investigate such conditions and, if the Architect determines that they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend an equitable adjustment in the Contract Sum or Contract Time, or both. If the Architect determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Architect shall promptly notify the Owner and Contractor in writing, stating the reasons. If either party disputes the Architect's determination or recommendation, that party may proceed as provided in Article 15.

**§ 3.7.5** If, in the course of the Work, the Contractor encounters human remains or recognizes the existence of burial markers, archaeological sites or wetlands not indicated in the Contract Documents, the Contractor shall immediately suspend any operations that would affect them and shall notify the Owner and Architect. Upon receipt of such notice, the Owner shall promptly take any action necessary to obtain governmental authorization required to resume the operations. The Contractor shall continue to suspend such operations until otherwise instructed by the Owner but shall continue with all other operations that do not affect those remains or features. Requests for adjustments in the Contract Sum and Contract Time arising from the existence of such remains or features may be made as provided in Article 15.

### **§ 3.8 Allowances**

**§ 3.8.1** The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities to whom the Contractor has reasonable objection.

**§ 3.8.2** Unless otherwise provided in the Contract Documents,

- 1 allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;



- 2 Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowances; and
- 3 whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the allowances under Section 3.8.2.1 and (2) changes in Contractor's costs under Section 3.8.2.2.

**§ 3.8.3** Materials and equipment under an allowance shall be selected by the Owner with reasonable promptness.

**§ 3.9 Superintendent**

**§ 3.9.1** The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during performance of the Work. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor.

**§ 3.9.2** The Contractor, as soon as practicable after award of the Contract, shall furnish in writing to the Owner through the Architect the name and qualifications of a proposed superintendent. The Architect may reply within 14 days to the Contractor in writing stating (1) whether the Owner or the Architect has reasonable objection to the proposed superintendent or (2) that the Architect requires additional time to review. Failure of the Architect to reply within the 14 day period shall constitute notice of no reasonable objection.

**§ 3.9.3** The Contractor shall not employ a proposed superintendent to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not change the superintendent without the Owner's consent, which shall not unreasonably be withheld or delayed.

**§ 3.10 Contractor's Construction Schedules**

**§ 3.10.1** The Contractor, promptly after being awarded the Contract, shall prepare and submit for the Owner's and Architect's information a Contractor's construction schedule for the Work. The schedule shall not exceed time limits current under the Contract Documents, shall be revised at appropriate intervals as required by the conditions of the Work and Project, shall be related to the entire Project to the extent required by the Contract Documents, and shall provide for expeditious and practicable execution of the Work.

**§ 3.10.2** The Contractor shall prepare a submittal schedule, promptly after being awarded the Contract and thereafter as necessary to maintain a current submittal schedule, and shall submit the schedule(s) for the Architect's approval. The Architect's approval shall not unreasonably be delayed or withheld. The submittal schedule shall (1) be coordinated with the Contractor's construction schedule, and (2) allow the Architect reasonable time to review submittals. If the Contractor fails to submit a submittal schedule, the Contractor shall not be entitled to any increase in Contract Sum or extension of Contract Time based on the time required for review of submittals.

**§ 3.10.3** The Contractor shall perform the Work in general accordance with the most recent schedules submitted to the Owner and Architect.

**§ 3.11 Documents and Samples at the Site**

The Contractor shall maintain at the site for the Owner one copy of the Drawings, Specifications, Addenda, Change Orders and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and one copy of approved Shop Drawings, Product Data, Samples and similar required submittals. These shall be available to the Architect and shall be delivered to the Architect for submittal to the Owner upon completion of the Work as a record of the Work as constructed.

**§ 3.12 Shop Drawings, Product Data and Samples**

**§ 3.12.1** Shop Drawings are drawings, diagrams, schedules and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-subcontractor, manufacturer, supplier or distributor to illustrate some portion of the Work.

**§ 3.12.2** Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.

**§ 3.12.3** Samples are physical examples that illustrate materials, equipment or workmanship and establish standards by which the Work will be judged.



**§ 3.12.4** Shop Drawings, Product Data, Samples and similar submittals are not Contract Documents. Their purpose is to demonstrate the way by which the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents for those portions of the Work for which the Contract Documents require submittals. Review by the Architect is subject to the limitations of Section 4.2.7. Informational submittals upon which the Architect is not expected to take responsive action may be so identified in the Contract Documents. Submittals that are not required by the Contract Documents may be returned by the Architect without action.

**§ 3.12.5** The Contractor shall review for compliance with the Contract Documents, approve and submit to the Architect Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of separate contractors.

**§ 3.12.6** By submitting Shop Drawings, Product Data, Samples and similar submittals, the Contractor represents to the Owner and Architect that the Contractor has (1) reviewed and approved them, (2) determined and verified materials, field measurements and field construction criteria related thereto, or will do so and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

**§ 3.12.7** The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples or similar submittals until the respective submittal has been approved by the Architect.

**§ 3.12.8** The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Architect's approval of Shop Drawings, Product Data, Samples or similar submittals unless the Contractor has specifically informed the Architect in writing of such deviation at the time of submittal and (1) the Architect has given written approval to the specific deviation as a minor change in the Work, or (2) a Change Order or Construction Change Directive has been issued authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples or similar submittals by the Architect's approval thereof.

**§ 3.12.9** The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples or similar submittals, to revisions other than those requested by the Architect on previous submittals. In the absence of such written notice, the Architect's approval of a resubmission shall not apply to such revisions.

**§ 3.12.10** The Contractor shall not be required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents for a portion of the Work or unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. The Contractor shall not be required to provide professional services in violation of applicable law. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Architect will specify all performance and design criteria that such services must satisfy. The Contractor shall cause such services or certifications to be provided by a properly licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the Architect. The Owner and the Architect shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications and approvals performed or provided by such design professionals, provided the Owner and Architect have specified to the Contractor all performance and design criteria that such services must satisfy. Pursuant to this Section 3.12.10, the Architect will review, approve or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Contractor shall not be responsible for the adequacy of the performance and design criteria specified in the Contract Documents.

#### **§ 3.13 Use of Site**

The Contractor shall confine operations at the site to areas permitted by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.

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### **§ 3.14 Cutting and Patching**

**§ 3.14.1** The Contractor shall be responsible for cutting, fitting or patching required to complete the Work or to make its parts fit together properly. All areas requiring cutting, fitting and patching shall be restored to the condition existing prior to the cutting, fitting and patching, unless otherwise required by the Contract Documents.

**§ 3.14.2** The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner or separate contractors by cutting, patching or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter such construction by the Owner or a separate contractor except with written consent of the Owner and of such separate contractor; such consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold from the Owner or a separate contractor the Contractor's consent to cutting or otherwise altering the Work.

### **§ 3.15 Cleaning Up**

**§ 3.15.1** The Contractor shall keep the premises and surrounding area free from accumulation of waste materials or rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery and surplus materials from and about the Project.

**§ 3.15.2** If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and Owner shall be entitled to reimbursement from the Contractor.

### **§ 3.16 Access to Work**

The Contractor shall provide the Owner and Architect access to the Work in preparation and progress wherever located.

### **§ 3.17 Royalties, Patents and Copyrights**

The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner and Architect harmless from loss on account thereof, but shall not be responsible for such defense or loss when a particular design, process or product of a particular manufacturer or manufacturers is required by the Contract Documents, or where the copyright violations are contained in Drawings, Specifications or other documents prepared by the Owner or Architect. However, if the Contractor has reason to believe that the required design, process or product is an infringement of a copyright or a patent, the Contractor shall be responsible for such loss unless such information is promptly furnished to the Architect.

### **§ 3.18 Indemnification**

**§ 3.18.1** To the fullest extent permitted by law the Contractor shall indemnify and hold harmless the Owner, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by the negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity that would otherwise exist as to a party or person described in this Section 3.18.

**§ 3.18.2** In claims against any person or entity indemnified under this Section 3.18 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under Section 3.18.1 shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts or other employee benefit acts.

## **ARTICLE 4 ARCHITECT**

### **§ 4.1 General**

**§ 4.1.1** The Owner shall retain an architect lawfully licensed to practice architecture or an entity lawfully practicing architecture in the jurisdiction where the Project is located. That person or entity is identified as the Architect in the Agreement and is referred to throughout the Contract Documents as if singular in number.

**§ 4.1.2** Duties, responsibilities and limitations of authority of the Architect as set forth in the Contract Documents shall not be restricted, modified or extended without written consent of the Owner, Contractor and Architect. Consent shall not be unreasonably withheld.



**§ 4.1.3** If the employment of the Architect is terminated, the Owner shall employ a successor architect as to whom the Contractor has no reasonable objection and whose status under the Contract Documents shall be that of the Architect.

**§ 4.2 Administration of the Contract**

**§ 4.2.1** The Architect will provide administration of the Contract as described in the Contract Documents and will be an Owner's representative during construction until the date the Architect issues the final Certificate for Payment. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents.

**§ 4.2.2** The Architect will visit the site at intervals appropriate to the stage of construction, or as otherwise agreed with the Owner, to become generally familiar with the progress and quality of the portion of the Work completed, and to determine in general if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Architect will not have control over, charge of, or responsibility for, the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents, except as provided in Section 3.3.1.

**§ 4.2.3** On the basis of the site visits, the Architect will keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and report to the Owner (1) known deviations from the Contract Documents and from the most recent construction schedule submitted by the Contractor, and (2) defects and deficiencies observed in the Work. The Architect will not be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Architect will not have control over or charge of and will not be responsible for acts or omissions of the Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

**§ 4.2.4 Communications Facilitating Contract Administration**

Except as otherwise provided in the Contract Documents or when direct communications have been specially authorized, the Owner and Contractor shall endeavor to communicate with each other through the Architect about matters arising out of or relating to the Contract. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and material suppliers shall be through the Contractor. Communications by and with separate contractors shall be through the Owner.

**§ 4.2.5** Based on the Architect's evaluations of the Contractor's Applications for Payment, the Architect will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.

**§ 4.2.6** The Architect has authority to reject Work that does not conform to the Contract Documents. Whenever the Architect considers it necessary or advisable, the Architect will have authority to require inspection or testing of the Work in accordance with Sections 13.5.2 and 13.5.3, whether or not such Work is fabricated, installed or completed. However, neither this authority of the Architect nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect to the Contractor, Subcontractors, material and equipment suppliers, their agents or employees, or other persons or entities performing portions of the Work.

**§ 4.2.7** The Architect will review and approve, or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Architect's action will be taken in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time in the Architect's professional judgment to permit adequate review. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect's review of the Contractor's submittals shall not relieve the Contractor of the obligations under Sections 3.3, 3.5 and 3.12. The Architect's review shall not constitute approval of safety precautions or, unless otherwise specifically stated by the Architect, of any construction means, methods, techniques, sequences or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.



§ 4.2.8 The Architect will prepare Change Orders and Construction Change Directives, and may authorize minor changes in the Work as provided in Section 7.4. The Architect will investigate and make determinations and recommendations regarding concealed and unknown conditions as provided in Section 3.7.4.

§ 4.2.9 The Architect will conduct inspections to determine the date or dates of Substantial Completion and the date of final completion; issue Certificates of Substantial Completion pursuant to Section 9.8; receive and forward to the Owner, for the Owner's review and records, written warranties and related documents required by the Contract and assembled by the Contractor pursuant to Section 9.10; and issue a final Certificate for Payment pursuant to Section 9.10.

§ 4.2.10 If the Owner and Architect agree, the Architect will provide one or more project representatives to assist in carrying out the Architect's responsibilities at the site. The duties, responsibilities and limitations of authority of such project representatives shall be as set forth in an exhibit to be incorporated in the Contract Documents.

§ 4.2.11 The Architect will interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of either the Owner or Contractor. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness.

§ 4.2.12 Interpretations and decisions of the Architect will be consistent with the intent of, and reasonably inferable from, the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and decisions, the Architect will endeavor to secure faithful performance by both Owner and Contractor, will not show partiality to either and will not be liable for results of interpretations or decisions rendered in good faith.

§ 4.2.13 The Architect's decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents.

§ 4.2.14 The Architect will review and respond to requests for information about the Contract Documents. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If appropriate, the Architect will prepare and issue supplemental Drawings and Specifications in response to the requests for information.

## ARTICLE 5 SUBCONTRACTORS

### § 5.1 Definitions

§ 5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include a separate contractor or subcontractors of a separate contractor.

§ 5.1.2 A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the site. The term "Sub-subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor.

### § 5.2 Award of Subcontracts and Other Contracts for Portions of the Work

§ 5.2.1 Unless otherwise stated in the Contract Documents or the bidding requirements, the Contractor, as soon as practicable after award of the Contract, shall furnish in writing to the Owner through the Architect the names of persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for each principal portion of the Work. The Architect may reply within 14 days to the Contractor in writing stating (1) whether the Owner or the Architect has reasonable objection to any such proposed person or entity or (2) that the Architect requires additional time for review. Failure of the Owner or Architect to reply within the 14-day period shall constitute notice of no reasonable objection.

§ 5.2.2 The Contractor shall not contract with a proposed person or entity to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.

§ 5.2.3 If the Owner or Architect has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner or Architect has no reasonable objection. If the proposed but rejected Subcontractor was reasonably capable of performing the Work, the Contract Sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be



issued before commencement of the substitute Subcontractor's Work. However, no increase in the Contract Sum or Contract Time shall be allowed for such change unless the Contractor has acted promptly and responsively in submitting names as required.

**§ 5.2.4** The Contractor shall not substitute a Subcontractor, person or entity previously selected if the Owner or Architect makes reasonable objection to such substitution.

### **§ 5.3 Subcontractual Relations**

By appropriate agreement, written where legally required for validity, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work, which the Contractor, by these Documents, assumes toward the Owner and Architect. Each subcontract agreement shall preserve and protect the rights of the Owner and Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement that may be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

### **§ 5.4 Contingent Assignment of Subcontracts**

**§ 5.4.1** Each subcontract agreement for a portion of the Work is assigned by the Contractor to the Owner, provided that

1. assignment is effective only after termination of the Contract by the Owner for cause pursuant to Section 14.2 and only for those subcontract agreements that the Owner accepts by notifying the Subcontractor and Contractor in writing; and
2. assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

When the Owner accepts the assignment of a subcontract agreement, the Owner assumes the Contractor's rights and obligations under the subcontract.

**§ 5.4.2** Upon such assignment, if the Work has been suspended for more than 30 days, the Subcontractor's compensation shall be equitably adjusted for increases in cost resulting from the suspension.

**§ 5.4.3** Upon such assignment to the Owner under this Section 5.4, the Owner may further assign the subcontract to a successor contractor or other entity. If the Owner assigns the subcontract to a successor contractor or other entity, the Owner shall nevertheless remain legally responsible for all of the successor contractor's obligations under the subcontract.

## **ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS**

### **§ 6.1 Owner's Right to Perform Construction and to Award Separate Contracts**

**§ 6.1.1** The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and to award separate contracts in connection with other portions of the Project or other construction or operations on the site under Conditions of the Contract identical or substantially similar to these including those portions related to insurance and waiver of subrogation. If the Contractor claims that delay or additional cost is involved because of such action by the Owner, the Contractor shall make such Claim as provided in Article 15.

**§ 6.1.2** When separate contracts are awarded for different portions of the Project or other construction or operations on the site, the term "Contractor" in the Contract Documents in each case shall mean the Contractor who executes each separate Owner-Contractor Agreement.

**§ 6.1.3** The Owner shall provide for coordination of the activities of the Owner's own forces and of each separate contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with other separate contractors and the Owner in reviewing their construction schedules. The Contractor shall make any revisions to the construction schedule deemed necessary after a joint review and mutual agreement. The construction schedules shall then constitute the schedules to be used by the Contractor, separate contractors and the Owner until subsequently revised.



§ 6.1.4 Unless otherwise provided in the Contract Documents, when the Owner performs construction or operations related to the Project with the Owner's own forces, the Owner shall be deemed to be subject to the same obligations and to have the same rights that apply to the Contractor under the Conditions of the Contract, including, without excluding others, those stated in Article 3, this Article 6 and Articles 10, 11 and 12.

#### § 6.2 Mutual Responsibility

§ 6.2.1 The Contractor shall afford the Owner and separate contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents.

§ 6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner or a separate contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly report to the Architect apparent discrepancies or defects in such other construction that would render it unsuitable for such proper execution and results. Failure of the Contractor so to report shall constitute an acknowledgment that the Owner's or separate contractor's completed or partially completed construction is fit and proper to receive the Contractor's Work, except as to defects not then reasonably discoverable.

§ 6.2.3 The Contractor shall reimburse the Owner for costs the Owner incurs that are payable to a separate contractor because of the Contractor's delays, improperly timed activities or defective construction. The Owner shall be responsible to the Contractor for costs the Contractor incurs because of a separate contractor's delays, improperly timed activities, damage to the Work or defective construction.

§ 6.2.4 The Contractor shall promptly remedy damage the Contractor wrongfully causes to completed or partially completed construction or to property of the Owner or separate contractors as provided in Section 10.2.5.

§ 6.2.5 The Owner and each separate contractor shall have the same responsibilities for cutting and patching as are described for the Contractor in Section 3.14.

#### § 6.3 Owner's Right to Clean Up

If a dispute arises among the Contractor, separate contractors and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish, the Owner may clean up and the Architect will allocate the cost among those responsible.

### ARTICLE 7 CHANGES IN THE WORK

#### § 7.1 General

§ 7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, Construction Change Directive or order for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents.

§ 7.1.2 A Change Order shall be based upon agreement among the Owner, Contractor and Architect; a Construction Change Directive requires agreement by the Owner and Architect and may or may not be agreed to by the Contractor; an order for a minor change in the Work may be issued by the Architect alone.

§ 7.1.3 Changes in the Work shall be performed under applicable provisions of the Contract Documents, and the Contractor shall proceed promptly, unless otherwise provided in the Change Order, Construction Change Directive or order for a minor change in the Work.

#### § 7.2 Change Orders

§ 7.2.1 A Change Order is a written instrument prepared by the Architect and signed by the Owner, Contractor and Architect stating their agreement upon all of the following:

- 1 The change in the Work;
- 2 The amount of the adjustment, if any, in the Contract Sum; and
- 3 The extent of the adjustment, if any, in the Contract Time.

#### § 7.3 Construction Change Directives

§ 7.3.1 A Construction Change Directive is a written order prepared by the Architect and signed by the Owner and Architect, directing a change in the Work prior to agreement on adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in



the Work within the general scope of the Contract consisting of additions, deletions or other revisions, the Contract Sum and Contract Time being adjusted accordingly.

**§ 7.3.2** A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order.

**§ 7.3.3** If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:

1. Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
2. Unit prices stated in the Contract Documents or subsequently agreed upon;
3. Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
4. As provided in Section 7.3.7.

**§ 7.3.4** If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed in a proposed Change Order or Construction Change Directive so that application of such unit prices to quantities of Work proposed will cause substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.

**§ 7.3.5** Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Architect of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.

**§ 7.3.6** A Construction Change Directive signed by the Contractor indicates the Contractor's agreement therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.

**§ 7.3.7** If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the Architect shall determine the method and the adjustment on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, an amount for overhead and profit as set forth in the Agreement, or if no such amount is set forth in the Agreement, a reasonable amount. In such case, and also under Section 7.3.3.3, the Contractor shall keep and present, in such form as the Architect may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.3.7 shall be limited to the following:

1. Costs of labor, including social security, old age and unemployment insurance, fringe benefits required by agreement or custom, and workers' compensation insurance;
2. Costs of materials, supplies and equipment, including cost of transportation, whether incorporated or consumed;
3. Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;
4. Costs of premiums for all bonds and insurance, permit fees, and sales, use or similar taxes related to the Work; and
5. Additional costs of supervision and field office personnel directly attributable to the change.

**§ 7.3.8** The amount of credit to be allowed by the Contractor to the Owner for a deletion or change that results in a net decrease in the Contract Sum shall be actual net cost as confirmed by the Architect. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.

**§ 7.3.9** Pending final determination of the total cost of a Construction Change Directive to the Owner, the Contractor may request payment for Work completed under the Construction Change Directive in Applications for Payment. The Architect will make an interim determination for purposes of monthly certification for payment for those costs and certify for payment the amount that the Architect determines, in the Architect's professional judgment, to be reasonably justified. The Architect's interim determination of cost shall adjust the Contract Sum on the same basis as a Change Order, subject to the right of either party to disagree and assert a Claim in accordance with Article 15.



§ 7.3.10 When the Owner and Contractor agree with a determination made by the Architect concerning the adjustments in the Contract Sum and Contract Time, or otherwise reach agreement upon the adjustments, such agreement shall be effective immediately and the Architect will prepare a Change Order. Change Orders may be issued for all or any part of a Construction Change Directive.

#### § 7.4 Minor Changes in the Work

The Architect has authority to order minor changes in the Work not involving adjustment in the Contract Sum or extension of the Contract Time and not inconsistent with the intent of the Contract Documents. Such changes will be effected by written order signed by the Architect and shall be binding on the Owner and Contractor.

### ARTICLE 8 - TIME

#### § 8.1 Definitions

§ 8.1.1 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

§ 8.1.2 The date of commencement of the Work is the date established in the Agreement.

§ 8.1.3 The date of Substantial Completion is the date certified by the Architect in accordance with Section 9.8.

§ 8.1.4 The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

#### § 8.2 Progress and Completion

§ 8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

§ 8.2.2 The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, prematurely commence operations on the site or elsewhere prior to the effective date of insurance required by Article 11 to be furnished by the Contractor and Owner. The date of commencement of the Work shall not be changed by the effective date of such insurance.

§ 8.2.3 The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time.

#### § 8.3 Delays and Extensions of Time

§ 8.3.1 If the Contractor is delayed at any time in the commencement or progress of the Work by an act or neglect of the Owner or Architect, or of an employee of either, or of a separate contractor employed by the Owner, or by changes ordered in the Work, or by labor disputes, fire, unusual delay in deliveries, unavoidable casualties or other causes beyond the Contractor's control, or by delay authorized by the Owner pending mediation and arbitration, or by other causes that the Architect determines may justify delay, then the Contract Time shall be extended by Change Order for such reasonable time as the Architect may determine.

§ 8.3.2 Claims relating to time shall be made in accordance with applicable provisions of Article 15.

§ 8.3.3 This Section 8.3 does not preclude recovery of damages for delay by either party under other provisions of the Contract Documents.

### ARTICLE 9 - PAYMENTS AND COMPLETION

#### § 9.1 Contract Sum

The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

#### § 9.2 Schedule of Values

Where the Contract is based on a stipulated sum or Guaranteed Maximum Price, the Contractor shall submit to the Architect, before the first Application for Payment, a schedule of values allocating the entire Contract Sum to the various portions of the Work and prepared in such form and supported by such data to substantiate its accuracy as the Architect may require. This schedule, unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment.



### **§ 9.3 Applications for Payment**

**§ 9.3.1** At least ten days before the date established for each progress payment, the Contractor shall submit to the Architect an itemized Application for Payment prepared in accordance with the schedule of values, if required under Section 9.2, for completed portions of the Work. Such application shall be notarized, if required, and supported by such data substantiating the Contractor's right to payment as the Owner or Architect may require, such as copies of requisitions from Subcontractors and material suppliers, and shall reflect retainage if provided for in the Contract Documents.

**§ 9.3.1.1** As provided in Section 7.3.9, such applications may include requests for payment on account of changes in the Work that have been properly authorized by Construction Change Directives, or by interim determinations of the Architect, but not yet included in Change Orders.

**§ 9.3.1.2** Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or material supplier, unless such Work has been performed by others whom the Contractor intends to pay.

**§ 9.3.2** Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment suitably stored off the site at a location agreed upon in writing. Payment for materials and equipment stored on or off the site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, and shall include the costs of applicable insurance, storage and transportation to the site for such materials and equipment stored off the site.

