GENEVA GLEN CAMP
MARATHON LODGE ADDITION

5793 Santa Clara Road
Indian Hills, Colorado 80454

OUTLINE SPECIFICATIONS

Construction Documents

August 30, 2013

GREEN RIDGE DESIGN
P.O.Box 963
Conifer, CO 80433
303.697.6114

PROSPEC PROJECT MANUALS
WWW.PROSPEC.BIZ

TABLE OF CONTENTS

END OF TABLE OF CONTENTS

PROJECT DIRECTORY

Owner:
Geneva Glen Camp, Inc.
Ken Atkinson, Director
5793 Santa Clara Road
Indian Hills, CO 80454
303.697.4621 x10
ken@genevaglen.com

Architect:
Green Ridge Design, LLC
PO Box 963
Conifer, CO 80433
Edie Stevenson, Architect
303.697.6114 O 720.480.2963 C
grnridge@aol.com
www.green-ridge-design.com

Civil Engineer:
Entitlement and Engineering Solutions, Inc.
518 17th St. Suite 1575
Denver, CO 80202
Amanda O'Conner, PE
303.572.7997 O
amanda.oconner@ees.us.com

Structural Engineer:
Evolve Structures, Inc.
29029 Upper Bear Creek Road Suite 308
Evergreen, CO 80439
Oliver Rice, PE
720.626.9201
oliver@evolvestruct.com

Electrical Engineer:
Hutchison Papesh Engineering, Onc.
13986 W. Bowls Ave. Suite 102
Littleton, CO 80127
Mike Hutchison, PE
303.973.9779 O
mike@hutchenginering.com

SECTION 011000 - SUMMARY

PART 1 - GENERAL

1.1 WORK COVERED BY CONTRACT DOCUMENTS

A. Owner: Geneva Glen Camp

1. Address: 5793 Santa Clara Road, Indian Hills, Colorado 80454.

B. Architect: Green Ridge Design.

1. Contact: Edie Stevenson
2. Address: P.O.Box 963, Conifer, CO 80433
3. Phone: 303.697.6114
4. Mobile: 720.480.2963
5. Web: www.green-ridge-design.com
6. Email: grnridge@aol.com

C. Contractor: to be determined.

D. Project Description:

1. Location: The project site is located at the Geneva Glen Camp at 5793 Santa Clara Road in Indian Hills, Colorado 08554.
2. Demolition: Remove the following elements, as detailed on architectural drawings:

    a. Existing roof structure
    b. Exterior siding
    c. Interior walls and paneling
    d. Existing decks

3. Construction: Renovation of and additions to an existing two-story rustic lodge with crawl space as detailed on drawings.
4. Structure: Existing wood-framed structure on concrete foundations.

1.2 TYPE OF CONTRACT

A. Project will be constructed under a single prime contract. Contract will be AIA Document A111, 1997 Standard Form of Agreement between Owner and Contractor.

1.3 OWNER-FURNISHED PRODUCTS

A. Owner will furnish products indicated. The Work includes providing support systems to receive Owner's equipment and making plumbing, mechanical, and electrical connections.

1. Owner will arrange for and deliver Shop Drawings, Product Data, and Samples to Contractor.
2. Owner will arrange and pay for delivery of Owner-furnished items according to Contractor's Construction Schedule.
3. After delivery, Owner will inspect delivered items for damage. Contractor shall be present for and assist in Owner's inspection.
4. If Owner-furnished items are damaged, defective, or missing, Owner will arrange for replacement.
5. Owner will arrange for manufacturer's field services and for delivery of manufacturer's warranties to Contractor.

6. Owner will furnish Contractor the earliest possible delivery date for Owner-furnished products. Using Owner-furnished earliest possible delivery dates, Contractor shall designate delivery dates of Owner-furnished items in Contractor's Construction Schedule.
7. Contractor shall review Shop Drawings, Product Data, and Samples and return them to Architect noting discrepancies or anticipated problems in use of product.
8. Contractor is responsible for receiving, unloading, and handling Owner-furnished items at Project site.
9. Contractor is responsible for protecting Owner-furnished items from damage during storage and handling, including damage from exposure to the elements.
10. If Owner-furnished items are damaged as a result of Contractor's operations, Contractor shall repair or replace them.
11. Contractor shall install and otherwise incorporate Owner-furnished items into the Work.

B. Owner-Furnished Products to be Installed by Contractor:

1. Appliances not included in Section 113100.

1.4 WORK UNDER OTHER CONTRACTS

A. General: Cooperate fully with separate contractors so work on those contracts may be carried out smoothly, without interfering with or delaying work under this Contract. Coordinate the Work of this Contract with work performed under separate contracts.

1.5 PRODUCTS ORDERED IN ADVANCE

A. General: Owner has negotiated Purchase Orders with suppliers of material and equipment to be incorporated into the Work. Owner will assign these Purchase Orders to Contractor. Costs for receiving, handling, storage if required, and installation of material and equipment are included in the Contract Sum.

1. Contractor's responsibilities are same as if Contractor had negotiated Purchase Orders, including responsibility to renegotiate purchase and to execute final Purchase-Order agreements.

1.6 USE OF PREMISES

A. General: Contractor shall have full use of premises for construction operations, including use of Project site, during construction period. Contractor's use of premises is limited only by Owner's right to perform work or to retain other contractors on portions of Project.

1.7 OWNER'S OCCUPANCY REQUIREMENTS

A. Owner Occupancy of Completed Areas of Construction: Owner reserves the right to occupy and to place and install equipment in completed areas of building, before Substantial Completion, provided such occupancy does not interfere with completion of the Work. Such placement of equipment and partial occupancy shall not constitute acceptance of the total Work.

1. Architect will prepare a Certificate of Substantial Completion for each specific portion of the Work to be occupied before Owner occupancy.
2. Obtain a Certificate of Occupancy from authorities having jurisdiction before Owner occupancy.
3. Before partial Owner occupancy, mechanical and electrical systems shall be fully operational, and required tests and inspections shall be successfully completed. On occupancy, Owner will operate and maintain mechanical and electrical systems serving occupied portions of building.

4. On occupancy, Owner will assume responsibility for maintenance and custodial service for occupied portions of building.

1.8 SPECIFICATION FORMATS AND CONVENTIONS

A. Specification Format: The Specifications are organized into Divisions and Sections using the 2004 Version-Division Format and CSI/CSC's "MasterFormat" numbering system.

1. Section Identification: The Specifications use Section numbers and titles to help cross-referencing in the Contract Documents. Sections in the Project Manual are in numeric sequence; however, the sequence is incomplete because all available Section numbers are not used. Consult the table of contents at the beginning of the Project Manual to determine numbers and names of Sections in the Contract Documents.
2. Division 1: Sections in Division 1 govern the execution of the Work of all Sections in the Specifications.

B. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:

1. Abbreviated Language: Language used in the Specifications and other Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be inferred as the sense requires. Singular words shall be interpreted as plural, and plural words shall be interpreted as singular where applicable as the context of the Contract Documents indicates.
2. Imperative mood and streamlined language are generally used in the Specifications. Requirements expressed in the imperative mood are to be performed by Contractor. Occasionally, the indicative or subjunctive mood may be used in the Section Text for clarity to describe responsibilities that must be fulfilled indirectly by Contractor or by others when so noted.

    a. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 011000

SECTION 012100 - ALLOWANCES

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes administrative and procedural requirements governing the following:

1. Lump-sum allowances.
2. Contingency allowances.
3. Testing and inspecting allowances.

B. See Division 01 Section "Unit Prices" for procedures for using unit prices.

C. See Division 01 Section "Quality Requirements" for procedures governing the use of allowances for testing and inspecting.

1.2 SELECTION AND PURCHASE

A. At the earliest practical date after award of the Contract, advise Architect of the date when final selection and purchase of each product or system described by an allowance must be completed to avoid delaying the Work.

B. At Architect's request, obtain proposals for each allowance for use in making final selections. Include recommendations that are relevant to performing the Work.

C. Purchase products and systems selected by Architect from the designated supplier.

1.3 SUBMITTALS

A. Submit proposals for purchase of products or systems included in allowances, in the form specified for Change Orders.

B. Submit invoices or delivery slips to show actual quantities of materials delivered to the site for use in fulfillment of each allowance.

C. Coordinate and process submittals for allowance items in same manner as for other portions of the Work.

1.4 COORDINATION

A. Coordinate allowance items with other portions of the Work. Furnish templates as required to coordinate installation.

1.5 CONTINGENCY ALLOWANCES

A. Use the contingency allowance only as directed by Architect for Owner's purposes and only by Change Orders that indicate amounts to be charged to the allowance.

B. Contractor's overhead, profit, and related costs for products and equipment ordered by Owner under the contingency allowance are included in the allowance and are not part of the Contract Sum. These costs include delivery, installation, taxes, insurance, equipment rental, and similar costs.

C. Change Orders authorizing use of funds from the contingency allowance will include Contractor's related costs and reasonable overhead and profit margins.

D. At Project closeout, credit unused amounts remaining in the contingency allowance to Owner by Change Order.

1.6 TESTING AND INSPECTING ALLOWANCES

A. Testing and inspecting allowances include the cost of engaging testing agencies, actual tests and inspections, and reporting results.

B. The allowance does not include incidental labor required to assist the testing agency or costs for retesting if previous tests and inspections result in failure. The cost for incidental labor to assist the testing agency shall be included in the Contract Sum.

C. Costs of services not required by the Contract Documents are not included in the allowance.

D. At Project closeout, credit unused amounts remaining in the testing and inspecting allowance to Owner by Change Order.

1.7 UNUSED MATERIALS

A. Return unused materials purchased under an allowance to manufacturer or supplier for credit to Owner, after installation has been completed and accepted.

1. If requested by Architect, prepare unused material for storage by Owner when it is not economically practical to return the material for credit. If directed by Architect, deliver unused material to Owner's storage space. Otherwise, disposal of unused material is Contractor's responsibility.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine products covered by an allowance promptly on delivery for damage or defects. Return damaged or defective products to manufacturer for replacement.

3.2 PREPARATION

A. Coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related work.

3.3 SCHEDULE OF ALLOWANCES

1. Contingency Allowance: 2 percent of construction budget for unforeseen expenses.

END OF SECTION 012100

SECTION 012600 - CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. This Section specifies administrative and procedural requirements for handling and processing Contract modifications.

B. Related Sections: Division 1 Section "Product Requirements" for administrative procedures for handling requests for substitutions made after Contract award.

1.2 MINOR CHANGES IN THE WORK

A. Architect will issue supplemental instructions authorizing Minor Changes in the Work, not involving adjustment to the Contract Sum or the Contract Time, on AIA Document G710, "Architect's Supplemental Instructions."

1.3 PROPOSAL REQUESTS

A. Owner-Initiated Proposal Requests: Architect will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.

1. Proposal Requests issued by Architect are for information only. Do not consider them instructions either to stop work in progress or to execute the proposed change.
2. Within time specified in Proposal Request after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.

    a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
    b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
    c. Include costs of labor and supervision directly attributable to the change.
    d. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.

B. Contractor-Initiated Proposals: If latent or unforeseen conditions require modifications to the Contract, Contractor may propose changes by submitting a request for a change to Architect.

1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
4. Include costs of labor and supervision directly attributable to the change.

5. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
6. Comply with requirements in Division 1 Section "Product Requirements" if the proposed change requires substitution of one product or system for product or system specified.

C. Proposal Request Form: Use AIA Document G709 for Proposal Requests or forms provided by Owner.

1.4 CHANGE ORDER PROCEDURES

A. On Owner's approval of a Proposal Request, Architect will issue a Change Order for signatures of Owner and Contractor on AIA Document G701.

1.5 CONSTRUCTION CHANGE DIRECTIVE

A. Construction Change Directive: Architect may issue a Construction Change Directive on AIA Document G714. Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.

1. Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.

B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.

1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012600

SECTION 012900 - PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. This Section specifies administrative and procedural requirements necessary to prepare and process Applications for Payment.

1.2 DEFINITIONS

A. Schedule of Values: A statement furnished by Contractor allocating portions of the Contract Sum to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

1.3 SCHEDULE OF VALUES

A. Coordination: Coordinate preparation of the Schedule of Values with preparation of Contractor's Construction Schedule.

