

Project Manual

Spring Creek 3, Springville 4

55 North Main Street, Springville, UT 84663

Project # 505084719010101

July 2019

THE CHURCH OF
JESUS CHRIST
OF LATTER-DAY SAINTS

ARCHITECTS:

KNELL ARCHITECTS, P.C.

45 EAST 300 NORTH, PROVO, UTAH 84606, (801) 373-6134

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BIDDING REQUIREMENTS

FOR SMALL PROJECTS (U.S.)

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INVITATION TO BID (U.S.)

1. CONTRACTORS INVITED TO BID THE PROJECT:

1. Broderick & Henderson Construction (801) 225-9213
2. Dynamic Construction (801) 318-9711
3. Majestic Builders (801) 798-2162
4. Painter Building (801) 556-9794
5. Oasis Builders (801) 466-1000
6. SRFCO Inc. (801) 224-1581
7. Stone River Construction (801) 636-3217
8. Warner & Associates Inc. (801) 794-0024

2. PROJECT:

Spring Creek 3, Springville 4

3. LOCATION:

55 North Main Street, Springville, UT 84663

4. OWNER:

Corporation of the Presiding Bishop of
The Church of Jesus Christ of Latter-day Saints, a Utah corporation sole
c/o American Fork Project Management Office, 110 East Main, American Fork, Utah

5. CONSULTANT:

Knell Architects, P.C.
45 East 300 North
Provo, Utah 84606

6. DESCRIPTION OF PROJECT:

- A. Re-roof of existing roof and associated work.
- B. Products or systems may be provided under a Value Managed Relationship (VMR) the Owner has negotiated with the supplier. VMR products and systems are indicated as such in the Specifications.

7. TYPE OF BID: Bids will be on a lump-sum basis. Segregated bids will not be accepted.

8. TIME OF SUBSTANTIAL COMPLETION: The time limit for substantial completion of this work will be 45 calendar days and will be as noted in the Agreement.

9. BID OPENING: Sealed bids will be received at (time and date at place). Bids will be publicly opened at (time and date at place).

10. BIDDING DOCUMENTS:

- A. Bidding Documents may be examined at the following plan room locations:
 - 1) Mountainlands Area Plan Room
583 W 3560 S, Suite 4
Salt Lake City, Utah 84115
Office (801) 288-1188 Fax (801) 288-1184
Contact: Mike Luke

- B. Bidding Documents are available to invited Contractors with a deposit of \$0.00 per set. Deposit will be refunded if documents are returned complete and in good condition within five days of bid opening.

- 11. **BIDDER'S QUALIFICATIONS:** Bidding by the Contractors will be by invitation only.
- 12. **OWNER'S RIGHT TO REJECT BIDS:** Owner reserves the right to reject any or all bids and to waive any irregularity therein.

END OF DOCUMENT

INSTRUCTIONS TO BIDDERS (U.S.)

1. DOCUMENTS:

- A. Bidding Documents include Bidding Requirements and proposed Contract Documents. Proposed Contract Documents consist of:
 - 1) Agreement Between Owner and Contractor for Small Project (U.S.)
 - 2) Other documents included by reference
 - 3) Addenda.
- B. Bidding Requirements are those documents identified as such in proposed Project Manual.
- C. Addenda are written or graphic documents issued prior to execution of the Contract which modify or interpret the Bidding Documents. They become part of the Contract Documents as noted in the Agreement Between Owner and Contractor for Small Project (U.S.) upon execution of the Agreement by Owner.

2. BIDDER'S REPRESENTATIONS:

- A. By submitting a bid proposal, bidder represents that
 - 1) Bidder has carefully studied and compared Bidding Documents with each other. Bidder understands the Bidding Documents and the bid is fully in accordance with the requirements of those documents,
 - 2) Bidder has thoroughly examined the site and any building located thereon, has become familiar with local conditions which might directly or indirectly affect contract work, and has correlated its personal observations with requirements of proposed Contract Documents, and
 - 3) Bid is based on materials, equipment, and systems required by Bidding Documents without exception.

