Tallgrass Creek
Residential Building 1.3

13840 Metcalf Avenue
Overland Park, KS

Project Manual
Volume One of Two
Divisions 1 through 14
And Interior Design Specifications

Issue for Construction
September 5, 2013

Owner:
Redwood-ERC Kansas LLC.
703 Maiden Choice Lane
Catonsville, MD 21228

Architect:
Lantz-Boggio Architects, P.C.
5650 DTC Parkway, Suite 200
Englewood, CO 80111

Prepared by:
Lantz-Boggio Architects, PC
5650 DTC Parkway, Suite 200
Englewood, Colorado 80111

Tallgrass Creek
Residential Building 1.3

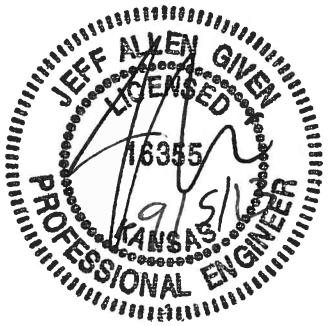
13840 Metcalf Avenue
Overland Park, KS

Project Manual
Volume Two of Two
Divisions 15 through 33

Issue for Construction
September 5, 2013

Owner:
Redwood-ERC Kansas LLC.
703 Maiden Choice Lane
Catonsville, MD 21228

Architect:
Lantz-Boggio Architects, P.C.
5650 DTC Parkway, Suite 200
Englewood, CO 80111



Prepared by:
Lantz-Boggio Architects, PC
5650 DTC Parkway, Suite 200
Englewood, Colorado 80111

TABLE OF CONTENTS

VOLUME ONE

END OF TABLE OF CONTENTS

SECTION 000103-PROJECT DIRECTORY

TALLGRASS CREEK SKILLED NURSING AND MEMORY CARE FACILITIES
OVERLAND PARK, KANSAS

OWNER:

Redwood-ERC Kansas LLC.
701 Maiden Choice Lane
Catonsville, Maryland 21228
410-242-2880 / F 410-402-2420

PROJECT CONSULTANTS:

Architect:

Lantz-Boggio Architects, PC.
5650 DTC Parkway, Suite 200
Englewood, Colorado 80111
303-773-0436 / F 303-773-8709

Interior Design Consultant:

LBA Interiors
5650 DTC Parkway, Suite 100
Englewood, Colorado 80111
303-773-0436 / 303-773-8709

Civil Engineering Consultant: (Under Separate Cover)

Kimley-Horn and Associates, Inc.
2800 Hitchcock Avenue
Downers Grove, IL 60515
630-487-5557

Landscape Architecture Consultant: (Under Separate Cover)

Kenneth Weikal Landscape Architecture
33203 Biddestone Lane
Farmington Hills, MI 48334
248-477-3600

Structural Engineering Consultant:

Jirsa Hedrick & Associates
7000 E. Belleview Avenue, Suite 250
Greenwood Village, Colorado 80111
303-839-1963

Mechanical and Plumbing Engineering Consultant:

Given & Associates, Inc.
735 S. Xenon Court, Suite 201
Lakewood, Colorado 80228
303-716-1270

Electrical Engineering Consultant:

Alber Engineering, Inc.
5173 Oak Hollow Drive
Morrison, CO. 80465
303-736-2739

Food Service Equipment Consultant:

United Restaurant Supply, Inc.
725 Clark Place
Colorado Springs, Colorado 80915
719-574-3220

Geotechnical Consultant: (Under Separate Cover)

Kansas City Testing and Engineering, LLC.
1308 Adams Street
Kansas City, KS 66103
913-321-8100 / F 913-321-8181

END OF PROJECT DIRECTORY

SECTION 00 3100-AVAILABLE PROJECT INFORMATION

PART 1 GENERAL

1.01 EXISTING CONDITIONS

A. Certain information relating to existing surface and subsurface conditions and structures is available to Contractor, but are not part of the Contract Documents, as follows:

B. ALTA/ACSM Survey:
   1. A copy may be obtained from the Architect upon request.
   2. This survey identifies conditions of existing construction prepared primarily for the use of Architect in establishing the extent of the new versus existing work.
   3. This survey includes a photographic record of existing conditions visible.
   4. This survey identifies grade elevations, boundary data, existing legal encumberances, setbacks, existing utilities, and existing site improvements prepared primarily for the use of Architect in establishing new grades and identifying natural water shed.
   5. Contractor is urged to examine survey data.
   6. Contractor should visit the site and become acquainted with existing conditions.
   7. Interpretation: This survey is provided only for information and convenience. Owner and Architect disclaim responsibility for accuracy, true location and extent of existing conditions that have been documented by others. Owner and Architect further disclaim responsibility for interpretation of the survey data by the Contractor.

C. Geotechnical Report: Prepared by Kansas City Testing and Engineering, LLC. Titled Site Exploration and Geotechnical Engineering Report, Tallgrass Creek Retirement Community Phase II, West 139th Street and Metcalf Avenue, Overland Park, Kansas, dated October 5, 2012.
   1. A copy is included with this document.
   2. Contractor is urged to examine data provided.
   3. Contractor should visit the site and become acquainted with existing conditions.
   4. This report identifies properties of below grade conditions and offers recommendations for the design of foundations, prepared primarily for the use of Architect.
   5. This report, by its nature, cannot reveal all conditions that exist on the site. Should subsurface conditions be found to vary substantially from this report, changes in the design and construction of foundations will be made, with resulting credits or expenditures to the Contract Sum accruing to Owner.
   6. Interpretation: This report is provided only for information and convenience. Owner and Architect disclaim responsibility for accuracy, true location and extent of soil conditions that have been evaluated by others. Owner and Architect further disclaim responsibility for interpretation of the report data by the Contractor; including but not limited to projecting soil bearing values, rock profiles, soil stability, and presence, level, and extent of underground water.
   7. Applicable Requirements: Specific and variable recommendations contained in this document are subject to acceptance by Owner for incorporation in the Contract Documents prepared by Architect. Comply with requirements specified in the Contract Documents for earthwork, paving systems, and other applicable work scope items.

1.02 TESTED ASSEMBLY DATA

A. Tested assembly data for specified fire-resistive assemblies and systems is required to be provided as part of the building permit documents. This data is included in the Drawings.

B. Contractor is urged to examine data provided.

C. Interpretation: Tested assembly data is provided only for information and convenience. Owner and Architect disclaim responsibility for data that has been prepared by others. Owner and Architect further disclaim responsibility for interpretation of the data.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

SECTION 00 5000 -CONTRACTING FORMS AND SUPPLEMENTS

PART 1 GENERAL

1.01 AGREEMENT AND CONDITIONS OF THE CONTRACT

A. The Agreement is based on Owner's form following this Section.

B. The General Conditions are based on Owner's form following this Section.

1.02 FORMS

A. Use the following forms for the specified purposes unless otherwise indicated elsewhere in the Contract Documents.

B. Post-Award Certificates and Other Forms:
   1. Submittal Transmittal Form: Contractor's standard form is acceptable.
   2. Schedule of Values Form: AIA G703.
   3. Application for Payment Form: AIA G702 and G703.

C. Clarification and Modification Forms:
   1. Supplemental Instruction Form: See Section 00 6000.
   2. Construction Change Directive Form: See Section 00 6000.
   3. Request for Proposal Form: See Section 00 6000.
   4. Change Order Form: AIA G701.

D. Closeout Forms:
   1. Certificate of Substantial Completion Form: AIA G704.

1.03 REFERENCE STANDARDS

A. AIA G701 - Change Order ; 2001.

B. AIA G702 - Application and Certificate for Payment ; 1992.

C. AIA G703 - Continuation Sheet ; 1992.

D. AIA G704 - Certificate of Substantial Completion ; 2000.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF DOCUMENT

SECTION 00 6000 -PROJECT FORMS

PART 1 GENERAL

1.01 SUMMARY

A. Procedures for use of administrative forms.

B. Administrative forms.

1.02 PROCEDURES

A. Deliver or electronically transmit completed forms to Architect at the address listed on the cover of the Project Manual.

B. Use of forms included at end of this Section is required. Architect will provide electronic copies of the forms upon request.
   1. Use of Contractor's alternative forms is acceptable subject to approval of Architect, and provided that content of alternative forms is substantially equivalent to forms provided in this Section.

C. Complete applicable information on form. Indicate date transmitted and date of required response, as applicable. Attach supporting documentation and additional descriptive information as necessary to fully describe the request.

D. Use a single form for each separate request. Closely related items may be included in a single request only if acceptance of one item requires acceptance of all items in the request.

1.03 ARCHITECT'S ACTION

A. Architect will review each request, and return the form to Contractor with written response within 10 days of receipt, except when it must be held for coordination with pending submittals, and Contractor is so advised.

B. When requests are made within the time allowed for Architect's review, Architect will make reasonable effort to respond in a timely manner, but no claim for delay by Contractor will be allowed.

1.04 FORMS

A. Proposal Request: Architect may submit a Proposal Request which includes detailed description of proposed modification with supplementary or revised drawings and specifications, the projected time for executing the modification, with a stipulation of any overtime work required, and the period of time during which the requested price will be considered valid. Refer to Section 01 2000.

B. Supplemental Instructions: Architect may issue a Supplemental Instruction which includes detailed description of proposed minor modification, with supplementary or revised drawings and specifications.

C. Construction Change Directive: Architect may issue a Construction Change Directive, signed by Owner and Architect, instructing Contractor to proceed with a modification to the Work, for subsequent inclusion in a Change Order. Construction Change Directive will describe changes in the Work, and will designate method of determining any change in Contract Sum or Contract Time.

D. Forms are on pages immediately following the end of this Section.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF DOCUMENT

SECTION 01 1000-SUMMARY

PART 1 GENERAL

1.01 PROJECT

A. Project Name: Tallgrass Creek Residential Building 1.3.

B. Owner's Name: Erickson Living.

C. Architect's Name: Lantz-Boggio Architects, PC.

D. The Project includes materials, labor, transportation, security, temporary facilities, and other items identified in, or reasonably inferable from the construction Drawings and Project Manual for the referenced Project.

1.02 CONTRACT DESCRIPTION

A. Contract Type: A single prime contract based on the Cost of the Work plus a fee as described in Document 00 5000 - Contracting Forms and Supplements.

1.03 DIVISION 01 SPECIFICATIONS

A. Division 01 General Requirements expand on the broad provisions of the Conditions of the Contract, and govern the execution of the work of all Sections of the specifications. Division 01 General Requirements specify administrative and procedural requirements relating to execution of the Work, and temporary facilities for use during the construction period.

1.04 WORK BY OWNER

A. Items noted NIC (Not in Contract) will be supplied and installed by Owner before Substantial Completion. Some items include:
   1. Movable cabinets.
   2. Furnishings.
   3. Small equipment.
   4. Rugs.
   5. Artwork.
   6. Fabric window coverings and drapery tracks.