1. Correlate line items in the Schedule of Values with other required administrative forms and schedules, including the following:

    a. Application for Payment forms with Continuation Sheets.
    b. Contractor's Construction Schedule.

2. Submit the Schedule of Values to Architect at earliest possible date but no later than seven days before the date scheduled for submittal of initial Applications for Payment.
3. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with the Project Manual table of contents. Provide several line items for principal subcontract amounts, where appropriate. Include separate line items under required principal subcontracts for operation and maintenance manuals, punch list activities, Project Record Documents, and demonstration and training in the amount of 5 percent of the Contract Sum.
4. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
5. Schedule Updating: Update and resubmit the Schedule of Values before the next Applications for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.

B. Format and Content: Use the Project Manual table of contents as a guide to establish line items for the Schedule of Values. Provide at least one line item for each Specification Section.

1. Identification: Include the following Project identification on the Schedule of Values:

    a. Project name and location.
    b. Name of Architect.
    c. Contractor's name and address.
    d. Date of submittal.

1.4 APPLICATIONS FOR PAYMENT

A. Each Application for Payment shall be consistent with previous applications and payments as certified by Architect and Owner's Representative and paid for by Owner.

B. Payment Application Times: The date for each progress payment is indicated in the Agreement between Owner and Contractor. The period of construction Work covered by each Application for Payment is the period indicated in the Agreement.

C. Payment Application Forms: Use AIA Document G702 and AIA Document G703 Continuation Sheets or forms provided by the Owner's Representative as form for Applications for Payment.

D. Application Preparation: Complete every entry on form.

E. Waivers of Mechanic's Lien: Refer to Exhibit of Agreement between Owner and Contractor.

F. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:

1. List of subcontractors.
2. Schedule of Values.
3. Contractor's Construction Schedule (preliminary if not final).
4. Products list.
5. Schedule of unit prices.
6. Submittals Schedule (preliminary if not final).
7. Copies of building permits.
8. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
9. Initial progress report.
10. Certificates of insurance and insurance policies.

G. Application for Payment at Substantial Completion: After issuing the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.

H. Final Payment Application: Submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012900

SECTION 013100 - PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:

1. Coordination Drawings.
2. Administrative and supervisory personnel.
3. Project meetings.
4. Requests for Interpretation (RFIs).

B. Related Sections include the following:

1. Division 1 Section "Construction Progress Documentation" for preparing and submitting Contractor's Construction Schedule.
2. Division 1 Section "Closeout Procedures" for coordinating closeout of the Contract.

1.2 DEFINITIONS

A. RFI: Request from Contractor seeking interpretation or clarification of the Contract Documents.

1.3 COORDINATION

A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections, that depend on each other for proper installation, connection, and operation.

1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
2. Coordinate installation of different components with other contractors to ensure maximum accessibility for required maintenance, service, and repair.
3. Make adequate provisions to accommodate items scheduled for later installation.
4. Where availability of space is limited, coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair of all components, including mechanical and electrical.

B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.

1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.

C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:

1. Preparation of Contractor's Construction Schedule.
2. Preparation of the Schedule of Values.
3. Installation and removal of temporary facilities and controls.
4. Delivery and processing of submittals.
5. Progress meetings.
6. Preinstallation conferences.
7. Project closeout activities.
8. Startup and adjustment of systems.
9. Project closeout activities.

1.4 SUBMITTALS

A. Coordination Drawings: Prepare Coordination Drawings if limited space availability necessitates maximum utilization of space for efficient installation of different components or if coordination is required for installation of products and materials fabricated by separate entities.

1. Content: Project-specific information, drawn accurately to scale. Do not base Coordination Drawings on reproductions of the Contract Documents or standard printed data. Include the following information, as applicable:

    a. Indicate functional and spatial relationships of components of architectural, structural, civil, mechanical, and electrical systems.
    b. Indicate required installation sequences.
    c. Indicate dimensions shown on the Contract Drawings and make specific note of dimensions that appear to be in conflict with submitted equipment and minimum clearance requirements. Provide alternate sketches to Architect for resolution of such conflicts. Minor dimension changes and difficult installations will not be considered changes to the Contract.

2. Sheet Size: At least 8-1/2 by 11 inches (215 by 280 mm) but no larger than 30 by 40 inches (750 by 1000 mm).
3. Number of Copies: Submit two opaque copies of each submittal. Architect, through will return one copy.

    a. Submit five copies where Coordination Drawings are required for operation and maintenance manuals. Architect will retain two copies; remainder will be returned. Mark up and retain one returned copy as a Project Record Drawing.

4. Refer to individual Sections for Coordination Drawing requirements for Work in those Sections.

B. Key Personnel Names: Within 15 days of starting construction operations, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including home and office telephone numbers. Provide names, addresses, and telephone numbers of individuals assigned as standbys in the absence of individuals assigned to Project.

1.5 PROJECT MEETINGS

A. General: Schedule and conduct meetings and conferences at Project site, unless otherwise indicated.

1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Architect of scheduled meeting dates and times.

2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
3. Minutes: Record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner and Architect, within three days of the meeting.

B. Preconstruction Conference: Schedule a preconstruction conference before starting construction, at a time convenient to Owner, and Architect, but no later than 15 days after execution of the Agreement. Hold the conference at Project site or another convenient location. Conduct the meeting to review responsibilities and personnel assignments.

1. Attendees: Authorized representatives of Owner, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
2. Agenda: Discuss items of significance that could affect progress, including the following:

    a. Tentative construction schedule.
    b. Phasing.
    c. Critical work sequencing and long-lead items.
    d. Designation of key personnel and their duties.
    e. Procedures for processing field decisions and Change Orders.
    f. Procedures for RFIs.
    g. Procedures for testing and inspecting.
    h. Procedures for processing Applications for Payment.
    i. Distribution of the Contract Documents.
    j. Submittal procedures.
    k. Preparation of Record Documents.
    l. Use of the premises and existing building.
    m. Work restrictions.
    n. Owner's occupancy requirements.
    o. Responsibility for temporary facilities and controls.
    p. Construction waste management and recycling.
    q. Parking availability.
    r. Office, work, and storage areas.
    s. Equipment deliveries and priorities.
    t. First aid.
    u. Security.
    v. Progress cleaning.
    w. Working hours.

3. Minutes: Record and distribute meeting minutes.

C. Progress Meetings: Conduct progress meetings at weekly or regular intervals as indicated in Agreement. Coordinate dates of meetings with preparation of payment requests.

1. Attendees: In addition to representatives of Owner and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
2. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.

    a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's Construction Schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule

revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.

1) Review schedule for next period.

b. Review present and future needs of each entity present, including the following:

1) Interface requirements.
2) Sequence of operations.
3) Status of submittals.
4) Deliveries.
5) Off-site fabrication.
6) Access.
7) Site utilization.
8) Temporary facilities and controls.
9) Work hours.
10) Hazards and risks.
11) Progress cleaning.
12) Quality and work standards.
13) Status of correction of deficient items.
14) Field observations.
15) RFIs.
16) Status of proposal requests.
17) Pending changes.
18) Status of Change Orders.
19) Pending claims and disputes.
20) Documentation of information for payment requests.

3. Minutes: Record the meeting minutes.
4. Reporting: Distribute minutes of the meeting to each party present and to parties who should have been present.

a. Schedule Updating: Revise Contractor's Construction Schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

1.6 REQUESTS FOR INTERPRETATION (RFIs)

A. Procedure: Immediately on discovery of the need for interpretation of the Contract Documents, and if not possible to request interpretation at Project meeting, prepare and submit an RFI in the form specified.

1. RFIs shall originate with Contractor. RFIs submitted by entities other than Contractor will be returned with no response.
2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.

B. Content of the RFI: Include a detailed, legible description of item needing interpretation and the following:

1. Project name.
2. Date.
3. Name of Contractor.
4. Name of Architect.
5. RFI number, numbered sequentially.

6. Specification Section number and title and related paragraphs, as appropriate.
7. Drawing number and detail references, as appropriate.
8. Field dimensions and conditions, as appropriate.
9. Contractor's suggested solution(s). If Contractor's solution(s) impact the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
10. Contractor's signature.
11. Attachments: Include drawings, descriptions, measurements, photos, Product Data, Shop Drawings, and other information necessary to fully describe items needing interpretation.

    a. Supplementary drawings prepared by Contractor shall include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments.

C. Hard-Copy RFIs: Refer to Form following this section.

1. Identify each page of attachments with the RFI number and sequential page number.

D. Software-Generated RFIs: Software-generated form with substantially the same content as indicated above.

1. Attachments shall be electronic files in Adobe Acrobat PDF format.

E. Architect's Action: Architect will review each RFI, determine action required, and return it. Allow ten (10) working days for Architect's response for each RFI. RFIs received after 1:00 p.m. will be considered as received the following working day.

1. The following RFIs will be returned without action:

    a. Requests for approval of submittals.
    b. Requests for approval of substitutions.
    c. Requests for coordination information already indicated in the Contract Documents.
    d. Requests for adjustments in the Contract Time or the Contract Sum.
    e. Requests for interpretation of Architect's actions on submittals.
    f. Incomplete RFIs or RFIs with numerous errors.

2. Architect's action may include a request for additional information, in which case Architect's time for response will start again.
3. Architect's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Division 1 Section "Contract Modification Procedures."

    a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Architect in writing within 10 days of receipt of the RFI response.

F. On receipt of Architect's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect within seven days if Contractor disagrees with response.

G. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log weekly. Include the following:

1. Project name.
2. Name and address of Contractor.
3. Name and address of Architect.
4. RFI number including RFIs that were dropped and not submitted.
5. RFI description.

6. Date the RFI was submitted.
7. Date Architect's response was received.
8. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 013100

SECTION 017300 - EXECUTION

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes general procedural requirements governing execution of the Work including, but not limited to, the following:

1. Construction layout.
2. General installation of products.
3. Coordination of Owner-installed products.
4. Progress cleaning.
5. Starting and adjusting.
6. Protection of installed construction.
7. Correction of the Work.

B. Related Sections include the following:

1. Division 1 Section "Project Management and Coordination" for procedures for coordinating field engineering with other construction activities.
2. Division 1 Section "Submittal Procedures" for submitting surveys.
3. Division 1 Section "Cutting and Patching" for procedural requirements for cutting and patching necessary for the installation or performance of other components of the Work.
4. Division 1 Section "Closeout Procedures" for submitting final property survey with Project Record Documents, recording of Owner-accepted deviations from indicated lines and levels, and final cleaning.

1.2 SUBMITTALS

A. Landfill Receipts: Submit copy of receipts issued by a landfill facility, licensed to accept hazardous materials, for hazardous waste disposal.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

A. Existing Conditions: The existence and location of site improvements, utilities, and other construction indicated as existing are not guaranteed. Before beginning work, investigate and verify the existence and location of mechanical and electrical systems and other construction affecting the Work.

1. Before construction, verify the location and points of connection of utility services.

B. Existing Utilities: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities and other construction affecting the Work.

1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping; and underground electrical services.
2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.

C. Acceptance of Conditions: Examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.

1. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:

    a. Description of the Work.
    b. List of detrimental conditions, including substrates.
    c. List of unacceptable installation tolerances.
    d. Recommended corrections.

2. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
3. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
4. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
5. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.2 PREPARATION

A. Existing Utility Information: Furnish information to Owner that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.

B. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

C. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.

D. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents, submit a request for information to Architect. Include a detailed description of problem encountered, together with recommendations for changing the Contract Documents.

3.3 CONSTRUCTION LAYOUT

A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks. If discrepancies are discovered, notify Architect promptly.

B. Site Improvements: Locate and lay out site improvements, including pavements, grading, fill and topsoil placement, utility slopes, and invert elevations.

C. Building Lines and Levels: Locate and lay out control lines and levels for structures, building foundations, column grids, and floor levels, including those required for mechanical and electrical work. Transfer survey markings and elevations for use with control lines and levels. Level foundations and piers from two or more locations.

D. Record Log: Maintain a log of layout control work. Record deviations from required lines and levels. Include beginning and ending dates and times of surveys, weather conditions, name and duty of each survey party member, and types of instruments and tapes used. Make the log available for reference by Architect.

3.4 INSTALLATION

A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.

1. Make vertical work plumb and make horizontal work level.
2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
3. Conceal pipes, ducts, and wiring in finished areas, unless otherwise indicated.
4. Maintain minimum headroom clearance of 8 feet (2.4 m) in spaces without a suspended ceiling.