3. BIDDING DOCUMENTS:

- A. Copies
 - 1) Owner will provide the Bidding Documents as set forth in the Invitation to Bid.
 - 2) Partial sets of Bidding Documents will not be issued.
- B. Interpretation or Correction of Bidding Documents
 - 1) Bidders will request interpretation or correction of any apparent errors, discrepancies, and omissions in the Bidding Documents.
 - 2) Corrections or changes to Bidding Documents will be made by written Addenda.
- C. Substitutions and Equal Products
 - 1) Equal products may be approved upon compliance with Contract Document requirements.
 - 2) Base bid only on materials, equipment, systems, suppliers or performance qualities specified in the Bidding documents.
 - 3) Where a specified product is identified as a "quality standard", products of other manufacturers that meet the performance, properties, and characteristics of the specified "quality standard" may be used without specific approval as a substitute.
- D. Addenda. Addenda will be sent to bidders and to locations where Bidding Documents are on file no later than one week prior to bid opening or by fax no later than 48 hours prior to bid opening.

4. BIDDING PROCEDURES:

- A. Form and Style of Bids
 - 1) Use Owner's Bid Form.
 - 2) Bid will be complete and executed by authorized representative of Bidder.
 - 3) Do not delete from or add to the information requested on bid form.

- B. Submission of Bids
 - 1) Submit bid in sealed opaque envelope containing only bid form.
 - 2) It is bidder's sole responsibility to see that its bid is received at or before the specified time. Bids received after specified bid opening time may be returned to bidders unopened.
 - 3) No oral, facsimile transmitted, telegraphic, or telephonic bids, modifications, or cancellations will be considered.

- C. Modification or Withdrawal of Bid
 - 1) Bidder guarantees there will be no revisions or withdrawal of bid amount for 45 days after bid opening.
 - 2) Prior to bid opening, bidders may withdraw bid by written request or by reclaiming bid envelope.
 - 3) Prior to bid opening, bidder may mark and sign on the sealed envelope that bidder acknowledges any or all Addenda.

5. CONSIDERATION OF BIDS:

- A. Opening Of Bids - See Invitation to Bid.

- B. Acceptance Of Bid
 - 1) No bidder will consider itself under contract after opening and reading of bids until Owner accepts Contractor's Bid Proposal by executing same.
 - 2) Bidder's past performance, organization, subcontractor selection, equipment, and ability to perform and complete its contract in manner and within time specified, together with amount of bid, will be elements considered in award of contract.

6. FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR:

- A. Agreement form will be "Agreement Between Owner and Contractor for Small Project (U.S.)" provided by Owner.

7. MISCELLANEOUS:

- A. Pre-Bid Conference. A pre-bid conference may be held at a time and place to be announced.

- B. Examination Schedule for Existing Building and Site
 - 1) Contact Alex Nelson, FM, Springville UT FM Group 385 201 8308

END OF DOCUMENT

INFORMATION AVAILABLE TO BIDDERS (U.S.)

1. ASBESTOS-CONTAINING MATERIAL (ACM)

- A. The building upon which work is being performed has not yet been examined for asbestos-containing material.
- B. If contractor suspects any asbestos containing material, stop work immediately and notify architect.

END OF DOCUMENT

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BID FORM

FOR GENERAL CONTRACT WORK (U.S.)

PROJECT IDENTIFICATION:

OWNER:

Corporation of the Presiding Bishop of the Church of Jesus Christ of Latter-day Saints, a Utah corporation sole ("Owner")

CONSULTANT:

BID

1. In submitting this Bid, Bidder represents that:
 - a. If this Bid is accepted, Bidder will enter into an agreement with Owner to perform and furnish the Work described in the Bidding Documents for the Bid Price and within the Time of Substantial Completion indicated in this Bid and in accordance with the other terms and conditions of the Contract Documents.
 - b. Bidder has carefully examined the Bidding Documents consisting of the Project Manual containing the Bidding Requirements, the Conditions of the Contract, and the Specifications, entitled _____, the Drawings entitled _____ and dated _____, and including sheets numbered _____, and addenda numbers _____.
 - c. Bidder has examined the site of the work, existing conditions, and all other conditions affecting the work on the above-named Project.
 - d. Bidder has carefully correlated the information known to Bidder and information and observations obtained from visits to the site with the Bidding Documents.
 - e. Bidder is familiar with federal, State, and local laws and regulations applicable to Project.
 - f. Bidder guarantees there will be no revisions or withdrawal of bid amount for forty-five (45) days after the bid opening.