**§ 9.3.3** The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information and belief, be free and clear of liens, claims, security interests or encumbrances in favor of the Contractor, Subcontractors, material suppliers, or other persons or entities making a claim by reason of having provided labor, materials and equipment relating to the Work.

### **§ 9.4 Certificates for Payment**

**§ 9.4.1** The Architect will, within seven days after receipt of the Contractor's Application for Payment, either issue to the Owner a Certificate for Payment, with a copy to the Contractor, for such amount as the Architect determines is properly due, or notify the Contractor and Owner in writing of the Architect's reasons for withholding certification in whole or in part as provided in Section 9.5.1.

**§ 9.4.2** The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on the Architect's evaluation of the Work and the data comprising the Application for Payment, that, to the best of the Architect's knowledge, information and belief, the Work has progressed to the point indicated and that the quality of the Work is in accordance with the Contract Documents. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion and to specific qualifications expressed by the Architect. The issuance of a Certificate for Payment will further constitute a representation that the Contractor is entitled to payment in the amount certified. However, the issuance of a Certificate for Payment will not be a representation that the Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work, (2) reviewed construction means, methods, techniques, sequences or procedures, (3) reviewed copies of requisitions received from Subcontractors and material suppliers and other data requested by the Owner to substantiate the Contractor's right to payment, or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

### **§ 9.5 Decisions to Withhold Certification**

**§ 9.5.1** The Architect may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Architect's opinion the representations to the Owner required by Section 9.4.2 cannot be made. If the Architect is unable to certify payment in the amount of the Application, the Architect will notify the Contractor and Owner as provided in Section 9.4.1. If the Contractor and Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment for the amount for which the Architect is able to make such representations to the Owner. The Architect may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as



may be necessary in the Architect's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from acts and omissions described in Section 3.3.2, because of

- 1 defective Work not remedied;
- 2 third party claims filed or reasonable evidence indicating probable filing of such claims unless security acceptable to the Owner is provided by the Contractor;
- 3 failure of the Contractor to make payments properly to Subcontractors or for labor, materials or equipment;
- 4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- 5 damage to the Owner or a separate contractor;
- 6 reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; or
- 7 repeated failure to carry out the Work in accordance with the Contract Documents.

§ 9.5.2 When the above reasons for withholding certification are removed, certification will be made for amounts previously withheld.

§ 9.5.3 If the Architect withholds certification for payment under Section 9.5.1.3, the Owner may, at its sole option, issue joint checks to the Contractor and to any Subcontractor or material or equipment suppliers to whom the Contractor failed to make payment for Work properly performed or material or equipment suitably delivered. If the Owner makes payments by joint check, the Owner shall notify the Architect and the Architect will reflect such payment on the next Certificate for Payment.

#### § 9.6 Progress Payments

§ 9.6.1 After the Architect has issued a Certificate for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents, and shall so notify the Architect.

§ 9.6.2 The Contractor shall pay each Subcontractor no later than seven days after receipt of payment from the Owner the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner.

§ 9.6.3 The Architect will, on request, furnish to a Subcontractor, if practicable, information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Architect and Owner on account of portions of the Work done by such Subcontractor.

§ 9.6.4 The Owner has the right to request written evidence from the Contractor that the Contractor has properly paid Subcontractors and material and equipment suppliers amounts paid by the Owner to the Contractor for subcontracted Work. If the Contractor fails to furnish such evidence within seven days, the Owner shall have the right to contact Subcontractors to ascertain whether they have been properly paid. Neither the Owner nor Architect shall have an obligation to pay or to see to the payment of money to a Subcontractor, except as may otherwise be required by law.

§ 9.6.5 Contractor payments to material and equipment suppliers shall be treated in a manner similar to that provided in Sections 9.6.2, 9.6.3 and 9.6.4.

§ 9.6.6 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

§ 9.6.7 Unless the Contractor provides the Owner with a payment bond in the full penal sum of the Contract Sum, payments received by the Contractor for Work properly performed by Subcontractors and suppliers shall be held by the Contractor for those Subcontractors or suppliers who performed Work or furnished materials, or both, under contract with the Contractor for which payment was made by the Owner. Nothing contained herein shall require money to be placed in a separate account and not commingled with money of the Contractor, shall create any fiduciary liability or tort liability on the part of the Contractor for breach of trust or shall entitle any person or entity to an award of punitive damages against the Contractor for breach of the requirements of this provision.

#### § 9.7 Failure of Payment

If the Architect does not issue a Certificate for Payment, through no fault of the Contractor, within seven days after receipt of the Contractor's Application for Payment, or if the Owner does not pay the Contractor within seven days after



the date established in the Contract Documents the amount certified by the Architect or awarded by binding dispute resolution; then the Contractor may, upon seven additional days' written notice to the Owner and Architect, stop the Work until payment of the amount owing has been received. The Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shut-down, delay and start-up, plus interest as provided for in the Contract Documents.

#### **§ 9.8 Substantial Completion**

**§ 9.8.1** Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use.

**§ 9.8.2** When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the Architect a comprehensive list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

**§ 9.8.3** Upon receipt of the Contractor's list, the Architect will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Architect's inspection discloses any item, whether or not included on the Contractor's list, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work or designated portion thereof for its intended use, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Architect. In such case, the Contractor shall then submit a request for another inspection by the Architect to determine Substantial Completion.

**§ 9.8.4** When the Work or designated portion thereof is substantially complete, the Architect will prepare a Certificate of Substantial Completion that shall establish the date of Substantial Completion, shall establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance, and shall fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

**§ 9.8.5** The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in such Certificate. Upon such acceptance and consent of surety, if any, the Owner shall make payment of retainage applying to such Work or designated portion thereof. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.

#### **§ 9.9 Partial Occupancy or Use**

**§ 9.9.1** The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is consented to by the insurer as required under Section 11.3.1.5 and authorized by public authorities having jurisdiction over the Project. Such partial occupancy or use may commence whether or not the portion is substantially complete; provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage, if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the Contractor considers a portion substantially complete, the Contractor shall prepare and submit a list to the Architect as provided under Section 9.8.2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. The stage of the progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, by decision of the Architect.

**§ 9.9.2** Immediately prior to such partial occupancy or use, the Owner, Contractor and Architect shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

**§ 9.9.3** Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

#### **§ 9.10 Final Completion and Final Payment**

**§ 9.10.1** Upon receipt of the Contractor's written notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect will promptly make such inspection and, when the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will



promptly issue a final Certificate for Payment stating that to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's on-site visits and inspections, the Work has been completed in accordance with terms and conditions of the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Architect's final Certificate for Payment will constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

**§ 9.10.2** Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Owner, (3) a written statement that the Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment and (5), if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts, releases and waivers of liens, claims, security interests or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien. If such lien remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.

**§ 9.10.3** If, after Substantial Completion of the Work, final completion thereof is materially delayed through no fault of the Contractor or by issuance of Change Orders affecting final completion, and the Architect so confirms, the Owner shall, upon application by the Contractor and certification by the Architect, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance for Work not fully completed or corrected is less than retainage stipulated in the Contract Documents, and if bonds have been furnished, the written consent of surety to payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Architect prior to certification of such payment. Such payment shall be made under terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

**§ 9.10.4** The making of final payment shall constitute a waiver of Claims by the Owner except those arising from

- .1 liens, Claims, security interests or encumbrances arising out of the Contract and unsettled;
- .2 failure of the Work to comply with the requirements of the Contract Documents; or
- .3 terms of special warranties required by the Contract Documents.

**§ 9.10.5** Acceptance of final payment by the Contractor, a Subcontractor or material supplier shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment.

## **ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY**

### **§ 10.1 Safety Precautions and Programs**

The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the Contract.

### **§ 10.2 Safety of Persons and Property**

**§ 10.2.1** The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury or loss to

- .1 employees on the Work and other persons who may be affected thereby;
- .2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody or control of the Contractor or the Contractor's Subcontractors or Sub-subcontractors; and
- .3 other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.



**§ 10.2.2** The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities bearing on safety of persons or property or their protection from damage, injury or loss.

**§ 10.2.3** The Contractor shall erect and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying owners and users of adjacent sites and utilities.

**§ 10.2.4** When use or storage of explosives or other hazardous materials or equipment or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel.

**§ 10.2.5** The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contract Documents) to property referred to in Sections 10.2.1.2 and 10.2.1.3 caused in whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 10.2.1.2 and 10.2.1.3, except damage or loss attributable to acts or omissions of the Owner or Architect or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 3.18.

**§ 10.2.6** The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner and Architect.

**§ 10.2.7** The Contractor shall not permit any part of the construction or site to be loaded so as to cause damage or create an unsafe condition.

**§ 10.2.8 Injury or Damage to Person or Property**

If either party suffers injury or damage to person or property because of an act or omission of the other party, or of others for whose acts such party is legally responsible, written notice of such injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding 21 days after discovery. The notice shall provide sufficient detail to enable the other party to investigate the matter.

**§ 10.3 Hazardous Materials**

**§ 10.3.1** The Contractor is responsible for compliance with any requirements included in the Contract Documents regarding hazardous materials. If the Contractor encounters a hazardous material or substance not addressed in the Contract Documents and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and report the condition to the Owner and Architect in writing.

**§ 10.3.2** Upon receipt of the Contractor's written notice, the Owner shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to cause it to be rendered harmless. Unless otherwise required by the Contract Documents, the Owner shall furnish in writing to the Contractor and Architect the names and qualifications of persons or entities who are to perform tests verifying the presence or absence of such material or substance or who are to perform the task of removal or safe containment of such material or substance. The Contractor and the Architect will promptly reply to the Owner in writing stating whether or not either has reasonable objection to the persons or entities proposed by the Owner. If either the Contractor or Architect has an objection to a person or entity proposed by the Owner, the Owner shall propose another to whom the Contractor and the Architect have no reasonable objection. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time shall be extended appropriately and the Contract Sum shall be increased in the amount of the Contractor's reasonable additional costs of shut-down, delay and start-up.

**§ 10.3.3** To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor, Subcontractors, Architect, Architect's consultants and agents and employees of any of them from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of



the Work in the affected area if in fact the material or substance presents the risk of bodily injury or death as described in Section 10.3.1 and has not been rendered harmless, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), except to the extent that such damage, loss or expense is due to the fault or negligence of the party seeking indemnity.

**§ 10.3.4** The Owner shall not be responsible under this Section 10.3 for materials or substances the Contractor brings to the site unless such materials or substances are required by the Contract Documents. The Owner shall be responsible for materials or substances required by the Contract Documents, except to the extent of the Contractor's fault or negligence in the use and handling of such materials or substances.

**§ 10.3.5** The Contractor shall indemnify the Owner for the cost and expense the Owner incurs (1) for remediation of a material or substance the Contractor brings to the site and negligently handles, or (2) where the Contractor fails to perform its obligations under Section 10.3.1, except to the extent that the cost and expense are due to the Owner's fault or negligence.

**§ 10.3.6** If, without negligence on the part of the Contractor, the Contractor is held liable by a government agency for the cost of remediation of a hazardous material or substance solely by reason of performing Work as required by the Contract Documents, the Owner shall indemnify the Contractor for all cost and expense thereby incurred.

#### **§ 10.4 Emergencies**

In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Article 15 and Article 7.

### **ARTICLE 11 INSURANCE AND BONDS**

#### **§ 11.1 Contractor's Liability Insurance**

**§ 11.1.1** The Contractor shall purchase from and maintain in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located such insurance as will protect the Contractor from claims set forth below which may arise out of or result from the Contractor's operations and completed operations under the Contract and for which the Contractor may be legally liable, whether such operations be by the Contractor or by a Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

1. Claims under workers' compensation, disability benefit and other similar employee benefit acts that are applicable to the Work to be performed;
2. Claims for damages because of bodily injury, occupational sickness or disease, or death of the Contractor's employees;
3. Claims for damages because of bodily injury, sickness or disease, or death of any person other than the Contractor's employees;
4. Claims for damages insured by usual personal injury liability coverage;
5. Claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom;
6. Claims for damages because of bodily injury, death of a person or property damage arising out of ownership, maintenance or use of a motor vehicle;
7. Claims for bodily injury or property damage arising out of completed operations; and
8. Claims involving contractual liability insurance applicable to the Contractor's obligations under Section 3.18.

**§ 11.1.2** The insurance required by Section 11.1.1 shall be written for not less than limits of liability specified in the Contract Documents or required by law, whichever coverage is greater. Coverages, whether written on an occurrence or claims-made basis, shall be maintained without interruption from the date of commencement of the Work until the date of final payment and termination of any coverage required to be maintained after final payment, and, with respect to the Contractor's completed operations coverage, until the expiration of the period for correction of Work or for such other period for maintenance of completed operations coverage as specified in the Contract Documents.

**§ 11.1.3** Certificates of insurance acceptable to the Owner shall be filed with the Owner prior to commencement of the Work and thereafter upon renewal or replacement of each required policy of insurance. These certificates and the insurance policies required by this Section 11.1 shall contain a provision that coverages afforded under the policies will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Owner. An additional certificate evidencing continuation of liability coverage, including coverage for completed operations, shall



be submitted with the final Application for Payment as required by Section 9.10.2 and thereafter upon renewal or replacement of such coverage until the expiration of the time required by Section 11.1.2. Information concerning reduction of coverage on account of revised limits or claims paid under the General Aggregate, or both, shall be furnished by the Contractor with reasonable promptness.

**§ 11.1.4** The Contractor shall cause the commercial liability coverage required by the Contract Documents to include (1) the Owner, the Architect and the Architect's consultants as additional insureds for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's operations; and (2) the Owner as an additional insured for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's completed operations.

**§ 11.2 Owner's Liability Insurance**

The Owner shall be responsible for purchasing and maintaining the Owner's usual liability insurance.

**§ 11.3 Property Insurance**

**§ 11.3.1** Unless otherwise provided, the Owner shall purchase and maintain, in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located, property insurance written on a builder's risk "all-risk" or equivalent policy form in the amount of the initial Contract Sum, plus value of subsequent Contract Modifications and cost of materials supplied or installed by others, comprising total value for the entire Project at the site on a replacement cost basis without optional deductibles. Such property insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made as provided in Section 9.10 or until no person or entity other than the Owner has an insurable interest in the property required by this Section 11.3 to be covered, whichever is later. This insurance shall include interests of the Owner, the Contractor, Subcontractors and Sub-subcontractors in the Project.

**§ 11.3.1.1** Property insurance shall be on an "all-risk" or equivalent policy form and shall include, without limitation, insurance against the perils of fire (with extended coverage) and physical loss or damage including, without duplication of coverage, theft, vandalism, malicious mischief, collapse, earthquake, flood, windstorm, falsework, testing and startup, temporary buildings and debris removal including demolition occasioned by enforcement of any applicable legal requirements, and shall cover reasonable compensation for Architect's and Contractor's services and expenses required as a result of such insured loss.

**§ 11.3.1.2** If the Owner does not intend to purchase such property insurance required by the Contract and with all of the coverages in the amount described above, the Owner shall so inform the Contractor in writing prior to commencement of the Work. The Contractor may then effect insurance that will protect the interests of the Contractor, Subcontractors and Sub-subcontractors in the Work, and by appropriate Change Order the cost thereof shall be charged to the Owner. If the Contractor is damaged by the failure or neglect of the Owner to purchase or maintain insurance as described above, without so notifying the Contractor in writing, then the Owner shall bear all reasonable costs properly attributable thereto.

**§ 11.3.1.3** If the property insurance requires deductibles, the Owner shall pay costs not covered because of such deductibles.

**§ 11.3.1.4** This property insurance shall cover portions of the Work stored off the site, and also portions of the Work in transit.

**§ 11.3.1.5** Partial occupancy or use in accordance with Section 9.9 shall not commence until the insurance company or companies providing property insurance have consented to such partial occupancy or use by endorsement or otherwise. The Owner and the Contractor shall take reasonable steps to obtain consent of the insurance company or companies and shall, without mutual written consent, take no action with respect to partial occupancy or use that would cause cancellation, lapse or reduction of insurance.

**§ 11.3.2 Boiler and Machinery Insurance**

The Owner shall purchase and maintain boiler and machinery insurance required by the Contract Documents or by law, which shall specifically cover such insured objects during installation and until final acceptance by the Owner; this insurance shall include interests of the Owner, Contractor, Subcontractors and Sub-subcontractors in the Work, and the Owner and Contractor shall be named insureds.



#### **§ 11.3.3 Loss of Use Insurance**

The Owner, at the Owner's option, may purchase and maintain such insurance as will insure the Owner against loss of use of the Owner's property due to fire or other hazards, however caused. The Owner waives all rights of action against the Contractor for loss of use of the Owner's property, including consequential losses due to fire or other hazards however caused.

**§ 11.3.4** If the Contractor requests in writing that insurance for risks other than those described herein or other special causes of loss be included in the property insurance policy, the Owner shall, if possible, include such insurance, and the cost thereof shall be charged to the Contractor by appropriate Change Order.

**§ 11.3.5** If during the Project construction period the Owner insures properties, real or personal or both, at or adjacent to the site by property insurance under policies separate from those insuring the Project, or if after final payment property insurance is to be provided on the completed Project through a policy or policies other than those insuring the Project during the construction period, the Owner shall waive all rights in accordance with the terms of Section 11.3.7 for damages caused by fire or other causes of loss covered by this separate property insurance. All separate policies shall provide this waiver of subrogation by endorsement or otherwise.

**§ 11.3.6** Before an exposure to loss may occur, the Owner shall file with the Contractor a copy of each policy that includes insurance coverages required by this Section 11.3. Each policy shall contain all generally applicable conditions, definitions, exclusions and endorsements related to this Project. Each policy shall contain a provision that the policy will not be canceled or allowed to expire, and that its limits will not be reduced, until at least 30 days' prior written notice has been given to the Contractor.

#### **§ 11.3.7 Waivers of Subrogation**

The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents and employees, each of the other, and (2) the Architect, Architect's consultants, separate contractors described in Article 6, if any, and any of their subcontractors, sub-subcontractors, agents and employees, for damages caused by fire or other causes of loss to the extent covered by property insurance obtained pursuant to this Section 11.3 or other property insurance applicable to the Work, except such rights as they have to proceeds of such insurance held by the Owner as fiduciary. The Owner or Contractor, as appropriate, shall require of the Architect, Architect's consultants, separate contractors described in Article 6, if any, and the subcontractors, sub-subcontractors, agents and employees of any of them, by appropriate agreements, written where legally required for validity, similar waivers each in favor of other parties enumerated herein. The policies shall provide such waivers of subrogation by endorsement or otherwise. A waiver of subrogation shall be effective as to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the person or entity had an insurable interest in the property damaged.

**§ 11.3.8** A loss insured under the Owner's property insurance shall be adjusted by the Owner as fiduciary and made payable to the Owner as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause and of Section 11.3.10. The Contractor shall pay Subcontractors their just shares of insurance proceeds received by the Contractor, and by appropriate agreements, written where legally required for validity, shall require Subcontractors to make payments to their Sub-subcontractors in similar manner.

**§ 11.3.9** If required in writing by a party in interest, the Owner as fiduciary shall, upon occurrence of an insured loss, give bond for proper performance of the Owner's duties. The cost of required bonds shall be charged against proceeds received as fiduciary. The Owner shall deposit in a separate account proceeds so received, which the Owner shall distribute in accordance with such agreement as the parties in interest may reach, or as determined in accordance with the method of binding dispute resolution selected in the Agreement between the Owner and Contractor. If after such loss no other special agreement is made and unless the Owner terminates the Contract for convenience, replacement of damaged property shall be performed by the Contractor after notification of a Change in the Work in accordance with Article 7.

**§ 11.3.10** The Owner as fiduciary shall have power to adjust and settle a loss with insurers unless one of the parties in interest shall object in writing within five days after occurrence of loss to the Owner's exercise of this power; if such objection is made, the dispute shall be resolved in the manner selected by the Owner and Contractor as the method of binding dispute resolution in the Agreement. If the Owner and Contractor have selected arbitration as the method of binding dispute resolution, the Owner as fiduciary shall make settlement with insurers or, in the case of a dispute over distribution of insurance proceeds, in accordance with the directions of the arbitrators.



#### **§ 11.4 Performance Bond and Payment Bond**

**§ 11.4.1** The Owner shall have the right to require the Contractor to furnish bonds covering faithful performance of the Contract and payment of obligations arising thereunder as stipulated in bidding requirements or specifically required in the Contract Documents on the date of execution of the Contract.

**§ 11.4.2** Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.

### **ARTICLE 12 UNCOVERING AND CORRECTION OF WORK**

#### **§ 12.1 Uncovering of Work**

**§ 12.1.1** If a portion of the Work is covered contrary to the Architect's request or to requirements specifically expressed in the Contract Documents, it must, if requested in writing by the Architect, be uncovered for the Architect's examination and be replaced at the Contractor's expense without change in the Contract Time.

**§ 12.1.2** If a portion of the Work has been covered that the Architect has not specifically requested to examine prior to its being covered, the Architect may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, costs of uncovering and replacement shall, by appropriate Change Order, be at the Owner's expense. If such Work is not in accordance with the Contract Documents, such costs and the cost of correction shall be at the Contractor's expense unless the condition was caused by the Owner or a separate contractor in which event the Owner shall be responsible for payment of such costs.

#### **§ 12.2 Correction of Work**

##### **§ 12.2.1 Before or After Substantial Completion**

The Contractor shall promptly correct Work rejected by the Architect or failing to conform to the requirements of the Contract Documents, whether discovered before or after Substantial Completion and whether or not fabricated, installed or completed. Costs of correcting such rejected Work, including additional testing and inspections, the cost of uncovering and replacement, and compensation for the Architect's services and expenses made necessary thereby, shall be at the Contractor's expense.

##### **§ 12.2.2 After Substantial Completion**

**§ 12.2.2.1** In addition to the Contractor's obligations under Section 3.5, if, within one year after the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under Section 9.9.1, or by terms of an applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of written notice from the Owner to do so unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. During the one-year period for correction of Work, if the Owner fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of warranty. If the Contractor fails to correct nonconforming Work within a reasonable time during that period after receipt of notice from the Owner or Architect, the Owner may correct it in accordance with Section 2.4.

**§ 12.2.2.2** The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.

**§ 12.2.2.3** The one-year period for correction of Work shall not be extended by corrective Work performed by the Contractor pursuant to this Section 12.2.

**§ 12.2.3** The Contractor shall remove from the site portions of the Work that are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

**§ 12.2.4** The Contractor shall bear the cost of correcting destroyed or damaged construction, whether completed or partially completed, of the Owner or separate contractors caused by the Contractor's correction or removal of Work that is not in accordance with the requirements of the Contract Documents.



**§ 12.2.5** Nothing contained in this Section 12.2 shall be construed to establish a period of limitation with respect to other obligations the Contractor has under the Contract Documents. Establishment of the one-year period for correction of Work as described in Section 12.2.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

**§ 12.3 Acceptance of Nonconforming Work**

If the Owner prefers to accept Work that is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Sum will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

**ARTICLE 13 MISCELLANEOUS PROVISIONS**

**§ 13.1 Governing Law**

The Contract shall be governed by the law of the place where the Project is located except that, if the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 15.4.

**§ 13.2 Successors and Assigns**

**§ 13.2.1** The Owner and Contractor respectively bind themselves, their partners, successors, assigns and legal representatives to covenants, agreements and obligations contained in the Contract Documents. Except as provided in Section 13.2.2, neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make such an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

**§ 13.2.2** The Owner may, without consent of the Contractor, assign the Contract to a lender providing construction financing for the Project, if the lender assumes the Owner's rights and obligations under the Contract Documents. The Contractor shall execute all consents reasonably required to facilitate such assignment.

**§ 13.3 Written Notice**

Written notice shall be deemed to have been duly served if delivered in person to the individual, to a member of the firm or entity, or to an officer of the corporation for which it was intended; or if delivered at, or sent by registered or certified mail or by courier service providing proof of delivery to, the last business address known to the party giving notice.