1.05 OWNER OCCUPANCY

A. Owner intends to occupy the Project upon Substantial Completion.

B. Cooperate with Owner to minimize conflict and to facilitate Owner's operations.

C. Schedule the Work to accommodate Owner occupancy on or before the Date established in the Agreement.

1.06 CONTRACTOR USE OF SITE

A. Construction Operations: Limited to areas noted on Drawings.

B. Arrange use of site and premises to allow:
   1. Owner occupancy.
   2. Work by Others.
   3. Work by Owner.

C. Provide access to and from site as required by law and by Owner:
   1. Emergency Building Exits During Construction: Keep all exits required by code open during construction period; provide temporary exit signs if exit routes are temporarily altered.
   2. Do not obstruct roadways, sidewalks, or other public ways without permit.

D. Existing building spaces may not be used for storage.

1.07 DELEGATED DESIGN WORK

A. See Section 01 4000 - Quality Requirements, for delegated design requirements.

B. Design of building systems, or components of systems, specified to be provided by Contractor; refer to applicable Division 21 and 28 Sections:
   1. Fire sprinkler systems.
   2. Fire alarm systems.

C. Design of products and systems, or components of products and systems, specified to be provided by Contractor in the following specification Sections:
   1. Section 05 1200 - Structural Steel Framing.
   2. Section 05 2110 - Hambro Joist Framing.
   3. Section 05 5100 - Metal Stairs.
   4. Section 07 8400 - Firestopping.
   5. Section 08 5313 - Vinyl Windows.

D. Contractor's Responsibilities:
   1. Comply with specified design requirements for each applicable product or system.
   2. Coordinate design and space requirements with other affected work and Architect.
   3. Review applicable submittals and coordinate selections with Architect.
   4. Receive and unload products and systems at the site; inspect for completeness and for damage.
   5. Handle, store, install, and finish products and systems.
   6. Repair or replace damaged, defective, or missing items.
   7. Arrange for manufacturer's warranties, inspections, and service.
   8. Comply with applicable provisions of Division 01 - General Requirements, specifically including administrative requirements, coordination, quality, regulatory, and product requirements.
   9. Coordinate delegated design work with Sections 07 8400 - Firestopping, 08 3100 - Access Doors, applicable Division 09 painting Sections, applicable Division 23 HVAC instrumentation and control Sections, and provide work scope specified in these Sections that is applicable to design-build work.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01 2000- PRICE AND PAYMENT PROCEDURES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Procedures for preparation and submittal of applications for progress payments.

B. Documentation of modifications in Contract Sum and Contract Time.

C. Modification procedures.

D. Correlation of Contractor submittals based on modifications.

E. Procedures for preparation and submittal of application for final payment.

1.02 SCHEDULE OF VALUES

A. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit sample to Architect for approval.

B. Forms filled out by hand will not be accepted.

C. Submit a printed schedule on AIA Form G703 - Application and Certificate for Payment Continuation Sheet. Contractor's standard form or electronic media printout will be considered.

D. Submit Schedule of Values in duplicate within 15 days after date of Owner-Contractor Agreement.

E. Format: Utilize the Table of Contents of this Project Manual. Identify each line item with number and title of the specification Section. Identify site mobilization.

F. Include in each line item, the amount of Allowances specified in this Section. For unit cost Allowances, identify quantities taken from Contract Documents multiplied by the unit cost to achieve the total for the item.

G. Revise schedule to list approved Change Orders, with each Application For Payment.

1.03 APPLICATIONS FOR PROGRESS PAYMENTS

A. Payment Period: Submit at intervals stipulated in the Agreement.

B. Form: AIA G702 Application and Certificate for Payment and AIA G703 - Continuation Sheet including continuation sheets when required.

C. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit sample to Architect for approval.
   1. Forms filled out by hand will not be accepted.

D. For each item, provide a column for listing each of the following:
   1. Item Number.
   2. Description of work.
   3. Scheduled Values.
   4. Previous Applications.
   5. Work in Place and Stored Materials under this Application.
   6. Authorized Change Orders.
   7. Total Completed and Stored to Date of Application.
   8. Percentage of Completion.
   9. Balance to Finish.
   10. Retainage.

E. Execute certification by signature of authorized officer.

F. Use data from approved Schedule of Values. Provide dollar value in each column for each line item for portion of work performed and for stored Products.

G. List each authorized Change Order as a separate line item, listing Change Order number and dollar amount as for an original item of Work.

H. Submit three copies of each Application for Payment.

I. Include the following with the application:
   1. Transmittal letter as specified for Submittals in Section 01 3000.
   2. Construction progress schedule, revised and current as specified in Section 01 3000.
   3. Conditional release of liens from each Subcontractor and vendor for the current month's payment application, and unconditional release of liens from each Subcontractor and vendor for the previous month's payment application.
   4. Project record documents as specified in Section 01 7800, for review by Owner which will be returned to the Contractor.
   5. Affidavits attesting to off-site stored products.

J. When Architect requires substantiating information, submit data justifying dollar amounts in question. Provide one copy of data with cover letter for each copy of submittal. Show application number and date, and line item by number and description.

1.04 MODIFICATION PROCEDURES

A. Submit name of the individual authorized to receive modification documents and who will be responsible for informing others in Contractor's employ or subcontractors of modifications to the Contract Documents.

B. Supplemental Instructions: For minor modifications not involving an adjustment to the Contract Price or Contract Time, Architect will issue instructions directly to Contractor.

C. Construction Change Directive: For other required modifications, Architect will issue a document signed by Architect and Owner instructing Contractor to proceed with the modification, for subsequent inclusion in a Change Order.
   1. The document will describe the required changes and will designate method of determining any change in Contract Price or Contract Time.
   2. Promptly execute the change.

D. Proposal Request: For modifications for which advance pricing is desired, Architect will issue a document which includes a detailed description of a proposed modification with supplementary or revised drawings and specifications, a modification in Contract Time for executing the modification with a stipulation of any overtime work required and the period of time during which the requested price will be considered valid. Contractor shall prepare and submit a fixed price quotation within 10 days.

E. Contractor may propose a change by submitting a request for change to Architect, describing the proposed change and its full effect on the Work, with a statement describing the reason for the change, and the effect on the Contract Price and Contract Time with full documentation and a statement describing the effect on Work by separate or other contractors. Document any requested substitutions in accordance with Section 01 6000.

F. Computation of Change in Contract Amount: As specified in the Agreement and Conditions of the Contract.
   1. For change requested by Architect for work falling under a fixed price contract, the amount will be based on Contractor's price quotation.
   2. For change requested by Contractor, the amount will be based on the Contractor's request for a Change Order as approved by Architect.
   3. For pre-determined unit prices and quantities, the amount will based on the fixed unit prices.
   4. For change ordered by Architect without a quotation from Contractor, the amount will be determined by Architect based on the Contractor's substantiation of costs as specified for Time and Material work.

G. Substantiation of Costs: Provide full information required for evaluation.
   1. On request, provide following data:
      a. Quantities of products, labor, and equipment.
      b. Taxes, insurance, and bonds.
      c. Overhead and profit.
      d. Justification for any change in Contract Time.

e. Credit for deletions from Contract, similarly documented.

2. Support each claim for additional costs with additional information:
   a. Origin and date of claim.
   b. Dates and times work was performed, and by whom.
   c. Time records and wage rates paid.
   d. Invoices and receipts for products, equipment, and subcontracts, similarly documented.
3. For Time and Material work, submit itemized account and supporting data after completion of change, within time limits indicated in the Conditions of the Contract.

H. Execution of Change Orders: Contractor will issue Change Orders for signatures of parties as provided in the Conditions of the Contract.

I. After execution of Change Order, promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as a separate line item and adjust the Contract Price.

J. Promptly revise progress schedules to reflect any change in Contract Time, revise sub-schedules to adjust times for other items of work affected by the change, and resubmit.

K. Promptly enter changes in Project Record Documents.

1.05 APPLICATION FOR FINAL PAYMENT

A. Prepare Application for Final Payment as specified for progress payments, identifying total adjusted Contract Price, previous payments, and sum remaining due.

B. Application for Final Payment will not be considered until the following have been accomplished:
   1. All closeout procedures specified in Section 01 7000.
   2. Receipt of final Certificate of Occupancy from jurisdictional authority.
   3. Acceptance or Work by Owner and Architect .

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01 2100-ALLOWANCES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Cash allowances.

1.02 CASH ALLOWANCES

A. Costs Included in Cash Allowances: Cost of products to Contractor or subcontractor, less applicable trade discounts.

B. Differences in costs will be adjusted by Change Order.

1.03 ALLOWANCES SCHEDULE

A. Section 01 4000 - Quality Requirements: Include the stipulated sum of $6,000.00 for the cost of composite mock-up of the exterior finishes, consisting of a 10 x 10 foot square "shed building" separate from the main building; comply with specified requirements and Architect's direction for composite mock-up construction.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01 3000-ADMINISTRATIVE REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Preconstruction meeting.

B. Progress meetings.

C. Construction progress schedule.

D. Submittals for review, information, and project closeout.

E. Number of copies of submittals.

F. Submittal procedures.

1.02 PROJECT COORDINATION - GENERAL

A. Project Coordinator: Contractor.

B. Comply with requirements specified in Section 01 3114.

C. Cooperate with the Project Coordinator in allocation of mobilization areas of site; for field offices and sheds, for site access, traffic, and parking facilities.

D. During construction, coordinate use of site and facilities through the Project Coordinator.

E. Comply with Project Coordinator's procedures for communications within the construction team; for submittals, reports and records, schedules, coordination drawings, and recommendations; and resolution of ambiguities and conflicts.

F. Comply with instructions of the Project Coordinator for use of temporary utilities and construction facilities.

G. Coordinate field engineering and layout work under instructions of the Project Coordinator.

H. Make the following types of submittals to Architect through the Project Coordinator:
   1. Requests for interpretation.
   2. Requests for substitution.
   3. Shop drawings, product data, and samples.
   4. Test and inspection reports.
   5. Design data.
   6. Manufacturer's instructions and field reports.
   7. Applications for payment and change order requests.
   8. Progress schedules.
   9. Coordination drawings.
   10. Closeout submittals.
   11. Other specified submittals.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 PRECONSTRUCTION MEETING

A. Architect will schedule a meeting after Notice of Award.

B. Attendance Required:
   1. Owner.
   2. Architect.
   3. Contractor.

4. Other invited participants.

C. Minimum Agenda:
1. Execution of Owner- Contractor Agreement.
2. Submission of executed bonds and insurance certificates.
3. Distribution of Contract Documents.
4. Submission of list of Subcontractors, list of Products, schedule of values, and progress schedule.
5. Designation of personnel representing the parties to Contract , including Contractor, Owner, and Architect.
6. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders, and Contract closeout procedures.
7. Scheduling.
8. Scheduling activities of a Geotechnical Engineer.
9. Infection Control Plan (ICP) and Policy.

D. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.

3.02 PROGRESS MEETINGS

A. Schedule and administer meetings throughout progress of the Work at maximum bi-monthly intervals.

B. Make arrangements for meetings, prepare agenda with copies for participants, preside at meetings.

C. Attendance Required: Job superintendent, major Subcontractors and suppliers as necessary, Owner, Architect, as appropriate to agenda topics for each meeting.

D. Minimum Agenda:
1. Review minutes of previous meetings.
2. Review of Work progress.
3. Field observations, problems, and decisions.
4. Review of RFI log and status of RFI's.
5. Identification of problems that impede, or will impede, planned progress.
6. Review of submittals schedule and status of submittals.
7. Modification (Change Order) status.
8. Review of off-site fabrication and delivery schedules.
9. Maintenance of progress schedule.
10. Corrective measures to regain projected schedules.
11. Planned progress during succeeding work period.
12. Coordination of projected progress.
13. Maintenance of quality and work standards.
14. Effect of proposed changes on progress schedule and coordination.
15. Other business relating to Work.

E. Record minutes and distribute copies by e-mail within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.

3.03 CONSTRUCTION PROGRESS SCHEDULE

A. Within 10 days after date of the Agreement, submit preliminary schedule defining planned operations for the first 60 days of Work, with a general outline for remainder of Work.

B. If preliminary schedule requires revision after review, submit revised schedule within 10 days.

C. Within 20 days after review of preliminary schedule, submit draft of proposed complete schedule for review.
1. Include written certification that major contractors have reviewed and accepted proposed schedule.

D. Within 10 days after joint review, submit complete schedule.

E. Submit updated schedule with each Application for Payment.

3.04 SUBMITTALS FOR REVIEW

A. When the following are specified in individual Sections, submit them for review:
   1. Product data.
   2. Shop drawings.
   3. Samples for selection.
   4. Samples for verification.

B. Submit to Architect for review for the limited purpose of checking for conformance with information given and the design concept expressed in the contract documents.

C. Samples will be reviewed only for aesthetic, color, or finish selection as applicable.

D. Coordinate submittals into logical groupings to facilitate interrelation of the several items:
   1. Submit interior finishes samples and product data as a single package, including but not limited to finishes items specified in Divisions 09, 10, 12, and 14.
   2. Submit exterior finishes samples and product data as a single package, including but not limited to finishes items specified in Divisions 03, 04, 07, 08, and 09.
   3. Submit all door, frame, and hardware product data, schedules, and other specified submittal information in a single package as specified in Division 08.
   4. Submit mechanical items in a single package, including but not limited to items specified in Divisions 21, 22, and 23.
   5. Submit electrical items in a single package, including but not limited to items specified in Divisions 25, 26, 27, and 28.

E. After review, provide copies and distribute in accordance with SUBMITTAL PROCEDURES articles below, and for record documents purposes described in Section 01 7800.

3.05 SUBMITTALS FOR INFORMATION

A. When the following are specified in individual Sections, submit them for information:
   1. Design data.
   2. Certificates.
   3. Test reports.
   4. Inspection reports.
   5. Manufacturer's instructions.
   6. Manufacturer's field reports.
   7. Other types specified.

B. Submit for Architect's knowledge as contract administrator or for Owner. No action will be taken.

3.06 SUBMITTALS FOR PROJECT CLOSEOUT

A. When the following are specified in individual Sections, submit them at project closeout:
   1. Project record documents.
   2. Operation and maintenance data.
   3. Warranties.
   4. Bonds.

B. Submit for Owner's benefit during and after project completion.

3.07 NUMBER OF COPIES OF SUBMITTALS

A. Documents: Submit one electronic copy in PDF format; an electronically-marked up file will be returned. Create PDFs at native size and right-side up; illegible files will be rejected.

B. Extra Copies at Project Closeout: See Section 01 7800.

C. Samples: Submit the number specified in individual specification Sections; one of which will be retained by Architect.
   1. After review, produce duplicates.

2. Retained samples will not be returned to Contractor unless specifically so stated.

3.08 SUBMITTAL PROCEDURES - GENERAL

A. Transmit each submittal with approved form.
   1. Submittal Format: Electronic only.
   2. Sample Submittals: Submit as physical submittals as specified.

B. Sequentially number the transmittal form. Revise submittals with original number and a sequential alphabetic suffix.
   1. Submittal Log: Establish and maintain a submittal log, numbering each submittal by corresponding CSI Section number using Architect's project number as a prefix.
      a. Number multiple submittals within each Section sequentially as a suffix, starting with 001.
      b. Example Submittal Number: 2011.16-(Section Number)-001

C. Identify Project, Contractor, Subcontractor or supplier; pertinent drawing and detail number, and specification Section number, as appropriate on each copy.

D. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of Products required, field dimensions, adjacent construction Work, and coordination of information is in accordance with the requirements of the Work and Contract Documents.

E. Deliver submittals to Construction Manager at business address.

F. Schedule submittals to expedite the Project, and coordinate submission of related items.

G. For each submittal for review, allow 21 calendar days excluding delivery time to and from the Contractor.

H. Identify variations from Contract Documents and Product or system limitations that may be detrimental to successful performance of the completed Work.

I. Provide space for Contractor and Architect review stamps.

J. When revised for resubmission, identify all changes made since previous submission.
   1. Make resubmissions under procedures specified for initial submittals; identify changes made since previous submittal.

K. Distribute reviewed submittals as appropriate. Instruct parties to promptly report any inability to comply with requirements.

L. Submittals not requested will not be recognized or processed.

3.09 ARCHITECT'S ACTION

A. Architect will review each submittal, mark it with appropriate "action," and return it to Contractor within specified time allowance; except when it must be held for coordination, and Contractor is so advised.

B. Where submittals include materials, products, systems, or manufacturers not specified, approved by Addendum prior to execution of the Contract, or approved in writing in conjunction with the proposed products list submittal specified in Section 01 6000, Architect reserves the right to exceed the specified time allowance to allow sufficient time to determine the acceptability of such items, and no claim for delay by Contractor will be allowed.

C. Where submittals include a material, product, system, or manufacturer substitution which has not been previously accepted or approved in writing, Architect reserves the right to reject such submittal and require a compliant submittal, or may direct that other action be taken by Contractor to achieve compliance with Contract Documents, and no claim for delay by Contractor will be allowed.

D. Architect's review is for general conformance only and does not relieve Contractor from full compliance with the Contract Documents. Refer to General Conditions.

1.1 REQUESTS FOR INFORMATION (RFIs)

A. General: Immediately on discovery of the need for additional information or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI in the form specified.

1. Architect will return RFIs submitted to Architect by other entities controlled by Contractor 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 information or interpretation and the following:

1. Project name.
2. Project number.
3. Date.
4. Name of Contractor.
5. Name of Architect.
6. RFI number, numbered sequentially.
7. RFI subject.
8. Specification Section number and title and related paragraphs, as appropriate.
9. Drawing number and detail references, as appropriate.
10. Field dimensions and conditions, as appropriate.
11. Contractor's suggested resolution. If Contractor's suggested resolution impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
12. Contractor's signature.
13. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.

    a. Include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments on attached sketches.

C. RFI Forms: Software-generated form with substantially the same content as indicated above, acceptable to Architect.

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

D. Architect's Action: Architect will review each RFI, determine action required, and respond. Allow seven working days for Architect's response for each RFI. RFIs received by Architect after 1:00 p.m. will be considered as received the following working day.

1. The following Contractor-generated RFIs will be returned without action:

    a. Requests for approval of submittals.
    b. Requests for approval of substitutions.
    c. Requests for approval of Contractor's means and methods.
    d. Requests for coordination information already indicated in the Contract Documents.
    e. Requests for adjustments in the Contract Time or the Contract Sum.
    f. Requests for interpretation of Architect's actions on submittals.
    g. Incomplete RFIs or inaccurately prepared RFIs.

2. Architect's action may include a request for additional information, in which case Architect's time for response will date from time of receipt of additional information.
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 Section 012600 "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.

E. 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 returned without action or withdrawn.
5. RFI description.
6. Date the RFI was submitted.
7. Date Architect's response was received.

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.

1. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.
2. Identification of related Field Order, Work Change Directive, and Proposal Request, as appropriate.

END OF SECTION

SECTION 01 3114-FACILITY SERVICES COORDINATION

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Coordination of facility services construction.

B. Services of a coordinator for facility services construction.

C. Coordination documents.

1.02 MECHANICAL AND ELECTRICAL COORDINATOR

A. Provide staff dedicated to this Project who are technically qualified and administratively experienced in field coordination of the type of work required to be coordinated, for the duration of the Work.

1.03 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Submit coordination drawings and schedules prior to submitting shop drawings, product data, and samples.

C. Submit coordination drawings in a timely manner to facilitate proper coordination with the construction schedule, and to avoid adverse impacts on progress of construction.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 COORDINATION REQUIRED

A. See Drawings, Division 23 specifications, and Division 26 specifications for mechanical/electrical coordination schedules which define responsibilities for providing, setting, and final connecting of applicable devices and equipment items.

B. Coordinate the work listed below:
1. Fire Suppression: Division 21.
2. Plumbing: Division 22.
3. Heating, Ventilating, and Air Conditioning: Division 23.
4. Electrical: Division 26.
5. Site Utilities: Division 33.
6. All facility construction work affected by work listed above.
7. All Owner-furnished work affected by work listed above, if any.

C. Coordinate progress schedules, including dates for submittals and for delivery of products.

D. Conduct meetings among subcontractors and others concerned, to establish and maintain coordination and schedules, and to resolve coordination matters in dispute.

E. Participate in progress meetings. Report on progress of work to be adjusted under coordination requirements, and any required changes in schedules. Transmit minutes of meetings and reports to concerned parties.

3.02 COORDINATION DOCUMENTS

A. Prepare coordination drawings to organize installation of products for efficient use of available space, for proper sequence of installation, and to identify potential conflicts.

B. Prepare a master schedule identifying responsibilities for activities that directly relate to this work, including submittals and temporary utilities; organize by specification Section.

C. Identify electrical power characteristics and control wiring required for each item of equipment.

D. Maintain documents for the duration of the work, recording changes due to site instructions, modifications or adjustments.

3.03 COORDINATION OF SUBMITTALS

A. Review shop drawings, product data, and samples for compliance with Contract Documents and for coordination with related work. Transmit copies of reviewed documents to Architect.

B. Check field dimensions and clearances and relationship to available space and anchors.

C. Check compatibility with equipment and work of other Sections, electrical characteristics, and operational control requirements.