2. Bidder hereby proposes to furnish all materials, labor, equipment, tools, transportations, services, licenses, fees, permits, etc., required by said documents to complete the Work described by the Contract Documents for the lump-sum of: _____ Dollars (\$ _____).

3. Bidder agrees to achieve substantial completion of the Work within the number of days indicated in the Invitation to Bid.

RESPECTFULLY SUBMITTED:

	Signature
	Printed name
	Title
	Company name
	Business Address
Date	City, State, and Zip Code
License No.	Telephone Fax
	Contact Email Address

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CONSTRUCTION MATERIAL ASBESTOS STATEMENT (U.S.)

PROJECTS FOR: CORPORATION OF THE PRESIDING BISHOP OF THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

Building Name: _____

Building Plan Type: _____

Building Address: _____

Building Owner: Corporation of the Presiding Bishop of The Church of Jesus Christ of Latter-day Saints, a Utah corporation sole.

Project Number: _____

Completion Date: _____

As PROJECT CONSULTANT and principal in charge; based on my best knowledge, information, inspection, and belief; I certify that on the above referenced Project, no asbestos-containing building materials were specified in the construction documents or given approval in shop drawings or submittals.

Project Consultant and Principal in Charge (signature) Date

Company Name

As GENERAL CONTRACTOR in charge of construction; based on my best knowledge, information, inspection, and belief; I affirm that on the above-referenced Project, no asbestos-containing building materials were used in the construction.

General Contractor (signature) Date

Company Name

SMALL PROJECT AGREEMENT BETWEEN OWNER AND CONTRACTOR (U.S.)

Corporation of the Presiding Bishop of The Church of Jesus Christ of Latter-day Saints, a Utah corporation sole, (“Owner”) and _____ (“Contractor”) enter into this *Small Project Agreement Between Owner and Contractor (U.S.)* (“Agreement”) and agree as follows:

1. **Property/Project.**

Property/Project Number: _____
Property Address (“Project Site”): _____
Project Type: _____
Project Name (“Project”): _____
Stake Name: _____

2. **Scope of Work.** Contractor will furnish all labor, materials, tools, and equipment necessary to complete the Work in accordance with the Contract Documents. The Work is all labor, materials, tools, equipment, construction, and services required by the Contract Documents (the “Work”).

3. **Contract Documents.** Contract Documents consist of:

- a. This Agreement;
- b. Supplementary Conditions for Small Project Agreement Between Owner and Contractor (U.S.);
- c. The Specifications (Division 01 and Divisions _____);
- d. Drawings entitled and dated _____;
- e. Addendum No. with date(s) _____;
- f. All written Field Changes, written Construction Change Directives and written Change Orders when prepared and signed by Owner and Contractor.

4. **Compensation.** Owner will pay Contractor for performance of Contractor’s obligations under the Contract Documents the sum of _____ Dollars (\$ _____) (the “Contract Sum”). This Contract Sum includes all labor, materials, equipment, tools, costs, expenses, work and services of Contractor and its subcontractors necessary to perform the Work in accordance with the terms of this Agreement, including without limitation travel, communications, and copying costs.