**§ 13.4 Rights and Remedies**

**§ 13.4.1** Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights and remedies otherwise imposed or available by law.

**§ 13.4.2** No action or failure to act by the Owner, Architect or Contractor shall constitute a waiver of a right or duty afforded them under the Contract, nor shall such action or failure to act constitute approval of or acquiescence in a breach there under, except as may be specifically agreed in writing.

**§ 13.5 Tests and Inspections**

**§ 13.5.1** Tests, inspections and approvals of portions of the Work shall be made as required by the Contract Documents and by applicable laws, statutes, ordinances, codes, rules and regulations or lawful orders of public authorities. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections and approvals. The Contractor shall give the Architect timely notice of when and where tests and inspections are to be made so that the Architect may be present for such procedures. The Owner shall bear costs of (1) tests, inspections or approvals that do not become requirements until after bids are received or negotiations concluded, and (2) tests, inspections or approvals where building codes or applicable laws or regulations prohibit the Owner from delegating their cost to the Contractor.

**§ 13.5.2** If the Architect, Owner or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection or approval not included under Section 13.5.1, the Architect will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection or approval by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Architect of when and where tests and inspections are to be made so that the Architect may be present for such procedures. Such costs, except as provided in Section 13.5.3, shall be at the Owner's expense.

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**§ 13.5.3** If such procedures for testing, inspection or approval under Sections 13.5.1 and 13.5.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure including those of repeated procedures and compensation for the Architect's services and expenses shall be at the Contractor's expense.

**§ 13.5.4** Required certificates of testing, inspection or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Architect.

**§ 13.5.5** If the Architect is to observe tests, inspections or approvals required by the Contract Documents, the Architect will do so promptly and, where practicable, at the normal place of testing.

**§ 13.5.6** Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

**§ 13.6 Interest**

Payments due and unpaid under the Contract Documents shall bear interest from the date payment is due at such rate as the parties may agree upon in writing or, in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.

**§ 13.7 Time Limits on Claims**

The Owner and Contractor shall commence all claims and causes of action, whether in contract, tort, breach of warranty or otherwise, against the other arising out of or related to the Contract in accordance with the requirements of the final dispute resolution method selected in the Agreement within the time period specified by applicable law, but in any case not more than 10 years after the date of Substantial Completion of the Work. The Owner and Contractor waive all claims and causes of action not commenced in accordance with this Section 13.7.

**ARTICLE 14 - TERMINATION OR SUSPENSION OF THE CONTRACT**

**§ 14.1 Termination by the Contractor**

**§ 14.1.1** The Contractor may terminate the Contract if the Work is stopped for a period of 30 consecutive days through no act or fault of the Contractor or a Subcontractor, Sub-subcontractor or their agents or employees or any other persons or entities performing portions of the Work under direct or indirect contract with the Contractor, for any of the following reasons:

1. Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped;
2. An act of government, such as a declaration of national emergency that requires all Work to be stopped;
3. Because the Architect has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Section 9.4.1, or because the Owner has not made payment on a Certificate for Payment within the time stated in the Contract Documents; or
4. The Owner has failed to furnish to the Contractor promptly, upon the Contractor's request, reasonable evidence as required by Section 2.2.1.

**§ 14.1.2** The Contractor may terminate the Contract if, through no act or fault of the Contractor or a Subcontractor, Sub-subcontractor or their agents or employees or any other persons or entities performing portions of the Work under direct or indirect contract with the Contractor, repeated suspensions, delays or interruptions of the entire Work by the Owner as described in Section 14.3 constitute in the aggregate more than 100 percent of the total number of days scheduled for completion, or 120 days in any 365-day period, whichever is less.

**§ 14.1.3** If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon seven days' written notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for Work executed, including reasonable overhead and profit, costs incurred by reason of such termination, and damages.

**§ 14.1.4** If the Work is stopped for a period of 60 consecutive days through no act or fault of the Contractor or a Subcontractor or their agents or employees or any other persons performing portions of the Work under contract with the Contractor because the Owner has repeatedly failed to fulfill the Owner's obligations under the Contract Documents with respect to matters important to the progress of the Work, the Contractor may, upon seven additional days' written notice to the Owner and the Architect, terminate the Contract and recover from the Owner as provided in Section 14.1.3.



**§ 14.2 Termination by the Owner for Cause**

**§ 14.2.1** The Owner may terminate the Contract if the Contractor

- 1 repeatedly refuses or fails to supply enough properly skilled workers or proper materials;
- 2 fails to make payment to Subcontractors for materials or labor in accordance with the respective agreements between the Contractor and the Subcontractors;
- 3 repeatedly disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority; or
- 4 otherwise is guilty of substantial breach of a provision of the Contract Documents.

**§ 14.2.2** When any of the above reasons exist, the Owner, upon certification by the Initial Decision Maker that sufficient cause exists to justify such action, may without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven days' written notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:

- 1 Exclude the Contractor from the site and take possession of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
- 2 Accept assignment of subcontracts pursuant to Section 5.4; and
- 3 Finish the Work by whatever reasonable method the Owner may deem expedient. Upon written request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.

**§ 14.2.3** When the Owner terminates the Contract for one of the reasons stated in Section 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

**§ 14.2.4** If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Architect's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall be certified by the Initial Decision Maker, upon application, and this obligation for payment shall survive termination of the Contract.

**§ 14.3 Suspension by the Owner for Convenience**

**§ 14.3.1** The Owner may, without cause, order the Contractor in writing to suspend, delay or interrupt the Work in whole or in part for such period of time as the Owner may determine.

**§ 14.3.2** The Contract Sum and Contract Time shall be adjusted for increases in the cost and time caused by suspension, delay or interruption as described in Section 14.3.1. Adjustment of the Contract Sum shall include profit. No adjustment shall be made to the extent

- 1 that performance is, was or would have been so suspended, delayed or interrupted by another cause for which the Contractor is responsible; or
- 2 that an equitable adjustment is made or denied under another provision of the Contract.

**§ 14.4 Termination by the Owner for Convenience**

**§ 14.4.1** The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause.

**§ 14.4.2** Upon receipt of written notice from the Owner of such termination for the Owner's convenience, the Contractor shall

- 1 cease operations as directed by the Owner in the notice;
- 2 take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and
- 3 except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.

**§ 14.4.3** In case of such termination for the Owner's convenience, the Contractor shall be entitled to receive payment for Work executed, and costs incurred by reason of such termination, along with reasonable overhead and profit on the Work not executed.



## ARTICLE 15 CLAIMS AND DISPUTES

### § 15.1 Claims

#### § 15.1.1 Definition

A Claim is a demand or assertion by one of the parties seeking, as a matter of right, payment of money, or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. The responsibility to substantiate Claims shall rest with the party making the Claim.

#### § 15.1.2 Notice of Claims

Claims by either the Owner or Contractor must be initiated by written notice to the other party and to the Initial Decision Maker with a copy sent to the Architect, if the Architect is not serving as the Initial Decision Maker. Claims by either party must be initiated within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later.

#### § 15.1.3 Continuing Contract Performance

Pending final resolution of a Claim, except as otherwise agreed in writing or as provided in Section 9.7 and Article 14, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents. The Architect will prepare Change Orders and issue Certificates for Payment in accordance with the decisions of the Initial Decision Maker.

#### § 15.1.4 Claims for Additional Cost

If the Contractor wishes to make a Claim for an increase in the Contract Sum, written notice as provided herein shall be given before proceeding to execute the Work. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

#### § 15.1.5 Claims for Additional Time

§ 15.1.5.1 If the Contractor wishes to make a Claim for an increase in the Contract Time, written notice as provided herein shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work. In the case of a continuing delay, only one Claim is necessary.

§ 15.1.5.2 If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated and had an adverse effect on the scheduled construction.

#### § 15.1.6 Claims for Consequential Damages

The Contractor and Owner waive Claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes

1. damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and
2. damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit except anticipated profit arising directly from the Work.

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 14. Nothing contained in this Section 15.1.6 shall be deemed to preclude an award of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

### § 15.2 Initial Decision

§ 15.2.1 Claims, excluding those arising under Sections 10.3, 10.4, 11.3.9, and 11.3.10, shall be referred to the Initial Decision Maker for initial decision. The Architect will serve as the Initial Decision Maker, unless otherwise indicated in the Agreement. Except for those Claims excluded by this Section 15.2.1, an initial decision shall be required as a condition precedent to mediation of any Claim arising prior to the date final payment is due, unless 30 days have passed after the Claim has been referred to the Initial Decision Maker with no decision having been rendered. Unless the Initial Decision Maker and all affected parties agree, the Initial Decision Maker will not decide disputes between the Contractor and persons or entities other than the Owner.

§ 15.2.2 The Initial Decision Maker will review Claims and within ten days of the receipt of a Claim take one or more of the following actions: (1) request additional supporting data from the claimant or a response with supporting data from

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the other party, (2) reject the Claim in whole or in part, (3) approve the Claim, (4) suggest a compromise, or (5) advise the parties that the Initial Decision Maker is unable to resolve the Claim if the Initial Decision Maker lacks sufficient information to evaluate the merits of the Claim or if the Initial Decision Maker concludes that, in the Initial Decision Maker's sole discretion, it would be inappropriate for the Initial Decision Maker to resolve the Claim.

**§ 15.2.3** In evaluating Claims, the Initial Decision Maker may, but shall not be obligated to, consult with or seek information from either party or from persons with special knowledge or expertise who may assist the Initial Decision Maker in rendering a decision. The Initial Decision Maker may request the Owner to authorize retention of such persons at the Owner's expense.

**§ 15.2.4** If the Initial Decision Maker requests a party to provide a response to a Claim or to furnish additional supporting data, such party shall respond, within ten days after receipt of such request, and shall either (1) provide a response on the requested supporting data, (2) advise the Initial Decision Maker when the response or supporting data will be furnished or (3) advise the Initial Decision Maker that no supporting data will be furnished. Upon receipt of the response or supporting data, if any, the Initial Decision Maker will either reject or approve the Claim in whole or in part.

**§ 15.2.5** The Initial Decision Maker will render an initial decision approving or rejecting the Claim, or indicating that the Initial Decision Maker is unable to resolve the Claim. This initial decision shall (1) be in writing; (2) state the reasons therefor; and (3) notify the parties and the Architect, if the Architect is not serving as the Initial Decision Maker, of any change in the Contract Sum or Contract Time or both. The initial decision shall be final and binding on the parties but subject to mediation and, if the parties fail to resolve their dispute through mediation, to binding dispute resolution.

**§ 15.2.6** Either party may file for mediation of an initial decision at any time, subject to the terms of Section 15.2.6.1.

**§ 15.2.6.1** Either party may, within 30 days from the date of an initial decision, demand in writing that the other party file for mediation within 60 days of the initial decision. If such a demand is made and the party receiving the demand fails to file for mediation within the time required, then both parties waive their rights to mediate or pursue binding dispute resolution proceedings with respect to the initial decision.

**§ 15.2.7** In the event of a Claim against the Contractor, the Owner may, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Contractor's default, the Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

**§ 15.2.8** If a Claim relates to or is the subject of a mechanic's lien, the party asserting such Claim may proceed in accordance with applicable law to comply with the lien notice or filing deadlines.

### **§ 15.3 Mediation**

**§ 15.3.1** Claims, disputes, or other matters in controversy arising out of or related to the Contract except those waived as provided for in Sections 9.10.4, 9.10.5, and 15.1.6 shall be subject to mediation as a condition precedent to binding dispute resolution.

**§ 15.3.2** The parties shall endeavor to resolve their Claims by mediation which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Mediation Procedures in effect on the date of the Agreement. A request for mediation shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the mediation. The request may be made concurrently with the filing of binding dispute resolution proceedings but, in such event, mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order. If an arbitration is stayed pursuant to this Section 15.3.2, the parties may nonetheless proceed to the selection of the arbitrator(s) and agree upon a schedule for later proceedings.

**§ 15.3.3** The parties shall share the mediator's fee and any filing fees equally. The mediation shall be held in the place where the Project is located, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof.



#### § 15.4 Arbitration

§ 15.4.1 If the parties have selected arbitration as the method for binding dispute resolution in the Agreement, any Claim subject to, but not resolved by, mediation shall be subject to arbitration which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules in effect on the date of the Agreement. A demand for arbitration shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the arbitration. The party filing a notice of demand for arbitration must assert in the demand all Claims then known to that party on which arbitration is permitted to be demanded.

§ 15.4.1.1 A demand for arbitration shall be made no earlier than concurrently with the filing of a request for mediation, but in no event shall it be made after the date when the institution of legal or equitable proceedings based on the Claim would be barred by the applicable statute of limitations. For statute of limitations purposes, receipt of a written demand for arbitration by the person or entity administering the arbitration shall constitute the institution of legal or equitable proceedings based on the Claim.

§ 15.4.2 The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

§ 15.4.3 The foregoing agreement to arbitrate and other agreements to arbitrate with an additional person or entity duly consented to by parties to the Agreement shall be specifically enforceable under applicable law in any court having jurisdiction thereof.

#### § 15.4.4 Consolidation or Joinder

§ 15.4.4.1 Either party, at its sole discretion, may consolidate an arbitration conducted under this Agreement with any other arbitration to which it is a party provided that (1) the arbitration agreement governing the other arbitration permits consolidation, (2) the arbitrations to be consolidated substantially involve common questions of law or fact, and (3) the arbitrations employ materially similar procedural rules and methods for selecting arbitrator(s).

§ 15.4.4.2 Either party, at its sole discretion, may include by joinder persons or entities substantially involved in a common question of law or fact whose presence is required if complete relief is to be accorded in arbitration, provided that the party sought to be joined consents in writing to such joinder. Consent to arbitration involving an additional person or entity shall not constitute consent to arbitration of any claim, dispute or other matter in question not described in the written consent.

§ 15.4.4.3 The Owner and Contractor grant to any person or entity made a party to an arbitration conducted under this Section 15.4, whether by joinder or consolidation, the same rights of joinder and consolidation as the Owner and Contractor under this Agreement.



# **Supplementary Conditions ----- 00750**

The following supplements modify the "General Conditions of the Contract for Construction," AIA Document A201. Where a portion of the General Conditions is modified or deleted by these Supplementary Conditions, the unaltered portions of the General Conditions shall remain in effect.

## **ARTICLE 9; PAYMENTS AND COMPLETION**

### **9.11 LIQUIDATED DAMAGES**

9.11.1 The contractor and the Contractor's Surety, if any, shall be liable for and shall pay the Owner the sums herein stipulated as liquidated damages for each calendar day for delay until the Work is substantially complete:

**Five hundred dollars (\$ 500.00)**

The Contractor shall specify on the Proposal Form the stipulated construction time to be part of this contract agreement in calendar days.

**End of Supplementary Conditions**



# General Requirements ----- 01010

**1. General:** These General Requirements, so far as they may apply, shall be considered as forming part of all divisions of this specification and shall apply to all branches of work and to all contracts.

**2. Definitions:** Terms as used in these contract documents are defined as follows:

- **Architect:** Where this term is used, it shall refer to Hunter & Millard Architects, Inc. Joplin, Missouri; and shall include their authorized representatives.
- **Contractor:** The person or entity identified as such in the Owner-Contractor Agreement and is referred to throughout the Contract as if singular in number and masculine in gender. The term Contractor means the Contractor or his authorized representative.
- **Contract Documents:** The Contract Documents shall include General Conditions, Special Conditions, Regulations of the Contract, Specifications, Architect's Drawings, and all Addenda thereto. The intent of these documents is to include all labor, materials, appliances, and services of every kind necessary for the proper execution of the work, and the terms and conditions of payment therefore. The documents are to be considered as one; whatever is called for by any one of the documents shall be as binding as if called by all. In the event of discrepancies within the Contract Documents, Specifications usually take precedence over drawings (contact Architect for verification), and large scale details shall take precedence over small scale drawings.
- **Subcontractor:** A person or entity who has a direct contract with the Contractor to perform any of the Work at the site.

**3. Subcontractor subletting:** The holder of any subcontract for construction shall be prohibited from further subletting of that work to others without prior knowledge and approval of the General Contractor and Owner.

**4. Architect's drawings and specifications:** All drawings, specifications, and copies thereof are property of the Owner. They are not to be used on other work and shall be returned on request at the completion of the work. The Architect shall keep the original tracings. As-Built drawings shall be provided by the Contractor to the Owner after job completion.

**5. Changes in the work:** The Contract Sum and/or the Plans and Specifications may be changed only by Change Order. Changes affecting the Contract Cost shall be considered only upon acceptance in writing by Owner, and Contractor and/or Supplier as authorized by signatures of representatives of each. A Change Order signed by the General Contractor indicates his agreement therewith, including the adjustment in the Contract Sum.



All changes in the Work shall be authorized by Change Order, and shall be performed under the applicable condition of the Contract Documents.

**6. Procedures for change orders:** Party requesting the change shall submit a written Change Order request outlining the nature and purpose for the change and any expected adjustment in cost including the adjustments by all affected Contractors or Suppliers. Architect shall review and approve or disapprove the change. If approved, Contractor shall prepare a Change Order stating scope of work and the quoted costs for changes for all affected Contractors and Suppliers and any fee applicable to the change. Change Orders shall be considered a part of Contract Documents only upon authorization of all parties as outlined above.

**7. Minor changes:** The Architect will have authority to order minor changes in the Work not involving an adjustment in the Contract Sum and not inconsistent with the intent of the Contract Documents.

**8. Permits, laws, and ordinances:** General Contractor and each subcontractor shall obtain at his expense all necessary permits and fees required in the completion of his work. The Work throughout shall be done in accordance with the laws and ordinances which govern and are in force in the place of locality where the work is done.

**9. Insurance, General:** The Contractor shall not commence work under this contract until he has obtained all insurance required under this paragraph and such insurance has been approved. The Contractor shall not allow any subcontractor to commence work on this subcontract until all similar insurance required of the subcontractors has been obtained. The minimum insurance coverage's listed below shall in no way limit the Contractor from any other obligations or liabilities.

**10. Certificates of Insurance:** The Contractor shall furnish Certificates of Insurance to the Owner and the Architect showing that he carries the following insurance:

- Workmen's Compensation: Statutory Limit
- General Liability: \$1,000,000.00 per occurrence, \$2,000,000.00 aggregate

Insurance in said amounts shall be maintained throughout the life of the Contract. The Contractor's insurance shall include coverage against the hazards of explosion, collapse, and underground damage.

Failure to file certificates or acceptance by the Owner of Certificates of Insurance which do not indicate coverage as specified herein, shall in no way relieve the Contractor of his responsibility for maintaining adequate insurance.

Insurance certificates shall be furnished to Owner BEFORE any work by Contractor begins.



**11. Subcontractor Liability Insurance:** Subcontractors shall maintain such insurance as will protect him from claims under Worker's Compensation acts and other employee benefit acts, from claims for damages because of bodily injury, including death, and from claims for damages to property which may arise both out of and during operations under this contract. Certificates for such insurance must be filed with the Contractor.

**12. Owner's Liability Insurance:** The Owner shall be responsible for and at his option may maintain such insurance as will protect him from his contingent liability for damages which the subcontractor is required to insure under any provision of this Contract.

**13. Builder's risk insurance:** The Contractor shall effect and maintain 'Builder's Risk' insurance for this project.

**14. Substitution of materials:** Certain definite makes of material or equipment are specified as standard. The SubContractor shall bid on the basis for furnishing new makes as specified. He is invited to bid also on any other equal approved makes. The Owner shall have price adjustment information and the right to determine whether or not such substitutions and subsequent price adjustments will be accepted.

**15. Manufacturer's directions:** All manufactured articles, materials, and equipment shall be applied, installed, connected, erected, used, cleaned, and conditioned as directed by the manufacturer unless specified herein to the contrary. Full operating and maintenance manuals to be given to the Owner by the installer.

**16. Applications for payment:** The Contractor shall be paid for work complete and properly stored materials on a monthly basis. Only ninety percent (90%) of each monthly estimate approved during the construction of the project shall be paid by the Owner to the Contractor prior to completion of construction, and the Certificate of Payment shall be made for this percentage. **Each application for payment shall be made on AIA Document G702 and AIA Document G703.** Additionally, with each application, starting with the second application, the Contractor shall submit a notarized Waiver and Release of Lien, in the form attached hereto, from all manufacturers, materialmen, SubContractors, and others furnishing services and/or material for the Project.

Contractor shall, if required, furnish receipts or other vouchers showing his payments for materials or labor.

Payments shall be made on the basis of ninety percent (90%) of work completed and materials on the job site at time of application.

**17. Deductions for uncorrected work:** If the Architect and Owner deem it expedient to correct work injured or done not in accordance with the Contract, an equitable deduction from the Contract Price shall be made therefore.



**18. Payments withheld:** The Architect may withhold, or on account of subsequently discovered evidence, nullify the whole or a part of any certificate to such extent as may be necessary to protect the Owner from loss on account of:

- Defective work not remedied.
- Claims filed or reasonable evidence indicating probable filing of claims.
- Failure of SubContractors to make payments properly for material or labor.
- A reasonable doubt that the contract can be completed for the balance then unpaid.
- Damage to another Contractor.

When the above grounds are removed, payment shall be made for amounts withheld because of them.

**19. Liens:** Neither the final payment for any part of the retained percentage shall become due until the Contractor, if required, shall deliver to the Owner a complete release of all liens arising out of this Contract, or receipts in full lieu thereof. If any lien or claim remain unsatisfied after all payments are made, the Contractor shall refund to the Owner all monies that the latter may be compelled to pay in discharging such liens or claims, including all costs and reasonable fee for attorney.

**20. General guarantee:** Each SubContractor shall and hereby does agree and warrant that he shall make good any defects arising from or discovered in his work in the building within one (1) year after completion and acceptance by the Architect whether from shrinkage or defective work, inferior labor and materials.

**21. Cleaning up:** On completion of the Work, and from time to time when so directed, the Contractor shall clean up and remove from the premises all rubbish arising from the work. Special care shall be taken to avoid cutting, burning, staining, or in any way defacing the floors and walls. Finally, the work and finish materials shall be left cleaned and ready for occupancy by the Owner.

**END OF SECTION**



# Special Conditions ----- 01011

## 1. Temporary Utilities:

- **Electrical Service:** Electrical SubContractor shall provide adequate electrical service at site for construction needs.
- **Construction Water Piping:** Plumbing SubContractor shall provide construction water piping as required.
- **Temporary Utility Costs:** Contractor shall pay cost of utilities through temporary service only.
- **Temporary Restroom Facilities:** Contractor shall provide temporary restroom facilities, location to be approved by Architect.

2. **Punchlist:** The Owner will submit a punchlist near the completion of the job.

3. **Construction Documents:** The Architect will furnish the General Contractor six (6) sets of printed drawings and project manuals along w/ the documents in .pdf format. Contractor may have additional copies printed by others.

**END OF SECTION**



# **Alternates ----- 01101**

## **1. Alternate No. 1**

In the place provided on the Proposal Form: Contractor shall state price difference for the following: provide different lighting package – see Electrical Drawings for additional information.

## **2. Alternate No. 2**

In the place provided on the Proposal Form: Contractor shall state price difference for the following: provide two (2) additional windows type 'C'. See Floor Plan sheet A1 for locations in Future Dr. Office 119 and Dr Office 121.

## **3. Alternate No. 3**

In the place provided on the Proposal Form: Contractor shall state price difference for the following: provide one (1) wood file shelving unit - (See Drawing Sht. A12). Owner will determine how many units (if any) to purchase. Note: The two (2) units shown in Office Rm. 128 are part of the base bid. This alternate is for possible additional units in other rooms.

**END OF SECTION**



# Submittal Process ----- 01330

**1. Submittals / Shop Drawing Procedure:** Submittals and Shop Drawings shall be submitted to the Architect in .pdf format.