D. Check motor voltages and control characteristics.

E. Coordinate controls, interlocks, wiring of switches, and relays.

F. Coordinate wiring and control diagrams.

G. When changes in the work are made, review their effect on other work.

H. Verify information and coordinate maintenance of record documents.

3.04 COORDINATION OF SUBSTITUTIONS AND MODIFICATIONS

A. Review proposals and requests for substitution prior to submission to Architect.

B. Verify compliance with Contract Documents and for compatibility with work of other Sections.

C. Submit with recommendation for action.

3.05 INSPECTION OF WORK

A. Inspect work for compliance with Contract Documents.

B. Maintain a list of observed deficiencies and defects; promptly submit to Architect.

3.06 DOCUMENTATION

A. Observe and maintain a record of tests. Record:
1. Specification Section number and product name.
2. Name of Contractor, subcontractor , and supplier/manufacturer.
3. Name of testing agency and name of inspector.
4. Name of manufacturer's representative present.
5. Date, time, and duration of tests.
6. Type of test, and results.
7. Retesting required.

B. Assemble background documentation and retain in the event that dispute resolution becomes necessary.

C. Submit copies of documentation to Architect upon request.

3.07 EQUIPMENT START-UP

A. Verify utilities, connections, and controls are complete and equipment is in operable condition as required by Section 01 7000.

B. Observe start-up and adjustments, test run, record time and date of start-up, and results.

C. Observe equipment demonstrations made to Owner; record times and additional information required for operation and maintenance manuals.

3.08 INSPECTION AND ACCEPTANCE OF EQUIPMENT

A. Prior to inspection, verify that equipment is tested, operational, clean, and ready for operation.

END OF SECTION

SECTION 01 4000-QUALITY REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. References and standards.

B. Quality assurance submittals.

C. Mock-ups.

D. Control of installation.

E. Tolerances.

F. Manufacturers' field services.

G. Basis of design specifications.

H. Delegated design requirements.

1.02 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Design Data: Submit for Architect's knowledge as contract administrator or for the Owner, for information for the limited purpose of assessing conformance with information given and the design concept expressed in the Contract Documents.
   1. Provide additional copies of design data for Architect's design consultants, including but not limited to structural engineer, mechanical engineer, plumbing engineer, and electrical engineer; transmit to each design consultant's address concurrently, if requested by Architect.

C. Certificates: When specified in individual specification Sections, submit certification by the manufacturer and Architect or installation/application subcontractor to Architect, in quantities specified for Product Data.
   1. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
   2. Certificates may be recent or previous test results on material or product, but must be acceptable to Architect.

D. Subcontractor, Trade Contractor and Installer Qualifications: When specified in individual specification Sections, submit qualifications data substantiating specified qualifications; three copies, one of which will be reviewed and returned to Contractor indicating action taken.

E. Manufacturer's Instructions: When specified in individual specification Sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, for the Owner's information. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.

F. Manufacturer's Field Reports: Submit reports for Architect's benefit as contract administrator or for Owner.
   1. Submit report in duplicate within 30 days of observation to Architect for information.
   2. Submit for information for the limited purpose of assessing conformance with information given and the design concept expressed in the Contract Documents.

G. Erection Drawings: Submit drawings for Architect's benefit as contract administrator or for Owner.
   1. Submit for information for the limited purpose of assessing conformance with information given and the design concept expressed in the Contract Documents.
   2. Data indicating inappropriate or unacceptable Work may be subject to action by Architect or Owner.

1.03 REFERENCE STANDARDS

A. For products and workmanship specified by reference to a document or documents not included in the Project Manual, also referred to as reference standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.

B. Conform to reference standard of date of issue current on date of Contract Documents, except where a specific date is established by applicable code.

C. Obtain copies of standards where required by product specification Sections.
   1. Maintain copy at project site during submittals, planning, and progress of the specific work, until Substantial Completion.

D. Should specified reference standards conflict with Contract Documents, request clarification from Architect before proceeding.

E. Neither the contractual relationships, duties, or responsibilities of the parties in Contract nor those of Architect shall be altered from the Contract Documents by mention or inference otherwise in any reference standard document.

1.04 QUALITY CONTROL - GENERAL

A. Maintain quality control over subcontractors, suppliers, manufacturers, products, services, site conditions, and workmanship to produce Work of specified quality according to the requirements of the Contract Documents.

B. Special Testing and Inspection: It is recognized that specified special testing and inspection program is intended to assist Contractor, Owner, Architect, and jurisdictional authorities in nominal determination of probable compliance with specified requirements for certain elements of the Work. This program is not intended to limit Contractor's standard quality control program.
   1. See Section 01 4533 - Code-Required Special Inspections, for special inspection and testing requirements.

1.05 BASIS OF DESIGN SPECIFICATIONS

A. Individual specification Sections may include a Basis of Design Manufacturer or Product, which forms the basis of the specifications, drawing details, and other requirements of the Contract Documents. The specified Basis of Design Manufacturer or Product is not intended to exclude other manufacturers, products, or systems which comply with the requirements of the Contract Documents, subject to the provisions and requirements specified in individual specification Sections.

B. Comply with the administrative requirements for substitutions specified in Section 01 6000 for proposed products or systems other than the specified Basis of Design Manufacturer or Product.

1.06 DELEGATED DESIGN REQUIREMENTS

A. Performance and Design Requirements: Where professional design services or certifications by a licensed design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with performance and design requirements specified in individual specification Sections.

B. If specified performance or design requirements are not sufficiently complete to perform required services or provide required certifications, submit a written request for additional information to Architect under provisions of Section 00 6000.

C. Refer to Section 01 1000 for a listing of specification Sections that include delegated design requirements.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 CONTROL OF INSTALLATION

A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.

B. Comply with manufacturers' instructions, including each step in sequence.

C. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.

D. Have Work performed by persons qualified to produce required and specified quality.

E. Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.

F. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, and disfigurement.

3.02 MOCK-UPS

A. Assemble and erect a composite mock-up separate from building as detailed on Drawings .
   1. Once mock-up has been accepted by Architect, maintain mock-up in accepted condition for remaining duration of Contract Time.
   2. Composite Mock-up: Include all materials and accessories indicated on Drawings.

B. Assemble and erect individual system or product mock-ups as specified in individual specification Sections.

C. Assemble and erect specified items with specified backing materials, attachment and anchorage devices, weather barriers, flashings, sealants, applied coatings, surface treatments, and finishes.

D. Accepted mock-ups shall be a comparison standard for the remaining Work.

E. Where mock-up has been accepted by Architect and is specified in individual specification Sections to be removed, remove mock-up and clear area when directed to do so.

3.03 TOLERANCES

A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.

B. Comply with manufacturers' tolerances. Should manufacturers' tolerances conflict with Contract Documents, request clarification from Architect before proceeding.

C. Adjust products to appropriate dimensions; position before securing products in place.

3.04 MANUFACTURERS' FIELD SERVICES

A. When specified in individual specification Sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust and balance of equipment and systems as applicable, and to initiate instructions when necessary.

B. Submit qualifications of observer to Architect minimum 30 days in advance of required observations.

C. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

3.05 DEFECT ASSESSMENT

A. Replace Work or portions of the Work not conforming to specified requirements.

B. If, in the opinion of Architect, it is not practical to remove and replace the Work, Architect will direct an appropriate remedy or adjust payment, with Owner's consent.

END OF SECTION

SECTION 01 4100-REGULATORY REQUIREMENTS

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

A. Obtain and pay for required permits, fees, licenses, and inspections.

B. Arrange for required regulatory inspections and approvals.

C. Verify applicable codes and regulations.

D. Comply with applicable codes and regulations.

E. Listing of applicable Codes and regulations in this Section is not to be considered complete and all-inclusive; listing refers to primary applicable Codes and regulations only.

1.02 QUALITY ASSURANCE

A. Become completely familiar with applicable requirements of codes and regulations.

B. Verify that materials and equipment used in the Work meet or exceed code requirements.

C. Designer Qualifications: Where delegated engineering design (design-build work) is to be performed under the construction contract, provide the direct supervision of a Professional Engineer experienced in design of this type of work; licensed in Kansas.

1.03 APPLICABLE CODES AND REGULATIONS

A. Federal Regulations (Including but not limited to):
   1. ATBCB ADAAG - Americans with Disabilities Act Accessibility Guidelines ; 2002.
   2. FED-STD-795 - Uniform Federal Accessibility Standards (UFAS) ; current edition.

B. Johnson County and State of Kansas Regulations (Including but not limited to):
   1. Fire Protection District: Local jurisdiction.
   2. State of Kansas Health Department standards and regulations.
   3. ANSI/ICC A117.1 - American National Standard for Accessible and Usable Buildings and Facilities ; Edition cited in applicable building code.
   4. ICC (IFC) - ICC International Fire Code, 2006.
   5. ICC (IBC) - ICC International Building Code, 2006.
   6. ICC (IPC) - ICC International Plumbing Code, 2006.
   7. ICC (IMC) - ICC International Mechanical Code, 2006.
   8. ICC (IFGC) - ICC International Fuel Gas Code, 2006.
   9. ICC (IECC) - ICC International Energy Conservation Code, 2009.
   10. NFPA 70 - National Electrical Code, 2008.
   11. NFPA 101 - Life Safety Code, 2000.
   12. NFPA 5000 - Building Construction and Safety Code, 2003.

C. Comply with execution requirements of authority having jurisdiction including, if applicable, the requirement that all firestopping work be performed by a single qualified firm or subcontractor.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01 4533-CODE-REQUIRED SPECIAL INSPECTIONS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Code-required special inspections.

B. Testing services incidental to special inspections.

C. Submittals.

1.02 DEFINITIONS

A. Code or Building Code: International Building Code and, more specifically, Chapter 17 - Structural Tests and Inspections, of same edition cited in Section 01 4100.

B. Authority Having Jurisdiction (AHJ): Agency or individual officially empowered to enforce the building, fire and life safety code requirements of the permitting jurisdiction in which the Project is located.

C. Special Inspection:
   1. Special inspections are inspections and testing of materials, installation, fabrication, erection or placement of components and connections mandated by the AHJ that also require special expertise to ensure compliance with the approved contract documents and the referenced standards.
   2. Special inspections are separate from and independent of tests and inspections conducted by Owner or Contractor for the purposes of quality assurance and contract administration.

1.03 REFERENCE STANDARDS

A. ACI 318 - Building Code Requirements for Structural Concrete and Commentary ; 2008.

B. ACI 530/530.1/ERTA - Building Code Requirements and Specification for Masonry Structures ; 2009.

C. AISC 360 - Specification for Structural Steel Buildings ; 2005.

D. ASTM C31/C31M - Standard Practice for Making and Curing Concrete Test Specimens in the Field ; 2010.

E. ASTM C172/C172M - Standard Practice for Sampling Freshly Mixed Concrete ; 2010.

F. ASTM D3740 - Standard Practice for Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction ; 2010.

G. ASTM E329 - Standard Specification for Agencies Engaged Construction Inspection and/or Testing ; 2011.

H. ASTM E543 - Standard Specification for Agencies Performing Nondestructive Testing ; 2009.

I. ASTM E736 - Standard Test Method for Cohesion/Adhesion of Sprayed Fire-Resistive Materials Applied to Structural Members ; 2000 (Reapproved 2006).