5. **Payment.**

- a. If the Contract Sum is over \$100,000 or if otherwise requested by Owner, Contractor will submit to Owner a schedule of values which allocates the Contractor’s Bid Proposal Amount to various portions of the Work. This schedule, when accepted by Owner will be used as a basis for reviewing Contractor’s payment requests.
- b. Not more than once each month, Contractor will submit a payment request to Owner. Owner will pay Contractor for work completed within thirty (30) days after Owner receives:
 - 1) Contractor’s payment request for work to date;
 - 2) a certification by Contractor that Contractor has paid for all labor, materials, and equipment relating to the Work covered by prior payment requests and that Contractor will pay for all labor, materials, and equipment relating to the Work covered by the current payment request; and
 - 3) releases of all mechanics’ liens and claims of subcontractors, laborers, or material suppliers who supplied labor and/or materials for the Work covered by the payment request.
 - 4) updated Construction Schedule.
- c. Owner may modify or reject the payment request if, in Owner’s opinion, the Work for which payment is requested is not acceptable or is less complete than represented on the payment request.
- d. Contractor will timely pay subcontractors their portion of fees and expenses that Owner has paid to Contractor.

6. **Extras and Change Orders.** Owner may order changes in the Work by altering, adding to, or deducting from the Work. In the event of such a change, the Contract Sum and/or the time of completion will be adjusted to reflect the change by means of a written Change Order signed by Contractor and Owner. Contractor will not commence work on any change until either: (a) Contractor and Owner have executed a Change Order; or (b) Owner has issued a written order for the change acknowledging that there is a dispute regarding the compensation adjustment relating to the change. If Contractor proceeds with a change in the Work without complying with the preceding sentence, Contractor agrees that it will not be entitled to any additional compensation for such change.
7. **Warranty and Correction of Work.** For all Work, services, labor, materials, products, and equipment provided under the Contract Documents, Contractor provides and extends to Owner all statutory, common law, and standard industry warranties as well as those warranties set forth in Owner's Contract Documents. Unless a longer period is specified by Owner's Contract Documents or otherwise, Contractor, at a minimum and in addition to all other warranties, warrants all Work under the Contract Documents for at least one year. Specifically, and without limitation, Contractor will promptly correct at its own expense:
- a. any portion of the Work which
 - 1) fails to conform to the requirements of the Contract Documents, or
 - 2) is rejected by the Owner as defective or because it is damaged or rendered unsuitable during installation or resulting from failure to exercise proper protection.
 - b. any defects due to faulty materials, equipment, or workmanship which appear within a period of one year from the date of completion of the Work or within such longer period of time as may be prescribed by law or the terms of any applicable special warranty required by the Contract Documents.
8. **Time of Completion.** Contractor will complete the Work and have it ready for Owner's inspection within _____ (_____) calendar days from Notice to Proceed issued by Owner. Time is of the essence. If Contractor is delayed at any time in the progress of the Work by any act or neglect of Owner, or by changes in the Work, or by strikes, lockouts, unusual delay in transportation, unavoidable casualties, or acts of nature beyond Contractor's control, then the time for completion will be extended by the time that completion of the Work is delayed. However, Contractor expressly waives any damages for any such delays.
9. **Owner Provided Items.** Owner may provide furnishings, equipment, and/or other items for the Project. Contractor will install items furnished by Owner and/or receive, store, and protect such items on site until the date Owner accepts the Project.
10. **Product Requirements.** Contractor will provide products that comply with Contract Documents, are undamaged, and, unless otherwise indicated, are new and unused at time of installation. Contractor will provide products complete with accessories, trim, finish, safety guards, and other devices and details needed for complete installation and for intended use and effect.
11. **Permits, Surveys, and Taxes.** Contractor will obtain and pay for all permits and licenses, and also pay any applicable taxes. Contractor will also obtain and pay for any surveys it needs to perform the Work.
12. **Independent Contractor Relationship.** Contractor is not an agent or employee of Owner but is an independent contractor.
13. **Comply with Laws.** Contractor will comply, and ensure that all subcontractors comply, with all applicable laws, ordinances, rules, regulations, covenants, and restrictions.
14. **Indemnity and Hold Harmless.**
- a. Contractor will indemnify and hold harmless Owner and Owner's representatives, employees, agents, architects, and consultants from and against any and all claims, liens, damages, liability, demands, costs, judgments, awards, settlements, causes of action, losses and expenses (collectively "Claims" or "Claim"), including but not limited to attorney fees, consultant fees, expert fees, copy costs, and other expenses, arising out of or resulting from performance of or failure to perform the Work, attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of real or personal property, including loss of use