B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.

C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.

D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.

E. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.

F. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.

G. Anchors and Fasteners: Provide anchors and fasteners as required to anchor each component securely in place, accurately located and aligned with other portions of the Work.

1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect.
2. Allow for building movement, including thermal expansion and contraction.
3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.

H. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.

I. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

3.5 OWNER-INSTALLED PRODUCTS

A. Site Access: Provide access to Project site for Owner's construction forces.

B. Coordination: Coordinate construction and operations of the Work with work performed by Owner's construction forces.

1. Construction Schedule: Inform Owner of Contractor's preferred construction schedule for Owner's portion of the Work. Adjust construction schedule based on a mutually agreeable timetable. Notify Owner if changes to schedule are required due to differences in actual construction progress.
2. Preinstallation Conferences: Include Owner's construction forces at preinstallation conferences covering portions of the Work that are to receive Owner's work. Attend preinstallation conferences conducted by Owner's construction forces if portions of the Work depend on Owner's construction.

3.6 PROGRESS CLEANING

A. General: Clean Project site and work areas daily, including common areas. Coordinate progress cleaning for joint-use areas where more than one installer has worked. Enforce requirements strictly. Dispose of materials lawfully.

1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
2. Do not hold materials more than 7 days during normal weather or 3 days if the temperature is expected to rise above 80 deg F (27 deg C).
3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.

B. Site: Maintain Project site free of waste materials and debris.

C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.

1. Remove liquid spills promptly.
2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.

D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.

E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.

F. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.

G. Waste Disposal: Burying or burning waste materials on-site will not be permitted. Washing waste materials down sewers or into waterways will not be permitted.

H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.

I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.

J. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.7 STARTING AND ADJUSTING

A. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.

B. Adjust operating components for proper operation without binding. Adjust equipment for proper operation.

C. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

D. Manufacturer's Field Service: If a factory-authorized service representative is required to inspect field-assembled components and equipment installation, comply with qualification requirements in Division 1 Section "Quality Requirements."

3.8 PROTECTION OF INSTALLED CONSTRUCTION

A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.

B. Comply with manufacturer's written instructions for temperature and relative humidity.

3.9 CORRECTION OF THE WORK

A. Repair or remove and replace defective construction. Restore damaged substrates and finishes. Comply with requirements in Division 1 Section "Cutting and Patching."

1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.

B. Restore permanent facilities used during construction to their specified condition.

C. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.

D. Repair components that do not operate properly. Remove and replace operating components that cannot be repaired.

E. Remove and replace chipped, scratched, and broken glass or reflective surfaces.

END OF SECTION 017300

SECTION 017329 - CUTTING AND PATCHING

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes procedural requirements for cutting and patching.

B. Related Sections include the following:

1. Divisions 2 through 33 Sections for specific requirements and limitations applicable to cutting and patching individual parts of the Work.
2. Division 7 Section "Through-Penetration Firestop Systems" for patching fire-rated construction.

1.2 DEFINITIONS

A. Cutting: Removal of in-place construction necessary to permit installation or performance of other Work.

B. Patching: Fitting and repair work required to restore surfaces to original conditions after installation of other Work.

1.3 SUBMITTALS

A. Cutting and Patching Proposal: Submit a proposal describing procedures at least 10 days before the time cutting and patching will be performed, requesting approval to proceed. Include the following information:

1. Extent: Describe cutting and patching, show how they will be performed, and indicate why they cannot be avoided.
2. Changes to In-Place Construction: Describe anticipated results. Include changes to structural elements and operating components as well as changes in building's appearance and other significant visual elements.
3. Products: List products to be used and firms or entities that will perform the Work.
4. Dates: Indicate when cutting and patching will be performed.
5. Utility Services and Mechanical/Electrical Systems: List services/systems that cutting and patching procedures will disturb or affect. List services/systems that will be relocated and those that will be temporarily out of service. Indicate how long services/systems will be disrupted.
6. Structural Elements: Where cutting and patching involve adding reinforcement to structural elements, submit details and engineering calculations showing integration of reinforcement with original structure.
7. Architect's Approval: Obtain approval of cutting and patching proposal before cutting and patching. Approval does not waive right to later require removal and replacement of unsatisfactory work.

1.4 QUALITY ASSURANCE

A. Structural Elements: Do not cut and patch structural elements in a manner that could change their load-carrying capacity or load-deflection ratio.

B. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety. Operating elements include the following:

1. Primary operational systems and equipment.
2. Air or smoke barriers.
3. Fire-suppression systems.
4. Mechanical systems piping and ducts.
5. Control systems.
6. Communication systems.
7. Conveying systems.
8. Electrical wiring systems.
9. Operating systems of special construction in Division 13 Sections.

C. Miscellaneous Elements: Do not cut and patch miscellaneous elements or related components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety. Miscellaneous elements include the following:

1. Water, moisture, or vapor barriers.
2. Membranes and flashings.
3. Exterior curtain-wall construction.
4. Equipment supports.
5. Piping, ductwork, vessels, and equipment.
6. Noise- and vibration-control elements and systems.

D. Visual Requirements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.

1.5 WARRANTY

A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during cutting and patching operations, by methods and with materials so as not to void existing warranties.

PART 2 - PRODUCTS

2.1 MATERIALS

A. General: Comply with requirements specified in other Sections.

B. In-Place Materials: Use materials identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.

1. If identical materials are unavailable or cannot be used, use materials that, when installed, will match the visual and functional performance of in-place materials.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine surfaces to be cut and patched and conditions under which cutting and patching are to be performed.

1. Compatibility: Before patching, verify compatibility with and suitability of substrates, including compatibility with in-place finishes or primers.
2. Proceed with installation only after unsafe or unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Temporary Support: Provide temporary support of Work to be cut.

B. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.

C. Adjoining Areas: Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.

3.3 PERFORMANCE

A. General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.

1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.

B. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.

1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
3. Concrete and Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
4. Excavating and Backfilling: Comply with requirements in applicable Division 2 Sections where required by cutting and patching operations.
5. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
6. Proceed with patching after construction operations requiring cutting are complete.

C. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other Work. Patch with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other Sections.

1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate integrity of installation.
2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.

    a. Clean piping, conduit, and similar features before applying paint or other finishing materials.
    b. Restore damaged pipe covering to its original condition.

3. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance. Remove in-place floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.

    a. Where patching occurs in a painted surface, apply primer and intermediate paint coats over the patch and apply final paint coat over entire unbroken surface containing the patch. Provide additional coats until patch blends with adjacent surfaces.

4. Ceilings: Patch, repair, or rehang in-place ceilings as necessary to provide an even-plane surface of uniform appearance.
5. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition.

D. Cleaning: Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty, and similar materials.

END OF SECTION 017329

SECTION 017419 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. This Section includes administrative and procedural requirements for the following:

1. Salvaging nonhazardous construction waste.
2. Recycling nonhazardous construction waste.
3. Disposing of nonhazardous construction waste.

B. Related Sections include the following:

1. Division 01 Section "Temporary Facilities and Controls" for environmental-protection measures during construction, and location of waste containers at Project site.
2. Division 04 Section "Unit Masonry" for disposal requirements for masonry waste.
3. Division 31 Section "Site Clearing" for disposition of waste resulting from site clearing and removal of above- and below-grade improvements.

1.3 DEFINITIONS

A. Construction Waste: Building and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.

B. Disposal: Removal off-site of demolition and construction waste and subsequent sale, recycling, reuse, or deposit in landfill or incinerator acceptable to authorities having jurisdiction.

C. Recycle: Recovery of demolition or construction waste for subsequent processing in preparation for reuse.

D. Salvage: Recovery of demolition or construction waste and subsequent sale or reuse in another facility.

E. Salvage and Reuse: Recovery of demolition or construction waste and subsequent incorporation into the Work.

1.4 PERFORMANCE GOALS

A. General: Salvage/Recycle Goals: Project goal is to salvage and recycle as much nonhazardous construction waste as possible.

1.5 SUBMITTALS

A. Records of Donations: Indicate receipt and acceptance of salvageable waste donated to individuals and organizations. Indicate whether organization is tax exempt.

B. Records of Sales: Indicate receipt and acceptance of salvageable waste sold to individuals and organizations. Indicate whether organization is tax exempt.

C. Recycling and Processing Facility Records: Indicate receipt and acceptance of recyclable waste by recycling and processing facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.

D. Landfill and Incinerator Disposal Records: Indicate receipt and acceptance of waste by landfills and incinerator facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 RECYCLING CONSTRUCTION WASTE, GENERAL

A. General: Recycle paper and beverage containers used by on-site workers.

B. Recycling Incentives: Revenues, savings, rebates, tax credits, and other incentives received for recycling waste materials shall be shared equally by Owner and Contractor.

C. Procedures: Separate recyclable waste from other waste materials, trash, and debris. Separate recyclable waste by type at Project site to the maximum extent practical.

1. Provide appropriately marked containers or bins for controlling recyclable waste until they are removed from Project site. Include list of acceptable and unacceptable materials at each container and bin.

    a. Inspect containers and bins for contamination and remove contaminated materials if found.

2. Stockpile processed materials on-site without intermixing with other materials. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
3. Stockpile materials away from construction area. Do not store within drip line of remaining trees.
4. Store components off the ground and protect from the weather.
5. Remove recyclable waste off Owner's property and transport to recycling receiver or processor.

3.2 RECYCLING CONSTRUCTION WASTE

A. Packaging:

1. Cardboard and Boxes: Break down packaging into flat sheets. Bundle and store in a dry location.
2. Polystyrene Packaging: Separate and bag materials.
3. Pallets: As much as possible, require deliveries using pallets to remove pallets from Project site. For pallets that remain on-site, break down pallets into component wood pieces and comply with requirements for recycling wood.
4. Crates: Break down crates into component wood pieces and comply with requirements for recycling wood.

B. Site-Clearing Wastes: Chip brush, branches, and trees on-site or at landfill facility.

C. Wood Materials:

1. Clean Cut-Offs of Lumber: Grind or chip into small pieces.
2. Clean Sawdust: Bag sawdust that does not contain painted or treated wood.

D. Gypsum Board: Stack large clean pieces on wood pallets and store in a dry location.

1. Clean Gypsum Board: Grind scraps of clean gypsum board using small mobile chipper or hammer mill. Screen out paper after grinding.

3.3 DISPOSAL OF WASTE

A. General: Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.

1. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.
2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

B. Burning: Do not burn waste materials.

C. Disposal: Transport waste materials off Owner's property and legally dispose of them.

END OF SECTION 017419

SECTION 017700 - CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:

1. Inspection procedures.
2. Warranties.
3. Final cleaning.

B. Related Sections include the following:

1. Division 1 Section "Payment Procedures" for requirements for Applications for Payment for Substantial and Final Completion.
2. Division 1 Section "Execution Requirements" for progress cleaning of Project site.
3. Division 1 Section "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.
4. Division 1 Section "Operation and Maintenance Data" for operation and maintenance manual requirements.
5. Division 1 Section "Demonstration and Training" for requirements for instructing Owner's personnel.
6. Divisions 2 through 33 Sections for specific closeout and special cleaning requirements for the Work in those Sections.

1.2 SUBSTANTIAL COMPLETION

A. Preliminary Procedures: Before requesting inspection for determining date of Substantial Completion, complete the following. List items below that are incomplete in request.

1. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.
2. Advise Owner of pending insurance changeover requirements.
3. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
4. Obtain and submit releases permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
5. Prepare and submit Project Record Documents, operation and maintenance manuals, Final Completion construction photographs, damage or settlement surveys, property surveys, and similar final record information.
6. Deliver tools, spare parts, extra materials, and similar items to location designated by Owner. Label with manufacturer's name and model number where applicable.
7. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
8. Complete startup testing of systems.
9. Submit test/adjust/balance records.
10. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
11. Advise Owner of changeover in heat and other utilities.
12. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
13. Complete final cleaning requirements, including touchup painting.
14. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.

B. Inspection: Submit a written request for inspection for Substantial Completion. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.

1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
2. Results of completed inspection will form the basis of requirements for Final Completion.