General Contractor shall review and stamp Submittals / Shop Drawings before submitting to Architect.

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.

- A. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals and related activities that requires sequential activity.
- B. Coordinate transmittal of different types if submittals for related elements of the Work so processing will not be delayed by need to review submittals concurrently for coordination.
- C. Processing: Allow sufficient time for review of submittals, including time for rejection, revision, and resubmittal, so that installation will not be delayed.
  - Allow ten business days for initial review by Architect. Allow 14 business days for initial review by Architect's consultants.
  - Allow additional time for processing submittals that must be coordinated with subsequent submittals.
  - No extension in Contract Time will be authorized due to failure to transmit submittals sufficiently in advance of the Work to permit processing.

**2. Submittal / Shop Drawing Preparation:** Place a permanent label on each submittal for identification. Include the following information on the label.

- Project name.
- Date.
- Name and address of Architect.
- Name and address of Contractor.
- Name and address of subcontractor or supplier.
- Name of manufacturer.
- Number and title of applicable specification section.
- Drawing number and detail references as applicable.

**3. Submittal / Shop Drawing Transmittal:**

- Transmit each submittal from the Contractor to the Architect using a transmittal form.
- Apply Contractor's stamp, signed or initialed, certifying that review, verification of



Products required, field dimensions, adjacent construction Work, and coordination of information is in accordance with the requirements of the work and Contract Documents.

- Architect will not review submittals that have not been reviewed by the Contractor.
- Identify variations from Contract Documents and Product or system limitations which may be detrimental to successful performance of the completed work.

**4. Revisions:** Revise and resubmit submittals as required; identify all changes made since previous submittal.

**5. Review:** Review of submittals will be limited to those submittals required to establish compliance with the specified requirements and necessary for design intent. Other submittals will be returned indicating they are not required for design review.

**6. Distribution:** Distribute copies of reviewed submittals to affected parties. Instruct affected parties to report any inability to comply with provisions.

**6. Maintain one complete set of submittals** for Project Record documents.

**7. Samples:** Submit samples to illustrate functional and aesthetic characteristics of the Product. Submit samples fully fabricated, cured, and finished as specified and physically identical with the material or product proposed.

Submit for review of kind, color, pattern, texture, for final check of these characteristics with other elements, and for comparison of the characteristics between the final submittal and the actual component as delivered and installed. Submit samples of finishes from the full range of manufacturer's standard colors, textures, and patterns for Architect/Engineer's selection.

Where variation in color, pattern, texture or other characteristics is inherent in the material or product represented, submit multiple units that show the approximate limits of the variations.

Colors and Finishes will not be selected from .pdfs. Color Charts/samples to be submitted to Architect. Architect may request full size or larger sample of finishes being considered.

**8. Manufacturer's Certificates:** When specified in individual specification Sections, submit manufacturer's certifications to Architect/Engineer in quantities specified for Product Data. Indicate if material or Product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.

**9. Field Samples:** Construct field samples, or mock-ups, at the site for review as required by the individual specification sections. Acceptable samples establish a standard of quality for the Work.

**END OF SECTION**



## ***Part 1 General***

### **1. Section includes:**

- A. General Conditions
- B. Supplementary Conditions
- C. Systems Start-up
- D. Demonstration and Instructions
- E. Testing and Adjusting
- F. Final Cleaning
- G. Project Record Documents
- H. Operations and Maintenance Data
- I. Warranties
- J. Contract Closeout

### **1.2 Systems Start-up**

- A. Ensure that each piece of equipment or system is ready for operation.
- B. Execute start-up under supervision of responsible persons in accordance with manufacturers' instructions.
- C. Submit a written report that equipment or system has been properly installed and is functioning correctly.

### **1.3 Demonstration & Instructions**

- A. Demonstrate operation and maintenance of Products to Owner's personnel prior to date of Substantial Completion. Include instructions by manufacturer's representatives where installers are not expert in the required procedures.
- B. For equipment or systems requiring seasonal operation, perform demonstration for other season within six (6) months.
- C. Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, emergency operations, noise and vibration adjustments, safety, economy/efficiency adjustments, and shutdown of each item of equipment.
- D. Review maintenance and operations in relation with applicable warranties, agreements to maintain, bonds, and similar continuing commitments. Review maintenance manuals, record documentation, tools, spare parts and materials, lubricants, fuels, identification system, control sequences, hazards, cleaning, and similar procedures and facilities.
- K. Operation and Maintenance Manuals: Assemble two sets of operation and maintenance manuals. Include emergency instructions, spare parts listing, warranties, wiring diagrams, recommended "turn-around" cycles, inspection procedures, shop drawings, product data, and similar applicable information. Instruction and Maintenance Manuals are required for, but not necessarily limited to, the following:
  - a. Plumbing System
  - b. HVAC System
  - c. Electrical System
- L. Deliver tools, spare parts, extra stocks of materials, and similar physical items to Owner.
- M. Make final changeover of locks and transmit keys to Owner, and advise Owner's personnel of changeover in security provisions.



## **1.4 Testing and Adjusting**

- A. Test equipment and systems at full operating conditions and pressures for normal conditions of use. Make adjustments and replacements that are necessary to comply with the Contract Documents and all applicable codes and regulations.

## **1.5 Final Cleaning**

- A. Execute final cleaning prior to Substantial Completion inspection.
  - 1. Special cleaning for specific units of work is specified in sections of Divisions 2 through 16.
  - 2. General cleaning during progress of work is specified in General Conditions and as jobsite administration in "Coordination" section of this Division.
  - 3. Provide final cleaning of the work, at time indicated, consisting of cleaning each surface or unit of work to normal "clean" condition. Comply with manufacturer's instructions for cleaning operations. Clean project in general as indicated below.
- B. Remove labels that are not required as permanent labels.
- C. Clean transparent materials, including mirrors and window/door glass, to a polished condition. Remove substances that obscure vision. Replace broken glass and damaged transparent materials.
- D. Clean exposed exterior and interior hard-surfaced finishes, to a dirt-free condition, free of dust, stains, films, and similar noticeable distracting substances.
  - 1. Except as otherwise indicated, avoid disturbance of natural weathering of exterior surfaces.
  - 2. Restore reflective surfaces to original reflective condition.
- E. Wipe surfaces of mechanical and electrical equipment clean. Remove excess lubrication and other substances.
- F. Remove debris from limited-access spaces including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
- G. Clean concrete floors in non-occupied spaces broom clean.
- H. Vacuum clean carpeted surfaces and similar soft surfaces.
- I. Clean plumbing fixtures to a sanitary condition, free of stains including those resulting from water exposure.
- J. Clean food service equipment to a sanitary condition ready and acceptable for intended food service use.
- K. Clean light fixtures and lamps so as to function with full efficiency. Replace lamps used for temporary lighting.
- L. Clean project site (yard and grounds), including landscape development areas, of litter and foreign substances.
  - 1. Sweep paved areas to a broom-clean condition;
  - 2. Remove stains, petro-chemical spills, and other foreign deposits.
- M. Comply with safety standards and governing regulations for cleaning operations.
  - 1. Do not burn waste materials at site, or bury debris or excess material on Owner's property, or discharge volatile or other harmful or dangerous materials into drainage systems; remove waste materials from site and dispose of in a lawful manner.

## **1.6 Project Record Documents**



- A. Maintain on site, one set of Contract Documents to be utilized for record documents. Do not use Record Documents for construction purposes. Protect from deterioration and loss.
- B. Record actual revisions to the Work concurrent with construction progress.
- C. Record Drawings and Shop Drawings: Legibly mark each item to record actual installation where the installation varies significantly from work as originally shown. Mark whichever 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 Drawing.
  - 1. Mark record sets in red ink. Use other colors to distinguish between variations in the separate categories of work.
  - 2. Mark new information that was not shown on original drawings or shop drawings.
  - 3. Note related Change Order numbers as applicable.
  - 4. Organize record drawings into a manageable set, bind with durable paper cover sheets and print suitable titles and other identification on the cover of each set.
- D. Record Specifications: Maintain one complete copy of the Project Manual including addenda, Change Orders, and other construction documents such as supplemental instructions and clarifications.
  - 1. Mark these documents to show significant variations in the actual Work performed in comparison with the text of the Specifications and modifications.
  - 2. Indicate the selection of substitutions, options, finishes and similar information. Note related record drawing and product data information.
- E. Record Product Data: Maintain one copy of each product data submittal. Mark each to show significant variations in actual work performed in comparison to information submitted.
  - 1. Include variations in products delivered to site and from manufacturer's installation instructions and recommendations.
  - 2. Note related change order items and mark-up of record drawings and specifications.
- F. Submit record documents to Architect prior to date of Substantial Completion.

## **1.7 Warranties**

- A. General Project Warranty: The Contractor hereby does warrant that the work for this building shall be free from defects of labor and materials for a period of one (1) year from the date of final acceptance of same, except when longer periods are herein specified.
- B. Other Warranties:
  - 1. Special Warranty: A written warranty required by or incorporated into the requirements of the technical sections of the specifications, to either extend the time limits provided by standard warranties or to provide greater rights to the Owner.
  - 2. Product Warranties: Preprinted, written warranties provided by individual manufacturers for particular products and specifically endorsed by the manufacturer to the Owner.
- C. Related Damages and Losses: When correcting warranted work, remove and replace other work that has been damaged as a result of failure of the warranted work, or that must be removed and replaced to provide access for correction of warranted work.
- D. Re-instatement of Warranty: When work covered by warranty has failed and been corrected, reinstate the warranty by written endorsement, equal to the original warranty with equitable adjustment for depreciation.
- E. Replacement Cost: The contractor is responsible for the full cost of replacing or rebuilding defective work and related damages.
- F. Submit special warranties, Product warranties, workmanship/maintenance bonds, maintenance agreements, final certifications, and similar documents required by individual specification sections.



G. Submit prior to date of Substantial Completion.

## **1.8 Contract Closeout**

A. Prerequisites to Substantial Completion:

1. Perform work as described in paragraphs above.
2. Obtain and submit releases enabling Owner's full and unrestricted use of the work and access to services and utilities, including occupancy permits, operating certificates, and similar releases.
3. Complete final cleanup, operation and maintenance data, and Warranty requirements as indicated above.
4. Prepare an Application for Payment to coincide with the date of Substantial Completion. Show 100% completion for the portion of Work claimed as substantially complete.
  - a. If 100% completion cannot be shown, include a list of incomplete items accompanied by the value of incomplete construction, an explanation of why work is not complete, and a schedule indicating when incomplete items will be completed.
5. Advise Owner of pending insurance changeover requirements.

B. Substantial Completion: Upon receipt of Contractor's request, the Architect will proceed with inspection or advise Contractor of prerequisite not fulfilled. After initial inspection, Architect will:

1. Prepare a Certificate of Substantial Completion accompanied by an inspection report in the form of a "punch list" of items to be completed or corrected;
2. Or advise Contractor of work which must be performed prior to issuance of certificate; and repeat inspection when requested and assured that work has been substantially completed.

C. Final Acceptance: Prior to requesting Architect's final inspection for certification of final acceptance and final payment, as required by General Conditions, complete the following and list known exceptions in request:

1. Submit final payment request accounting for additional (final) changes to Contract Sum with final releases and supporting documentation not previously submitted and accepted.
  - a. Include certificates of insurance for products and completed operations where required.
2. Submit certified copy of Architect's final punch-list of itemized work to be completed or corrected, stating that each item has been completed or otherwise resolved for acceptance, endorsed and dated by Architect.
3. Submit consent of surety.
4. Submit a final liquidated damages settlement statement.

D. Final Inspection: Upon receipt of Contractor's notice that work has been completed, including punch-list items resulting from earlier inspections, and excepting incomplete items delayed because of acceptable circumstances, Architect will re-inspect work.

1. Upon completion of re-inspection, Architect will either prepare Certificate of Final Acceptance or advise Contractor of work not completed or obligations not fulfilled as required for final acceptance. Procedure will be repeated as necessary.

**END OF SECTION**



# Demolition, Patch & Repair ----- 02050

## Part 1 General

**1. Related documents:** The provisions of the General and Supplementary Conditions and General Requirements apply to the work specified in this section.

**2.** Bidders shall visit the site to see the extent of demolition work that has already been completed.

## Part 3 Execution

**1. Surface conditions:** Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.

**2. Demolition:** By careful study of the Drawings and Specifications, determine the location and extent of selective demolition to be performed.

**3. Verifying:** In company with the Architect and Owner, visit the site and verify the extent and location of demolition required. Carefully identify limits of demolition required

**4. Prepare and follow an organized plan for demolition and removal of items.** Shut off, cap, and otherwise protect existing public utility lines in accordance with the requirements of the public agency or utility having jurisdiction. Completely remove items scheduled to be so demolished and removed, leaving surfaces clean, solid, and ready to receive new materials specified elsewhere. In all activities, comply with pertinent regulations of governmental agencies having jurisdiction.

**5. Demolished materials shall be considered property of the Contractor unless otherwise noted on the Drawings or agreed upon with the Owner and shall be completely removed from the site.**

**6. Dust:** Use means necessary to prevent dust becoming a nuisance to the public, to neighbors, and to other work being performed on or near the site.

**7. Replacements:** In the event of demolition of items not so scheduled to be demolished, promptly replace such items to the approval of the Architect and at no additional cost to the Owner.

**8. Recycling Requirements:** The Owner may donate used plumbing fixtures, etc to a charitable organization. This will be discussed during the pre-bid conference.

**End of Section**



# Structure Excavation, Trenching, Backfilling & Grading ----- 02220

## *Part 1 General*

**1. Related documents:** The provisions of the General and Supplementary Conditions and General Requirements (if any), apply to the work specified in this section.

**2. Shop Drawings and Product Data:** Submit in accordance with Section 01330 'Submittal Procedure'.

**3. Work Included:** In general, this includes, but is not limited to excavation, trenching, filling, compacting, and satisfactory disposal of all materials required to prepare a complete construction site for the miscellaneous structures, and all other uses in accordance with these specifications and in conformity with the dimensions as shown on the drawings and with elevations and contours established by the Architect.

**4. Site Clearing Work** Includes, but is not limited to:

- Protection of existing trees.
- Removal of trees and other vegetation.
- Topsoil stripping.
- Clearing and grubbing.
- Removing above-grade improvements.
- Removing below-grade improvements

**5. Protect improvements** on adjoining properties and on Owner's Property. Restore damaged improvements to their original condition, as acceptable to parties having jurisdiction. Protect existing trees and vegetation indicated to remain in place, against unnecessary cutting, breaking, skinning of roots, etc. Provide temporary guards to protect trees and vegetation to be left standing.

**6. Coordination with Civil Engineering Drawings and Specifications:** Contact Architect if a conflict arises between this Specification section and the structural or civil engineer's drawings and specifications for clarification.

## *Part 3 Execution*

**1. Common Excavation:** The Contractor shall excavate to the lines, grades, and elevations shown on the drawings all materials within the work area, and place and/or dispose of the excavated materials specified herein, as called for on the drawings or as directed by the Architect.

**2. Foundations:** All footings shall be founded on firm undisturbed soil or approved compacted fill material.



**3. Slabs on grade:** Where the drawings show compacted granular backfill under other slabs on grade, the excavation shall be carried deep enough to permit the minimum thickness of compacted granular material to be placed.

**4. Over-Excavation:** In no case shall any footings be found above those elevations shown on the drawings. If soft or unsuitable soil is encountered at elevations where footings are to be founded, the excavation shall be taken through unsuitable material and brought back up to grade with approved compacted fill material. Contractor shall notify the Architect when such conditions are encountered.

**5. Excavation Bottom:** Special care shall be taken to prevent disturbance of the bottom of excavations where the soil is to provide bearing for slabs, footings, etc. If surface water or other conditions which may decrease the bearing capacity of the foundation subgrade are present, then soil adequate to protect the foundation subgrade shall not be excavated until just before reinforcing steel and concrete are to be placed. The bottom of all excavations shall be inspected and approved by the Architect before placement of any granular materials, reinforcing steel, or concrete.

**6. Removal of Water:** The Contractor shall, at all times during the construction of the work, provide and maintain ample equipment to remove and dispose of all water entering the excavations of other parts of the work and keep said excavations dry until the structures to be built therein are completed. No reinforcing steel shall be placed in water, and no water shall be allowed to rinse over any reinforcing steel before the concrete has been placed. No water shall be allowed to come in contact with any concrete within 24 hours after placing unless specifically required by the drawings, authorized by the Architect, or specified herein. The Contractor shall be held responsible for the conditions of any sewers, drains, or other conduits or pipelines which may be used for drainage purposes and such pipes or conduits shall be clean and free from all sediment before acceptance by the Architect.

**7. Sheeting, Shoring or Bracing:** Sheeting, shoring or bracing shall be placed by the contractor wherever necessary for the proper preservation of any excavation, embankment, or structure. Where the ground is of such a character, or other conditions are such as to render it necessary, the sheeting shall be closely driven and shall be to such depth below the lowest point of the final excavation as may be directed. The Contractor shall be held responsible for the sufficiency of all sheeting and bracing used, and for any and all persons injured or property damaged as the result of improper quality, strength, placement, maintenance, or removal of the same. No extra compensation shall be made for sheeting, shoring, or bracing, whether left in place or not. The Contractor, at his own expense, shore up, protect, and insure from injury all building, retaining walls, piers, and footings, storm sewers, sanitary sewers, gas lines, water lines, fences, curbs, trees, or other property liable to be injured during the process of the Work, and he will be held responsible for all damage which may occur by reason of prosecution of the



Work. Sheeting, shoring, and bracing shall be provided, installed, and maintained to protect the excavation, and insure the safety of workmen, and shall be as required by applicable Federal, state, and local laws, rules, and regulations.

**8. Groundwater:** When groundwater is found which, in the opinion of the Architect, affects the safety, usefulness or satisfactory operation of any of the permanent work, he may direct special provision to be taken. Such work shall be performed and extra compensation shall be as previously established by written Change Order. Extra compensation shall not be made for removal of water required for normal construction.

**9. Backfill and Compaction:** All designated areas, including parking areas, driveways, and areas to receive new work, shall have a subgrade which has been scarified to a depth of 6 inches, broken up, adjusted to a moisture content and compacted to 95% of maximum dry density as determined by the standard proctor moisture-density relationship test.

Prior to placing fill material, all soft material shall be removed to a depth necessary to establish good bearing of the fill material. The surface of the ground shall be scarified to a depth of 6 inches and recompactd to 95% maximum density.

When the drawings require placement of fill beneath a proposed structure, the floor or footing subgrade shall be made with 8 inch loose lifts with each lift compacted to a minimum of 95% of maximum dry density as determined by the Standard Proctor Moisture-Density Relationship Test (ASTM D 698). Each lift should be tested by a recognized testing laboratory for compaction prior to the placement of successive lifts. At least three tests per lift should be obtained, with three (3) copies of the tests sent to the Architect. If insufficient compaction is indicated by testing, the lift should be reworked and retested prior to the placement of additional fill lifts. Contractor is responsible for cost of tests.

**10. Topsoil:** After rough grading is completed and approved, scarify subsoil areas to be lawns to a depth of 6" and place layer of topsoil thereover, using topsoil required (minimum of 4"). Topsoil material shall be fertile, natural loam topsoil, free from stones, debris, clay, and weeds.

**11. Finish Grading:** Cut, fill, and grade to extent of contours and elevations indicated on drawings; all areas free-draining. Make minor grade adjustments as may be directed by Architect, without added cost. All finished grading shall be hand raked.

### **End of Section**



# Landscaping ----- 02900

## ***Part 1 General***

- 1. Related documents:** The provisions of the General and Supplementary Conditions and General Requirements (if any), apply to the work specified in this section.
- 2. Work included:** In general, this includes, but is not limited to providing all labor, materials, and equipment for landscaping where shown on the drawings, as specified herein, and as needed for a complete and proper installation.
- 3. Shop Drawings and Product Data:** Submit in accordance with Section 01330 'Submittal Procedure'.
- 4. Substitutions:** Other manufacturers will be considered. Supply specifications sheet to Architect for approval.

## ***Part 2 Products***

- 1. All landscaping features** such as trees, plants, trees, shall be by Owner if required.

## ***Part 3 Execution***

**END OF SECTION**



# Cast-in-Place Concrete & Reinforcement ----- 03000

## *Part 1 General*

**1. Related documents:** The provisions of the General and Supplementary Conditions and General Requirements apply to the work specified in this section.

**2. Work included:** In general, this includes, but is not limited to providing all labor, materials, and equipment for concrete and reinforcement work where shown on the Drawings, as specified herein, and as needed for a complete and proper installation.

**3. Shop drawings and product data:** Submit in accordance with Section 01330 'Submittal Procedure'. Submit data for proprietary materials and items, including reinforcement and forming accessories, admixtures, patching compounds, waterstops, joint systems, curing compounds, dry-shake finish materials, and others as requested by Architect.

**Shop drawings - reinforcement:** Submit shop drawings for fabrication, bending, and placement of concrete reinforcement. comply with ACI 315 "Manual of Standard Practice for Detailing Reinforced Concrete Structures" showing bar schedules, stirrup spacing, diagrams of bent bars, arrangement of concrete reinforcement. Include special reinforcement required and openings through concrete structures.

**4. Substitutions:** Other manufacturers will be considered. Supply specifications sheet to Architect for approval.

**5. Codes and standards:** Comply with provisions of the following codes, specifications and standards, except where more stringent requirements are shown or specified.

- ACI 301 "Specifications for Structural Concrete for Buildings".
- ACI 318 "Building Code Requirements for Reinforced Concrete".
- Concrete Reinforcing Steel Institute, "Manual of Standard Practice".

**6. Concrete testing service:** Engage a testing laboratory acceptable to Architect to perform material evaluation tests and to design concrete mixes. Materials and installed work may require testing and retesting, as directed by Architect, at anytime during progress of work. Allow free access to material stockpiles and facilities. Tests, including retesting of rejected materials and installed work, shall be done at Contractor's expense.

**7. Laboratory test reports:** Submit laboratory test reports for concrete materials and mix design test as specified.

## *Part 2 Products*

**1. Forms for exposed finish concrete:** Unless otherwise indicated, construct formwork for exposed concrete surfaces with plywood, metal, metal-framed plywood faced or other acceptable panel-type materials, to provide continuous, straight, smooth, exposed surfaces. Furnish in largest practicable sizes to minimize number of joints and to conform to joint system shown on drawings. Provide form



material with sufficient thickness to withstand pressure of newly-placed concrete without bow or deflection. Use plywood complying the U.S. Product Standard PS-1 "B-B (Concrete Form) Plywood", Class I, Exterior Grade or better, mill-oiled and edge-sealed, with each piece bearing legible inspection trademark.

**2. Forms for unexposed finish concrete:** Form concrete surfaces which will be unexposed in finished structure with plywood, lumber, metal or other acceptable material. Provide lumber dressed on at least 2 edges and one side for tight fit.

**3. Forms for unexposed unfinished concrete:** Forms for concrete surfaces which will be placed directly against the neat excavation only when requested by the Contractor and approved in writing by the Architect. When omission of the forms is accepted, provide additional concrete at no additional cost required beyond the minimum design profiles and dimensions of the footing and grade beams as detailed.

**4. Form coatings:** Provide commercial formulation form coating compounds that will not bond with, stain, nor adversely affect concrete surfaces, and will not impair subsequent treatments of concrete surfaces.

**5. Reinforcing bars:** ASTM A 615, Grade 60, deformed.

**6. Steel wire:** ASTM A 82, plain, cold-drawn, steel

**7. Welded wire fabric:** ASTM A 185, welded steel wire fabric

**8. Supports for reinforcement:** Provide supports for reinforcement including bolsters, chairs, spacers and other devices for spacing, supporting, and fastening reinforcing bars and welded wire fabric in place. Use wire bar type supports complying with CRSI specifications, unless otherwise acceptable. For slabs-on-grade: use supports with sand plates or horizontal runners where base material will not support chair legs. For exposed-to-view concrete surfaces, where legs of supports are in contact with forms, provide supports with legs which are plastic protected (CRSI, Class 1) or stainless steel protected (CRSI, Class 2).