resulting therefrom, except to the extent that such liability arises out of the negligence of Owner, its representatives, agents, and employees. This indemnity includes, without limitation, indemnification of Owner from all losses or injury to Owner's property, except to the extent that such loss or injury arises out of the negligence of Owner, its representatives, agents, and employees. This indemnity applies, without limitation, to include Claims occurring both during performance of the Work and/or subsequent to completion of the Work. In the event that any Claim is caused in part by a party indemnified hereunder, that party will bear the cost of such Claim to the extent it was the cause thereof. In the event that a claimant asserts a Claim for recovery against any party indemnified hereunder, the party indemnified hereunder may tender the defense of such Claim to Contractor. If Contractor rejects such tender of defense and it is later determined that the negligence of the party indemnified hereunder did not cause all of the Claim, Contractor will reimburse the party indemnified hereunder for all costs and expenses incurred by that party in defending against the Claim. Contractor will not be liable hereunder to indemnify any party for damages resulting from the sole negligence of that party.

- b. In addition to the foregoing, Contractor will be liable to defend Owner in any lawsuit filed by any Subcontractor relating to the Project. Where liens have been filed against Owner's property, Contractor (and/or its bonding company which has issued bonds for the Project) will obtain lien releases and record them in the appropriate county and/or local jurisdiction and provide Owner with a title free and clear from any liens of Subcontractors. In the event that Contractor and/or its bonding company are unable to obtain a lien release, Owner in its absolute discretion may require Contractor to provide a bond around the lien or a bond to discharge the lien, at Contractor's sole expense.
 - c. In addition to the foregoing, Contractor will indemnify and hold Owner harmless from any claim of any other contractor resulting from the performance, nonperformance or delay in performance of the Work by Contractor.
 - d. The indemnification obligation herein will not be limited by a limitation on the amount or type of damages, compensation or benefits payable by or for Contractor or a Subcontractor under workers compensation acts, disability benefit acts, or other employee benefit acts.
15. **Work Restrictions.** Contractor will ensure that Contractor, its agents, employees, and subcontractors:
- a. Do not use or consume alcohol or cannabis, or illegally use drugs, on the Project Site or enter on or perform any Work on the Project Site while under their influence.
 - b. Do not smoke or vape anything on the Project Site. Do not use tobacco in any form on the Project Site.
 - c. Do not perform Work on the Project Site on Sundays except for emergency work.
 - d. Refrain from using profanity or being discourteous or uncivil to others on the Project Site or while performing Work under this Agreement.
 - e. Do not view or allow pornographic or other indecent materials on the Project Site.
 - f. Do not play obnoxious and/or loud music on the Project Site. Do not play any music within existing facilities.
 - g. Refrain from wearing immodest, offensive, or obnoxious clothing, while on the Project Site.
 - h. Do not bring weapons on the Project Site.
16. **Safety Hazards.** Contractor will ensure that no work or services will be performed that may pose an undue safety hazard to Contractor, Contractor's employees, or any other person.
17. **Contractor's Insurance.** Prior to performing any work, Contractor will obtain and maintain during the term of this Agreement the following insurance:
- a. Workers Compensation Insurance or evidence of exemption.
 - b. Employers Liability Insurance with minimum limits of the greater of \$500,000 E.L. each accident, \$500,000 E. L. disease-each employee, \$500,000 E.L. disease-policy limit or as required by the law of the state in which the Project is located.
 - c. Commercial General Liability Insurance – ISO Form CG 00 01 (12/07) or equivalent Occurrence policy which will provide primary coverage to the additional insureds (the Owner and the Architect) in the event of any Occurrence, Claim, or Suit with:
 - 1) Limits of the greater of: Contractor's actual coverage amounts or the following:
 - a) \$2,000,000 General Aggregate;
 - b) \$2,000,000 Products - Comp/Ops Aggregate;