1.3 FINAL COMPLETION

A. Preliminary Procedures: Before requesting final inspection for determining date of Final Completion, complete the following:

1. Submit a final Application for Payment according to Division 1 Section "Payment Procedures."
2. Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
3. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
4. Submit pest-control final inspection report and warranty.
5. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems.

B. Inspection: Submit a written request for final inspection for acceptance. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.

1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.4 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

A. Preparation: Submit three copies of list. Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.

1. Organize list of spaces in sequential order, starting with exterior areas first and proceeding from lowest floor to highest floor.
2. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.
3. Include the following information at the top of each page:

    a. Project name.
    b. Date.
    c. Name of Architect.
    d. Name of Contractor.
    e. Page number.

1.5 WARRANTIES

A. Submittal Time: Submit written warranties on request of Architect for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated.

B. Partial Occupancy: Submit properly executed warranties within 15 days of completion of designated portions of the Work that are completed and occupied or used by Owner during construction period by separate agreement with Contractor.

C. Organize warranty documents into an orderly sequence based on the table of contents of the Project Manual.

1. Bind warranties and bonds in heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch (215-by-280-mm) paper.
2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.

D. Provide additional copies of each warranty to include in operation and maintenance manuals.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

PART 3 - EXECUTION

3.1 FINAL CLEANING

A. General: Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.

B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.

1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a portion of Project:

a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
d. Remove tools, construction equipment, machinery, and surplus material from Project site.
e. Remove snow and ice to provide safe access to building.
f. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.

g. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
h. Sweep concrete floors broom clean in unoccupied spaces.
i. Vacuum carpet and similar soft surfaces, removing debris and excess nap; shampoo if visible soil or stains remain.
j. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials. Polish mirrors and glass, taking care not to scratch surfaces.
k. Remove labels that are not permanent.
l. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.
    1) Do not paint over "UL" and similar labels, including mechanical and electrical nameplates.
m. Wipe surfaces of mechanical and electrical equipment, elevator equipment, and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
n. Replace parts subject to unusual operating conditions.
o. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
p. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
q. Clean ducts, blowers, and coils if units were operated without filters during construction.
r. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency. Replace burned-out bulbs, and those noticeably dimmed by hours of use, and defective and noisy starters in fluorescent and mercury vapor fixtures to comply with requirements for new fixtures.
s. Leave Project clean and ready for occupancy.

C. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from Project site and dispose of lawfully.

END OF SECTION 017700

SECTION 017839 - PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes administrative and procedural requirements for Project Record Documents to be prepared by General Contractor, including the following:

1. Record Drawings.
2. Record Specifications.
3. Record Product Data.

B. Related Sections include the following:

1. Division 1 Section "Closeout Procedures" for general closeout procedures.
2. Division 1 Section "Operation and Maintenance Data" for operation and maintenance manual requirements.
3. Divisions 2 through 33 Sections for specific requirements for Project Record Documents of the Work in those Sections.

1.2 SUBMITTALS

A. Record Drawings: Comply with the following:

1. Number of Copies: Submit one set(s) of marked-up Record Prints and one CD of scanned PDFs.

B. Record Specifications: Submit one copy of Project's Specifications, including addenda and contract modifications and one CD of scanned PDFs.

C. Record Product Data: Submit one copy of each Product Data submittal and one CD of scanned PDFs.

1. Where Record Product Data is required as part of operation and maintenance manuals, submit marked-up Product Data as an insert in manual instead of submittal as Record Product Data.

PART 2 - PRODUCTS

2.1 RECORD DRAWINGS

A. Record Prints: Maintain one set of blue- or black-line white prints of the Contract Drawings and Shop Drawings.

1. Preparation: Mark Record Prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to prepare the marked-up Record Prints.

a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
b. Accurately record information in an understandable drawing technique.
c. Record data as soon as possible after obtaining it. Record and check the markup before enclosing concealed installations.

2. Content: Types of items requiring marking include, but are not limited to, the following:

    a. Dimensional changes to Drawings.
    b. Revisions to details shown on Drawings.
    c. Depths of foundations below first floor.
    d. Locations and depths of underground utilities.
    e. Revisions to routing of piping and conduits.
    f. Revisions to electrical circuitry.
    g. Actual equipment locations.
    h. Duct size and routing.
    i. Locations of concealed internal utilities.
    j. Changes made by Change Order or Construction Change Directive.
    k. Changes made following Architect's written orders.
    l. Details not on the original Contract Drawings.
    m. Field records for variable and concealed conditions.
    n. Record information on the Work that is shown only schematically.

3. Mark the Contract Drawings or Shop Drawings, whichever is most capable of showing actual physical conditions, completely and accurately. If Shop Drawings are marked, show cross-reference on the Contract Drawings.
4. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
5. Mark important additional information that was either shown schematically or omitted from original Drawings.
6. Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.

B. Format: Identify and date each Record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.

1. Record Prints: Organize Record Prints and newly prepared Record Drawings into manageable sets. Bind each set with durable paper cover sheets. Include identification on cover sheets.
2. Record Transparencies: Organize into unbound sets matching Record Prints. Place transparencies in durable tube-type drawing containers with end caps. Mark end cap of each container with identification. If container does not include a complete set, identify Drawings included.
3. Record CAD Drawings: Organize CAD information into separate electronic files that correspond to each sheet of the Contract Drawings. Name each file with the sheet identification. Include identification in each CAD file.
4. Identification: As follows:

    a. Project name.
    b. Date.
    c. Designation "PROJECT RECORD DRAWINGS."
    d. Name of Architect.
    e. Name of Contractor.

2.2 RECORD SPECIFICATIONS

A. Preparation: Mark Specifications to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.

1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
2. For each principal product, indicate whether Record Product Data has been submitted in operation and maintenance manuals instead of submitted as Record Product Data.
3. Note related Change Orders and Record Drawings where applicable.

2.3 RECORD PRODUCT DATA

A. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.

1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
2. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.
3. Note related Change Orders, Record Specifications, and Record Drawings where applicable.

2.4 MISCELLANEOUS RECORD SUBMITTALS

A. Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.

PART 3 - EXECUTION

3.1 RECORDING AND MAINTENANCE

A. Recording: Maintain one copy of each submittal during the construction period for Project Record Document purposes. Post changes and modifications to Project Record Documents as they occur; do not wait until the end of Project.

B. Maintenance of Record Documents and Samples: Store Record Documents and Samples in the field office apart from the Contract Documents used for construction. Do not use Project Record Documents for construction purposes. Maintain Record Documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to Project Record Documents for Architect's reference during normal working hours.

END OF SECTION 017839

SECTION 024119 - SELECTIVE STRUCTURE DEMOLITION

1.1 SUMMARY

A. Demolition and removal of selected site elements.

1.2 PROJECT CONDITIONS

A. Owner will not occupy portions of building immediately adjacent to selective demolition area.

B. Hazardous Materials: Asbestos will be removed by qualified contractor prior to start of this construction contract.

1.3 EXECUTION

A. Professional engineer engaged to survey condition of building.

1. Recorded by use of preconstruction photographs and video.

B. Utility Services and Mechanical/Electrical Systems: Maintained to facilities.

C. Site Access and Temporary Controls: Minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities

D. Temporary Facilities:

1. Temporary barricades to prevent injury to people.
2. Temporary weather protection.
3. Protection of existing finish work to remain.
4. Protection of furnishings and equipment.

E. Temporary shoring.

F. Reuse of Building Elements: per Drawings.

G. Disposal of Demolished Items: Off Owner's property.

1.4 SELECTIVE DEMOLITION SCHEDULE

A. Refer to Demolition Drawings.

END OF SECTION 024119

SECTION 033000 - CAST-IN-PLACE CONCRETE

1.1 SUMMARY

A. Cast-in-place concrete, including formwork, reinforcement, concrete materials, mixture design, placement procedures, and finishes, for the following:

1. Footings and caissons.
2. Foundation walls and grade beams.
3. Slabs-on-grade.
4. Stained concrete finish: locations and colors per Designer.

1.2 QUALITY ASSURANCE

A. Quality Standard: ACI 301.

B. Mockups: Build mockups to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.

1. Build mockups of full-thickness sections of decorative concrete to demonstrate typical joints; surface color, pattern, and texture; curing; and standard of workmanship.
2. Build mockups of decorative concrete in the location and of the size indicated or, if not indicated, build mockups where directed by Architect and not less than 96 inches (2400 mm) by 96 inches (2400 mm).
3. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
4. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.3 MATERIALS

A. Form-Facing Materials: chamfer strips and form ties.

B. Steel Reinforcement:

1. Reinforcing Bars: Deformed, Low-alloy steel or steel bar mats.
2. Welded Wire Reinforcement: Plain.
3. Bar supports.

C. Concrete Materials:

1. Portland Cement: ASTM C 150, Type I/II gray, supplemented with fly ash.
2. Blended Hydraulic Cement: ASTM C 595, Type IP.
3. Silica fume.
4. Aggregate: Normal weight or Lightweight, as indicated.
5. Water.
6. Admixtures: Air entraining Water reducing.

D. Fiber Reinforcement: Synthetic, polypropylene for exterior only.

E. Waterstops: Flexible PVC Self-expanding butyl strip.

F. Vapor Retarders: Class A, Polyethylene, 10-mil- (0.25-mm-) thick sheet.

1. Granular Course over Vapor Retarder: None.

G. Curing Materials: Clear, waterborne, membrane-forming curing, dissipating compound.

H. Related Materials: Expansion- and isolation-joint-filler strips.

I. Repair Materials: Overlayment.

J. Stain: Penetrating type.

K. Sealing Materials: Clear acrylic sealer (with slip-resistance-enhancing additive where exposed to water).

1.4 CONCRETE MIXTURES

A. Compressive Strength (28 Days):

1. Footings and Caissons: 3000 psi.
2. Foundation Walls and Grade Beams: 4000 psi .
3. Slabs-on-Grade: 3500 psi.

B. Mixing: Ready mixed.

1.5 INSTALLATION

A. Formed-Surface Finish: Smooth.

B. Floor and Slab Finishes:

1. Scratch: Surfaces to receive mortar setting beds for bonded cementitious floor finishes.
2. Float: Surfaces to receive trowel finish.
3. Trowel: Surfaces exposed to view, and surfaces to be covered with resilient flooring, carpet, ceramic or quarry tile set over a cleavage membrane, or clear sealer.
4. Stained and sealed: Surfaces selected by Architect.

1.6 FIELD QUALITY CONTROL

A. Testing: By Owner-engaged agency.

B. Inspections: By Owner-engaged special inspector.

END OF SECTION 033000

SECTION 040140 - MAINTENANCE OF STONE ASSEMBLIES

1.1 ALLOWANCES

A. Quantity allowances for each type of maintenance work.

1.2 UNIT PRICES

A. Unit prices for work covered by estimated quantities.

1.3 PRECONSTRUCTION TESTING

A. Preconstruction testing service engaged by Contractor to perform testing on existing masonry units and mortar and on replacement masonry.

1.4 QUALITY ASSURANCE

A. Mockups for each type of work demonstrating materials, workmanship, and blending new with existing work.

1.5 MATERIALS

A. Stone matching existing stone.

B. Salvaged stone from Owner.

C. Mortar: Portland cement-lime mortar colored, where exposed, to match original mortar.

D. Stone Patching Compound: Factory-mixed, custom-colored cementitious product.

E. Cementitious Crack Filler: Ultrafine superplasticized grout for injection into cracks.

F. Anchors: Type 304 stainless steel.

1.6 EXECUTION

A. Remove unused anchors and patch holes.

B. Remove and replace stone.

C. Paint steel uncovered during the work with antirust coating.

D. Perform partial stone replacement with stone-to-stone adhesive.

E. Perform stone plug repair and secure with stone-to-stone adhesive.

F. Perform stone fragment repair with stone-to-stone adhesive.

G. Inject cracks with cementitious crack filler.

H. Patch stone with patching compound.

I. Perform preliminary cleaning to remove plant growth, asphalt, paint, and tar.

J. Remove paint with solvent-type paint remover.

K. Clean stonework by:

1. Cold-water soaking.
2. Hot-water washing.
3. Steam cleaning.
4. Cleaning with detergent or mild acidic cleaner.

L. Repoint stonework with mortar and sealant where indicated.

M. Perform final cleaning only if overall cleaning occurs before pointing work.

1.7 FIELD QUALITY CONTROL

A. Inspectors: Architect's Project representatives.

END OF SECTION 040140

SECTION 044300 - STONE MASONRY VENEER

1.1 SUMMARY

A. Stone Masonry:

1. Synthetic stone veneer adhered to sheathing over wood stud framing

1.2 QUALITY ASSURANCE

A. Mockups: Build mockups to demonstrate aesthetic effects and set quality standards for materials and execution.

1. Build mockup of typical wall area as shown on Drawings.

1.3 MATERIALS

A. Stone Veneer:

1. Basis of Design Manufacturer: Coronado Stone Products, Inc.

a. Products: Italian Villa combined with Tuscan Villa Florentine Rustic Blend

2. Precast Portland Cement (synthetic) stone veneer.
3. Match Architect's samples for color, finish, and aesthetic effects.