**9. Concrete materials**

A. **portland cement:** conform to the Standard Specification of the ASTM, C150, type 1, latest edition. Cement produced by the same mill shall be used throughout the project.

B. **fly ash:** ASTM C 618, Type C or Type F. Limit use of fly ash to not exceed 25% of cement content by weight.

C. **normal weight aggregates:** ASTM C 33, and as herein specified. Provide aggregates from a single source for exposed concrete. For exterior exposed surfaces, do not use fine or coarse aggregates containing spalling-causing deleterious substances.

D. **lightweight aggregates:** ASTM C 330.

E. **water:** Drinkable

**10. Air-entraining admixture:** ASTM C 260. Subject to compliance with requirements, products which may be incorporated in the work include, but are not limited to, the following:

- "Air-Tite", Gifford-Hill
- "Sika Aer", Sika Chemical Corp.



- “Euco Air Mix”, Euclid Chemical Co.

**11. Water-reducing admixture:** ASTM C 494, Type A, and contain not more than 0.1% chloride ions. Subject to compliance with requirements, products which may be incorporated in the work include, but are not limited to, the following:

- “Eucon WR-75”; Euclid Chemical Co.
- “Plastocrete 160”; Sika Chemical Corp.
- “PSI-400”, Gifford-Hill.

**12. High-range water-reducing admixture** (super plasticizer): ASTM C 494, Type F or Type G and contain not more than 0.1% chloride ions. Subject to compliance with requirements, products which may be incorporated in the work include, but are not limited to, the following:

- “Sikament”; Sika Chemical Corp.
- “Eucon 37”; Euclid Chemical Co.
- “PSI Super”; Gifford-Hill

**13. Water-reducing, non-chloride accelerator admixture:** ASTM C 494, Type E, and containing not more than 0.1% chloride ions. Subject to compliance with requirements, products which may be incorporated in the work include, but are not limited to, the following:

- “Accelguard 80”; Euclid Chemical Corp.
- “Gilco Accelerator”; Gifford-Hill
- “161FL” Sika Chemical Corp.

**14. Water-reducing, retarding admixture:** ASTM C 494, Type D, and contain not more than 0.1% chloride ions. Subject to compliance with requirements, products which may be incorporated in the work include, but are not limited to, the following:

- “Edoco 20006”; Edoco Technical Products
- “Eucon Retarder 75”; Euclid Chemical Co.
- “Plasticment”, Sika Chemical Corp.

**15. Certification:** Provide admixture manufacturer's written certification that chloride ion content complies with specified requirements. Calcium chloride or admixtures containing more than 0.1% chloride ions are not permitted.

**16. Moisture barrier:** Provide moisture barrier cover over prepared base material where indicated. Polyethylene sheet not less than 10 mils. thick; ASTM E 1745 Compliant.

**17. Non-shrink grout:** CRD-C 621, factory pre-mixed grout. Subject to compliance with requirements, products which may be incorporated in the work include, but are not limited to, the following:

- “Embeco 153”; Master Builders
- “Firmix”; Euclid Chemical Co.
- “Kemox G”; Sika Chemical Co.

non-metallic:

- “Masterflow 713”; Master Builders
- “Euco-NS”; Euclid Chemical Co.
- “Sika 212”; Sika Chemical Co.



**18. Liquid membrane forming sealing compound:** Liquid type membrane-forming sealing compound complying with ASTM C 309, Type I, Class A unless other type acceptable to Architect. Subject to compliance with requirements, products which may be incorporated in the work include, but are not limited to, the following:

- “Ecocure”; Euclid Chemical Co.
- “Kure-N-Seal”; Sonneborn-Contech
- “Hardtop”; Gifford-Hill

**19. Bonding compound:** Polyvinyl acetate or acrylic base, rewettable type. Subject to compliance with requirements, products which may be incorporated in the work include, but are not limited to, the following:

“Euroweld”; Euclid Chemical Co.  
“Sonocrete”; Sonneborn-Contech  
“Hornweld”; A.C. Horn

**20. Epoxy adhesive:** ASTM C 881, two component material suitable for use on dry or damp surfaces. Provide material ‘type’, ‘grade’, and ‘class’ to suit project requirements. Subject to compliance with requirements, products which may be incorporated in the work include, but are not limited to, the following:

“Epoxite”; A.C. Horn  
“Sidadur Hi-Mod”; Sika Chemical Corp.  
“Euco Epoxy 463 or 615”; Euclid Chemical Corp.

**21. Proportioning & design of mixes**

Prepare design mixes for each type and strength of concrete by either laboratory trial batch or field experience methods as specified in ACI 301.

**22. Submit written reports** to Architect of each proposed mix for each class of concrete at least 15 days prior to start of work. Do not begin concrete production until mixes have been reviewed by Architect.

**23. Design mixes** to provide normal weight concrete as indicated on drawings and schedules.

**24. Adjustments to concrete mixes:** Mix design adjustments may be requested by Contractor when characteristics of materials, job conditions, weather, test results, or other circumstances warrant; at no additional cost to Owner and as accepted by Architect. Laboratory test data for revised mix design and strength results must be submitted to and accepted by Architect before using in work.

**25. Admixtures:** Use water-reducing admixture or high range water reducing admixture (super plasticizer) in concrete as required for placement and workability. Use non-chloride accelerating admixture in concrete slabs placed at ambient temperatures below 50 degrees F. Use air-entraining admixture in exterior exposed concrete, unless otherwise indicated. Add air-entraining admixture manufacturer’s prescribed rate to result in concrete at point of placement having total air content with a tolerance of plus or minus 1 1/2% within following limits: Concrete structures and slabs exposed to freezing and thawing, de-icer chemicals, or subjected to hydraulic pressure: 4.5% (moderate exposure) 6.0% (severe exposure) 1” maximum aggregate. Other concrete: 2% to 4% air. Use admixtures for water-reducing and set-control in strict compliance with manufacturer’s directions.



**26. Water-cement ratio:** Provide concrete for following conditions with maximum water-cement (WC) ratios as follows: Subjected to freezing and thawing: WC 0.50.

**27. Slump limits:** Ramps, slabs, and sloping surfaces: not less than 2" and not more than 4". Reinforced foundation systems: not less than 4" and not more than 6". Other concrete: not more than 4".

**28. Concrete mixes:** Ready-Mix concrete shall comply with requirements of ASTM C 94, and as herein specified.

### ***C. Execution***

**1. Mixing:** Concrete shall be mixed in a truck mixer until there is a uniform distribution of materials. The entire contents of the drum shall be discharged before recharging. The volume of the mixed material per batch shall not exceed the manufacturer's rated capacity of the mixer. The mixer shall be operated at not greater than twenty (20) r.p.m. Mixing shall continue for at least one and one-half (1 1/2) minutes after all the ingredients are in the mixer.

Ready-mixed concrete conforming to the above requirements may be used with the written approval of the Architect. Concrete transferred in a truck mixer, agitator, or other transportation device, shall be discharged at the job and placed in its final position in the forms within one and one-half (1 1/2) hours after the introduction of the mixing water to the cement and aggregate, except that in hot weather or under other conditions contributing to quick stiffening of the concrete, the maximum allowable time may be reduced by the Architect. The delivery ticket for each load of concrete shall state the proportions of each material in the mix for that load.

Re-tempering of concrete which has partially hardened, that is, remixing with or without additional aggregate, cement, or water, will not be permitted.

**2. Reinforcement:** Reinforcement steel shall be manufactured from new billet steel of 60,000 psi yield strength and shall conform to ASTM A-15 with deformations conforming to ASTM A-305. Wire mesh fabric shall conform to ATM A-185.

Reinforcing bars shall be accurately placed and securely tied with No. 18 iron wire at all intersections. Bars and mesh shall be supported above subgrade on precast concrete blocks and above forms on steel chairs and spacers. Metal hangers shall be used for support of vertical reinforcing. Metal chairs, which are in contact with the exterior surface of the concrete, shall be galvanized. Layers of bars shall be separated by precast concrete blocks. The use of pebbles, pieces of broken stone or brick, metal pipe and wood blocks for support of bars shall not be permitted. Splicing of reinforcing bars shall be done by overlapping the bars a minimum distance of 48 times the diameter of the bar and securely tied with no. 18 wire. Corner bars shall extend 48 times the diameter from corner in each direction.

In slabs on grade, position welded wire fabric 2" below top of slab. During concrete pouring operations, care shall be taken to keep fabric properly positioned. Reinforce such slabs with 6x6, w1.4 -w1.4 wire mesh fabric where not otherwise indicated on the Drawings. All reinforcement shall be unpainted, uncoated, clean and free of rust or scale before being placed.

**3. Placement of reinforcing shall be approved by the Architect before concrete is placed.**



**4. Forms:** Forms shall be true and rigid and built to the line, shape, and grade shown on the plans. They shall be made of sound and reasonably smooth lumber, plywood, or steel. Joints shall be mortar tight and forms shall be tied and braced to prevent any bulging or deflection during concrete work. Before reusing forms, or when using secondhand lumber for forms, they shall be cleaned and all nails removed therefrom. Immediately before pouring, all forms shall be thoroughly cleaned of all dirt, debris, and foreign matter.

Forms for exposed to view concrete beams, girders, columns, pilasters, and walls shall provide for a one (1) inch radius or flat bevel on external corners and as required to match abutting existing member profiles.

Box out for all slots, chases, recesses, or openings as shown on the Drawings and as required by the work of all other trades. Box out for all temporary openings, such as pipe spaces, etc., and build forms to seal up when, and as, required.

**5. Placing:** All excavations and forms shall be free of ponded water and clean of all debris before concrete is placed. Subgrade for slabs shall be wet down and forms shall be lightly oiled before placement.

Concrete shall be handled from mixer to the place of final deposit by methods which shall prevent the separation or loss of ingredients and shall be placed continuously in horizontal layers as near as possible to its final position to avoid rehandling.

The working face of the concrete shall be kept plastic and viable during the placement and no partially hardened concrete shall be deposited at any time. High frequency vibrators shall be supplemented by hand tamping, spading, etc., as necessary. Avoid vibrator contact with forms or reinforcing adjacent to partially set concrete. Over-vibrating so as to produce segregation of ingredients is also to be avoided.

For interior slabs on grade, screed underfill base to the plane to receive slab; then provide 10 mil polyethylene vapor barrier atop base. Lap edges 6" in direction of concrete pouring. Repair any holes other than those for grade stakes, with additional piece, lapping hole edges 12".

Expansion, control, and construction joints shall be provided as shown on the plans, or as herein specified, and any other locations will not be allowed without approval by the Architect.

After concrete has been placed and finished, it shall be protected against rain or immersion in water for twelve (12) hours.

**6. Finishing:** For all surfaces covered in final construction or below grade, the ties shall be broken off and all voids shall be grouted. For vertical surfaces exposed to view, all ties shall be broken off, all voids grouted, all fins, joints, ridges, and form defects carefully removed. Surfaces shall be rubbed with cement or abrasive bricks and water within 24 hours after removal of forms, and a general uniform appearance attained.

Interior slabs shall be floated to a uniform level surface with a uniform slope to drains, as shown on the Drawings. Final finish for building floors shall be hard steel trowel finish, giving a hard, dense, smooth



surface. If sufficient fines cannot be worked up from the base slab, the Contractor may apply a dry mix of cement and sanding passing a No. 16 sieve and mixed in the ratio of 1 : 2 1/2 by volume. Compact and work surface mix into base course. The surface mix shall never be added as a 'drier' to absorb excess surface water.

General Contractor shall be responsible for providing a level uniform surface on floor slabs to receive floor covering. Any grinding or filling shall be done at the General Contractor's expense with methods approved by the Architect.

Interior floor slab sealer and hardener shall be used only where floor is scheduled for sealed concrete.

**7. Curing and removing of forms:** After placement, exposed concrete not covered by forms shall be moist cured. After forms are removed, exposed concrete surfaces shall be moist cured for an additional time to total seven days since the placement of the concrete.

Concrete shall be cured at a temperature within the range of 50 degrees F, to 100 degrees F. For cold weather and hot weather requirements, see sections below.

Forms shall remain undisturbed until the concrete has gained sufficient strength to sustain its own weight and any temporary or permanent load that may be placed on it during the building of the structure. In no case shall forms be removed in less than three (3) days after placing concrete.

**8. Expansion joints:** Shall be of pre-molded asphalt impregnated fiberboard conforming to ASTM Specifications D-544, each one-half inch thick, or as noted, and extending the full depth of the slab in which they are to be used. Expansion joints shall be placed as shown on drawings. Exposed joints to be capped off with urethane sealant at exposed locations.

**9. Interior control joints:** Shall be 'screed-key' joint of depth as required, (3 1/2" for 4" slab) and as manufactured by Superior Concrete Accessories, Inc. or equal.

**10. Exterior and/or interior control joints (at Contractor's Option for interior joints):** Saw concrete slab within 12 hours after placing. Saw joints shall be 1/4- of the total slab thickness in depth. Control joints shall be placed as indicated on drawings. If not indicated then no joint shall be more than 12' from the next parallel joint. Control joints shall define an area of not more than 150 square feet.

**11. Miscellaneous:**

Construct concrete bases for mechanical equipment as required. Provide inserts, hangers, metal ties, anchors, bolts, dowels, sleeves, slots, nailing strips, blocking, grounds, and other fastening devices required for attachment of other work. Accurately locate same in cooperation with other trades and secure in position before concrete is poured. Unless specifically indicated by drawings, do not install sleeves in any concrete beams, joists, or columns, except upon approval of Architect. Provide any other miscellaneous concrete items indicated by Drawings.

**12. Concrete splash and splatter** from footings and slabs shall be cleaned from adjacent materials which will be exposed. Cleaning shall be done as soon as practical after placement. **CONCRETE ON EXPOSED FINISH MATERIALS WILL NOT BE ACCEPTED.**



**13. Testing:** Routine testing of materials, or proposed mix designs, and of resulting concrete for compliance with technical requirements of the specifications shall be performed by a qualified, experienced testing agency, employed by the Contractor and approved by the Architect. Provide Architect one copy of all tests performed. Cost of these tests shall be part of this contract.

The following minimum number of strength tests are required:

| member                                                     | no. of tests required   | # of cylinders req'd |
|------------------------------------------------------------|-------------------------|----------------------|
| Foundation walls, grade beams, columns, and elevated beams | 1 each day of placement | 3                    |
| Slabs on grade and elevated                                | 1 each 4,000 s.f.       | 3                    |
| Piers                                                      | 1 each day of placement | 3                    |

**END OF SECTION**



## ***Part 1 General***

- 1. Related documents:** The provisions of the General and Supplementary Conditions and General Requirements (if any), apply to the work specified in this section.
- 2. Shop Drawings and Product Data:** Submit in accordance with Section 01330 'Submittal Procedure'. Include design mix, indicate Proportion or Property method used, required environmental conditions, and admixture limitations. Submit test reports on mortar indicating conformance to ASTM C270 and C780. Submit test reports on grout indicating conformance to ASTM C476 and C1019.
- 3. Substitutions:** Other manufacturers will be considered. Supply specifications sheet to Architect for approval.
- 4. Related Sections:** Concrete Masonry Units 04300, Brick Masonry 04210.
- 5. Delivery, storage, and handling:** Maintain packaged materials clean, dry, and protected against dampness, freezing, and foreign matter.
- 6. Environmental requirements:** Cold Weather Requirements: IMIAC - Recommended Practices and Guide Specifications for Cold Weather Masonry Construction.
- 7. Mix tests:**
  - Testing of Mortar Mix: In accordance with ASTM C780.
  - Test mortar mix for compressive strength, consistency, mortar aggregate ration, water content, air content, splitting tensile strength and color.
  - Testing of Grout Mix: In accordance with ASTM C1019.
  - Test grout mix for compressive strength and slump.

## ***Part 2 Products***

- 1. Materials:**
  - A. **Portland cement:** ASTM C150, Type I, except Type III may be used for cold weather construction. Provide natural color or white cement as required to produce mortar color to match existing.
  - B. **Mortar aggregate:** ASTM C144, standard masonry type, except for joints less than 1/4" use aggregate graded with 100% passing the No. 16 sieve.
  - C. **Hydrated lime:** ASTM C207, Type S
  - D. **Water:** Clean and potable
- 2. Mortar Mixes:** Do not add admixtures including coloring pigments, air-entraining agents, accelerators, retarders, water repellent agents, anti-freeze compounds or other admixtures,



unless otherwise indicated. Do not use calcium chloride in mortar. Combine and thoroughly mix cementitious, water and aggregates in a mechanical batch mixer; comply with referenced ASTM standards for mixing time and water content.

**3. Mortar for Unit Masonry:** Comply with ASTM C 270, Proportion Specification, for types of mortar required, unless otherwise indicated. Limit cementitious materials in mortar to portland cement - lime. Use Type S mortar for below grade walls, otherwise Type M.

**END OF SECTION**



## ***Part 1 General***

- 1. Related documents:** The provisions of the General and Supplementary Conditions and General Requirements (if any), apply to the work specified in this section.
- 2. Work included:** In general, this includes, but is not limited to providing all labor, materials, and equipment for brick masonry where shown on the drawings, as specified herein, and as needed for a complete and proper installation.
- 3. Shop Drawings and Product Data:** Submit in accordance with Section 01330 'Submittal Procedure'.
- 4. Substitutions:** Other manufacturers will be considered. Supply specifications sheet to Architect for approval.

## ***Part 2 Products***

- 1. Face Brick:** match brick on existing building for size, texture, and color.
- 2. Other Materials:**
  - A. portland cement:** Comply with ASTM C150, type I or II, low alkali. "Masonry" cement will not be acceptable.
  - B. aggregate:** Sand for mortar: Comply with ASTM C144. Aggregate for grout: Comply with ASTM C404.
  - C. lime:** Quick lime: Provide pure ground mineral oxides, non-fading and alkali proof; approved by the Architect.
  - D. coloring pigment:** Provide pure ground mineral oxides, non-fading and alkali proof, approved by the Architect.
  - E. water:** Provide potable water free from injurious amounts of acids, alkalis, oil, and organic matter.
- 3. Reinforcement:** Comply with ASTM A165, grade 40, unless otherwise shown on the Drawings.
- 4. Mortar:** Unless otherwise directed by the Architect or governmental agencies having jurisdiction, provide type "S" mortar.

## ***Part 3 Execution***

- 1. Surface conditions:** Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.



**2. Foundation conditions:** Do not commence installation until foundations are clean, rough, and level. Sandblast the foundation tops, if necessary, and remove all laitance and foreign material. Verify that the foundation elevation is such that the bed joint thickness will be between 1/4" and 3/4", and that the foundation edge is true to line with masonry not projecting over more than 1/4". Clean projecting dowels free from loose scale, dirt, concrete, and other material that will inhibit bond.

**3. Installation:** Unless otherwise indicated on the Drawings, make the brickwork plumb, level, and true to line with square angles and corners. Use line blocks whenever possible. Use only bricks that are clean and free from dust and other foreign matter. Lay in running bond unless otherwise shown on the Drawings.

Bevel all bed joints, sloping toward the center of the wall in such a manner that the bed joints will be filled when the bricks finally brought to line. Immediately remove mortar and grout from areas where they are not scheduled to be placed.

**4. Joint Pattern:** Concave tooled

**5. Control and Expansion Joints:** As indicated on Drawings; note: if not indicated, spacing between horizontal joints shall not exceed 30 ft.

**6. Pointing and cleaning:** At the completion of this portion of the Work, visually inspect the work of this Section and point, or cut out and repoint if necessary, all holes and defective joints.

Thoroughly clean all brick surfaces to be left exposed in the finished Work, removing all traces of mortar, grout, and foreign matter. In the event ordinary cleaning is not adequate, provide light sandblasting when so directed by the Architect, and at no additional cost to the Owner.

**7. Existing Brick Masonry to be thoroughly cleaned.**

**END OF SECTION**



# Concrete Masonry Units ----- 04300

## *Part 1 General*

**1. Related documents:** The provisions of the General and Supplementary Conditions and General Requirements (if any), apply to the work specified in this section.

**2. Work included:** In general, this includes, but is not limited to providing all labor, materials, and equipment for concrete masonry units where shown on the drawings, as specified herein, and as needed for a complete and proper installation.

**3. Shop Drawings and Product Data:** Submit in accordance with Section 01330 'Submittal Procedure'.

**4. Substitutions:** Other manufacturers will be considered. Supply specifications sheet to Architect for approval.

**5. Project conditions:** Prevent grout, mortar, or soil from staining the face of masonry to be left exposed or painted. Remove immediately grout or mortar in contact with such masonry. Protect base of walls from rain-splashed mud and mortar splatter by means of coverings spread on ground and over wall surface. Protect sills, ledges and projections from droppings of mortar.

**6. Cold weather protection:** Do not lay masonry units which are wet or frozen. Remove any ice or snow formed on masonry bed by carefully applying heat until top surface is dry to the touch. Remove masonry damaged by freezing conditions.

Perform the following construction procedures while masonry work is progressing. Temperature ranges indicated below apply to air temperature existing at time of installation except for grout. For grout, temperature ranges apply to anticipated minimum night temperatures. In heating mortar and grout materials, maintain mixing temperature selected within 10 degrees F.

- 40 degrees F. to 32 degrees F. : Mortar: heat mixing water to produce mortar temperature between 40 degrees F. and 120 degrees F.
- 32 degrees F. to 25 degrees F. :Mortar: heat mixing water and sand to produce mortar temperature between 40 degrees F. and 120 degrees F.; maintain temperature of mortar on boards above freezing.
- 25 degrees F. to 20 degrees F. : Mortar: heat mixing water and sand to produce mortar temperature between 40 degrees F. and 120 degrees F.; maintain temperature of mortar on boards above freezing. Heat both sides of walls under construction using salamanders or other heat sources.



- 20 degrees F. and below: Mortar: heat mixing water and sand to produce mortar temperature between 40 degrees F. and 120 degrees F.; Masonry Units: Heat masonry units so that they are above 20 degrees F. at time of laying. Provide enclosure and auxiliary heat to maintain an air temperature of at least 40 degrees F. for 24 hours after laying units. Do not heat water for mortar and grout to above 160 degrees F.

## ***Part 2 Products***

**1. Concrete masonry units:** grade N, Type II, non-moisture controlled units. See Drawings for sizes and textures.

**2. Hot-dip galvanized steel wire:** ASTM A 82 for uncoated wire and with ASTM A 153, Class B-2 (1.5 oz. per sq. ft. of wire surface) for zinc coating applied after prefabrication into units.

**3. Joint reinforcement:** Provide welded-wire units prefabricated with deformed continuous side rods and plain cross rods into straight lengths of not less than 10', with prefabricated corner and tee units, and complying with requirements indicated below:

- **width:** Fabricate joint reinforcement in units with widths of approximately 2" less than nominal width of walls and partitions as required to provide mortar coverage of not less than 5/8" on joint faces exposed to exterior and 1/2" elsewhere.
- **Wire size for side and cross rods:** 0.1483" diameter
- **For single-wythe masonry** provide type as follows with single pair of side rods: Ladder design with perpendicular cross rods spaced not more than 16" o.c.

**4. Anchor bolts:** Provide steel bolts with hex nuts and flat washers complying with ASTM A 307, Grade A, hot-dip galvanized to comply with ASTM C 153, Class C, in sizes and configurations indicated.

**5. Reinforcing bars:** Deformed steel, ASTM A 615, Grade 60 for bars No. 3 to No. 18.

## ***Part 3 Execution***

**1. Installation, general:** Do not wet concrete masonry units. Cleaning Reinforcing: Before placing, remove loose rust, ice, and other coatings from reinforcing.

**2. Thickness:** Build cavity and composite walls, floors and other masonry construction to the full thickness shown. Build single-wythe walls to the actual thickness of the masonry units, using units of nominal thickness indicated.