- c) \$1,000,000 Personal and Advertising Liability;
 - d) \$1,000,000 Each Occurrence; and
 - e) \$50,000 Fire Damage to Rented Premises (Each Occurrence)
- 2) Endorsements attached to the General Liability policy including the following or their equivalent:
- a) ISO Form CG-25-03 (05/09), Amendment of Limits of Insurance (Designated Project or Premises) describing the Agreement and specifying limits as shown above.
 - b) ISO Form CG 20 10 (07/04), Additional Insured – Owners, Lessees, Or Contractors (Form B), naming Owner and Architect as additional insureds.
- d. Automobile Liability Insurance, with:
- 1) Combined Single Limit each accident in the amount of no less than \$500,000; and
 - 2) Coverage applying to "Any Auto" or its equivalent.

Contractor will provide evidence of these insurance coverages to Owner by providing an ACORD 25 (2010/05) Form or its equivalent: (1) listing Owner as the Certificate Holder and Additional Insured on the general liability and any excess liability policies, (2) listing the insurance companies providing coverage (all companies listed must be rated in A.M. Best Company Key Rating Guide-Property-Casualty and each company must have a rating of B+ Class VII or higher), (3) attaching the endorsements set forth above for the Certificate of Liability Insurance, and (4) bearing the name, address and telephone number of the producer and signed by an authorized representative of the producer. (The signature may be original, stamped, or electronic.) Notwithstanding the foregoing, Owner may, in writing and at its sole discretion, modify these insurance requirements.

18. **Resolution of Disputes.** In the event there is any dispute arising under the Contract Documents which cannot be resolved by agreement between the parties, either party may submit the dispute with all documentation upon which it relies to Director of Architecture, Engineering, and Construction, 50 East North Temple, Salt Lake City, Utah 84150, who will convene a dispute resolution conference within thirty (30) days. The dispute resolution conference will constitute settlement negotiations and any settlement proposal made pursuant to the conference will not be admissible as evidence of liability. In the event that the parties do not resolve their dispute pursuant to the dispute resolution conference, either party may commence legal action to resolve the dispute. Any such action must be commenced within six (6) months from the first day of the dispute resolution conference or be time barred. Submission of the dispute to the Director as outlined above is a condition precedent to the right to commence legal action to resolve any dispute. In the event that either party commences legal action to adjudicate any dispute without first submitting the dispute to the Director, the other party will be entitled to obtain an order dismissing the litigation without prejudice and awarding such other party any costs and attorney fees incurred by that party in obtaining the dismissal, including without limitation copy costs, and expert and consultant fees and expenses. Pending final resolution of a dispute hereunder, Contractor will proceed diligently with the performance of its obligations pursuant to this Agreement.
19. **Termination by Contractor.** In the event Owner materially breaches any term of the Contract Documents, Contractor will promptly give Written Notice of the breach to Owner. If Owner fails to cure the breach within ten (10) days of the Written Notice, Contractor may terminate this Agreement by giving Written Notice to Owner and recover from Owner the percentage of the Contract Sum represented by the Work completed on the Project site as of the date of termination together with any out of pocket loss Contractor has sustained with respect to materials and equipment as a result of the termination prior to completion of the Work, less any offsets. Contractor will not be entitled to unearned profits or any other compensation or damages as a result of the termination and hereby waives any claim therefor. Contractor will provide to Owner all warranty, as built, inspection, and other close out documents as well as materials that Contractor has in its possession or control at the time of termination. Without limitation, Contractor's indemnities and obligations as well as all warranties relative to Work provided through the date of termination survive a termination hereunder.
20. **Termination by Owner for Cause.** Should Contractor fail to timely provide Owner with the certificates of insurance, make a general assignment for the benefit of its creditors, fail to apply enough properly skilled workmen or specified materials to properly prosecute the Work in accordance with Contractor's schedule, or otherwise materially breach any provision of the Contract Documents, then Owner may, without any prejudice