B. Veneer Anchors: Hot-dip galvanized steel.

C. Stone Trim Anchors: Stainless steel.

D. Embedded Flashing:

1. All Flashing: Stainless steel.
2. Partially Exposed Flashing: Stainless steel.
3. Concealed Flashing: elastomeric thermoplastic or EPDM.

a. Used with stainless-steel drip edges or flashing terminations.

E. Asphalt dampproofing for concrete and unit masonry backup.

F. Weep Holes/Vents: rectangular plastic tubing or plastic mesh or open head joints.

G. Metal Lath: Expanded.

H. Cavity walls: None.

I. Mortar:

1. Setting Mortar for Adhered Stone Masonry Veneer: Latex modified.
2. Pointing Mortar: Pigmented per Architect selection.

J. Stone Fabrication:

1. Thickness for Adhered Stone Masonry Veneer: 1 inch, or as selected by Architect.
2. Finish: Architect to provide sample.
3. Finish for Sills, Lintels and Copings: Architect sample.

1.4 INSTALLATION

A. Pattern: Sawed-bed ashlar with uniform course heights and random lengths or as selected by Architect.

B. Joints:
1. Base Width: 3/8 inch (10 mm).
2. Maximum Variation: 1/8 inch from base.
3. Profile: Raked.

C. Recycle clean masonry waste as fill material.

END OF SECTION 044300

SECTION 055000 - METAL FABRICATIONS

1.1 SUMMARY

A. Miscellaneous metal framing and supports.

B. Loose metal plates and shapes.

C. Miscellaneous fabricated metal items.

1.2 PRODUCTS

A. Materials: Steel plates, shapes, and bars, steel tubing, steel pipe, slotted channel framing, iron castings, aluminum.

B. Miscellaneous Framing and Supports:

1. Steel framing and supports for applications where framing and supports are not specified in other Sections.
2. Galvanize where indicated.

C. Loose steel lintels, galvanized at exterior walls.

D. Shelf angles, galvanized.

E. Loose bearing and leveling plates, galvanized.

F. Steel weld plates and angles not specified in other Sections, for casting into concrete.

G. Metal Floor Plate: Steel.

END OF SECTION 055000

SECTION 057113 - FABRICATED METAL SPIRAL STAIRS

1.1 SUMMARY

A. Fabricated spiral stairs with central-supporting columns and radiating treads.

1.2 PERFORMANCE REQUIREMENTS

A. Contractor to engineer stairs and railings to withstand design loads.

1.3 SUBMITTALS

A. Shop Drawings: Show location of each item, dimensioned plans and elevations, large-scale details, attachment devices, and other components.

1.4 MANUFACTURERS

A. Fabricated Spiral Stairs:

1. The Iron Shop
2. Goddard Spiral Stairs
3. Salter Spiral Stair

1.5 COMPONENTS

A. Center Column: Steel or aluminum pipe.

B. Treads and Platforms: Oak flooring.

C. Railings: submit manufacturer options to Architect for selection.

D. Finishes:

1. Steel and Iron: Shop primed.
2. Paint per Section 099113.

END OF SECTION 057113

SECTION 057300 - DECORATIVE METAL RAILINGS

1.1 SUMMARY

A. Steel and twisted wrought iron decorative railings.

1.2 QUALITY ASSURANCE

A. Contractor to engineer railings to withstand structural loads.

B. Preconstruction Testing: Paid from the testing and inspecting allowance by Contractor.

C. Mockups: Build mockups to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for fabrication and installation.

1. Build mockups for each form and finish of railing consisting of two posts, top rail, infill area, and anchorage system components.

1.3 SUBMITTALS

A. Shop Drawings: Show location of each item, dimensioned plans and elevations, large-scale details, attachment devices, and other components.

1.4 MANUFACTURERS

A. Wrought Iron Railings:

1. Vulcan Design Studio
2. Iron Wolf Designs
3. Northwinds Forge, Ltd.

1.5 MATERIALS

A. Steel and iron.

1.6 FABRICATION

A. Connections: Welded, brazed or mechanical.

B. Changes in Direction of Members: By bending or by inserting prefabricated fittings.

C. Infill Panels: decorative units per Drawings.

1.7 FINISHES

A. Steel and Iron: Ungalvanized, powder coated.

1.8 FIELD QUALITY CONTROL

A. Field Quality-Control Testing: Paid from the testing and inspecting allowance.

END OF SECTION 057300

SECTION 061000 - ROUGH CARPENTRY

1.1 SUMMARY

A. Framing with dimension lumber, timber and engineered wood products.

B. Wood blocking, cants and nailers.

C. Wood furring and grounds.

1.2 MATERIALS

A. Wood-Preservative-Treated Lumber:

1. Preservative Treatment: AWPA C2 with chemicals containing no arsenic or chromium.

a. AWPA C31 (inorganic boron) may be used in protected locations.

2. Application: Items indicated and as follows:

a. Items in contact with roofing or waterproofing.
b. Items in contact with concrete or masonry.
c. Framing less than 18 inches (460 mm) above ground in crawlspaces.
d. Floor plates installed over concrete slabs-on-grade.

B. Fire-Retardant-Treated Materials:

1. Exterior type for exterior locations and where indicated.
2. Interior Type A, High Temperature (HT) for enclosed roof framing, framing in attic spaces, and where indicated.

C. Dimension Lumber Framing:

1. Maximum Moisture Content: 15 percent.
2. Framing: Construction or No. 2 grade any species.

D. Timber: Select Structural No. 1 grade Douglas fir-larch.

E. Engineered Wood Products: Laminated-veneer lumber, parallel-strand lumber, wood I-joists and rim boards.

F. Plywood backing panels for telephone and electrical equipment.

G. Fasteners: Hot-dip galvanized steel where exposed to weather, in ground contact, in contact with treated wood, or in area of high relative humidity.

H. Metal Framing Anchors:

1. Metal: Hot-dip galvanized steel.
2. Types: Types: Joist hangers, I-joist hangers, top flange hangers, bridging, post bases, joist ties, rafter tie-downs (hurricane ties), floor-to-floor ties, hold-downs and wall bracing, per structural engineer.

I. Miscellaneous Materials:

1. Sill-Sealer Gaskets: Neoprene foam.

1.3 INSTALLATION

A. Exterior Wall Framing: 2-by-6-inch nominal-size wood studs at 16 inches o.c.

B. Interior Partitions Framing: 2-by-4-inch nominal-size wood studs at 24 inches o.c.

C. Bracing: Corner bracing per structural engineer.

END OF SECTION 061000

SECTION 061063 - EXTERIOR ROUGH CARPENTRY

1.1 SUMMARY

A. Exterior composite wood decking.

B. Exterior wood structural framing.

C. Exterior timber posts and beams.

1.2 SUBMITTALS

A. Shop Drawings: Show location of each item, dimensioned plans and elevations, large-scale details, attachment devices, and other components.

1.3 MATERIALS

A. Dimension Lumber:

1. Maximum Moisture Content: 15 percent.
2. Deck and Stair Framing: Select Structural No. 2 grade.
3. Dimension Lumber Posts: No. 2 grade.
4. Dimension Lumber Decking and Stair Treads: Composite wood per Architect.
5. Dimension Lumber Railing Members: Select Structural No. 2 Cedar.

B. Timber:

1. Maximum Moisture Content: 15 percent.
2. Timber Posts: Douglas fir-larch; No. 2.

C. Preservative Treatment:

1. Boards and Lumber: AWPA C2.
2. Timber: AWPA C15.
3. Poles: AWPA C4.
4. Application: Items indicated on Drawings and as follows:

    a. Framing members less than 18 inches (460 mm) above grade.
    b. Sills and ledgers.
    c. Members in contact with masonry or concrete.
    d. Posts.
    e. Round wood poles.

D. Composite Lumber:

1. Solid shapes made from polyethylene or polypropylene, 1-1/4 by 6 nominal, 1 by 5-1/2 inches actual .

2. Basis-of-Design Product: Subject to compliance with requirements, provide Trex Company, Inc. or comparable product by one of the following:

a. Certainteed Corporation.
b. Elk Composite Building Products, Inc.
c. Louisiana-Pacific Corporation.
d. TimberTech.
e. Universal Forest Products, Inc.

3. Surface Texture: Woodgrain.

4. Color: As selected by Architect from manufacturer's full range.

E. Fasteners:

1. Stainless steel or Hot-dip zinc coated unless otherwise indicated.
2. For pressure-preservative-treated wood, use stainless-steel fasteners.
3. For composite wood decking, use stainless-steel fasteners where fasteners are exposed to view.
4. For redwood, use hot-dip galvanized steel fasteners.

F. Metal Framing Anchors:

1. Metal: Hot-dip galvanized steel sheet.
2. Types: Joist hangers, top flange hangers, post bases, joist ties.

END OF SECTION 061063

SECTION 061323 - HEAVY TIMBER CONSTRUCTION

1.1 QUALITY ASSURANCE

A. Timber Standard: AITC 108.

1.2 SUBMITTALS

A. Shop Drawings: Show location of each item, dimensioned plans and elevations, large-scale details, attachment devices, and other components.

1.3 MATERIALS

A. Timber: Dressed timber (S4S) and Rough sawn (Rgh).

1. Douglas fir-larch; Select Structural No. 1.
2. Seal Coat: Penetrating sealer.

B. Preservative Treatment: As indicated and the following:

1. Members in contact with masonry or concrete.
2. Members less than 18 inches (460 mm) above grade.

C. Timber Connectors:
1. Prime-painted steel at interior.
2. Hot-dip galvanized steel at exterior.

D. Fabrication: Shop.

END OF SECTION 061323

SECTION 061600 - SHEATHING

1.1 SUMMARY

A. Wall sheathing.

B. Roof sheathing.

C. Subflooring

D. Underlayment.

E. Building paper.

F. Building wrap.

G. Flexible flashing at openings in sheathing.

1.2 MATERIALS

A. Preservative-Treated Plywood:

1. Preservative Treatment: AWPA C9 with chemicals containing no arsenic or chromium.
2. Application: Treat plywood in contact with masonry or concrete or used with roofing, flashing, vapor barriers, and waterproofing.

B. Fire-Retardant-Treated Plywood:

1. Exterior type for exterior locations and where indicated.
2. Interior Type A, High Temperature (HT) for roof sheathing and where indicated.

C. Wall Sheathing:

1. Plywood: Exterior, Structural I, 1/2 inch thick, minimum. Refer to Structural Drawings.

D. Roof Sheathing:

1. Plywood: Exterior, Structural I, 1/2 inch thick, minimum. Refer to Structural Drawings.

E. Subflooring and Underlayment:

1. Plywood Combination Subfloor-Underlayment: Exposure 1, Structural I, Underlayment ¾-inch thick, minimum. Refer to Structural Drawings.

F. Fasteners: Hot-dip galvanized steel where exposed to weather, in ground contact, in contact with treated wood, or in area of high relative humidity.

G. Miscellaneous Materials:

1. Building paper.
2. Building wrap.
3. Flexible Flashing: Self-adhesive.

1.3 INSTALLATION

A. Wood Structural Panel:

1. Combination Subfloor-Underlayment:

a. Glue and nail to wood framing.

2. Subflooring:

a. Glue and nail to wood framing.

3. Sheathing:

a. Glue and nail to wood framing.

END OF SECTION 061600

SECTION 064013 - EXTERIOR ARCHITECTURAL WOODWORK

1.1 SUMMARY

A. Exterior standing and running trim.

B. Exterior ornamental work: brackets, fascia, rafters, and railing features.

1.2 SUBMITTALS

A. Shop Drawings: Show location of each item, dimensioned plans and elevations, large-scale details, attachment devices, and other components.