Leave openings for equipment to be installed before completion of masonry work. After installation of equipment, complete masonry work to match work immediately adjacent to the opening.



Cut masonry units using motor-driven saws (dry cutting) to provide clean, sharp, unchipped edges. Cut units as required to provide continuous pattern and to fit adjoining work. Use full-size units without cutting where possible.

**3. Tolerances:**

|                                                            |                     |
|------------------------------------------------------------|---------------------|
| Maximum Variation From Alignment of Columns:               | 1/4 inch            |
| Maximum Variation From Unit to Adjacent Unit:              | 1/32 inch           |
| Maximum Variation From Plane of Wall:                      | 1/4 inch in 10 feet |
| Maximum Variation From Plumb:                              | 1/4 inch            |
| Maximum Variation From Level Coursing:                     | 1/8 inch in 3 feet  |
| Maximum Variation of Joint Thickness:                      | 1/8 inch in 3 feet  |
| Maximum Variation From Cross Sectional Thickness of Walls: | 1/4 inch            |

**4. Layout:** Layout walls in advance for accurate spacing of surface bond patterns with uniform joint widths and to accurately locate openings, movement-type joints, returns and offsets. Avoid the use of less than half size units at corners, jambs and wherever possible at other locations. Dimensions shown on plans (unless otherwise noted) indicate nominal CMU thickness and layout and location of those walls should be to centerline of nominal thickness indicated.

**5. Lay-up walls** to comply with specified construction tolerances, with courses accurately spaced and coordinated with other work.

**6. Pattern bond:** Lay exposed masonry in the bond pattern shown. Lay concealed masonry with all units in a wythe in running bond or bonded by lapping not less than 2". Bond and interlock each course of each wythe at corners. Do not use units with less than nominal 4" horizontal face dimensions at corners or jambs.

**7. Stopping and resuming work:** Rake back 1/2 unit length in each course; do not tooth. Clean exposed surfaces of set masonry, wet units lightly (if required) and remove loose masonry units and mortar prior to laying fresh masonry.

**8. Built-in work:** Fill space between hollow metal frames and masonry solidly with mortar, unless otherwise indicated. Where built-in items are to be embedded in cores of hollow masonry units, place a layer of metal lath in the joint below and rod mortar or grout into core.

**9. Lay hollow concrete masonry units** with full mortar coverage on horizontal and vertical face shells.

**10. Maintain joint widths** shown, except for minor variations required to maintain bond alignment. If not shown, lay walls with 3/8" joints.

**11. Cut joints flush for masonry walls** which are to be concealed or to be covered by other materials, unless otherwise indicated.



**12. Remove masonry units disturbed after laying,** clean and reset in fresh mortar. Do not pound corners or jambs to shift adjacent stretcher units which have been set in position. If adjustments are required, remove units, clean off mortar and reset in fresh mortar.

**13. Collar joints:** After each course is laid, fill the vertical longitudinal joint between wythes solidly and with mortar for the following work: Non-loadbearing interior walls or partitions where metal ties or horizontal reinforcing are indicated for structural bonding and nominal thickness of wall or partition is required to meet code requirements for height-to-thickness ratio.

**14. Horizontal joint reinforcement:** Provide continuous horizontal joint reinforcement as indicated. Install longitudinal side rods in mortar for their entire length with a minimum cover of 5/8" on exterior side of walls, 1/2" elsewhere. Lap reinforcing a min. of 6". Cut or interrupt joint reinforcement at control and expansion joints, unless otherwise noted. Reinforce walls with continuous horizontal joint reinforcing unless specifically noted to be omitted. Provide continuity at corners and wall intersections by use of prefabricated 'L' and 'T' sections. cut and bend reinforcement units as directed by manufacturer.

Space reinforcement for single-wythe walls at 16" o.c. vertically, unless otherwise indicated.

Reinforce masonry openings greater than 1'-0" wide with horizontal joint reinforcement placed in 2 horizontal joints approx. 8" apart, immediately above the lintel and immediately below the sill. Extend reinforcement a min. of 2'-0" beyond jambs of the openings except at control joints. In addition to wall reinforcement, provide additional reinforcement at openings as required to comply with drawings and details.

**15. Repair, pointing and cleaning:** Remove and replace masonry units which are loose, chipped, broken, stained or otherwise damaged, or if units do not match adjoining units as intended. Provide new units to match adjoining units and install in fresh mortar or grout, pointed to eliminate evidence of replacement.

Pointing: during the tooling of joints, enlarge any voids or holes, except weep holes, and completely fill with mortar. Point-up all joints including corners, openings and adjacent work to provide a neat, uniform appearance, prepared for application of sealants.

Note: Grout cells of masonry units full at corners, edge of openings, and at all vertical reinforced bars.

**16. Insulation Installation:** insulation contractor to be approved by insulation manufacturer. All applicators to be trained and certified in the use of the insulation materials and equipment.

**END OF SECTION**



## ***Part 1 General***

- 1. Related documents:** The provisions of the General and Supplementary Conditions and General Requirements (if any), apply to the work specified in this section.
- 2. Work included:** In general, this includes, but is not limited to providing all labor, materials, and equipment for roof hatches where shown on the drawings, as specified herein, and as needed for a complete and proper installation.
- 3. Shop Drawings and Product Data:** Submit in accordance with Section 01330 'Submittal Procedure'.
- 4. Substitutions:** Other manufacturers will be considered. Supply specifications sheet to Architect for approval.
- 5. Measurements:** The contractor shall take measurements at the building as may be required and shall be responsible for the accuracy of such measurements.

## ***Part 2 Products***

- 1. Materials:** shall conform to the following standards:
  - Structural Steel Members: ASTM A992
  - Structural Tubing: ASTM A500, Grade B.
  - Pipe: ASTM A53, Grade B.
  - Bolts, Nuts, and Washers: ASTM A325.
  - Anchor Rods: ASTM F1554.
  - Welding Materials: AWS D1.1; type required for materials being welded.
  - Grout: Non-shrink type, pre-mixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing additives, capable of developing a minimum compressive strength of 7,000.

## ***Part 3 Execution***

- 1. Fabrication:** Insofar as possible work shall be done in the shop. Fabricate from approved drawings only. Structural steel framing connections, parts, and accessories shall (where applicable) conform to the Handbook of the American Institute of Steel Construction, with latest amendments. Steel sections bearing on walls shall conform to the Handbook of the American Institute of Steel Construction, latest edition.

Provide holes and connections as required for work of other trades.

- 3. Shop painting:** Metal shall receive prime coat of approved shop paint.

**4. Field Assembly:**

- Set structural members accurately to lines and elevations indicated.
- Align and adjust members forming frame or structure before permanently fastening.
- Clean bearing surfaces and other surfaces that will be in permanent contact before assembly.
- Perform necessary adjustments to compensate for discrepancies in elevations and alignment.
- Level and plumb individual members of structure within specified AISC tolerances.
- Establish required leveling and plumbing measurements on mean operating temperature of structure. Make allowances for difference between temperature at time of erection and mean temperature at which structure will be when completed and in service.

5. **Splice members** only where indicated and accepted on shop drawings.

6. **Allow for erection loads.** Provide temporary bracing to maintain framing in alignment until completion of erection and installation of permanent bridging and bracing.

7. **Field weld components** indicated on Drawings.

8. Do **not field cut or alter structural members** without approval of Architect/Engineer.

9. **After erection**, prime welds, abrasions, and surfaces not shop primed, except surfaces to be in contact with concrete.

10. **Grout** under base plates.

**End of Section**



# Rough Carpentry ----- 06100

## ***Part 1 General***

- 1. Related documents:** The provisions of the General and Supplementary Conditions and General Requirements (if any), apply to the work specified in this section.
- 2. Work included:** In general, this includes, but is not limited to providing all labor, materials, and equipment for rough carpentry where shown on the drawings, as specified herein, and as needed for a complete and proper installation.
- 3. Shop Drawings and Product Data:** Submit in accordance with Section 01330 'Submittal Procedure'.
- 4. Substitutions:** Other manufacturers will be considered. Supply specifications sheet to Architect for approval.
- 5. Definition of Rough Carpentry:** includes carpentry work not specified as part of other sections and which is generally not exposed, except as otherwise indicated. Includes rough carpentry, , osb sheathing on walls, any furring grounds, nailers or blocking. Provide lumber for support or attachment of other construction.
- 6. Product handling:** Delivery and Storage: Keep materials under cover and dry. Protect against exposure to weather and contact with damp or wet surfaces. Stack lumber as well as plywood and other panels; provide for air circulation within and around stacks and under temporary coverings including polyethylene and similar materials.
- 7. Coordination:** Fit carpentry work to other work; scribe and cope as required for accurate fit. Correlate location of furring, nailers, blocking, grounds and similar supports to allow attachment of other work.

## ***Part 2 Products***

- 1. Lumber standards:** Manufacture lumber to comply with PS 20 "American Softwood Lumber Standard" and with applicable grading rules of inspection agencies certified by American Lumber Standards Committee's (ALSC) Board of Review.
- 2. Nominal sizes** are indicated, except as shown by detail dimensions. Provide actual sizes as required by PS 20, for moisture content specified for each use. Provide dressed lumber, S45, unless otherwise indicated. Provide lumber with 15% maximum moisture content at time of dressing and shipment for sizes 2" or less in nominal thickness, unless otherwise indicated.
- 3. Dimension lumber:** No. 2 grade, Douglas Fir, Douglas-Fir-Larch, or S-P-F. Fb (min. extreme fiber stress in bending): 1200 psi.

**4. Miscellaneous lumber:** Provide wood for support or attachment of other work including rooftop equipment curbs and support bases, cant strips, bucks, nailers, blocking, furring, grounds, stripping, and similar members. Provide lumber of sizes indicated, worked into shapes shown, and as follows: moisture content: 19% max. for lumber items not specified to receive wood preservation treatment. Grade: standard grade light framing size lumber of any species or board size lumber as required. No. 3 Common or Standard grade boards per WCLIB or WWPA rules or No. 3 boards per SPIB rules.

**5. Construction panels:** Comply with PS 1 "U.S. Product Standard for Construction and Industrial Plywood" for plywood panels and, for products not manufactured under PS 1 provisions, with American Plywood Association (APA) "Performance Standard and Policies for Structural-Use Panels", Form No. E445.

**6. Plywood backing panels:** For mounting electrical or telephone equipment, provide fire-retardant treated plywood panels; ADA C-D PLUGGED INT with exterior glue, in thickness indicated, or if not otherwise indicated, not less than 15/32".

**7. Fasteners and anchorages:** Provide size, type, material and finish as indicated and as recommended by applicable standards, complying with applicable Federal Specifications for nails, staples, screws, bolts, nuts, washers, and anchoring devices. Provide metal hangers and framing anchors of the size and type recommended by the manufacturer for each use including recommended nails. Where rough carpentry work is exposed to weather, in ground contact, or in area of high relative humidity, provide fasteners and anchorages with a hot-dip zinc coating (ASTM A 153).

### ***Part 3 Execution***

**1. Installation, general:** Discard units of material with defects which might impair quality of work, and units which are too small to use in fabricating work with minimum joints or optimum joint arrangement. Set carpentry work to required levels and lines, with members plumb and true to line and cut and fitted. Securely attach carpentry work to substrate by anchoring and fastening as shown and as required by recognized standards. Use screws, except as otherwise indicated. Select fasteners of size that will not penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting wood; predrill as required.

**2. Wood grounds, nailers and blocking:** Provide wherever shown and where required for screeding or attachment of other work. Form to shapes as shown and cut as required for true line and level of work to be attached. Coordinate location with other work involved. Attach to substrates as required to support applied loading. Countersink screws flush with surfaces, unless otherwise indicated.

**3. Wood framing:** Provide framing members of sizes and on spacings shown, and frame openings as shown. Do not splice structural members between supports. Anchor and nail as shown and to comply with "Recommended Nailing Schedule" of "National Design Specifications for Wood Construction" published by N.F.P.A. Firestop concealed spaces of wood framed walls and partitions at each floor level and at the ceiling line of the top story.

**4. Installation of construction panels:** Comply with applicable recommendations contained in Form No. E 30F, "APA Design/Construction Guide - Residential & Commercial", for types of construction



panels and applications indicated. Fastening methods: sheathing - nail to framing. plywood backing panels - nail to supports.

**END OF SECTION**

# Finish Carpentry ----- 06220

## *Part 1 General*

- 1. Related documents:** The provisions of the General and Supplementary Conditions and General Requirements (if any), apply to the work specified in this section.
- 2. Work included:** In general, this includes, but is not limited to providing all labor, materials, and equipment for finish carpentry where shown on the drawings, as specified herein, and as needed for a complete and proper installation.
- 3. Shop Drawings and Product Data:** Submit in accordance with Section 01330 'Submittal Procedure'.
- 4. Substitutions:** Other manufacturers will be considered. Supply specifications sheet to Architect for approval.
- 5. Product delivery, storage, and handling:** Protect finish carpentry materials during transit, delivery, storage, and handling to prevent damage, soiling and deterioration.
- 6. Job conditions:** Installer shall advise Contractor of temperature and humidity requirements for finish carpentry installation areas. Do not install finish carpentry until required temperature and relative humidity conditions have been stabilized and will be maintained in installation areas.

## *Part 2 Products*

- 1. Wood product quality standards:**
  - Softwood Lumber Standard: PS 20
  - Plywood Standard: PS 1/NASI A199.1
  - Hardwood Lumber Standard: National Hardwood Lumber Association (NHLA) rules
  - Woodworking Standard: Architectural Woodwork Institute (AWI) "Quality Standards".
- 2. Materials:** Nominal sizes are indicated, except as shown as detailed dimensions. Provide seasoned (KD) lumber having a moisture content from time of manufacture until time of installation not greater than values required by the applicable grading rules of the respective grading and inspecting agency for the species and product indicated. Lumber for transparent finish (stain or clear): use pieces made of solid lumber stock.
- 3. Fasteners and anchorages:** Provide nails, screws, and other anchoring devices of the type, size, material, and finish required for application indicated to provide secure attachment, concealed where possible, and complying with applicable Federal Specifications. Where finish carpentry is exposed on exterior or in areas of high relative humidity, provide fasteners and anchorages with a hot-dipped zinc coating (ASTM A 153).



### ***Part 3 Execution***

- 1. Condition wood materials** to average prevailing humidity conditions in installation areas prior to installing.
- 2. Backprime lumber** for painted finish exposed on the exterior or, where indicated, to moisture and high humidities on the interior. Comply with requirements of section on painting within Painting Specifications Section 09900.
- 3. Installation, general:** Install the work plumb, level, true and straight with no distortions. Scribe and cut work to fit adjoining work, and refinish cut surfaces or repair damaged finish at cuts.
- 4. Installing standing and running trim:** Install with minimum number of joints possible, using full-length pieces to the greatest extent possible. Stagger joints in adjacent and related members. Cope at returns, miter at corners. to produce tight fitting joints with full surface contact throughout length of joint. Use scarf joints for end-to-end joints. Anchor finish carpentry work to anchorage devices or blocking built-in or directly attached to substrate. Secure to grounds, stripping and blocking with countersunk, concealed fasteners, and blind nailing as required for a complete installation. Except where prefinished matching fasteners heads are required, use fine finishing nails for exposed nailings, countersunk and filled flush with finished surface, and matching final finish where transparent is indicated.
- 5. Repair damaged and defective finish carpentry** work wherever possible to eliminate defects functionally and visually; where not possible to repair properly, replace woodwork. Adjust joinery for uniform appearance.

**END OF SECTION**

## ***Part 1 General***

- 1. Related documents:** The provisions of the General and Supplementary Conditions and General Requirements (if any), apply to the work specified in this section.
- 2. Work included:** In general, this includes, but is not limited to providing all labor, materials, and equipment for millwork where shown on the drawings, as specified herein, and as needed for a complete and proper installation.
- 3. Shop Drawings and Product Data:** Submit in accordance with Section 01330 'Submittal Procedure'.
- 4. Substitutions:** Other manufacturers will be considered. Supply specifications sheet to Architect for approval.

## ***Part 2 Products***

- 1. Cabinets & Countertops:** These cabinets are to be custom made for the project, not stock units. See Drawings for sizes, locations, and details. Cabinet materials shall be as indicated on drawings and as follows:
  - a. Species: Birch on exposed cabinet fronts, sides, etc.
  - b. Interior shelves and non-exposed surfaces shall be melamine-covered board.
  - c. Countertop style: See drawings for post formed top or square edge front.
- 2. Materials:**
  - a. **Plastic Laminates:** Plastic laminate shall be as manufactured by Wilsonart, Formica, or Nevamar. Color(s) shall be selected by Architect.
  - b. **Melamine covered board:** Shall be 3/4" thick, on one or both sides as indicated on the Drawings.
  - c. **Drawers:** All drawers shall be Blum Metabox design with separate front. Drawer backs and bottoms shall be constructed of 5/8" thick 45# medium density melamine covered board with laminated faces and matching PVC top edges.
  - d. **Doors:** (plastic laminate: Solid hinged doors shall be 3/4" thick melamine covered board, with plastic laminate on exposed surfaces).
  - e. **Cabinet backs:** Fixed cabinets, in applications where the back is unexposed, shall have 1/4" thick melamine covered board back panels.
  - f. **Adjustable shelves** (Melamine covered board): All adjustable shelves shall be 3/4" thick when under 36" long and 1" thick when 36" long and over. Shelves shall be constructed of 45# density melamine covered board. Front edge shall have PVC self edge to match trim group color.
  - g. **Frame rails:** Frame rails between drawers shall be full length, 3/4" thick x 4" wide, pinned, and fastened into cabinet sides. The front leading edge shall be covered with plastic laminate.



- h. **Drawer / door pulls:** 4" brushed chrome, wire type. Verify finish and style with Architect.
- i. **Hinges:** European style concealed hinges, 125 degrees swing.
- j. **Locks:** If indicated on Drawings, provide cylinder type, die cast, with five (5) disc tumbler mechanism. Each lock shall come with a milled brass key with keying to be determined.

### **3. Construction:**

- a. **Construction jointery:** Cabinet corner joints shall incorporate dado construction and be glued and clamped under pressure to assure rigid load-bearing corner joints.
- b. **Mounting supports:** Base and wall cabinets shall have a support rail that is mechanically fastened to the upper back for mounting units to walls.

## ***Part 3 Execution***

**1. Surface conditions:** Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected. Condition cabinet work to prevailing humidity and temperature conditions prior to installation.

### **2. Installation:**

- a. General Contractor and subcontractor/supplier shall coordinate work and verify dimensions. If field dimensions for millwork vary from drawings dimensions in a way that effects the millwork design, contact Architect.
- b. Install work in accordance with AWI "Quality Standards" Grade "Custom".
- c. Set and secure casework in place rigid, plumb, and level.
- d. Provide cutouts for plumbing fixtures, appliances, and other fixtures and fittings.
- e. Use fixture attachments at concealed locations for wall mounted components.
- f. Carefully scribe casework which is against other building materials, leaving gaps of 1/32" maximum. Use filler strips, not additional overlay trim for this purpose.
- g. Secure cabinets and counter bases to floor using appropriate anchorages.
- h. Adjust moving or operating parts to function smoothly and correctly.
- i. Adjust hardware for fit and alignment of doors and drawers.
- j. Seal junction of walls and cabinet tops, sides, splashes, and countertops with latex sealant.
- k. Clean all exposed cabinet surfaces and cabinet interiors.

**END OF SECTION**

# Building Insulation ----- 07210

## ***Part 1 General***

- 1. Related documents:** The provisions of the General and Supplementary Conditions and General Requirements (if any), apply to the work specified in this section.
- 2. Work included:** In general, this includes, but is not limited to providing all labor, materials, and equipment for building insulation where shown on the drawings, as specified herein, and as needed for a complete and proper installation.
- 3. Shop Drawings and Product Data:** Submit in accordance with Section 01330 'Submittal Procedure'.
- 4. Substitutions:** Other manufacturers will be considered. Supply specifications sheet to Architect for approval.
- 5. Work NOT Included:** Batt insulation on ceiling tiles shall be furnished and installed by Suspended Ceiling Contractor.

## ***Part 2 Products***

- 1. Sound Batt Insulation:** Unfaced fiberglass batt insulation, R-11, equal to Owens Corning "Sonobatt" or equal. Install full height in walls indicated on Floor Plan.

Acceptable manufacturers:

- CertainTeed
- Johns Manville
- Owens-Corning

- 2. Fiber Glass Building insulation:** Blanket type insulation, ASTM C 665, Type II, Class C, Category 1. See Drawings for R-values. Unless otherwise noted provide as follows:

- 2x4 wood stud wall or 3 5/8" mtl. stud wall: R-11
- 2x6 wood stud wall or 6" mtl. stud wall: R-19

Glass fiber insulation acceptable manufacturers:

- CertainTeed
- Johns Manville
- Owens-Corning

- 3. Rigid Insulation (walls):** 1 1/2" thick polyisocyanurate foam sheathing insulation. Installed in 1 1/2" metal stud wall furring on all existing cmu walls (except mechanical rooms).



### ***Part 3 Execution***

**1. Examine job conditions:** Examine substrates and conditions under which insulation work is to be performed. Do not proceed with installation until any unsatisfactory conditions are corrected.

Clean substrates of substances harmful to insulations or vapor barriers, including removal of projections which might puncture vapor barriers.

**2. Installation:** Install per manufacturer's written instructions. Extend insulation full thickness over entire area to be insulated. Cut and fit tightly around obstructions, and fill voids with insulation. Apply a single layer of insulation of required thickness, unless otherwise shown or required to make up total thickness.

**END OF SECTION**

# Exterior Insulation & Finish System ----- 07240

## ***Part 1 General***

- 1. Related documents:** The provisions of the General and Supplementary Conditions and General Requirements (if any), apply to the work specified in this section.
- 2. Work included:** In general, this includes, but is not limited to providing all labor, materials, and equipment for the EIFS system where shown on the Drawings, as specified herein, and as needed for a complete and proper installation.
- 3. Shop Drawings and Product Data:** Submit in accordance with Section 01330 'Submittal Procedure'.
- 4. Substitutions:** Other manufacturers will be considered. Supply specifications sheet to Architect for approval.

## ***Part 2 Products***

- 1. Manufacturer/System:** Dryvit "Outsulation".  
Other approved manufacturers:  
Sto Corporation  
Senerflex PB EIFS Wall System by BASF.
- 2. Insulation:** At all locations, the EPS Foam Insulation boards shall be encapsulated by the Binder/Primer mortar and finish coat products, or the Substrate.
- 3. Color and finish:** Contractor shall bid project with two (2) colors of E.I.F.S. finished. Owner may choose to have only one color utilized. Quartzputz finish, Colors shall be selected by the Architect. Sample panels showing texture and color must be approved by Architect before commencing work.
- 4. Substrate:** Exterior grade gypsum sheathing or plywood, see Drawings.
- 5. Materials:** All components of the system shall be as specified by the manufacturer. No substitutions of, or additions of, other materials shall be submitted without prior written approval from the E.I.F.S. manufacturer.
- 6. Reinforcing fiberglass mesh:** Standard Plus, 6 oz. mesh  
Up to 6' above the finish grade: Panzer 20: 20 oz. mesh

## ***Part 3 Execution***

- 1. Delivery:** All materials shall be delivered in original unopened containers and/or packages with labels intact.



**2. Initial inspection:** Examine the job conditions which affect execution, performance, or job quality of workmanship required. DO NOT proceed with work until existing unsatisfactory conditions are corrected, adjusted, or otherwise controlled. Substrates shall be clean, dry, smooth and true to plane or plumb within 1/4" tolerance in every 10 feet vertically and horizontally. Substrates shall comply with contract documents and manufacturers specifications.