to any other right or remedy, give Contractor Written Notice thereof. If Contractor fails to cure its default within ten (10) days, Owner may terminate this Agreement by giving Written Notice to Contractor. In such case, Owner may, in Owner's sole discretion, take legal assignment of subcontracts and other contractual rights of Contractor and/or take possession of the premises and all materials, tools, equipment, and appliances thereon, and finish the Work by whatever method Owner deems expedient. Contractor will not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the Contract Sum exceeds the expense of finishing the Work, including compensation for additional administrative, architectural, consultant, and legal services (including without limitation attorney fees, expert fees, copy costs, and other expenses), such excess will be paid to Contractor, less any offsets. If such expense exceeds the unpaid balance, Contractor will pay the difference to Owner. Contractor will provide to Owner all warranty, as built, inspection, and other close out documents as well as materials that Contractor has in its possession or control at the time of termination. Without limitation, Contractor's indemnities and obligations as well as all warranties relative to Work provided through the date of termination survive a termination hereunder.

21. **Termination by Owner for Convenience.** Notwithstanding any other provision contained in the Contract Documents, Owner may, without cause and in its absolute discretion, terminate this Agreement at any time. In the event of such termination, Contractor will be entitled to recover from Owner the percentage of the Contract Sum equal to the percentage of the Work which Owner and/or its architect determines has been completed on the Project site as of the date of termination together with any out of pocket loss Contractor has sustained with respect to materials and equipment as a result of the termination prior to completion of the Work, less any offsets. Contractor will not be entitled to unearned profits or any other compensation as a result of the termination and hereby waives any claim therefor. Contractor will provide to Owner all warranty, as built, inspection, and other close out documents as well as materials that Contractor has in its possession or control at the time of termination. Owner may, in Owner's sole discretion, take legal assignment of subcontracts and other contractual rights of Contractor. Without limitation, Contractor's indemnities and obligations as well as all warranties relative to Work provided through the date of termination survive a termination hereunder.
22. **Enforcement.** In the event either party commences legal action to enforce or rescind any term of this Agreement, the prevailing party will be entitled to recover its attorney fees, costs and legal expenses, including without limitation all copy costs and expert and consultant fees and expenses, incurred in that action and on all appeals, from the other party.
23. **Ownership of Materials, Products, and Intellectual Property Rights.** Owner will retain ownership and intellectual property rights in all plans, designs, drawings, documents, concepts, and materials provided by or on behalf of Owner to Contractor and to all work products of Contractor and its subcontractors for products, services, and Work provided under this Agreement, such products, services, and Work of Contractor and its subcontractors constituting works made for hire. Neither Contractor nor its subcontractors will reuse any portion of such items provided by Owner or work products developed by Contractor or its subcontractors for Owner pursuant to this Agreement or disclose any such items to any third party without the prior written consent of Owner. Owner may withhold its consent in its absolute discretion. Contractor shall obtain the written agreement of each of its subcontractors to the terms of this section prior to permitting the subcontractor to perform any services contemplated by this Agreement.
24. **Comply with Intellectual Property Rights of Others.** Contractor represents and warrants that no Work or services (with its means, methods, goods, and services attendant thereto), provided to Owner will infringe or violate any right of any third party and that Owner may use and exploit such Work, means, methods, goods, and services without liability or obligation to any person or entity (specifically and without limitation, such Work, means, methods, goods, and services will not violate rights under any patent, copyright, trademark, or other intellectual property right or application for the same).
25. **Ownership and Use of Renderings and Photographs.** Renderings, photographs, and/or other images of or representing the services, Work, or any improvement on or relative to the Project Site, whether created before, during, or at completion of construction (and whether created by Owner, Contractor, or Contractor's subcontractors), are the property of the Owner. Contractor hereby transfers and assigns to Owner all

ownership and intellectual property rights that Contractor and/or its subcontractors may have in and to all such renderings, photographs, and other images. The Owner reserves all rights including copyrights and other intellectual property rights to such renderings, photographs, and other images. No such renderings, photographs, or other images shall be used or distributed without written consent of the Owner.

26. **Public Statements.** Contractor will not make any statements or provide any information to the media about the Project or Work without the prior written consent of Owner. If Contractor receives any requests for information from media, Contractor will refer such requests to Owner.