J. AWS D1.1/D1.1M - Structural Welding Code - Steel ; 2010.

K. AWS D1.3 - Structural Welding Code - Sheet Steel ; 2008.

L. AWS D1.4/D1.4M - Structural Welding Code - Reinforcing Steel ; 2005.

1.04 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Special Inspection Agency Qualifications: Prior to the start of work, Special Inspection Agency is required to:
   1. Submit agency name, address, and telephone number, names of full time registered Engineer and responsible officer.

2. Submit copy of report of laboratory facilities inspection made by NIST Construction Materials Reference Laboratory during most recent inspection, with memorandum of remedies of any deficiencies reported by the inspection.
3. Submit certification that Special Inspection Agency is acceptable to AHJ.

C. Testing Agency Qualifications: Prior to the start of work, Testing Agency is required to:
1. Submit agency name, address, and telephone number, and names of full time registered Engineer and responsible officer.
2. Submit copy of report of laboratory facilities inspection made by NIST Construction Materials Reference Laboratory during most recent inspection, with memorandum of remedies of any deficiencies reported by the inspection.
3. Submit certification that Testing Agency is acceptable to AHJ.

D. Special Inspection Reports: After each special inspection, Special Inspector is required to promptly submit four copies of report; one to Architect, one to Contractor, one to Architect's structural engineering consultant, and one to the AHJ.
1. Include:
   a. Date issued.
   b. Project title and number.
   c. Name of Special Inspector.
   d. Date and time of special inspection.
   e. Identification of product and specifications Section.
   f. Location in the Project.
   g. Type of special inspection.
   h. Date of special inspection.
   i. Results of special inspection.
   j. Conformance with Contract Documents.

2. Final Special Inspection Report: Document special inspections and correction of discrepancies prior to the start of the work.

E. Fabricator Special Inspection Reports: After each special inspection of fabricated items at the Fabricator's facility, Special Inspector is required to promptly submit three copies of report; one to Architect, one to Architect's structural engineering consultant, and one to AHJ.
1. Include:
   a. Date issued.
   b. Project title and number.
   c. Name of Special Inspector.
   d. Date and time of special inspection.
   e. Identification of fabricated item and specification Section.
   f. Location in the Project.
   g. Results of special inspection.
   h. Verification of fabrication and quality control procedures.
   i. Conformance with Contract Documents.
   j. Conformance to referenced standard(s).

F. Test Reports: After each test or inspection, promptly submit three copies of report; one to Architect one to Architect's structural engineering consultant, and one to AHJ.
1. Include:
   a. Date issued.
   b. Project title and number.
   c. Name of inspector.
   d. Date and time of sampling or inspection.
   e. Identification of product and specifications Section.
   f. Location in the Project.
   g. Type of test or inspection.
   h. Date of test or inspection.

i. Results of test or inspection.
j. Conformance with Contract Documents.

G. Certificates: When special inspection requirements are specified in individual specification Sections, Special Inspector is required to submit certification by the manufacturer, fabricator, and installation subcontractor to Architect and AHJ, in quantities specified for Product Data.
1. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
2. Certificates may be recent or previous test results on material or product, but must be acceptable to Architect and AHJ.

1.05 SPECIAL INSPECTION AND TESTING AGENCY

A. Owner will employ services of a Special Inspection Agency to perform inspections and associated testing and sampling required by the building code.

B. The Special Inspection Agency may employ and pay for services of an independent testing agency to perform testing and sampling associated with special inspections and required by the building code.

C. Employment of agency in no way relieves Contractor of obligation to perform work in accordance with requirements of Contract Documents.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 SCHEDULE OF SPECIAL INSPECTIONS, GENERAL

A. Frequency of Special Inspections: Special Inspections are indicated as continuous or periodic.
1. Continuous Special Inspection: Special Inspection Agency shall be present in the area where the work is being performed and observe the work at all times the work is in progress.
2. Periodic Special Inspection: Special Inspection Agency shall be present in the area where work is being performed and observe the work part-time or intermittently and at the completion of the work.

3.02 SPECIAL INSPECTIONS FOR STEEL CONSTRUCTION

A. High-Strength Bolt, Nut and Washer Material:
1. Verify identification markings conform to ASTM standards specified in the approved contract and to AISC 360, A3.3; periodic.
2. Submit manufacturer's certificates of compliance; periodic.

B. High-Strength Bolting Installation: Verify items listed below comply with AISC 360, Section M2.5.
1. Snug tight joints; periodic.

C. Structural Steel and Cold Formed Steel Deck Material:
1. Structural Steel: Verify identification markings conform to AISC 360, Section M3.5; periodic.
2. Other Steel: Verify identification markings conform to ASTM standards specified in the approved contract documents; periodic.
3. Submit manufacturer's certificates of compliance and test reports; periodic.

D. Weld Filler Material:
1. Verify identification markings conform to AWS standards specified in the approved contract documents and to AISC 360, A3.5; periodic.
2. Submit manufacturer's certificates of compliance; periodic.

E. Welding:
1. Structural steel and cold formed steel deck:
a. Complete and partial joint penetration groove welds: Verify compliance with AWS D1.1; continuous.
b. Multipass fillet welds: Verify compliance with AWS D1.1; continuous.

c. Single pass fillet welds less than 5/16 inch wide: Verify compliance with AWS D1.1; continuous.
d. Plug and slot welds: Verify compliance with AWS D1.1; continuous.
e. Single pass fillet welds 5/16 inch or greater: Verify compliance with AWS D1.1; periodic.
f. Floor and roof deck welds: Verify compliance with AWS D1.3; continuous.

2. Reinforcing Steel: Verify items listed below comply with AWS D1.4 and ACI 318, Section 3.5.2.
a. Verification of weldability; periodic.
b. Reinforcing steel resisting flexural and axial forces in intermediate and special moment frames as well as boundary elements of special structural walls of concrete and shear reinforcement; continuous.
c. Shear reinforcement; continuous.
d. Other reinforcing steel; periodic.

F. Steel Frame Joint Details: Verify compliance with approved contract documents.
1. Details, bracing and stiffening; periodic.
2. Member locations; periodic.
3. Application of joint details at each connection; periodic.

G. Cold formed steel trusses spanning 60 feet or more; periodic.

3.03 SPECIAL INSPECTIONS FOR CONCRETE CONSTRUCTION

A. Reinforcing Steel, Including Prestressing of Tendons and Placement: Verify compliance with approved contract documents and ACI 318, 3.5 and 7.1 through 7.7; periodic.

B. Reinforcing Steel Welding: Verify compliance with AWS D1.4 and ACI 318, 3.5.2; periodic.

C. Bolts Installed in Concrete: Where allowable loads have been increased or where strength design is used, verify compliance with approved contract documents and ACI 318, 8.1.3 and 21.2.8 prior to and during placement of concrete; continuous.

D. Anchors Installed in Hardened Concrete: Verify compliance with ACI 318, 3.8.6, 8.1.3 and 21.2.8; periodic.

E. Design Mix: Verify plastic concrete complies with the design mix in approved contract documents and with ACI 318, Chapter 4 and 5.2; periodic.

F. Concrete Sampling Concurrent with Strength Test Sampling: Each time fresh concrete is sampled for strength tests, verify compliance with ASTM C172, ASTM C31 and ACI 318, 5.6 and 5.8 and record the following, continuous:
1. Slump.
2. Air content.
3. Temperature of concrete.

G. Specified Curing Temperature and Techniques: Verify compliance with approved contract documents and ACI 318, 5.11 through 5.13; periodic.

H. Concrete Strength - In Place: Verify concrete strength complies with approved contract documents and ACI 318, 6.2, for the following.

I. Formwork Shape, Location and Dimensions: Verify compliance with approved contract documents and ACI 318, 6.1.1; periodic.

J. Materials: If Contractor cannot provide sufficient data or documentary evidence that concrete materials conform to the quality standards of ACI 318, the AHJ will require that the Special Inspector verify compliance with the appropriate standards and criteria in ACI 318, Chapter 3.

3.04 SPECIAL INSPECTIONS FOR MASONRY CONSTRUCTION

A. Masonry Structures Subject to Special Inspection:
1. Empirically designed masonry, glass unit masonry and masonry veneer in structures designated as "essential facilities".

2. Engineered masonry in structures classified as "low hazard" and "substantial hazard to human life in the event of failure".

B. Verify each item below complies with approved contract documents and the applicable articles of ACI 530/530.1/ERTA.
   1. Inspections and Approvals:
      a. Verify compliance with the required inspection provisions of the approved contract documents; periodic.
      b. Verify approval of submittals required by contract documents; periodic.
   2. Compressive Strength of Masonry: Verify compressive strength of masonry units prior to start of construction unless specifically exempted by code; periodic.
   3. Slump Flow and Visual Stability Index (VSI): Verify compliance as self consolidating grout arrives on site; continuous.
   4. Joints and Accessories: When masonry construction begins, verify:
      a. Proportions of site prepared mortar; periodic.
      b. Construction of mortar joints; periodic.
      c. Location of reinforcement, connectors, prestressing tendons, anchorages, etc.; periodic.

   5. Structural Elements, Joints, Anchors, Protection: During masonry construction, verify:
      a. Size and location of structural elements; periodic.
      b. Type, size and location of anchors, including anchorage of masonry to structural members, frames or other construction; periodic.
      c. Size, grade and type of reinforcement, anchor bolts and prestressing tendons and anchorages; periodic.
      d. Welding of reinforcing bars; continuous.
      e. Preparation, construction and protection of masonry against hot weather above 90 degrees F and cold weather below 40 degrees F; periodic.
   6. Grouting Preparation: Prior to grouting, verify:
      a. Grout space is clean; periodic.
      b. Correct placement of reinforcing, connectors, prestressing tendons and anchorages; periodic.
      c. Correctly proportioned site prepared grouts and prestressing grout for bonded tendons; periodic.
      d. Correctly constructed mortar joints; periodic.
   7. Preparation of Grout Specimens, Mortar Specimens and Prisms: Observe preparation of specimens; periodic.