**3. Application:** Per manufacturer's recommendations.

**END OF SECTION**

# **TPO** (Thermoplastic Polyolefin) **Roofing & Insulation----- 07500**

## ***Part 1 General***

- 1. Related documents:** The provisions of the General and Supplementary Conditions and General Requirements (if any), apply to the work specified in this section.
- 2. Work included:** In general, this includes, but is not limited to providing all labor, materials, and equipment for TPO Roofing and insulation where shown on the drawings, as specified herein, and as needed for a complete and proper installation.
- 3. Shop Drawings and Product Data:** Submit in accordance with Section 01330 'Submittal Procedure'.
- 4. Substitutions:** Other manufacturers will be considered. Supply specifications sheet to Architect for approval.
- 5. Warranty:** Twenty (20) year NDL written warranty
- 6. Guarantee:** At the completion of project, roofing contractor and material supplier shall furnish Owner a written guarantee that flashing and roofing as installed will be watertight for a period of two (2) years from date of acceptance of roof by the Owner. This guarantee shall be on the Contractor's letterhead. Include in the guarantee a statement that the contractor will make any necessary repairs during the initial two (2) year period to make roof watertight without cost to Owner.

Guarantee shall also state that the Owner has the right, in case of any emergency at any time during this two year period, to make any temporary repairs that are required in order to protect building and/or contents of building from damage due to the roof leaking. Cost of such repairs shall be borne by the Contractor, and such action by the Owner shall not invalidate the guarantee.

## ***Part 2 Products***

- 1. Roofing Membrane System:** 60 mil, white, TPO (Thermoplastic Polyolefin)
- 2. Roof insulation:** 2" rigid roof insulation board, closed cell polyisocyanurate foam core. See Drawings for locations and details.
- 3. Metal Flashing:** 24 ga. Kynar coated

## ***Part 3 Execution***

- 1. Material Storage:** All insulation and materials which are stored at the site shall be placed on pallets which are sufficiently above the ground and tarped to insure that material does not absorb moisture or get damp or wet. **Any material which gets damp or wet shall not be utilized on this project.**



**2. Roof Deck conditions:** existing roof deck must be cleaned, smooth and moisture-free, properly attached, with no electrical conduits, bolts, or similar equipment placed on the surface of the roof deck.

**3. Roof Insulation:** must be manufactured for use as a roof insulation and meet the roofing material manufacturer's written requirements.

**4. Application of Roofing Materials:** The roofing contractor must maintain qualified supervision on the job at all times. The roofing contractor shall follow all of the manufacturer's written instructions, and be an approved installer.

- a) Install insulation to deck
- b) Install TPO roof membrane per manufacturers instructions.
- c) Flash all walls and curbs same as field

**5. Pitch Pans and Piping Penetration:** where pitch pans or piping penetration thru roof occurs, flashed curb type with metal capped flashing shall be installed with a minimum curb of 8" above roof surface. Blocking and curbs shall be securely attached to structural components of building. All curbs shall be securely attached before installing insulation and roofing membrane. Roofing contractor shall install fiber cants at curbs and projections.

**END OF SECTION**

# Flashings, Gutters & Downspouts ----- 07600

## ***Part 1 General***

- 1. Related documents:** The provisions of the General and Supplementary Conditions and General Requirements (if any), apply to the work specified in this section.
- 2. Work included:** In general, this includes, but is not limited to providing all labor, materials, and equipment for flashings, gutters, and downspouts where shown on the drawings, as specified herein, and as needed for a complete and proper installation.
- 3. Shop Drawings and Product Data:** Submit in accordance with Section 01330 'Submittal Procedure'.
- 4. Substitutions:** Other manufacturers will be considered. Supply specifications sheet to Architect for approval.

## ***Part 2 Products***

- 1. Flashings:** Pre-painted finish (where exposed), 24 ga. metal flashing.
- 2. Gutters:** Box Gutter, See Drawings for profile, 24 ga., pre-painted metal; color to be selected. Note: the profile shown on the Drawings is approximate - suppliers that can furnish a standard gutter with a SIMILAR profile are allowed to do so.
- 3. Downspouts:** pre-painted metal, 24 ga. 3" x 4" size, pre-painted metal; color to be selected.
- 4. Splashblocks:** Provide a concrete splash block at each downspout location that discharges onto grade.

## ***Part 3 Execution***

- 1. Surface conditions:** Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.

**END OF SECTION**



# Joint Sealers & Firestopping ----- 07900

## ***Part 1 General***

- 1. Related documents:** The provisions of the General and Supplementary Conditions and General Requirements apply to the work specified in this section.
- 2. Work included:** In general, this includes, but is not limited to providing all labor, materials, and equipment for joint sealers and firestopping where shown on the Drawings, as specified herein, and as needed for a complete and proper installation.
- 3. Shop Drawings and Product Data:** Submit in accordance with Section 01330 'Submittal Procedure'.
- 4. Substitutions:** Other manufacturers will be considered. Supply specifications sheet to Architect for approval.
- 5. Joint Sealers:** Regardless of any specific mention on the Drawings showing various items to be caulked, exterior caulking will be required wherever it is needed to prevent passage of moisture or air into the building or into construction where damage would result. In particular, caulking shall be applied to:
  - a) Exterior: joints between steel or aluminum and masonry/concrete, surface applied flashings, expansion joints in concrete paving, joints between paving/sidewalks and building elements, building control and expansion joints, and to any incidental areas where required for waterproofing, or to complete the installation of material and/or equipment specified under this contract.
  - b) Interior: joints between steel or aluminum and masonry/concrete, between countertop splashes and walls, building control and expansion joints, around plumbing fixtures, and to any other incidental areas where required to complete the installation of material and/or equipment specified under the contract.
  - c) System performance requirements:
    1. system performance to achieve moisture and air tight joint seals.
    2. General Sealer Performance: select materials for compatibility with joint surfaces and other indicated exposures. Select modulus of elasticity and hardness or grade recommended by manufacturer for each application
    3. Where exposed to foot traffic, select materials of sufficient strength and hardness to withstand stiletto heel traffic damage, or deterioration of sealer system
    4. provide colors to match adjacent finish materials, or if not otherwise indicated, as selected by architect from manufacturer's standard colors.
    5. Note: contractor is cautioned not to expect to be allowed to correct inferior workmanship of other trades with caulking.

**6. Firestopping materials and accessories:** Install firestopping materials at rated floors, walls and various partitions which contain openings, penetrating sleeves, piping, ductwork, conduit, and other items requiring firestopping within the area of work indicated for this project.

- a) Fireproofing materials: ASTM E814 and UL 1479: install material(s) to achieve a fire rating equivalent to the assembly in which it is placed. At rated wall penetrations not larger than a 4" nominal pipe or 16 square inches in overall cross-sectional area which contain non-combustible penetrating items: fill the annular space between the penetrating items and the passage of flame and hot gases sufficient to ignite cotton waste when subjected to UBC Standard No. 7-1.
- b) Surface Burning: ASTM E84, Max. flame spread/smoke developed rating of 0/10
- c) Fire Resistive Requirements: Rating N: Ext. bearing walls, interior bearing walls, ext. non-bearing walls, structural frame, partitions-permanent, floors-ceilings/floors, roofs-ceilings/roofs, corridor construction. Rating 1 Hour: shaft enclosures, stairway construction
- d) Firestopping Materials shall contain no asbestos. Durability and Longevity: permanent. Side effects during installation: non-toxic

**7. Quality Assurance:** perform work in accordance with manufacturer's requirements for preparation of surfaces and material installation instructions. Perform acoustical sealant application work in accordance with ASTM C919.

**8. Warranty:** submit a written warranty, signed by an authorized representatives of sealant manufacturer warranting that the work is as specified in the sections above is of the specified quality, free from defects, and in conformance with the requirements of the contract documents, and further promising to provide all labor and materials to repair or replace defective materials and workmanship including improper installation during a five year period following the date of substantial completion.

## ***Part 2 Products***

**1. Exterior Sealants, General Purpose:** Polyurethane sealant, ASTM C920 AND D1850, equal to:

Sika "Sikaflex 15LM"

Tremco "Dymeric 511"

Pecora Corp "Dynatrol II"

Sonneborn "Sonolastic NP-2"

Or approved equal

Sealant manufacturer shall be responsible for determining compatibility of sealant for use in joints between the various construction materials and for recommending proper surface preparation including primer(s) if necessary.



**2. Exterior Sealants, Curtain Wall/Window System Perimeter and Glass Butt Joints:**

Silicone Sealant: ASTM C920, Type S, Grade NS, single component, color to be selected by Architect. Equal to:

Dow Corning "795 Silicone Building Sealant"

Tremco "Spectrem 2"

Or approved equal

Sealants and joint fillers for joints within the window system construction as recommended by window manufacturer.

**3. Exterior Sealants, for use at Roofing:** as recommended by roofing system manufacturer.

**4. Interior Sealants, for use at Concrete Paving:** Polyurethane sealant, ASTM C920 and D1850, equal to "NR-200" as manufactured by Pecora Corp. or approved equal.

**5. Interior Sealants, General Purpose:** Acrylic emulsion latex; ASTM C834-86, equal to Pecora "AC-20 + Silicone"

Tremco "Tremflex 834"

Or approved equal.

**6. Interior Sealants, Mildew Resistant Silicone:** ASTM c920, equal to Dow/Corning "786 Mildew Resistant Silicone Sealant" or approved equal.

**7. Interior Sealants, Expanding foam:** UL Listed, Flame Retardant, ASTM E84 Class 1, for sealing joints between concrete panels, 'cracks' at perimeter of exterior door and window frames, mechanical equipment vents and louvers, and at piping, conduit and other misc. penetrations through exterior walls equal to "Geocel", or approved equal.

**8. Interior Sealants, acoustical sealant:** specialty sealant as manufactured by United States Gypsum Company, or others as approved by architect; for acoustically sealing the perimeter and openings in partitions.

**9. Sealant Accessories:** primer as recommended by sealant manufacturer. Joint cleaner: non-corrosive and non-staining type as recommended by sealant manufacturer. Joint backing: ASTM D1056 or D1565 round, closed cell polyethylene foam rod, oversized 30 to 50 percent larger than joint width. Bond Breaker: pressure sensitive tape recommended by sealant manufacturer.

**10. Firestopping Caulking/Trowel Grade, Small Openings, Single Use:** "Flamesafe FS-900 (caulk grade) FST-900 (trowel grade) as manufactured by International Protective Coatings Corporation or approved equal. Applications: many small to medium holes or pipe penetrations requiring infrequent changes or access. Firestopping material: water resistant, single component, sandable and paintable, UL Classified Systems for up to 3 hours. Rated for use in UL Listed through-penetration firestop system numbers; UL 176, 235, 236, 364, 468, 469, 540, 541.

**11. Firestopping Caulking/Trowel Grade – Large Openings, Single Use:** “Flamesafe FS-500 (caulk grade) FST-600 (trowel grade) “KBS-Mortar Seal” (requires mixing with water) as manufactured by International Protective Coatings Corp, or approved equal. Typical application: many large holes or pipe penetrations requiring infrequent changes or access. FS-500 & FST-600 Rated for use in UL listed: UL 36, 37, 50,53,54,111,144, 145, 146, 200, 201. KBS-Mortar Seal: UL 173, 363,365, 366, 554,555, 556.

**12. Safing Insulation – Large Openings, Single Use;** Manufacturers: USG “Thermafiber Safing Insulation’, or approved equal. Typical applications: many large holes or pipe penetrations requiring infrequent changes or access. Rated for use in UL listed Through-Penetration Firestop system numbers: UL 449, 450, 510, 604, 605, 606, 607. Sealing compound: “Firecode” Compound as manufactured by USG as part of listed assembly.

**13. Firestopping Accessories:** Dam Material: as required, by Putty Manufacturer. Retainers: clips to support mineral fiber matting and primer as recommended by manufacturer.

**13. Firestopping Putty (reusable):** “Flamesafe Putty FSP-1000”, FSP-1077, FSP-1100 as manufactured by International Protective Coatings Corp. or approved equal. Typical applications: telecommunications, data and power cable penetrations which require frequent cable changes. Firestopping Material: non-hardening, water resistant, single component, tool-less installation. UL Classified for up to 3-hours.

**14. Firestopping Bags (reusable):** “Flamesafe KBS-Sealbags, as manufactured by International Protective Coatings Corp., or approved equal. Typical applications: communications, data and power cable penetrations which require frequent cable changes. Material: stackable ‘brick-like’ bags constructed of coated fiberglass. UL classified systems for up to 4 hours.

### ***Part 3 Execution***

**1. Joint Sealants:** Verify that substrate surfaces and joint openings are ready to receive work. Remove loose materials. Verify that joint backing and release tapes are compatible with sealant. Install per manufacturer’s instructions. Install bond breaker where joint backing is not used. Apply within recommended application temperature ranges. Tool joints concave.

**2. Firestopping:** Verify that openings are ready to receive the work. Clean substrate surfaces. Install backing materials to arrest liquid material leakage. Install materials in accordance with manufacturer’s instructions and per applicable UL system requirements.

### **END OF SECTION**



# Hollow Metal Doors & Frames ----- 08110

## ***Part 1 General***

- 1. Related documents:** The provisions of the General and Supplementary Conditions and General Requirements (if any), apply to the work specified in this section.
- 2. Work included:** In general, this includes, but is not limited to providing all labor, materials, and equipment for hollow metal doors and frames where shown on the drawings, as specified herein, and as needed for a complete and proper installation.
- 3. Shop Drawings and Product Data:** Submit in accordance with Section 01330 'Submittal Procedure'.
- 4. Substitutions:** Other manufacturers will be considered. Supply specifications sheet to Architect for approval

## ***Part 2 Products***

- 1. Hollow metal doors:** As shown on the Drawings and Schedule; 16 ga. face sheets exterior; HMMA 861.
- 2. Door frames:** Shall be of 16 ga. rolled or formed steel with two faces. Door schedule indicates wall thickness', however Contractor shall be responsible to field verify thickness of walls. Corners shall be factory setup, welded and ground smooth. Frames shall be shop primed. Frames shall have three (3) rubber bumpers per door, supplied by frame manufacturer.
- 3. Frame anchors:** Provide minimum of three (3) per jamb as required for adjoining wall construction.

## ***Part 3 Execution***

- 1. Installation:** Doors shall be erected plumb and in true alignment. Coordinate hardware requirements with Hardware Supplier.
- 2. Damaged doors or frames:** Door frames which are dented or bent shall be repaired to the Architect's satisfaction or replaced with new frames.
- 3. Hardware preparation:** Door frames shall be ready to receive mortised hinges, and door hardware as scheduled on the drawings.

**END OF SECTION**

# Wood Doors ----- 08210

## ***Part 1 General***

- 1. Related documents:** The provisions of the General and Supplementary Conditions and General Requirements apply to the work specified in this section.
- 2. Work included:** In general, this includes, but is not limited to providing all labor, materials, and equipment for wood doors where shown on the Drawings, as specified herein, and as needed for a complete and proper installation.
- 3. Shop Drawings and Product Data:** Submit in accordance with Section 01330 'Submittal Procedure'.
- 4. Substitutions:** Other manufacturers will be considered. Supply specifications sheet to Architect for approval
- 5. Warranty:** min. five (5) year written warranty

## ***Part 2 Products***

- 1. Acceptable manufacturer's:** Specific products or materials manufactured by any of the following listed manufacturer's are "acceptable", (not approved) only if the specific product or material can evidence exact compliance with the contract documents.
  - Algoma Hardwoods, Inc.
  - Eggers Industries, Architectural Door Div.
  - Graham Manufacturing Corp.
  - Maiman Company
  - Marshfield
  - Oshkosh Architectural Door Co.
  - VT Industries
- 2. Wood door:** Seven (7) ply; per AWI/NWWDA Standards and ANSI/HPVA grading rules; Flush doors, A Grade, Rotary White Birch. Edges shall match face veneer.
- 3. Finishing:** Factory finish, furnish samples for color selection to architect
- 3. Prefitting and preparation for hardware:** Prefit and premachine all wood doors at factory. Premachine doors in accordance with final approved hardware and frame schedules. Fire doors shall be machined in strict compliance of NFPA-80-95. Premachine doors within industry tolerances. A plus or minus 1/32" will be allowed on all hardware locations. A plus 1/32" minus 1/64" tolerance will be allowed on lock front preparation cutouts.



**4. General:** Comply with AWI Quality Standards Section 1300 or NWWDA I.S.1-A for premium grade wood doors except to meet or exceed requirements herein specified. Completely factory prefit to required size ready for installation at project site; no on-jobsite trimming permitted. Prepare in accordance with frame shop drawings and schedule, hardware schedule and templates. Thickness: 1 3/4" inches thick unless indicated otherwise on door schedule.

### ***Part 3 Execution***

**1. Preparation:** Examine door frames and verify frames are of correct type and have been installed for proper hanging of corresponding doors.

**2. Installation:** Install in accordance with manufacturer's written instructions. Install fire doors in accordance with NFPA-80-1995. Install accurately in frame, within clearances specified. Install hardware in accordance with manufacturer's written instructions and associated templates. Do not field cut doors to opening sizes smaller than those for which doors were manufactured. Do not install door in frame set out of plumb or square. Install to operate freely, but not loosely, free from hinge bound conditions, striking or binding. Do not install in frames which would hinder operation of doors. Hang free from rattling when in latched position. Pilot holes to be drilled for screws attaching hinges, lock hardware all other devices to the stile or face of wood doors.

**3. Adjusting:** Adjust and check each door to ensure proper operating and function. Replace or rehang doors which are hinge bound and do not swing or operate freely. Replace or rehang doors which are warped, twisted, or which are not in true planes.

**END OF SECTION**

# Aluminum Entrances & Windows ----- 08410

## ***Part 1 General***

- 1. Related documents:** The provisions of the General and Supplementary Conditions and General Requirements (if any), apply to the work specified in this section.
- 2. Work included:** In general, this includes, but is not limited to providing all labor, materials, and equipment for the aluminum entrances and window systems where shown on the Drawings, as specified herein, and as needed for a complete and proper installation.
- 3. Shop Drawings and Product Data:** Submit in accordance with Section 01330 'Submittal Procedure'.
- 4. Substitutions:** Other manufacturers will be considered. Supply specifications sheet to Architect for approval.
- 5. Warranties:** All manufacturers shall provide a one (1) year warranty on units and a five (5) year warranty on insulating glass.

## ***Part 2 Products***

- 1. Aluminum 'Storefront' System & Windows:** System 403 Flush-Glazed Thermal Storefront as manufactured by EFCO Corporation, Monett, Missouri, or approved equal.
  - **Aluminum:** Extruded aluminum shall be 6063-T5 or T6 alloy and temper.
  - **Exterior Window units glass:** 1" insulated tempered (where required) glass units, 1/4" tinted at exterior, 1/2" airspace, and 1/4" clear at interior.
  - **Dissimilar Metals:** All dissimilar metals must be properly insulated to prevent galvanic action.
  - **Fasteners:** All exposed fasteners must be aluminum or stainless steel.
  - **Thermal Barrier:** Poured-in-place two part polyurethane. A nonstructural thermal barrier is unacceptable.
- 2. Other pre-approved manufacturers:**
  - Boyd Aluminum Manufacturing
  - Kawneer
  - Manko Window Systems 2450 Series
  - Tubelite 14000 series
- 3. Fabrication:** All aluminum frame extrusions shall have a minimum wall thickness of .080". All exposed work shall be carefully matched to produce continuity of line and design with all joints. System design shall be such that raw edges will not be visible at joints.



- Depth of frame shall not be less than 4 1/2"
- Face dimension shall not be less than 2"
- Frame components shall be screw spline construction.

**4. Door & Window Frame Finish:** for bidding purposes: factory finish 'White', verify aluminum frame finish with Owner before ordering.

**5. Aluminum Entry Door:**

- **Manufacturer:** EFCO Corp.
- **Model:** Series 300, medium stile width, see Door Schedule on Drawings
- **Glazing:** 1 / 4" tempered glass; tinted at exterior doors.

**6. Aluminum Door Hardware:** Provide the following hardware as scheduled or required:

- ball bearing butts
- "Ultraline Push/Pull Set"
- closer with hold open
- aluminum thresholds with stop strip
- weatherstripping

**7. Automatic Sliding Aluminum Door:** automatic sliding door unit, single sliding door, as manufactured by Stanley "Dura-Glide 200", Besam Assa Abloy, Dorma Automatics ESA 200 Series, Gildor, or Tormax. White Finish.

### ***Part 3 Execution***

**1. Inspection:** All openings shall be prepared by others to the proper size and shall be plumb, level and in the proper location and alignment as shown on the Drawings.

**2. Installation:** Installation shall be done in accordance with approved shop drawings and specifications. Storefront system shall be erected plumb and true, in proper alignment and relation to established lines and grades. Entrance doors shall be securely anchored in place to a straight, plumb and level condition without distortion. Weather-stripping contact and hardware movement shall be checked and final adjustment made for proper operation and performance of units. Furnish and apply sealing materials to provide a weather tight installation at all joints and intersections and at opening perimeters. Sealing material shall be in strict accordance with the manufacturer's written instructions. Caulk between aluminum frame and adjacent material with aluminum in colored sealant to match frame.

**END OF SECTION**

# Finish Hardware ----- 08700

## ***Part 1 General***

- 1. Related documents:** The provisions of the General and Supplementary Conditions and General Requirements (if any), apply to the work specified in this section.
- 2. Work included:** In general, this includes, but is not limited to providing all labor, materials, and equipment for finish hardware where shown on the drawings, as specified herein, and as needed for a complete and proper installation.
- 3. Shop Drawings and Product Data:** Submit in accordance with Section 01330 'Submittal Procedure'.
- 4. Substitutions:** Other manufacturers will be considered. Supply specifications sheet to Architect for approval.
- 5. Special Note:** It is the intention of the hardware schedule to provide all of the hardware required for a door assembly for proper operation and to achieve the indicated fire ratings. Bidders shall notify the Architect of any discrepancies or items not indicated but required before the bid date. Bidders shall include any necessary hardware required for the door assembly.

## ***Part 2 Products***

- 1. Materials:** See Door Schedule on Drawings for manufacturers and product numbers and finishes.
- 2. Keying schedule:** supplier shall coordinate keying schedule with Owner and Architect.
- 3. Key material and quantity:** Provide keys of nickel silver only. Furnish 3 change keys for each lock; 5 master keys for each master system; and 5 grandmaster keys for each grandmaster system.
- 4. Hardware finishes:** Provide matching finishes for hardware units at each door or opening, to the greatest extent possible, and except as otherwise indicated. Reduce differences in color and textures as such as commercially possible where the base metal or metal forming process is different for individual units of the hardware exposed at the same door or opening. In general, match items to the manufacturer's standard finish for the latch and lock set (or push-pull units if no latch-lock sets) for color and texture.

## ***Part 3 Execution***

- 1. Receipt and storage:** Receive and accept finish hardware in original packages of manufacturer only, each item marked for location where same is to be used and



corresponding to itemized schedule furnished by hardware supplier. Properly tag and deliver keys to the Owner after completion of the work.

**2. Mount hardware units at heights** indicated in “Recommended Locations for Builders Hardware for Standard Steel Doors and Frames” by the Door and Hardware Institute, except as specifically indicated or required to comply with governing regulations and except as otherwise directed by Architect.

**3. Install each hardware item in compliance with the manufacturer’s instructions** and recommendations. Set units level, plumb and true to line and location. Drill and countersink units which are not factory prepared for anchorage fasteners.

**4. Adjust and check each operating item of hardware** and each door to ensure proper operation of every unit. Replace units which cannot be adjusted to operate freely and smoothly as intended for the application made.

**5. Clean adjacent surfaces** soiled by hardware installation.

**6. Instruct Owner’s personnel** in proper adjustment and maintenance of hardware and hardware finishes, during the final adjustment of hardware.