1.3 MATERIALS

A. Preservative Treatment:

1. Nonpressure process with water-repellent preservative.
2. Extent of Treatment: Treat blocking and nailers by pressure process and other exterior woodwork by either process unless fabricated from naturally durable wood.

B. Fire-Retardant-Treated Materials: Exterior-type treatment.

C. Fasteners: hot-dip galvanized or stainless steel.

D. Exterior Standing and Running Trim for Transparent Finish:

1. Grade: Custom.
2. Wood Species: Architect select.

E. Exterior Ornamental Work for Transparent Finish (including railings):

1. Grade: Custom.
2. Wood Species: Architect select.

F. Shop Finishing: Same grades as items to be finished.

1. Stain and seal all exterior wood per Section 099300.

END OF SECTION 064013

SECTION 064023 - INTERIOR ARCHITECTURAL WOODWORK

1.1 SUMMARY

A. Interior woodwork items, including:

1. Interior standing and running trim.
2. Interior frames and jambs.
3. Wood-veneer cabinets.
4. Plastic-laminate countertops.
5. Wood seating and storage.
6. Interior board paneling.
7. Exterior beadboard soffit.
8. Wood ceilings and soffit.

1.2 SUBMITTALS

A. Shop Drawings: Show location of each item, dimensioned plans and elevations, large-scale details, attachment devices, and other components.

B. Samples:

1. Lumber and panel products for transparent finish, for each species and cut, finished on one side and one edge.
2. Lumber and panel products with shop-applied opaque finish, for each finish system and color, with exposed surface finished.
3. Plastic-laminates, for each type, color, pattern, and surface finish.

1.3 QUALITY ASSURANCE

A. Quality Standard: AWI, including installation.

B. Mockups for each form of construction and finish.

1.4 MATERIALS

A. Wood Species and Cut for Transparent Finish: Architect select.

B. Composite Wood Products: None.

C. Wood Seating Hardware:

1. Hinges: Piano-type, heavy duty.
2. Pulls: Back mounted.
3. Locks: None.
4. Exposed Hardware Finishes: Architect select.

D. Interior Standing and Running Trim for Transparent Finish:

1. Grade: Custom.

2. Wood Species and Cut: Hand-hewn finish.

E. Interior Frames and Jambs for Transparent Finish:

1. Grade: Custom.
2. Wood Species and Cut: Hand-hewn finish.
3. Fire-Rated Frames and Jambs: None.

F. Wood Cabinets for Transparent Finish:

1. Grade: Custom.
2. Wood Species and Cut for Exposed Surfaces: Designer select.
3. Cabinet Interior: Compatible species stained to match exterior.
4. Hinges: Grade 2, heavy duty.

G. Plastic-Laminate Countertops:

1. Grade: Custom.
2. Edge Treatment: Self-edged.

H. Interior Wood Ceiling: Interior and Porch Ceilings

1. Grade: Custom.
2. Wood Species and Cut: Beetle-kill pine.
3. Size: 1 by 6 inch.
4. Edge: Tongue-in-groove.
5. Finish: Sand smooth.
6. Stain: per Architect.

I. Beadboard Paneling for Ceilings: Exterior soffit at Second Floor.

1. Grade: Custom.
2. Wood Species and Cut: Pine panels.
3. Edge: Tongue-in-groove.
4. Finish: Sand smooth.
5. Stain: per Architect.

J. Interior Board Paneling: Interior Walls

1. Grade: Custom.
2. Wood Species and Cut: Beetle-kill pine.
3. Size: 1 by 6 inch.
4. Edge: Square.
5. Finish: Rough sawn.
6. Stain: per Architect.

K. Wood Seating and Storage for Transparent Finish:

1. Grade: Custom.
2. Wood Species and Cut for Exposed Surfaces: Birch plywood (3/4 inch, min.).
3. Wood Edge: Matching hardwood trim.
4. Cabinet Interior: Compatible species stained to match exterior.
5. Finish: Sand smooth.
6. Stain: per Architect.
7. Hinges: Grade 2, heavy duty.

1.5 INSTALLATION

A. Fasten paneling by blind nailing and adhesive.

END OF SECTION 064023

SECTION 071113 - BITUMINOUS DAMPPROOFING

1.1 SUMMARY

A. Cold-applied, cut-back asphalt or cold-applied, emulsified-asphalt dampproofing applied to the following surfaces:

1. Exterior, below-grade surfaces of concrete foundation walls.
2. Exterior concrete grade beams.
3. Exterior face of concrete indicated to receive stone veneer assemblies.

1.2 MATERIALS

A. Protection Course: Roll roofing.

1.3 INSTALLATION

A. Cold-Applied, Cut-Back Asphalt Dampproofing:

1. Concrete Foundations: Two brush or spray coats or one trowel coat.
2. Unexposed Faces of Concrete Retaining Walls: One brush or spray coat.
3. Unexposed Faces of Masonry Retaining Walls: Primer and one brush or spray coat.

B. Cold-Applied, Emulsified-Asphalt Dampproofing:

1. Concrete Foundations: Two brush or spray coats or one trowel coat.
2. Unexposed Faces of Concrete Retaining Walls: One brush or spray coat.
3. Unexposed Faces of Masonry Retaining Walls: Primer and one brush or spray coat.

END OF SECTION 071113

SECTION 072100 - THERMAL INSULATION

1.1 SUMMARY

A. Applications:

1. Concealed batt insulation.

1.2 MATERIALS

A. Insulation:

1. Faced Glass-Fiber Blanket: Type III, Class A; Category 1, faced with vapor-retarder membrane on 1 face.

B. Auxiliary Insulating Materials:

1. Eave ventilation troughs.
2. Insulation fasteners.

END OF SECTION 072100

SECTION 073113 - ASPHALT SHINGLES

1.1 SUMMARY

A. Asphalt shingles.

B. Underlayment.

1.2 QUALITY ASSURANCE

A. Exterior Fire-Test Exposure: Class A; ASTM E 108 or UL 790.

B. Mockup of each form of construction.

1.3 WARRANTY

A. Material Warranty Period: 30 years.

B. Workmanship Warranty Period: 10 years.

C. Roofing Installer's Warranty: Five years.

1.4 MANUFACTURERS

A. Multitab-Strip Asphalt Shingles: ASTM D 3462, glass-fiber reinforced, mineral-granule surfaced, and self-sealing.

1. Manufacturers: select from the following:

a. CertainTeed Corporation.
b. Elk Premium Building Products, Inc.; an ElkCorp company.
c. GAF Materials Corporation.
d. Owens Corning.

1.5 PRODUCTS

A. Glass-Fiber-Reinforced Asphalt Shingles: Multitab-strip type.

1. Hip and Ridge Shingles: Standard units.

B. Organic-Felt-Reinforced Asphalt Shingles: Multitab-strip type.

1. Hip and Ridge Shingles: Standard units.

C. Underlayment: Architect select one of the following:

1. Field: 1 layer 30# felt.
2. Edges: Self-adhering sheet underlayment, polyethylene faced to 6’-0” from edge of roof.

D. Ridge Vents: Rigid, high-density plastic.

E. Metal Flashing and Trim: Aluminum, mill finished.

1. Types: Drip edges, sloped edging, fascias and vent pipe flashings.

2. Finishes:

a. Mill at unexposed areas;
b. Anodized at exposed areas: Architect select color.

1.6 INSTALLATION

A. Underlayment: 30# felt(s).

B. Ice-Dam Membrane: Self-adhering sheet.

C. Installation Standard: Install asphalt shingles according to manufacturer's written instructions, recommendations in ARMA's "Residential Asphalt Roofing Manual," and asphalt shingle recommendations in NRCA's "The NRCA Roofing and Waterproofing Manual."

D. Valleys: per Drawings.

END OF SECTION 073113

SECTION 074213 - METAL PANELS

1.1 SUMMARY

A. Factory-formed and field-assembled exposed-fastener, lap-seam corrugated metal wall panels for exterior wall and canopy. Rusted patina finish.

1.2 PERFORMANCE REQUIREMENTS

A. Structural Performance: ASTM E 1592.

1. Wind Loads: per Structural drawings.
2. Deflection Limits: per Structural drawings.

1.3 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Shop Drawings: Show fabrication and installation layouts of metal wall panels; details of edge conditions, joints, panel profiles, corners, anchorages, attachment system, trim, flashings, closures, and accessories; and special details. Distinguish between factory-, shop- and field-assembled work.

C. Samples: For each type of exposed finish required.

D. Delegated-Design Submittal: For metal wall panel assembly indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

E. Coordination Drawings: Exterior elevations drawn to scale and coordinating penetrations and wall-mounted items.

1.4 QUALITY ASSURANCE

A. In-place mockups for each form of construction.

1.5 WARRANTY

A. Materials and Workmanship: Two years.

B. Finishes: 10 years.

1.6 MATERIALS

A. Field-Installed Thermal Insulation: Mineral-fiber blanket.

B. Miscellaneous Metal Framing: hat-shaped, rigid furring channels, cold-rolled furring channels and Z-shaped furring.

1.7 MANUFACTURERS

A. Corrugated Metal Panels:

1. Flatiron Steel
2. Western States Metal Roofing (cortenroofing.com)
3. Recla Metals LLLP

1.8 PRODUCTS

A. Exposed-Fastener, Lap-Seam Metal Wall and Canopy Panels:

1. Profile: Corrugated.
2. Material: Uncoated steel sheet. 24 gage.
3. Exterior Finish: Prepatina rust finish.

B. Accessories: Flashing and trim as required for a complete, finished installation.

END OF SECTION 074213

SECTION 074600 – FIBER-CEMENT SIDING

1.1 SUMMARY

A. Fiber-cement siding.

B. Fiber-cement fascia and soffit.

1.2 SUBMITTALS

A. Samples: For siding including related accessories.

B. Warranty: Sample of special warranty.

1.3 QUALITY ASSURANCE

A. Mockups for each type of siding and soffit.

1.4 WARRANTY

A. Materials and Workmanship: 25 years.

1.5 PRODUCTS

A. Fiber-Cement Siding: ASTM C 1186, Type A, Grade II.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. Cemplank.
b. CertainTeed Corp.
c. GAF Materials Corporation.
d. James Hardie.
e. Nichiha Fiber Cement.

2. Basis of Design Manufacturer: CertainTeed Corp.

a. Pattern: Horizontal boards. Refer to architectural elevations.
b. Factory Priming: Acrylic primer.
c. Factory Painting: Color per Architect.
d. Texture: Wood grain.

B. Fiber-Cement Soffit: ASTM C 1186, Type A, Grade II.

1. Pattern: Soffit-width sheets.
2. Texture: Wood grain.
3. Ventilation: per Architect.
4. Factory Priming: Acrylic primer.
5. Factory Painting: Color per Architect.

C. Siding Accessories: Starter strips, edge trim, outside and inside corner caps, and other items.

D. Trim Accessories: Fiber cement.

E. Flashing: Aluminum flashing at window and door heads and where indicated.

1. Finish for Aluminum Flashing: Mill at unexposed areas, Factory-prime coating at areas to be painted and Anodized at unpainted exposed areas (Architect select color).

F. Fasteners:

1. For fastening aluminum, use aluminum fasteners. Where fasteners will be exposed to view, use prefinished aluminum fasteners in color to match item being fastened.
2. For fastening fiber cement, use hot-dip galvanized fasteners.

END OF SECTION 074600

SECTION 079200 - JOINT SEALANTS

1.1 PRECONSTRUCTION TESTING

A. Preconstruction compatibility and adhesion testing.

B. Preconstruction field-adhesion testing.

1.2 WARRANTY

A. Installer Warranty: Five years.

B. Special Manufacturer's Warranty: 25 years.

1.3 MATERIALS

A. VOC Content of Interior Sealants:

1. Architectural Sealants: 250 g/L.
2. Sealant Primers for Nonporous Substrates: 250 g/L.
3. Sealant Primers for Porous Substrates: 775 g/L.

B. Stain Test: ASTM C 1248.

C. Suitability for Contact with Food: Comply with 21 CFR 177.2600, where applicable.

1.4 JOINT SEALANTS

A. Silicone Joint Sealant:

1. Type: Single component.
2. Grade: Pourable or nonsag.
3. Class: 50.
4. Uses Related to Exposure: Nontraffic.

B. Urethane Joint Sealant:

1. Type: Single component or multicomponent.
2. Grade: Pourable or nonsag.
3. Class: 50.
4. Uses Related to Exposure: Traffic, nontraffic or immersible.