C. Engineered Masonry in Buildings Designated as "Essential Facilities": Verify compliance of each item below with approved contract documents and the applicable articles of ACI 530/ASCE 5/TMS 402.
   1. Inspections and Approvals:
      a. Verify compliance with the required inspection provisions of the approved contract documents; periodic.
      b. Verify approval of submittals required by contract documents; periodic.
   2. Compressive Strength of Masonry: Verify compressive strength of masonry units prior to start of construction and upon completion of each 5,000 square feet increment of masonry erected during construction; periodic.
   3. Preblended Mortar and Grout: Verify proportions of materials upon delivery to site; periodic.
   4. Slump Flow and Visual Stability Index (VSI): Verify compliance as self consolidating grout arrives on site; continuous.
   5. Engineered Elements, Joints, Anchors, Grouting, Protection: Verify compliance of each item below with approved contract documents and referenced standards.
      a. Proportions of site prepared mortar; periodic.
      b. Placement of masonry units and construction of mortar joints; periodic.
      c. Placement of reinforcement, connectors, prestressing tendons, anchorages, etc.; periodic.
      d. Grout space prior to grouting; continuous.
      e. Placement of grout; continuous.
      f. Size and location of structural elements; periodic.
      g. Type, size and location of anchors, including anchorage of masonry to structural members, frames or other construction; continuous.

h. Size, grade and type of reinforcement, anchor bolts and prestressing tendons and anchorages; periodic.
i. Welding of reinforcing bars; continuous.
j. Preparation, construction and protection of masonry against hot weather above 90 degrees F and cold weather below 40 degrees F; periodic.

6. Preparation of Grout Specimens, Mortar Specimens and Prisms: Observe preparation of specimens; continuous.

3.05 SPECIAL INSPECTIONS FOR COLD FORMED STEEL CONSTRUCTION

A. Diaphragms: Verify compliance of each item below with approved contract documents.
1. Grade and thickness of sheathing.
2. Nominal size of framing members at adjacent panel edges.
3. Nail or staple diameter and length.
4. Number of fastener lines.
5. Fastener spacing at lines and at edges.

B. Structural Framing: Verify compliance of each item below with approved contract documents.
1. Size, spacing, connections, and welds.

C. Structural Details: Verify compliance of each item below with approved contract documents.
1. Blocking, attachments, connections, sizes and other information shown on structural Drawings.

3.06 SPECIAL INSPECTIONS FOR SOILS

A. Materials and Placement: Verify each item below complies with approved construction documents and approved geotechnical report.
1. Design bearing capacity of material below shallow foundations; periodic.
2. Design depth of excavations and suitability of material at bottom of excavations; periodic.
3. Materials, densities, lift thicknesses; placement and compaction of backfill: continuous.
4. Subgrade, prior to placement of compacted fill; periodic.

B. Testing: Classify and test excavated material; periodic.

3.07 SPECIAL INSPECTIONS FOR SPRAYED FIRE-RESISTANT MATERIALS

A. Sprayed Fire-Resistant Materials - General:
1. Verify compliance of sprayed-fire resistant materials with specific fire-rated assemblies shown in the approved contract documents.
2. Perform special inspections after rough installation of electrical, mechanical, plumbing, automatic fire sprinkler and suspension systems for ceilings.

B. Physical and Visual Tests: Verify compliance with fire-resistance rating.
1. Condition of substrates; periodic.
2. Thickness of sprayed fire-resistant material; periodic.
3. Density of sprayed fire-resistant material in pounds per cubic foot; periodic.
4. Bond strength (adhesion); periodic.
5. Bond strength (cohesion); periodic.
6. Condition of finished application; periodic.

C. Structural Member Surface Conditions:
1. Inspect structural member surfaces before application of sprayed fire-resistant materials; periodic.
2. Verify preparation of structural member surfaces complies with approved contract documents and manufacturer's written instructions; periodic.

D. Application:
1. Ensure minimum ambient temperature before and after application complies with the manufacturer's written instructions; periodic.
2. Verify area where sprayed fire-resistant material is applied is ventilated as required by the manufacturer's written instructions during and after application; periodic.

E. Thickness: Verify that no more than 10 percent of thickness measurements taken from sprayed fire-resistant material are less than thickness required by fire-resistance design in approved contract documents. In no case shall the thickness of the sprayed fire-resistant material be less than the minimum below.
   1. Minimum Allowable Thickness: Tested according to ASTM E605, periodic.
   2. Structural Members: Test according to ASTM E605. Test no less than 25 percent of structural members on each story of the structure or portion thereof; periodic.

F. Density: Verify density of sprayed fire-resistant material is no less than density required by the fire-resistance design in the approved contract documents.

G. Bond Strength: Verify adhesive and cohesive bond strength of sprayed fire-resistant materials is no less than 150 pounds per square foot when in-place samples of the cured material are tested according to ASTM E736 and as described below.

END OF SECTION

SECTION 01 5000-TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Temporary utilities.

B. Temporary telecommunications services.

C. Temporary sanitary facilities.

D. Temporary Controls: Barriers, enclosures, and fencing.

E. Security requirements.

F. Vehicular access and parking.

G. Waste removal facilities and services.

H. Project identification sign.

I. Field offices.

1.02 TEMPORARY UTILITIES

A. Provide and pay for all electrical power, lighting, water, heating and cooling, and ventilation required for construction purposes.

B. New permanent facilities may not be used.

C. Use trigger-operated nozzles for water hoses, to avoid waste of water.

1.03 TELECOMMUNICATIONS SERVICES

A. Provide, maintain, and pay for telecommunications services to field office at time of project mobilization.

1.04 TEMPORARY SANITARY FACILITIES

A. Provide and maintain required facilities and enclosures. Provide at time of project mobilization.

B. Maintain daily in clean and sanitary condition.

1.05 BARRIERS

A. Provide barriers to prevent unauthorized entry to construction areas, to prevent access to areas that could be hazardous to workers or the public , to allow for Owner's use of site and to protect existing facilities and adjacent properties from damage from construction operations .

B. Provide protection for plants designated to remain. Replace damaged plants.

C. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

1.06 FENCING

A. Construction: Commercial grade chain link fence.

B. Provide minimum 6 foot high fence around construction site; equip with vehicular and pedestrian gates with locks.

1.07 EXTERIOR ENCLOSURES

A. Provide temporary weather tight closure of exterior openings to accommodate acceptable working conditions and protection for products, to allow for temporary heating and maintenance of required ambient temperatures

identified in individual specification Sections, and to prevent entry of unauthorized persons. Provide access doors with self-closing hardware and locks.

1.08 SECURITY

A. Provide security and facilities to protect Work and Owner's operations from unauthorized entry, vandalism, or theft.

B. Coordinate with Owner's security program.

1.09 VEHICULAR ACCESS AND PARKING

A. Comply with regulations relating to use of streets and sidewalks, access to emergency facilities, access for emergency vehicles, and off-street parking.

B. Coordinate access and haul routes with governing authorities and Owner.

C. Provide and maintain access to fire hydrants, free of obstructions.

D. Provide means of removing mud from vehicle wheels before entering streets.

E. Designated existing on-site roads may be used for construction traffic.

F. Provide temporary parking areas to accommodate construction personnel. When site space is not adequate, provide additional off-site parking.

G. Existing parking areas may not be used for construction parking.

H. Do not allow vehicle parking on existing pavement.

1.10 WASTE REMOVAL

A. Provide waste removal facilities and services as required to maintain the site in clean and orderly condition.

B. Provide containers with lids. Remove trash from site at least weekly.

C. If materials to be recycled or re-used on the project must be stored on-site, provide suitable non-combustible containers; locate containers holding flammable material outside the structure unless otherwise approved by the authorities having jurisdiction.

D. Open free-fall chutes are not permitted. Terminate closed chutes into appropriate containers with lids.

1.11 PROJECT IDENTIFICATION

A. Provide project identification sign of design and construction indicated on Drawings.

B. Erect on site at location indicated.

C. No other signs are allowed without Owner permission except those required by law.

1.12 FIELD OFFICES

A. Office: Weathertight, with lighting, electrical outlets, heating, cooling equipment, and equipped with sturdy furniture, drawing rack and drawing display table.

B. Provide space for Project meetings, with table and chairs to accommodate 10 persons.

C. Locate offices a minimum distance of 30 feet from existing and new structures.

1.13 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

A. Remove temporary utilities, equipment, facilities, materials, prior to Substantial Completion inspection.

B. Remove underground installations to a minimum depth of 2 feet. Grade site as indicated.

C. Clean and repair damage caused by installation or use of temporary work.

D. Restore existing facilities used during construction to original condition.

E. Restore new permanent facilities used during construction to specified condition.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01 6000- PRODUCT REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. General product requirements.

B. Transportation, handling, storage and protection.

C. Product option requirements.

D. Substitution limitations and procedures.

E. Maintenance materials, including extra materials, spare parts, tools, and software.

1.02 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Proposed Products List: Submit list of major products proposed for use, with name of manufacturer, trade name, and model number of each product.
   1. Submit within 30 days after date of Notice to Proceed.
   2. For products specified only by reference standards, list applicable reference standards.

C. Product Data Submittals: Submit manufacturer's standard published data. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.

D. Shop Drawing Submittals: Prepared specifically for this Project; indicate utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.

E. Sample Submittals: Illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
   1. For selection from standard finishes, submit samples of the full range of the manufacturer's standard colors, textures, and patterns.

PART 2 PRODUCTS

2.01 NEW PRODUCTS - GENERAL

A. Provide new products unless specifically required or permitted by the Contract Documents.

B. Provide interchangeable components of the same manufacture for components being replaced.

C. Do not use products having any of the following characteristics:
   1. Made using or containing CFC's or HCFC's.
   2. Made of composite wood containing added urea-formaldehyde; phenol-formaldehyde is acceptable.

2.02 MECHANICAL, PLUMBING, AND ELECTRICAL PRODUCTS

A. Components: Provide interchangeable components of the same manufacture for components being replaced.

2.03 PRODUCT OPTIONS

A. Products Specified by Reference Standards or by Description Only: Use any product meeting those standards or description.

B. Products Specified by Naming One or More Manufacturers: Use a product of one of the manufacturers named and meeting specifications, no options or substitutions allowed.

C. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.

D. Products Specified by Naming a Basis of Design Manufacturer or Product with a Provision for Substitutions: Submit a request for substitution for any other manufacturer listed under Other Acceptable Manufacturers, or for a manufacturer not named.
   1. Refer to Section 01 4000 for system standard specifications requirements.

2.04 MAINTENANCE MATERIALS

A. Furnish extra materials, spare parts, tools, and software of types and in quantities specified in individual specification Sections.

B. Deliver to Project site; obtain receipt prior to final payment.

PART 3 EXECUTION

3.01 SUBSTITUTION PROCEDURES

A. Architect and Owner will consider requests for substitutions only within 30 days after date of Agreement.
   1. Substitutions will be considered only when a product becomes unavailable through no fault of the Contractor.

B. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents.
   1. Request for Substitution Form: Specified in Section 00 6000.

C. A request for substitution constitutes a representation that the submitter:
   1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product.
   2. Will provide the same warranty for the substitution as for the specified product.
   3. Will coordinate installation and make changes to other Work that may be required for the Work to be complete with no additional cost to Owner.
   4. Waives claims for additional costs or time extension that may subsequently become apparent.
   5. Will reimburse Owner and Architect for review or redesign services associated with re-approval by authorities.

D. Substitutions will not be considered when they are indicated or implied on shop drawing or product data submittals, without separate written request, or when acceptance will require revision to the Contract Documents.