**END OF SECTION**

# Metal Studs Framing System ----- 09110

## ***Part 1 General***

- 1. Related documents:** The provisions of the General and Supplementary Conditions and General Requirements (if any), apply to the work specified in this section.
- 2. Work included:** In general, this includes, but is not limited to providing all labor, materials, and equipment for metal stud framing where shown on the drawings, as specified herein, and as needed for a complete and proper installation.
- 3. Shop Drawings and Product Data:** Submit in accordance with Section 01330 'Submittal Procedure'.
- 4. Substitutions:** Other manufacturers will be considered. Supply specifications sheet to Architect for approval.

## ***Part 2 Products***

- 1. Interior (non-load bearing) metal stud partitions:** Provide standard punched, hot dip galvanized steel studs, 3 5/8" wide, 25 ga. at 16" o.c.
- 2. Metal Studs for parapet and entry framing:** See Structural Engineering drawings for stud ga. & spacing.
- 3. Accessories:** Provide all accessories including, but not necessarily limited to tracks, clips, anchors, fastening devices, and other accessories required for a complete and proper installation, and as recommended by the manufacturer of the steel studs used.

## ***Part 3 Execution***

- 1. Installation:** Accurately layout partition and wall lines from the dimensions shown on the Drawings. Install studs and accessories in strict accordance with the manufacturer's recommendations, anchoring all components firmly into position.
- 2. Coordination:** Coordinate and provide required backing and other support for items to be mounted on the finished covering. Coordinate requirements for pipes and other items designed to be housed within the partition and wall systems.

**END OF SECTION**



## Part 1 General

### 1. Section includes:

- A. Division 0 Bidding & Contract Documents
- B. Division 1 General Requirements
- C. In general, this includes, but is not limited to providing gypsum drywall and accessories where shown on the Drawings, as specified herein, and as needed for a complete and proper installation.

**2. Shop Drawings and Product Data:** Submit in accordance with Section 01330 'Submittal Procedure'.

**3. ANSI Compliance:** All work shall comply with ANSI 94.1, drawings, and drywall manufacturer specific instructions.

**4. Fire-resistance ratings:** Where indicated, provide materials and construction which are identical to those of assemblies whose fire resistance rating has been determined per ASTM E 119 by a testing and inspection organization acceptable to authorities having jurisdiction.

Provide fire-resistance rated assemblies identical to those indicated by reference to GA File No.'s in GA "Fire Resistance Design Manual" or to design designations in UL "Fire Resistance Directory" or in listing of other testing and agencies acceptable to authorities having jurisdiction.

**5. Project conditions:** Establish and maintain environmental conditions for application and finishing gypsum board to comply with ASTM C 840 and with gypsum board manufacturer's recommendations. For nonadhesive attachment of gypsum board to framing, maintain not less than 40 degrees F. For adhesive attachment and finishing of gypsum board maintain not less than 50 degrees F for 40 hours prior to application and continuously thereafter until drying is complete.

## Part 2 Products

**1. Manufacturers:** Subject to compliance with requirements, manufacturers offering products which may be incorporated in the work include, but are not limited to, the following:

Flintkote Products, Genstar Building Materials Co.

Gold Bond Building Products Div., National Gypsum Co.

United States Gypsum Co.

**2. Gypsum drywall board (fire resistant):** ASTM C 36, except ASTM C 442 permitted for base layers and where finish of exposed faces not indicated; provide boards with long edges tapered for joint treatment. Provide UL labeled "Type X" board, 5/8" thick.

**3. Drywall sealant:** Non-drying mastic of type recommended by drywall manufacturer, except providing paintable elastic sealant where exposed to view.

**4. Drywall trim accessories:** Galvanized steel. (note: plastic not accepted) Provide casing bead of beaded-nose flange type, with flange for joint treatment. Provide J-mold, steel casing series 200 at exposed drywall terminations.

**5. Drywall fasteners:** Provide nails and screws of the type and size recommended by the drywall manufacturer for the types of applications indicated. Comply with ASTM C 646 for screws and ASTM C 514 for nails.

**6. Joint treatment materials:** ASTM C 475, types recommended by drywall manufacturer. Provide single or double compound treatment system (installer's option).

**7. Texturing materials:** Gold Bond's 'Wall Spray' or 'Spray-Quick' or approved equal.

### **Part 3 Execution**

**1. Partitions/walls:** Apply gypsum board horizontally and locate edge joints over supports, but offset at least one stud space on opposite faces of partitions/walls. Use maximum practical length boards; locate end joints over supports and stagger in alternate courses of board. Maximum gypsum board joint shall be 1/8". Gyp board shall extend to a min. of 6" above ceiling height.

**2. Metal supports:** Fasten gypsum wallboard with screws. Comply with manufacturer's instructions for fastening, but do not exceed 12" o.c. spacing.

**3. Surfacing texture:** light splatter

**END OF SECTION**



# Gypsum Drywall ----- 09260

## *Part 1 General*

- 1. Related documents:** The provisions of the General and Supplementary Conditions and General Requirements (if any), apply to the work specified in this section.
- 2. Work included:** In general, this includes, but is not limited to providing all labor, materials, and equipment for gypsum drywall where shown on the drawings, as specified herein, and as needed for a complete and proper installation.
- 3. Shop Drawings and Product Data:** Submit in accordance with Section 01330 'Submittal Procedure'.
- 4. Substitutions:** Other manufacturers will be considered. Supply specifications sheet to Architect for approval.
- 5. ANSI Compliance:** All work shall comply with ANSI 94.1, drawings, and drywall manufacturer specific instructions.
- 6. Fire-resistance ratings:** Where indicated, provide materials and construction which are identical to those of assemblies whose fire resistance rating has been determined per ASTM E 119 by a testing and inspection organization acceptable to authorities having jurisdiction.

Provide fire-resistance rated assemblies identical to those indicated by reference to GA File No.'s in GA "Fire Resistance Design Manual" or to design designations in UL "Fire Resistance Directory" or in listing of other testing and agencies acceptable to authorities having jurisdiction.

- 7. Mock-up Panel for texture:** provide a sample panel of 'light splatter' texture for approval by Owner's Representative before commencing work.

## *Part 2 Products*

- 1. Manufacturers:** Subject to compliance with requirements, manufacturers offering products which may be incorporated in the work include, but are not limited to, the following:

Flintkote Products, Genstar Building Materials Co.  
Gold Bond Building Products Div., National Gypsum Co.  
United States Gypsum Co.

**2. Gypsum drywall board (fire resistant):** ASTM C 36, except ASTM C 442 permitted for base layers and where finish of exposed faces not indicated; provide boards with long edges tapered for joint treatment. Provide UL labeled "Type X" board, 5/8" thick.

**3. Drywall sealant:** Non-drying mastic of type recommended by drywall manufacturer, except providing paintable elastic sealant where exposed to view.

**4. Drywall trim accessories:** Galvanized steel. (note: plastic not accepted) Provide casing bead of beaded-nose flange type, with flange for joint treatment. Provide J-mold, steel casing series 200 at exposed drywall terminations.

**5. Drywall fasteners:** Provide nails and screws of the type and size recommended by the drywall manufacturer for the types of applications indicated. Comply with ASTM C 646 for screws and ASTM C 514 for nails.

**6. Joint treatment materials:** ASTM C 475, types recommended by drywall manufacturer. Provide single or double compound treatment system (installer's option).

**7. Texturing materials:** Gold Bond's 'Wall Spray' or 'Spray-Quick' or approved equal.

### *Part 3 Execution*

**1. Project conditions:** Establish and maintain environmental conditions for application and finishing gypsum board to comply with ASTM C 840 and with gypsum board manufacturer's recommendations. For nonadhesive attachment of gypsum board to framing, maintain not less than 40 degrees F. For adhesive attachment and finishing of gypsum board maintain not less than 50 degrees F for 40 hours prior to application and continuously thereafter until drying is complete.

**2. Partitions/walls:** Apply gypsum board horizontally and locate edge joints over supports, but offset at least one stud space on opposite faces of partitions/walls. Use maximum practical length boards; locate end joints over supports and stagger in alternate courses of board. Maximum gypsum board joint shall be 1/8". Gyp board shall extend to a min. of 6" above ceiling height.

**3. Metal supports:** Fasten gypsum wallboard with screws. Comply with manufacturer's instructions for fastening, but do not exceed 12" o.c. spacing.

**4. Surfacing texture:** Walls: "light splatter" Ceilings and bulkheads: "smooth"

**END OF SECTION**



# Suspended Tile Ceilings ----- 09510

## ***Part 1 General***

- 1. Related documents:** The provisions of the General and Supplementary Conditions and General Requirements (if any), apply to the work specified in this section.
- 2. Work included:** In general, this includes, but is not limited to providing all labor, materials, and equipment for suspended tile ceilings where shown on the Drawings, as specified herein, and as needed for a complete and proper installation.
- 3. Shop Drawings and Product Data:** Submit in accordance with Section 01330 'Submittal Procedure'.
- 4. Substitutions:** Other manufacturers will be considered. Supply specifications sheet to Architect for approval.

## ***Part 2 Products***

- 1. Ceiling Tiles:** 2'x 2': ceiling tile shall be 2' x 2' x 5/8" , "RADAR", as manufactured by USG Interiors, Inc.; Class "A"; edge type: (tegular) SLT'; white. Other pre-approved tile: CertainTeed 'Baroque'.
- 2. Suspension system:** Donn DX grid (white) exposed grid system, with exposed bottom flange of white enamel & hold down clips. Tees shall have sufficient strength to carry imposed load and form a 2' x 2' ceiling grid (see Room Finish Schedule) in all areas unless otherwise noted. Other pre-approved suspension system: Chicago Metallic.

## ***Part 3 Execution***

- 1. Preparation:** Building shall be examined before beginning work to determine that it is properly enclosed and the structure is in proper condition to receive acoustical materials and/or suspension systems. Area shall be broom-cleaned and uninterrupted for free movement of rolling scaffold. Work not to proceed until unsatisfactory conditions have been corrected.
- 2. Installation:** The system shall be installed to permit border units of the greatest possible size, unless otherwise shown on the Reflected Ceiling Plans. All members shall be aligned for true, level surface and straight lines. Where required, pattern shall be laid out to the approval of the Architect to coordinate with ceiling outlets and fixtures.
- 3. Cleaning:** Following installation, clean soiled or discolored surfaces of units. Remove and replace units which are damaged or improperly installed.

**END OF SECTION**

# Resilient Flooring & Base ----- 09650

## ***Part 1 General***

- 1. Related documents:** The provisions of the General and Supplementary Conditions and General Requirements (if any), apply to the work specified in this section.
- 2. Work included:** In general, this includes, but is not limited to providing all labor, materials, and equipment for resilient flooring & base where shown on the drawings, as specified herein, and as needed for a complete and proper installation.
- 3. Shop Drawings and Product Data:** Submit in accordance with Section 01330 'Submittal Procedure'.
- 4. Substitutions:** Other manufacturers will be considered. Supply specifications sheet to Architect for approval.

## ***Part 2 Products***

- 1. Vinyl composition tile:** 12" x 12" x 1/8", Standard Architectural Series as manufactured by Azrock, Tarkett, Armstrong, or approved equal. Colors shall be selected by Architect.
- 2. Vinyl cove base:** 4", 1/8" gauge, vinyl cove wall base, or approved equal.  
Approved manufacturers: Johnsonite, Vpi, Armstrong. Color shall be selected by Architect.
- 3. Luxury Vinyl Plank:** Mannington Amtico Collection Wood, 3" x 36" plank (verify final width and finish selection with Owner); 2.5 mm thickness; urethane wear layer; 20 year commercial warranty. Install per manufacturer's written instructions.

## ***Part 3 Execution***

- 1. Examination and Preparation**
  - A. Surface conditions:** Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.
  - B. Surface preparation:** Immediately prior to installation of the work of this Section, thoroughly clean substrate and remove oil, grease, paint, varnish, hardeners, and other items which would adversely affect the bond of adhesive. Make substrate level and free from irregularities. Assure one constant floor height after flooring is installed, filling low spots and grinding high spots as required.
- 2. Installation (Base):**
  - A.** Apply wall base to walls, columns, pilasters, casework, and other permanent fixtures. Install base in lengths as long as practical.
  - B.** Adhere base tight to wall and floor surfaces.



- C. Fit joints tight and vertical. Miter internal corners. At external corners, use premolded units.
- D. Place resilient edge strip and reducer strips tightly butted to adjacent flooring and secure with adhesive.

**4. Cleaning and Protecting:**

- A. Remove excess adhesive from surfaces without damage.
- B. Clean, seal, and wax surfaces in accordance with manufacturer's instructions.
- C. Protect flooring with heavy Kraft paper or other covering.

**5. Surplus Materials:** furnish one carton of each color of floor tile to the Owner upon completion of work.

**END OF SECTION**

## ***Part 1 General***

- 1. Related documents:** The provisions of the General and Supplementary Conditions and General Requirements (if any), apply to the work specified in this section.
- 2. Work included:** In general, this includes, but is not limited to providing all labor, materials, and equipment for hollow metal doors and frames where shown on the drawings, as specified herein, and as needed for a complete and proper installation.
- 3. Shop Drawings and Product Data:** Submit in accordance with Section 01330 'Submittal Procedure'.
- 4. Substitutions:** Other manufacturers will be considered. The following carpet(s) specified shall be used as the basis for the bidding. After the general contractor's contract is awarded, the flooring contractor may submit samples of similar carpets to Architect for consideration; but should be prepared to furnish specified carpet.

## ***Part 2 Products***

- 1. Entry Fl.-1:** (Airlock 101): J&J Invision Catwalk 7010, color to be selected.
- 2. Carpet:** Mohawk Bigelow 'Bending Earth'; 24" x 24"; Colorstrand SD Nylon Fiber; Ecoflex ICT backing; solution dyed; Color to be selected from 'Caliber', 'Datum', 'Sector' selections.
- 3. Intersections of different materials:**
  - a) Intersection of carpet and sealed concrete floor: provide a carpet edge guard equal to Johnsonite EG-XX-H. Color to be selected.
  - b) Intersection of carpet to ceramic: Schluter 'TK' AE satin anodized aluminum
- 4. Other materials:** provide other materials, not specifically described but required for a complete and proper installation, as selected by the Contractor subject to the approval of the Architect.

## ***Part 3 Execution***

- 1. Examination and Preparation**
  - A. Surface conditions:** Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.
  - B. Surface preparation:** Immediately prior to installation of the work of this Section, thoroughly clean substrate and remove oil, grease, paint, varnish, hardeners, and other items which would adversely affect the bond of adhesive. Make substrate level and



free from irregularities. Assure one constant floor height after carpet is installed, filling low spots and grinding high spots as required.

**2. Installation:**

- A. Apply carpet in accordance with manufacturer's written instructions.
- B. Verify carpet match before cutting to ensure minimal variation between dye lots.
- C. Lay carpet tight and flat on subfloor, well fastened at edges, with a uniform appearance. Provide monolithic color, pattern, and texture match within any one area.
- D. Do not change run of pile in any room where carpet is continuous through a wall opening into another room. Locate change of color or pattern between rooms under door centerline.
- E. Cut and fit carpet around interruptions.
- F. Fit carpet tight to intersection with vertical surfaces without gaps.
- G. Where wall bases are scheduled, cut carpet tight to walls. Fit carpet tight to vertical interruptions, leaving no gaps.

**3. Cleaning:** In addition to the cleaning requirements stated elsewhere, thoroughly clean carpet and adjacent surfaces prior to final acceptance of the carpeted areas by the Owner.

**4. Protection:** Provide a heavy non-staining paper or plastic walkway as required over carpeting in the direction of traffic, maintaining intact until carpeted space is accepted by the Owner.

**5. Surplus materials:** Provide a min. of 8 sq. yards of carpet tile to owner.

**END OF SECTION**

## ***Part 1 General***

- 1. Related documents:** The provisions of the General and Supplementary Conditions and General Requirements (if any), apply to the work specified in this section.
- 2. Work included:** In general, this includes, but is not limited to providing all labor, materials, and equipment for painting where shown on the drawings, as specified herein, and as needed for a complete and proper installation.
- 3. Shop Drawings and Product Data:** Submit in accordance with Section 01330 'Submittal Procedure'.
- 4. Substitutions:** Other manufacturers will be considered. Supply specifications sheet to Architect for approval
- 5. Paint color selections:** Submit two (2) color fan charts to Architect for color selection.
- 6. Quality assurance:** Materials shall not be thinned, adulterated, or changed, except as recommended by the manufacturer.
- 7. Protection:** The painting subcontractor shall be responsible for all paint, stains, splatter, etc. on adjacent surfaces, and he shall remove all such stains in a manner satisfactory to the Architect.

## ***Part 2 Products***

- 1. Manufacturer:** Sherwin-Williams, or approved equal. Other Pre-Approved Manufacturers:
  - Benjamin Moore
  - Devoe
  - Pratt & Lambert
- 2. Exterior Products:**
  - a. Hollow Metal Doors & Frames, Misc. Metals, Metal Railings:**
    - 1st coat: S-W Kem Kromik Universal Metal Primer
    - 2nd coat: S-W ProClassic Interior Alkyd Semi-Gloss
    - 3rd coat: S-W ProClassic Interior Alkyd Semi-Gloss
- 3. Interior Products:**
  - a. Wall paint for Interior gypsum drywall partitions**
    - 1st Coat: S-W PrepRite 200 Interior Latex Wall Primer
    - 2nd Coat: S-W ProMar 200 Interior Latex Eg-Shel Series
    - 3rd Coat: S-W ProMar 200 Interior Latex Eg-Shel Series



**b. Interior cmu walls**

- 1st Coat: S-W PrepRite Block Filler
- 2nd Coat: S-W ProMar 200 Latex Semi-Gloss
- 3rd Coat: S-W ProMar 200 Latex Semi-Gloss

**c. Interior drywall ceilings & bulkheads**

- 1st Coat: S-W PrepRite 200 Interior Latex Wall Primer
- 2nd Coat: S-W ProMar 200 Interior Latex Flat Series
- 3rd Coat: S-W ProMar 200 Interior Latex Flat Series

**d. Hollow metal doors and frames:**

- 1st coat: S-W Kem Kromik Universal Metal Primer
- 2nd coat: S-W ProClassic Interior Alkyd Semi-Gloss
- 3rd coat: S-W ProClassic Interior Alkyd Semi-Gloss

**4. Materials:** All painting materials shall be delivered to the job in original unbroken manufacturer's packages with labels intact. All materials shall be the best of their respective kinds and thoroughly mixed in the proper proportions to secure the best results.

### ***Part 3 Execution***

**1. Application:** Follow manufacturer's recommendations and instructions.

**2. Preparation:** All surfaces shall be thoroughly cleaned and dusted, and all shall be thoroughly dry before succeeding coat is applied. After priming coat has been applied, all nail holes, open joints, and other imperfections shall be solidly and smoothly filled with non-oily wood filler. All painting on interior wood surfaces shall be lightly sandpapered between coats.

**END OF SECTION**

# Signage ----- 10435

## ***Part 1 General***

- 1. Related documents:** The provisions of the General and Supplementary Conditions and General Requirements apply to the work specified in this section.
- 2. Work included:** In general, this includes, but is not limited to providing all labor, materials, and equipment for signage where shown on on the Drawings, as specified herein, and as needed for a complete and proper installation.
- 3. Shop Drawings and Product Data:** Submit in accordance with Section 01330 'Submittal Procedure'.
- 4. Substitutions:** Other manufacturers will be considered. Supply specifications sheet to Architect for approval
- 5. Work not in contract:** All signage (exterior and interior, including restroom signage, other than HC parking sign noted below.

## ***Part 2 Products***

- 1. HC Parking signs:** 12" x 18", 18 ga. bonderized steel (or aluminum) screen printed sign. Sign shall be blue with white symbol. Symbol shall be ADA wheelchair symbol, and sign shall be per current ADA requirements. Provide h-channel or u- channel mounting posts (galvanized, or green painted).

## ***Part 3 Execution***

See civil engineering drawings. Install per ADA requirements & manufacturer's written recommendations.

**END OF SECTION**



# Fire Extinguishers & Cabinets ----- 10520

## ***Part 1 General***

- 1. Related documents:** The provisions of the General and Supplementary Conditions and General Requirements (if any), apply to the work specified in this section.
- 2. Work included:** In general, this includes, but is not limited to providing all labor, materials, and equipment for fire extinguishers, cabinets if required and brackets.
- 3. Shop Drawings and Product Data:** Submit in accordance with Section 01330 'Submittal Procedure'.
- 4. Substitutions:** Other manufacturers will be considered. Supply specifications sheet to Architect for approval.

## ***Part 2 Products***

- 1. Fire Extinguishers:** multi-purpose dry chemical ABC:
  - Larsen's ABC 10
  - JL Industries 'Cosmic FE10C'
  - Or approved equal
- 2. Fire Extinguisher Cabinets:** non-rated, full glass; clear acrylic glazing, rolled edge, semi-recessed; white baked enamel finish.
  - Larsen's Architectural Series 2409-6R, or approved equal
  - JL Industries Ambassador Series, C1017F10
  - Or approved equal
- 3. Fire Extinguisher Bracket:** chrome strap
  - Larsen's standard bracket
  - JL Industries MB846C
  - Or approved equal

## ***Part 3 Execution***

- 1. Installation:** Install the items of this Section in strict accordance with the original design, approved shop drawings, and requirements of agencies having jurisdiction, as approved by the Architect, anchoring all components firmly into position.
- 2. Mounting Height:** The NFPA guidelines state that the distance from the floor to the top of the fire cabinet to be no more than fifty four inches (54").

ADA Guidelines specify **reach ranges** for building occupants who require access to equipment such as fire extinguishers and other fire safety devices.

For an unobstructed approach, the maximum forward reach to this equipment (for example, the fire extinguisher handle) is 48" above the floor. The maximum side reach for such an approach is 54". The actual mounting heights for cabinets housing this equipment can be determined by reviewing the exact dimensions of the specified cabinet and the positioning of the fire equipment within that cabinet.

## **End of Section**



# Toilet Accessories ----- 10800

## ***Part 1 General***

- 1. Related documents:** The provisions of the General and Supplementary Conditions and General Requirements (if any), apply to the work specified in this section.
- 2. Work included:** In general, this includes, but is not limited to providing all labor, materials, and equipment for toilet accessories.
- 3. Shop Drawings and Product Data:** Submit in accordance with Section 01330 'Submittal Procedure'.
- 4. Substitutions:** Other manufacturers will be considered. Supply specifications sheet to Architect for approval.

## ***Part 2 Products***

- 1. Toilet tissue:** Bradley model # 5084, or approved equal; non-controlled delivery, heavy gauge type 304 stainless steel with satin finish. Holds one standard core roll through 5" in diameter.
- 2. Grab bars:** Shall be 1 1/4" diameter, stainless steel; 1 1/2"; safety clearance feature. Layout shall be according to details on plans.
- 3. Mirrors:** See Drawings for sizes. 1/4" thick; seaming edge
- 4. Paper towel dispensers, soap dispensers, napkin disposal units:** shall be furnished by Owner, installed by contractor at Owner's option.
- 5. Other Pre-Approved Manufacturers:**
  - American Specialties
  - Bobrick

## ***Part 3 Execution***

- 1. Installation:** Assemble fixtures and associated fittings and trim in accordance with manufacturer's instructions. Install supports attached to building structure for equipment requiring supports.
- 2. Grab Bars:** Install grab bars to withstand downward force of not less than 250 lbf (1112 N) per ASTM F 446.
- 3. Installation:** Install equipment level, plumb, and firmly in place in accordance with manufacturer's rough-in drawings.

**4. Cleaning and Protection:** Repair or replace defective work, including damaged equipment and components. Clean unit surfaces, and leave in ready-to-use condition. Turn over keys, tools, maintenance instructions, and maintenance stock to Owner.

**5. Testing and Adjustment:** Test each piece of equipment provided with moving parts to assure proper operation, freedom of movement, and alignment. Install new batteries in battery-powered items. Repair or replace malfunctioning equipment, or equipment with parts that bind or are misaligned.

**END OF SECTION**