C. Latex Joint Sealant: Acrylic latex or siliconized acrylic latex.

D. Solvent-Release-Curing Joint Sealant: Acrylic.

E. Preformed Joint Sealant: Preformed silicone.

F. Acoustical Joint Sealant: Nonsag, paintable, nonstaining latex.

G. Joint-Sealant Backing: Cylindrical.

1.5 FIELD QUALITY CONTROL

A. Field-adhesion testing.

1.6 SCHEDULE

A. Joint-Sealant Application: Exterior joints in horizontal traffic surfaces.

1. Joint Sealant: Urethane.
2. Joint-Sealant Color: Match adjacent material.

B. Joint-Sealant Application: Exterior joints in horizontal traffic surfaces subject to water immersion.

1. Joint Sealant: Urethane.
2. Joint-Sealant Color: Match adjacent material.

C. Joint-Sealant Application: Exterior joints in vertical surfaces and horizontal nontraffic surfaces.

1. Joint Sealant: Urethane.
2. Joint-Sealant Color: Match adjacent material.

D. Joint-Sealant Application: Interior joints in horizontal traffic surfaces.

1. Joint Sealant: Silicone.
2. Joint-Sealant Color: Match adjacent material.

E. Joint-Sealant Application: Interior joints in vertical surfaces and horizontal nontraffic surfaces.

1. Joint Sealant: Silicone.
2. Joint-Sealant Color: Match adjacent material.

F. Joint-Sealant Application: Mildew-resistant interior joints in vertical surfaces and horizontal nontraffic surfaces.

1. Joint Sealant: Mildew-resistant silicone.
2. Joint-Sealant Color: Match adjacent material.

G. Joint-Sealant Application: Interior acoustical joints in vertical surfaces and horizontal nontraffic surfaces.

1. Joint Sealant: Latex.
2. Joint-Sealant Color: Paintable.

END OF SECTION 079200

SECTION 081433 - STILE AND RAIL WOOD DOORS

1.1 QUALITY ASSURANCE

A. Manufacturer Qualifications: Certified for chain of custody by an FSC-accredited certification body.

1.2 SUBMITTALS

A. Shop Drawings: Indicate location, size, and hand of each door; elevation of each kind of door; construction details not covered in Product Data; and other pertinent data.

B. Samples: Representing typical range of color and grain for each species of veneer and solid lumber required.

1.3 WARRANTY

A. Exterior Doors: Five years.

B. Interior Doors: Life of installation.

C. Insulating Glass Vision Panels: Five years.

1.4 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

1. Graham; an Assa Abloy Group company.
2. Marlite.
3. Marshfield Door Systems, Inc.
4. Mohawk Flush Doors, Inc.; a Masonite company.

1.5 PRODUCTS

A. Exterior Doors: Stock exterior doors complying with WDMA I.S.6.

1. Finish and Grade: Transparent and Premium or Select.
2. Wood Species: per Architect.
3. Glass for Openings: Fully tempered insulating.
4. WDMA Design Group: 1-3/4 Front Entrance Doors (Exterior), 1-3/4 Thermal (Insulated-Glass) Doors (Exterior).

B. Dutch Door (Half-Lite):

1. Finish and Grade: Transparent and Premium or Select.
2. Wood Species and Cut for Transparent Finish: Species per Architect, plain sawed/sliced.
3. Raised Panels for Transparent Finish: Clear lumber.
4. WDMA Design Group: Combination doors.

C. Interior Doors: Stock interior doors complying with WDMA I.S.6.

1. Finish and Grade: Transparent and Premium or Select.
2. Wood Species: per Architect.
3. Glass for Openings: Fully tempered.
4. WDMA Design Group: 1-3/8 Interior Panel Doors.

END OF SECTION 081433

SECTION 083113 - ACCESS DOORS AND FRAMES

1.1 SUMMARY

A. Access doors and frames for walls and ceilings.

1.2 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated in the work include the following:

1. J.L. Industries.
2. Milcor, Inc.
3. Bilco
4. Ceco Products
5. Larsen's Manufacturing Co.

1.3 PRODUCTS

A. Access Doors and Frames for Walls and Ceilings:

1. Type:

a. Flush access doors and trimless frames.

2. Material: Steel.
3. Fire-Resistance Rating: Match wall rating.
4. Latch: Self-latching bolt operated by screwdriver with interior release.

B. Finishes:

1. Steel: Primed finish.

END OF SECTION 083113

SECTION 085200 – ALUMINUM-CLAD WOOD WINDOWS

1.1 SUMMARY

A. Aluminum-clad wood-framed windows.

1.2 PERFORMANCE REQUIREMENTS

A. Engineering design of wood windows by Contractor.

B. Basic Wind Speed: 90 mph.

1.3 SUBMITTALS

A. Shop Drawings: Include plans, elevations, sections, details, hardware, attachments to other work, operational clearances, and installation details.

B. Samples: For each exposed finish.

1.4 QUALITY ASSURANCE

A. Quality Standard: AAMA/WDMA 101/I.S.2/NAFS.

B. Mockups for each form of construction.

1.5 WARRANTY

A. Windows: Five years.

B. Glazing: Five years.

C. Metal Finish: Ten years.

1.6 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Aluminum-Clad Wood Windows/Doors:

a. EAGLE Window & Door, Inc.; an American Architectural Products Corporation Company.
b. Marvin Windows and Doors.
c. Pella Corporation.
d. Windsor Windows and Doors.

1.7 WINDOWS

A. Type: Fixed and double-hung and as indicated on Drawings.

B. Condensation-Resistance Factor: 45.

C. U-Factor: 0.35 Btu/sq. ft. x h x deg. F or less.

D. Solar Heat-Gain Coefficient: Whole-window SHGC maximum of 0.50.

E. Sound Transmission Class: 30.

F. Forced-Entry Resistance: Performance Grade 30.

G. Glazing: Factory glazed.

1. Glass: Clear, insulating, with low-E coating.
2. Glazing System: Manufacturer's standard.

H. Finishes: Class I, anodic, or baked enamel: Architect select color.

I. Hardware: Die-cast zinc, where exposed.

J. Insect Screens: Tubular aluminum frame with anodized finish.

1. Screen: Glass-fiber-mesh fabric.

K. Accessories: Architect select.

L. Wood Finishes: Factory stain and polyurethane finish, Architect select stain color.

END OF SECTION 085200

SECTION 087100 - DOOR HARDWARE

1.1 SUMMARY

A. Commercial door hardware for swinging doors.

B. Cylinders for doors specified in other Sections.

1.2 SUBMITTALS

A. Samples: For each exposed finish.

B. Other Action Submittals:

1. Door Hardware Sets: Prepared by or under the supervision of Installer, detailing fabrication and assembly of door hardware, as well as procedures and diagrams.
2. Keying Schedule: Prepared by or under the supervision of Installer, detailing Owner's final keying instructions for locks.

1.3 WARRANTY

A. Materials and Workmanship: Five years.

1.4 MAINTENANCE SERVICE

A. Full-Maintenance Service: One (1) year.

1.5 MANUFACTURERS:

A. The following manufacturers are approved subject to compliance with requirements of the Contract Documents. Approval of manufacturers other than those listed shall be in accordance with Division 1.

Item:	Manufacturer:	Approved:
Hinges	Stanley	Hager, McKinney
Continuous Hinges	Stanley	Select, Hager
Locksets & Cylinders	Best	Schlage ND VG, Yale 5400LN Sargent 11 Line
Exit Devices	Precision	Von Duprin 98, Sargent 80
Push/Pulls	Rockwood	Trimco, Hager
Protection	Plates Rockwood	Trimco, Hager
Closers	Stanley	LCN 4041, Norton 7500
Stops Flush-Bolts	Rockwood	Trimco, Hager
Overhead Stops	ABH	Glynn Johnson
Gasketing	Pemko	National Guard, Hager

1.6 PRODUCTS

A. Hinges:

1. Exterior: Stainless Steel.
2. Interior: Steel.
3. Fire-Rated Assemblies: Steel.

B. Continuous Hinges:

1. Barrel Type:

   a. Exterior: Stainless steel.
   b. Interior: Steel.
   c. Fire-Rated Assemblies: Steel.

2. Gear Type: Extruded aluminum.

C. Mechanical Locks and Latches:

1. Lockset Design: Lever-type.
2. Bored Locks: Grade 2, Series 4000.
3. Mortise Locks: All exterior doors.
4. Interconnected Locks: None.

D. Exit Devices: Grade 2.

1. Panic exit devices.
2. Fire exit devices.
3. Outside Trim: Match locksets and latchsets.

E. Cylinders and Keying:

1. Cylinders: Standard.

   a. Grade 2.
   b. Number of Pins: Seven.
   c. Cores: Removable.

2. Keying System:

   a. Master key.
   b. Keys: Nickel silver.

F. Closers:

1. Surface: Grade 2.
2. Closer holder release devices.

G. Stops and Holders: Grade 2.

H. Door Gasketing: as required.

I. Thresholds.

1.7 FIELD QUALITY CONTROL

A. Independent Architectural Hardware Consultant: Owner engaged to perform inspections.

B. Occupancy Adjustment: Six months.

1.8 DOOR HARDWARE SETS

A. General Contractor provide submittal for Architect/Owner review.

END OF SECTION 087100

SECTION 088000 - GLAZING

1.1 SUMMARY

A. Glazing required for the following:

1. Windows.
2. Doors.

1.2 QUALITY ASSURANCE

A. Preconstruction adhesion and compatibility testing.

1.3 WARRANTY

A. Deterioration of Coated Glass: Not less than 10 years.

B. Deterioration of Insulating Glass: Not less than 10 years.

1.4 MATERIALS

A. Glass Products:

1. Annealed Float Glass: Clear.
2. Heat-Treated Float Glass: Heat strengthened and fully tempered.
3. Coated Float Glass: Pyrolytically coated.
4. Insulating Glass: Manufacturer's standard dual-seal units.

B. Silicone Glazing Sealants: Neutral or basic curing, Class 50.

C. Glazing Tapes: Expanded-cellular type.

D. Glazing Gaskets: Dense compression.

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include:

1. General Glass Corporation
2. PPG Industries, Inc.
3. Guardian Industries Corporation
4. HPG Industries

1.5 SCHEDULE

A. Exterior Glazing: Clear, double-pane Low-E glass.

1. Glass: Fully tempered or heat-treated
2. Size: 1/8 inch (6cm)
3. Coating: Interior lite.
4. Gaskets: thermally broken.
5. Air Space: manufacturer standard at windows/doors.

END OF SECTION 088000

SECTION 092216 - NON-STRUCTURAL METAL FRAMING

1.1 SUMMARY

A. Non-load-bearing steel framing members for interior framing and suspension systems.

1.2 MATERIALS

A. Suspension Systems:

1. Wire hangers.
2. Flat hangers.
3. Carrying channels.
4. Furring channels.
5. Grid suspension systems for ceilings.

B. Steel Framing for Framed Assemblies:

1. Studs and runners.
2. Slip-Type Head Joints:

    a. Single long-leg runner.
    b. Double runner.
    c. Deflection track.

3. Firestop track.
4. Flat strap and backing plate.
5. Cold-rolled channel bridging.
6. Hat-shaped, rigid furring channels.
7. Resilient furring channels.
8. Cold-rolled furring channels.
9. Z-shaped furring.

END OF SECTION 092216

SECTION 092900 - GYPSUM BOARD

1.1 SUMMARY

A. Interior gypsum board.

B. Exterior gypsum board for ceilings and soffits.

C. Tile backing panels.

1.2 QUALITY ASSURANCE

A. Mockups for the following:

1. Levels of gypsum board finish for use in exposed locations.
2. Texture finishes.

1.3 MANUFACTURERS

A. General: Complying with ASTM C 36/C 36M or ASTM C 1396/C 1396M, as applicable to type of gypsum board indicated and whichever is more stringent.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. G-P Gypsum.
b. Lafarge North America Inc.
c. National Gypsum Company.
d. USG Corporation.