E. Substitution Submittal Procedure:
   1. Submit three copies of request for substitution for consideration. Limit each request to one proposed substitution.
   2. Submit shop drawings, product data, and certified test results attesting to the proposed product equivalence. Burden of proof is on proposer.
   3. The Architect will notify Contractor in writing of decision to accept or reject request.

3.02 TRANSPORTATION AND HANDLING

A. Coordinate schedule of product delivery to designated prepared areas in order to minimize site storage time and potential damage to stored materials.

B. Transport and handle products in accordance with manufacturer's instructions.

C. Transport materials in covered trucks to prevent contamination of product and littering of surrounding areas.

D. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.

E. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage.

F. Arrange for the return of packing materials, such as wood pallets, where economically feasible.

3.03 STORAGE AND PROTECTION

A. Designate receiving/storage areas for incoming products so that they are delivered according to installation schedule and placed convenient to work area in order to minimize waste due to excessive materials handling and misapplication.

B. Store and protect products in accordance with manufacturers' instructions.

C. Store with seals and labels intact and legible.

D. Store sensitive products in weather tight, climate controlled, enclosures in an environment favorable to product.

E. For exterior storage of fabricated products, place on sloped supports above ground.

F. Provide bonded off-site storage and protection when site does not permit on-site storage or protection.

G. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.

H. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.

I. Prevent contact with material that may cause corrosion, discoloration, or staining.

J. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.

K. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

END OF SECTION

SECTION 01 7000-EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Examination, preparation, and general installation procedures.

B. Pre-installation meetings.

C. Cutting and patching.

D. Surveying for laying out the work.

E. Cleaning and protection.

F. Starting of systems and equipment.

G. Demonstration and instruction of Owner personnel.

H. Closeout procedures, except payment procedures.

I. General requirements for maintenance service.

1.02 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Survey Work: Submit name, address, and telephone number of Surveyor before starting survey work.
   1. On request, submit documentation verifying accuracy of survey work.
   2. Submit a copy of site drawing signed by the Land Surveyor, that the elevations and locations of the work are in conformance with Contract Documents.
   3. Submit surveys and survey logs for the project record.

C. Cutting and Patching: Submit written request in advance of cutting or alteration that affects:
   1. Structural integrity of any element of Project.
   2. Integrity of weather exposed or moisture resistant element.
   3. Efficiency, maintenance, or safety of any operational element.
   4. Visual qualities of sight exposed elements.
   5. Work of Owner or separate Contractor.
   6. Include in Request:
      a. Identification of Project.
      b. Location and description of affected work.
      c. Necessity for cutting or alteration.
      d. Description of proposed work and products to be used.
      e. Alternatives to cutting and patching.
      f. Effect on work of Owner or separate Contractor.
      g. Written permission of affected separate Contractor.
      h. Date and time work will be executed.

D. Project Record Documents: Accurately record actual locations of capped and active utilities.

1.03 QUALIFICATIONS

A. For survey work, employ a land surveyor registered in Kansas and acceptable to Architect. Submit evidence of Surveyor's Errors and Omissions insurance coverage in the form of an Insurance Certificate.

B. For field engineering, employ a professional engineer of the discipline required for specific service on Project, licensed in Kansas.

C. For design of temporary shoring and bracing, employ a Professional Engineer experienced in design of this type of work and licensed in Kansas.

1.04 PROJECT CONDITIONS

A. Use of explosives is not permitted.

B. Grade site to drain. Maintain excavations free of water. Provide, operate, and maintain pumping equipment.

C. Protect site from puddling or running water. Provide water barriers as required to protect site from soil erosion.

D. Ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.

E. Dust Control: Execute work by methods to minimize raising dust from construction operations. Provide positive means to prevent air-borne dust from dispersing into atmosphere and over adjacent property.
   1. Provide dust-proof enclosures to prevent entry of dust generated outdoors.

F. Erosion and Sediment Control: Plan and execute work by methods to control surface drainage from cuts and fills, from borrow and waste disposal areas. Prevent erosion and sedimentation.
   1. Minimize amount of bare soil exposed at one time.
   2. Provide temporary measures such as berms, dikes, and drains, to prevent water flow.
   3. Construct fill and waste areas by selective placement to avoid erosive surface silts or clays.
   4. Periodically inspect earthwork to detect evidence of erosion and sedimentation; promptly apply corrective measures.

G. Noise Control: Provide methods, means, and facilities to minimize noise produced by construction operations.
   1. Outdoors: Limit conduct of especially noisy exterior work to the hours of 8 am to 5 pm.

H. Pest Control: Provide methods, means, and facilities to prevent pests and insects from damaging the work.

I. Rodent Control: Provide methods, means, and facilities to prevent rodents from accessing or invading premises.

J. Pollution Control: Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances, and pollutants produced by construction operations. Comply with federal, state, and local regulations.

1.05 COORDINATION

A. See Section 01 1000 for occupancy-related requirements.

B. Coordinate scheduling, submittals, and work of the various Sections of the Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements , with provisions for accommodating items installed later.

C. Notify affected utility companies and comply with their requirements.

D. Verify that utility requirements and characteristics of new operating equipment are compatible with building utilities. Coordinate work of various Sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.

E. Coordinate space requirements, supports, and installation of mechanical and electrical work that are indicated diagrammatically on Drawings. Follow routing shown for pipes, ducts, and conduit, as closely as practicable; place runs parallel with lines of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.

F. In finished areas except as otherwise indicated, conceal pipes, ducts, and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.

G. Coordinate completion and clean-up of work of separate Sections.

H. After Owner occupancy of premises, coordinate access to site for correction of defective work and work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

PART 2 PRODUCTS

2.01 PATCHING MATERIALS

A. New Materials: As specified in product Sections; match existing products and work for patching and extending work.

B. Type and Quality of Existing Products: Determine by inspecting and testing products where necessary, referring to existing work as a standard.

C. Product Substitution: For any proposed change in materials, submit request for substitution described in Section 01 6000.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent work. Start of work means acceptance of existing conditions.

B. Verify that existing substrate is capable of structural support or attachment of new work being applied or attached.

C. Examine and verify specific conditions described in individual specification Sections.

D. Take field measurements before confirming product orders or beginning fabrication, to minimize waste due to over-ordering or misfabrication.

E. Verify that utility services are available, of the correct characteristics, and in the correct locations.

F. Prior to Cutting: Examine existing conditions prior to commencing work, including elements subject to damage or movement during cutting and patching. After uncovering existing work, assess conditions affecting performance of work. Beginning of cutting or patching means acceptance of existing conditions.

3.02 PREPARATION

A. Clean substrate surfaces prior to applying next material or substance.

B. Seal cracks or openings of substrate prior to applying next material or substance.

C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

3.03 PRE-INSTALLATION MEETINGS

A. When required in individual specification Sections, convene a pre-installation meeting at the site prior to commencing work of the Section.

B. Require attendance of parties directly affecting, or affected by, work of the specific Section.

C. Notify Architect seven days in advance of meeting date.

D. Prepare agenda and preside at meeting:
   1. Review conditions of examination, preparation and installation procedures.
   2. Review coordination with related work.

E. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.

3.04 LAYING OUT THE WORK

A. Verify locations of survey control points prior to starting work.

B. Promptly notify Architect of any discrepancies discovered.

C. Locate and protect survey control and reference points.

D. Control datum for survey is that established by Owner provided survey.

E. Protect survey control points prior to starting site work; preserve permanent reference points during construction.

F. Promptly report to Architect the loss or destruction of any reference point or relocation required because of changes in grades or other reasons.

G. Replace dislocated survey control points based on original survey control. Make no changes without prior written notice to Architect.

H. Utilize recognized engineering survey practices.

I. Establish a minimum of two permanent bench marks on site, referenced to established control points. Record locations, with horizontal and vertical data, on project record documents.

J. Establish elevations, lines and levels. Locate and lay out by instrumentation and similar appropriate means:
   1. Site improvements including pavements; stakes for grading, fill and topsoil placement; utility locations, slopes, and invert elevations .
   2. Grid or axis for structures.
   3. Building foundation, column locations, ground floor elevations , and exterior face of foundation walls.

K. Periodically verify layouts by same means.

L. Maintain a complete and accurate log of control and survey work as it progresses.

M. On completion of foundation walls and major site improvements, prepare a certified survey illustrating dimensions, locations, angles, and elevations of construction and site work.

3.05 GENERAL INSTALLATION REQUIREMENTS

A. Install products as specified in individual Sections, in accordance with manufacturer's instructions and recommendations, and so as to avoid waste due to necessity for replacement.

B. Make vertical elements plumb and horizontal elements level, unless otherwise indicated.

C. Install equipment and fittings plumb and level, neatly aligned with adjacent vertical and horizontal lines, unless otherwise indicated.

D. Make consistent texture on surfaces, with seamless transitions, unless otherwise indicated.

E. Make neat transitions between different surfaces, maintaining texture and appearance.

3.06 CUTTING AND PATCHING

A. Whenever possible, execute the work by methods that avoid cutting or patching.

B. Perform whatever cutting and patching is necessary to:
   1. Complete the work.
   2. Fit products together to integrate with other work.
   3. Provide openings for penetration of mechanical, electrical, and other services.
   4. Match work that has been cut to adjacent work.
   5. Repair areas adjacent to cuts to required condition.
   6. Repair new work damaged by subsequent work.
   7. Remove samples of installed work for testing when requested.
   8. Remove and replace defective and non-conforming work.

C. Execute work by methods that avoid damage to other work and that will provide appropriate surfaces to receive patching and finishing.

D. Employ original installer to perform cutting for weather exposed and moisture resistant elements, and sight exposed surfaces.

E. Cut rigid materials, resulting in clean and neat edges, using masonry saw or core drill. Cutting rigid materials using chisels, impact or pneumatic tools is not allowed without prior approval.

F. Restore work with new products in accordance with requirements of Contract Documents.

G. Fit work air tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.

H. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with fire rated material in accordance with Section 07 8400, to full thickness of the penetrated element.

I. Patching:
   1. Finish patched surfaces to match finish that existed prior to patching. On continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.
   2. Match color, texture, and appearance.
   3. Repair patched surfaces that are damaged, lifted, discolored, or showing other imperfections due to patching work. If defects are due to condition of substrate, repair substrate prior to repairing finish.

3.07 PROGRESS CLEANING

A. General Project Requirement: Cleaning materials, products, and applications must be GreenSeal-compliant; materials, products, and applications that are not GreenSeal-compliant are not permitted.

B. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.

C. Remove debris and rubbish from wall cavities, pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing the space.

D. Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.

E. Collect and remove waste materials, debris, and trash/rubbish from site weekly and dispose off-site; do not burn or bury.

3.08 PROTECTION OF INSTALLED WORK

A. Protect installed work from damage by construction operations.

B. Provide special protection where specified in individual specification Sections.

C. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.

D. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.

E. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.

F. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.
   1. Keep waterproofed and roofed surfaces clean and free of debris that could cause damage to surfaces and membranes, particularly sharp objects including fasteners, wire cut-offs, and similar items.

G. Prohibit traffic from landscaped areas.

H. Remove protective coverings when no longer needed; reuse or recycle plastic coverings if possible.

3.09 SYSTEM STARTUP

A. Coordinate schedule for start-up of various equipment and systems.

B. Verify that each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequence, and for conditions that may cause damage.

C. Verify tests, meter readings, and specified electrical characteristics agree with those required by the equipment or system manufacturer.

D. Verify that wiring and support components for equipment are complete and tested.

E. Execute start-up under supervision of applicable Contractor personnel and manufacturer's representative in accordance with manufacturers' instructions.

F. When specified in individual specification Sections, require manufacturer to provide authorized representative to be present at site to inspect, check, and approve equipment or system installation prior to start-up, and to supervise placing equipment or system in operation.

G. Submit a written report that equipment or system has been properly installed and is functioning correctly.

3.10 DEMONSTRATION AND INSTRUCTION

A. See Section 01 7900 - Demonstration and Training.

3.11 ADJUSTING

A. Adjust operating products and equipment to ensure smooth and unhindered operation.

B. Testing, Adjusting, and Balancing HVAC Systems: See Division 23 and Section 01 4000.

3.12 FINAL CLEANING

A. General Project Requirement: Cleaning materials, products, and applications must be GreenSeal-compliant; materials, products, and applications that are not GreenSeal-compliant are not permitted.

B. Execute final cleaning after Substantial Completion but before making final application for payment.

C. Use cleaning materials that are nonhazardous.

D. Remove all labels that are not permanent. Do not paint or otherwise cover fire test labels or nameplates on mechanical and electrical equipment.

E. Clean equipment and fixtures to a sanitary condition with cleaning materials appropriate to the surface and material being cleaned.

F. Clean filters of operating equipment.

G. Clean debris from roofs, gutters, downspouts, and drainage systems.

H. Clean site; sweep paved areas, rake clean landscaped surfaces.

I. Remove waste, surplus materials, trash/rubbish, and construction facilities from the site; dispose of in legal manner; do not burn or bury.

3.13 CLOSEOUT PROCEDURES

A. Make submittals that are required by governing or other authorities.
   1. Provide copies to Architect and Owner.

B. Accompany Architect and Owner on preliminary inspection to determine items to be listed for completion or correction in Contractor's Notice of Substantial Completion.

C. Notify Architect when work is considered ready for Substantial Completion.
   1. Prerequisite for Substantial Completion: In addition to definition of Substantial Completion in the General Conditions or Agreement

D. Submit written certification that Contract Documents have been reviewed, work has been inspected, and that work is complete in accordance with Contract Documents and ready for Architect's review.

E. Owner will occupy all of the building as specified in Section 01 1000.

F. Correct items of work listed in executed Certificates of Substantial Completion and comply with requirements for access to Owner-occupied areas.

G. Accompany Architect and Owner on preliminary final inspection.

H. Notify Architect when work is considered finally complete.

I. Complete items of work determined by Architect's final inspection.

3.14 MAINTENANCE

A. Provide service and maintenance of components indicated in specification Sections.

B. Maintenance Period: As indicated in specification Sections or, if not indicated, not less than one year from the Date of Substantial Completion or the length of the specified warranty, whichever is longer.

C. Examine system components at a frequency consistent with reliable operation. Clean, adjust, and lubricate as required.

D. Include systematic examination, adjustment, and lubrication of components. Repair or replace parts whenever required. Use parts produced by the manufacturer of the original component.

E. Maintenance service shall not be assigned or transferred to any agent or subcontractor without prior written consent of Owner.

END OF SECTION

SECTION 01 7800-CLOSEOUT SUBMITTALS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Project record documents.

B. Operation and maintenance data.

C. Warranties and bonds.

1.02 SUBMITTALS

A. Project Record Documents: Submit documents to Architect with claim for final Application for Payment.

B. Operation and Maintenance Data:
   1. Submit two copies of preliminary draft or proposed formats and outlines of contents before start of Work. Architect will review draft and return one copy with comments.
   2. For equipment, or component parts of equipment put into service during construction and operated by Owner, submit completed documents within ten days after acceptance.
   3. Submit one copy of completed documents 15 days prior to final inspection. This copy will be reviewed and returned after final inspection, with Architect comments. Revise content of all document sets as required prior to final submission.
   4. Submit two sets of revised final documents in final form within 10 days after final inspection.

C. Warranties and Bonds:
   1. For equipment or component parts of equipment put into service during construction with Owner's permission, submit documents within 10 days after acceptance.
   2. Make other submittals within 10 days after Date of Substantial Completion, prior to final Application for Payment.
   3. For items of Work for which acceptance is delayed beyond Date of Substantial Completion, submit within 10 days after acceptance, listing the date of acceptance as the beginning of the warranty period.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 PROJECT RECORD DOCUMENTS

A. Maintain on site one set of the following record documents; record actual revisions to the Work:
   1. Drawings.
   2. Specifications.
   3. Addenda.
   4. Change Orders and other modifications to the Contract.
   5. Reviewed shop drawings, product data, and samples.
   6. Manufacturer's instruction for assembly, installation, and adjusting.

B. Ensure entries are complete and accurate, enabling future reference by Owner.

C. Store record documents separate from documents used for construction.

D. Record information concurrent with construction progress.

E. Specifications: Legibly mark and record at each product Section description of actual products installed, including the following:
   1. Manufacturer's name and product model and number.
   2. Product substitutions or alternates utilized.
   3. Changes made by Addenda and modifications.

F. Record Drawings and Shop Drawings: Legibly mark each item to record actual construction including:
   1. Measured depths of foundations in relation to finish first floor datum.
   2. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
   3. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
   4. Field changes of dimension and detail.
   5. Details not on original Contract Drawings.

3.02 OPERATION AND MAINTENANCE DATA

A. For Each Product or System: List names, addresses and telephone numbers of Subcontractors and suppliers, including local source of supplies and replacement parts.

B. Product Data: Mark each sheet to clearly identify specific products and component parts, and data applicable to installation. Delete inapplicable information.

C. Drawings: Supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams. Do not use Project Record Documents as maintenance drawings.

D. Typed Text: As required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.

3.03 OPERATION AND MAINTENANCE DATA FOR MATERIALS AND FINISHES

A. For Each Product, Applied Material, and Finish:
   1. Product data, with catalog number, size, composition, and color and texture designations.
   2. Information for re-ordering custom manufactured products, if any.

B. Instructions for Care and Maintenance: Manufacturer's recommendations for cleaning agents and methods, precautions against detrimental cleaning agents and methods, and recommended schedule for cleaning and maintenance.

C. Moisture Protection and Weather-exposed Products: Include product data listing applicable reference standards, chemical composition, and details of installation. Provide recommendations for inspections, maintenance, and repair.

D. Additional information as specified in individual product specification Sections.

E. Provide a listing in Table of Contents for design data, with tabbed fly sheet and space for insertion of data.

3.04 OPERATION AND MAINTENANCE DATA FOR EQUIPMENT AND SYSTEMS

A. For Each Item of Equipment and Each System:
   1. Description of unit or system, and component parts.
   2. Identify function, normal operating characteristics, and limiting conditions.
   3. Include performance curves, with engineering data and tests.
   4. Complete nomenclature and model number of replaceable parts.

B. Include manufacturer- or installer-produced wiring diagrams representing installed conditions.

C. Operating Procedures: Include start-up, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shut-down, and emergency instructions. Include summer, winter, and any special operating instructions.

D. Maintenance Requirements: Include routine procedures and guide for preventative maintenance and troubleshooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.

E. Provide servicing and lubrication schedule, and list of lubricants required.

F. Include manufacturer's printed operation and maintenance instructions.

G. Include sequence of operation by controls manufacturer.

H. Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.

I. Provide control diagrams by controls manufacturer representing installed conditions.

J. Provide Contractor's coordination drawings, with color coded piping diagrams documenting installed conditions.

K. Provide charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.

L. Provide list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.

M. Include test and balancing reports.

N. Additional Requirements: As specified in individual product specification Sections.

3.05 OPERATION AND MAINTENANCE MANUALS

A. Prepare instructions and data by personnel experienced in maintenance and operation of described products.

B. Prepare data in the form of an instructional manual.

C. Binders: Commercial quality, 8-1/2 by 11 inch three D side ring binders with durable plastic covers; 2 inch maximum ring size. When multiple binders are used, correlate data into related consistent groupings.

D. Cover: Identify each binder with typed or printed title OPERATION AND MAINTENANCE INSTRUCTIONS; identify title of Project; identify subject matter of contents.

E. Provide tabbed dividers for each separate product and system, with typed description of product and major component parts of equipment.

F. Text: Manufacturer's printed data, or typewritten data on minimum 20 pound paper.

G. Drawings: Provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.

H. Arrange content by systems under Section numbers and sequence of Table of Contents of this Project Manual.

I. Contents: Prepare a Table of Contents for each volume, with each product or system description identified, in three parts as follows:
   1. Part 1: Directory, listing names, addresses, and telephone numbers of Architect, Contractor, Subcontractors, and major equipment suppliers.
   2. Part 2: Operation and maintenance instructions, arranged by system and subdivided by specification Section. For each category, identify names, addresses, and telephone numbers of Subcontractors and suppliers. Identify the following:
      a. Significant design criteria.
      b. List of equipment.
      c. Parts list for each component.
      d. Operating instructions.
      e. Maintenance instructions for equipment and systems.
      f. Maintenance instructions for special finishes, including recommended cleaning methods and materials, and special precautions identifying detrimental agents.
   3. Part 3: Project documents and certificates, including the following:
      a. Shop drawings and product data.
      b. Air and water balance reports.
      c. Certificates.
      d. Photocopies of warranties and bonds.

J. Provide a listing in Table of Contents for design data, with tabbed dividers and space for insertion of data.

K. Table of Contents: Provide title of Project; names, addresses, and telephone numbers of Architect , Consultants, and Contractor with name of responsible parties; schedule of products and systems, indexed to content of the volume.

3.06 WARRANTIES AND BONDS

A. Obtain warranties and bonds, executed in duplicate by responsible Subcontractors, suppliers, and manufacturers, within 10 days after completion of the applicable item of work. Except for items put into use with Owner's permission, leave date of beginning of time of warranty until the Date of Substantial completion is determined.

B. Verify that documents are in proper form, contain full information, and are notarized.

C. Co-execute submittals when required.

D. Retain warranties and bonds until time specified for submittal.

E. Include photocopies of each in operation and maintenance manuals, indexed separately on Table of Contents.

F. Table of Contents: Neatly typed, in the sequence of the Table of Contents of the Project Manual, with each item identified with the number and title of the specification Section in which specified, and the name of product or work item.

END OF SECTION