1.4 MATERIALS

A. Interior Gypsum Board:

1. Type X.
2. Moisture- and mold-resistant type.

B. Exterior Gypsum Board for Ceilings and Soffits:

1. Exterior gypsum soffit board.
2. Glass-mat gypsum sheathing board.

C. Trim Accessories:

1. Interior.
2. Exterior.
3. Aluminum: Extruded profiles.

D. Texture finishes: None.

E. Gypsum Board Finish Levels: Finish panels to levels indicated below:

1. Level 1: Ceiling plenum areas, concealed areas, and where indicated.
2. Level 2: Panels that are substrate for tile.
3. Level 3: At areas to receive textured coatings.
4. Level 4: Other areas exposed to public.
5. Level 5: No areas.

END OF SECTION 092900

SECTION 099113 - EXTERIOR PAINTING

1.1 SUMMARY

A. Surface preparation and the application of paint systems on exterior substrates.

1.2 QUALITY ASSURANCE

A. Quality Standards: "MPI Approved Products List" and "MPI Architectural Painting Specification Manual."

B. Mockups for each color and finish.

1.3 FIELD QUALITY CONTROL

A. Testing: By Owner-engaged agency.

1.4 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Benjamin Moore®.
2. Kelly-Moore Paints.
3. Kwal-Howells Paint.
4. Sherwin-Williams Company (The).

1.5 EXTERIOR PAINTING SCHEDULE

A. Steel Substrates: powder-coated.

B. Galvanized-Metal Substrates: powder-coated.

C. Aluminum Substrates: powder-coated.

D. Exterior Gypsum Board Substrates:

1. Latex System: MPI EXT 9.2A.

E. Exterior Fiber-Cement Panel Substrates (not otherwise coated):

1. Latex System: MPI EXT 9.2A.

END OF SECTION 099113

SECTION 099123 - INTERIOR PAINTING

1.1 SUMMARY

A. Surface preparation and the application of paint systems on interior substrates.

1.2 QUALITY ASSURANCE

A. Quality Standards: "MPI Approved Products List" and "MPI Architectural Painting Specification Manual."

B. Mockups for each color and finish.

1.3 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Benjamin Moore®.
2. Kelly-Moore Paints.
3. Kwal-Howells Paint.
4. Sherwin-Williams Company (The).

1.4 FIELD QUALITY CONTROL

A. Testing: By Owner-engaged agency.

1.5 INTERIOR PAINTING SCHEDULE

A. Gypsum Board Substrates:

1. Latex System: MPI INT 9.2A.

END OF SECTION 099123

SECTION 099300 - STAINING AND TRANSPARENT FINISHING

1.1 SUMMARY

A. Surface preparation and application of wood finishes on exterior and interior substrates.

1.2 QUALITY ASSURANCE

A. Quality Standards: "MPI Approved Products List" and "MPI Architectural Painting Specification Manual."

B. Samples for each color and finish.

1.3 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Benjamin Moore & Co.
2. Kwal-Howells Paint.
3. PPG Architectural Finishes, Inc.
4. Sherwin-Williams Company (The)

1.4 EXTERIOR WOOD-FINISH-SYSTEM SCHEDULE

A. Exposed Beam and Column Substrates:

1. Solid-Color, Solvent-Based Stain System: MPI EXT 6.1C.

B. Exposed Rough Carpentry Substrates:

1. Semitransparent Stain System: MPI EXT 6.2L.

C. Finish Carpentry Substrates:

1. Clear, Two-Component Polyurethane System: MPI EXT 6.3G.

D. Exposed Wood Panel-Product Substrates:

1. Semitransparent Stain System: MPI EXT 6.4D.

E. Wood Deck and Stair Substrates:

1. Wood Preservative and Stain System: MPI EXT 6.5D.

1.5 INTERIOR WOOD-FINISH-SYSTEM SCHEDULE

A. Finish Carpentry Substrates:

1. Polyurethane Varnish Over Stain System: MPI INT 6.3E.

B. Exposed Wood Panel-Product Substrates:

1. Polyurethane Varnish Over Stain System: MPI INT 6.4E.
2. Polyurethane Varnish System: MPI INT 6.4.J.

END OF SECTION 099300

SECTION 104416 - FIRE EXTINGUISHERS

1.1 QUALITY ASSURANCE

A. Fire Extinguishers: NFPA 10.

1.2 WARRANTY

A. Materials and Workmanship: Five years.

1.3 MANUFACTURERS

A. Fire Extinguishers: Type, size, and capacity for each fire protection cabinet and mounting bracket indicated.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

a. J. L. Industries, Inc.; a division of Activar Construction Products Group.
b. Larsen's Manufacturing Company.
c. Potter Roemer LLC.

1.4 PRODUCTS

A. Portable, Hand-Carried Fire Extinguishers:

1. Multipurpose Dry-Chemical Type in Steel Container: UL-rated 4-A:60-B:C, 10-lb (4.5-kg) nominal capacity, with monoammonium phosphate-based dry chemical in stainless-steel container.

B. Mounting Brackets: Galvanized steel with identification lettering.

END OF SECTION 104416

SECTION 107313 – FABRIC AWNINGS

1.1 SUMMARY

A. Metal frame canopies with fade-resistant fixed fabric awnings.

1.2 PERFORMANCE REQUIREMENTS

A. Structural Performance: Manufacturer standard.

B. Wind Speed: N/A.

1.3 QUALITY ASSURANCE

A. Welding: Per AWS D1.1/D1.1M, "Structural Welding Code--Steel."

B. Mockups for each form of construction.

1.4 WARRANTY

A. Materials and Workmanship: 5 years.

1.5 FABRICS

A. Fabric Fiber Content: Resin-coated polyester, Resin-coated polyester/cotton blend, Solution-dyed acrylic, Solution-dyed modacrylic.

B. Bottom Hem: Straight.

C. Applied Treatment: Stain resistant, Water repellent.

1.6 FRAMES

A. Steel: Steel with powder-coat finish.

1.7 FABRICATION

A. Fabric Edges and Seams: Folded and stitched.

B. Decorative Trims: none.

C. Frame Connections: Welded.

D. Operation: Fixed.

1.8 INSTALLATION

A. Fabric attached to frames using fabric hem pockets.

END OF SECTION 107313

SECTION 113100 - RESIDENTIAL APPLIANCES

1.1 SUMMARY

A. The following appliances to be supplied by Owner, installed by Contractor:

1. Electric range.
2. Ventilation range hood.

1.2 QUALITY ASSURANCE

A. Quality Standard: NAECA.

B. Products: UL listed.

1.3 WARRANTY

A. Materials and Workmanship:

1. Electric Range and Hood: Manufacturer standard.

1.4 RESIDENTIAL APPLIANCE SCHEDULE

A. Range: Freestanding electric.

1. Type: ceramic-glass cooktop with oven.
2. Cooktop: Four burners.
3. Size: 30 inch.
4. Oven(s): One.

B. Exhaust Hood: Undercabinet, nonvented, recirculating.

1. Color: per Architect. Match adjacent appliances.

END OF SECTION 113100

SECTION 221353 - FACILITY SEPTIC TANKS

1.1 SUMMARY

A. Septic tanks and septic tank filters for sink waste.

B. Pipe and fittings, including cleanouts.

1.2 MANUFACTURED UNITS

A. Septic Tanks: Precast concrete, single chamber with filter.

1.3 MATERIALS

A. Distribution Pipes and Fittings:

1. ABS sewer pipe and fittings with solvent-cement or gasket joints.

B. Cleanouts: Cast iron or PVC.

END OF SECTION 221353

SECTION 224000 - PLUMBING FIXTURES

1.1 QUALITY ASSURANCE

A. Regulatory Requirement: ICC A117.1.

B. Quality Standard: NSF 61 for fixture materials in contact with potable water.

1.2 FAUCETS

A. Sink Faucets: Moen, or equal.

1. Kitchen faucet with spray, three-hole fixture.

a. Body Material: General-duty, solid brass.
b. Finish: Architect select from standard finishes.
c. Maximum Flow Rate: 2.5 gpm, unless otherwise indicated.
d. Mixing Valve: Single control.
e. Mounting: Deck.
f. Spout Type: Swing, shaped tube.
g. Spout Outlet: Aerator.
h. Vacuum Breaker: per Plumber.
i. Operation: Compression, manual.
j. Drain: Standard residential.

1.3 KITCHEN SINKS

A. Kitchen Sinks:

1. Two-bowl, residential, counter-mounting, stainless-steel kitchen sink.

a. Overall Dimensions: Per Architect. Provide shop drawings.
b. Metal Thickness: 0.038 inch.
c. Left Bowl:

1) Dimensions: equal to right bowl.
2) Drain: 3-1/2-inch.

d. Right Bowl:

1) Dimensions: equal to left bowl.
2) Drain: 3-1/2-inch.

1.4 SERVICE BASINS

A. Service Basins (Mop Sink):

1. Flush-to-wall, floor-mounting, cast-polymer or stainless steel fixture with rim guard.

a. Shape: Square.

b. Size: 24 by 24 inches.
c. Height: 10-12 inches.
d. Tiling Flange: Not required.
e. Rim Guard: On front top surfaces.
f. Faucet: Standard.

END OF SECTION 224000

SECTION 312000 - EARTH MOVING

1.1 SUMMARY

A. Preparing subgrades for slabs-on-grade.

B. Excavating and backfilling for buildings and structures.

C. Drainage course for concrete slabs-on-grade.

D. Subsurface drainage backfill for walls and trenches.

E. Excavating and backfilling trenches for utilities and pits for buried utility structures.

F. Excavation: Classified, with unit prices for rock.

1.2 QUALITY ASSURANCE

A. Blasting: Not allowed.

1.3 MATERIALS

A. Soil Materials:

1. Subbase Material: Graded mixture of gravel, crushed stone, and sand with 90 percent passing a 1-1/2-inch (37.5-mm) sieve and not more than 12 percent passing a No. 200 (0.075-mm) sieve.
2. Base Course: Graded mixture of gravel, crushed stone, and sand with 95 percent passing a 1-1/2-inch (37.5-mm) sieve and not more than 8 percent passing a No. 200 (0.075-mm) sieve.
3. Engineered Fill: Graded mixture of gravel, crushed stone, and sand with 90 percent passing a 1-1/2-inch (37.5-mm) sieve and not more than 12 percent passing a No. 200 (0.075-mm) sieve.
4. Bedding Course: Graded mixture of gravel, crushed stone, and sand with 100 percent passing a 1-inch (25-mm) sieve and not more than 8 percent passing a No. 200 (0.075-mm) sieve.
5. Drainage Course: Narrowly graded mixture of crushed stone or gravel, coarse-aggregate grading Size 57.
6. Filter Material: Narrowly graded mixture of gravel, or crushed stone and natural sand, coarse-aggregate grading Size 67.
7. Sand: ASTM C 33; fine aggregate.
8. Impervious Fill: Clayey gravel and sand mixture.

B. Geotextiles: Not required.

C. Warning Tape: Detectable, polyethylene film.

1.4 EXCAVATION

A. Explosives: Not allowed.

B. Disposal of Surplus and Waste Materials: Satisfactory soil to designated storage areas on Owner's property; waste materials and unsatisfactory soil off Owner's property.

1.5 FIELD QUALITY CONTROL

A. Special Inspector and Testing Agency: Owner engaged.

END OF SECTION 312000

SECTION 316329 - DRILLED CONCRETE PIERS AND SHAFTS

1.1 SUMMARY

A. Dry or Slurry displacement-installed drilled piers.

1.2 UNIT PRICES

A. Drilled Piers: Actual net volume of drilled piers in place.

B. Rock Measurement: Volume of rock actually removed, but not to exceed outside dimensions of drilled piers cast against rock.

C. Trial Drilled Pier: As indicated for drilled piers, including backfilling.

1.3 PROJECT CONDITIONS

A. Geotechnical report is available.

B. Contractor to engage a surveyor or engineer to perform surveys, layouts, and measurements for drilled piers.

1.4 MATERIALS

A. Steel Reinforcement: Low-alloy-steel reinforcing bars.

B. Steel Casings: Corrugated-steel pipe.

C. Concrete: 4000 psi or per Structural Engineer or record.

1.5 INSTALLATION

A. Excavation: per Civil Engineer.

1.6 FIELD QUALITY CONTROL

A. Special Inspections: Engage inspector.

B. Testing Agency: Engage agency.

END OF SECTION 316329