27. **Confidentiality.** Contractor shall ensure that Contractor and its subcontractors, and the employees, agents and representatives of Contractor and its subcontractors, maintain in strict confidence, and shall use and disclose only as authorized by Owner all Confidential Information of Owner that Contractor receives in connection with the performance of this Agreement. Notwithstanding the foregoing, Contractor may use and disclose any information to the extent required by an order of any court or governmental authority, but only after it has notified Owner and Owner has had an opportunity to obtain reasonable protection for such information in connection with such disclosure. For purposes of this Agreement, "Confidential Information" means:

- a. The name or address of any affiliate, customer or contractor of Owner or any information concerning the transactions of any such person with Owner;
- b. Any contracts, agreements, business plans, budgets or other financial information, renderings, photographs, and materials provided by Owner, relating to the Work or any improvement on the Project Site to the extent such has not been made available to the public by the Owner;
- c. Any other information that is marked or noted as confidential at the time of its disclosure.

28. **No Commercial Use of Transaction or Relationship.** Without the prior written consent of Owner, which Owner may grant or withhold in its sole discretion, neither Contractor nor Contractor's affiliates, officers, directors, agents, representatives, shareholders, members, Subcontractors, or employees shall make any private commercial use of their relationship to Owner or the Project, including, without limitation:

- a. By referring to the Owner or Project verbally or in any sales, marketing or other literature, letters, client lists, press releases, brochures or other written materials except as may be necessary for Contractor to perform Contractor's obligations under the terms of this Agreement;
- b. By using or allowing the use of any photographs of the Work or Project or any part thereof, or of any service marks, trademarks or trade names or other intellectual property now or which may hereafter be associated with, owned by or licensed by Owner, in connection with any work, service or product; or
- c. By contracting with or receiving money or anything of value from any person or commercial entity to facilitate such person or entity obtaining any type of commercial identification, advertising or visibility in connection with the Owner or Project.

Notwithstanding the foregoing, Contractor may include a reference to Owner or the Project in a professional résumé or other similar listing of Contractor's references without seeking Owner's written consent in each instance, provided that such reference to Owner or the Project is included with at least several other similar references to projects of different owners and is given no more prominence than such other references.

29. **Entire Agreement.** This Agreement contains the entire and integrated agreement between the parties hereto and supersedes all prior negotiations, representations, or agreements, either written or oral, relating to the Project. This Agreement may be amended only by a writing signed by both parties. This Agreement will not be construed to create a contractual relationship of any kind between any persons or entities other than Owner and Contractor.

30. **Assignment.** Contractor will not assign any right or obligation hereunder without the prior written consent of the Owner, which consent may be granted or withheld in Owner's absolute discretion.

31. **Governing Law.** The parties acknowledge that the Contract Documents have substantial connections to the State of Utah. The Contract Documents will be deemed to have been made, executed, and delivered in Salt Lake City, Utah. To the maximum extent permitted by law, (i) the Contract Documents and all matters related to their creation and performance will be governed by and enforced in accordance with the laws of the State

of Utah, excluding conflicts of law rules, and (ii) all disputes arising from or related to the Contract Documents will be decided only in a state or federal court located in Salt Lake City, Utah and not in any other court or state. Toward that end, the parties hereby consent to the jurisdiction of the state and federal courts located in Salt Lake City, Utah and waive any other venue to which they might be entitled by virtue of domicile, habitual residence, place of business, or otherwise.

32. **Effective Date.** The effective date of this Agreement is the date indicated by Owner's signature.

OWNER:

Corporation of the Presiding Bishop of
The Church of Jesus Christ of Latter-day Saints,
a Utah corporation sole.

Signature: _____

Print Name: _____

Title: _____

Address: _____

Telephone No: _____

Facsimile No: _____

Email: _____

Effective Date: _____

Reviewed By: _____

CONTRACTOR:

(company)

Signature: _____

Print Name: _____

Title: _____

Address: _____

Telephone No: _____

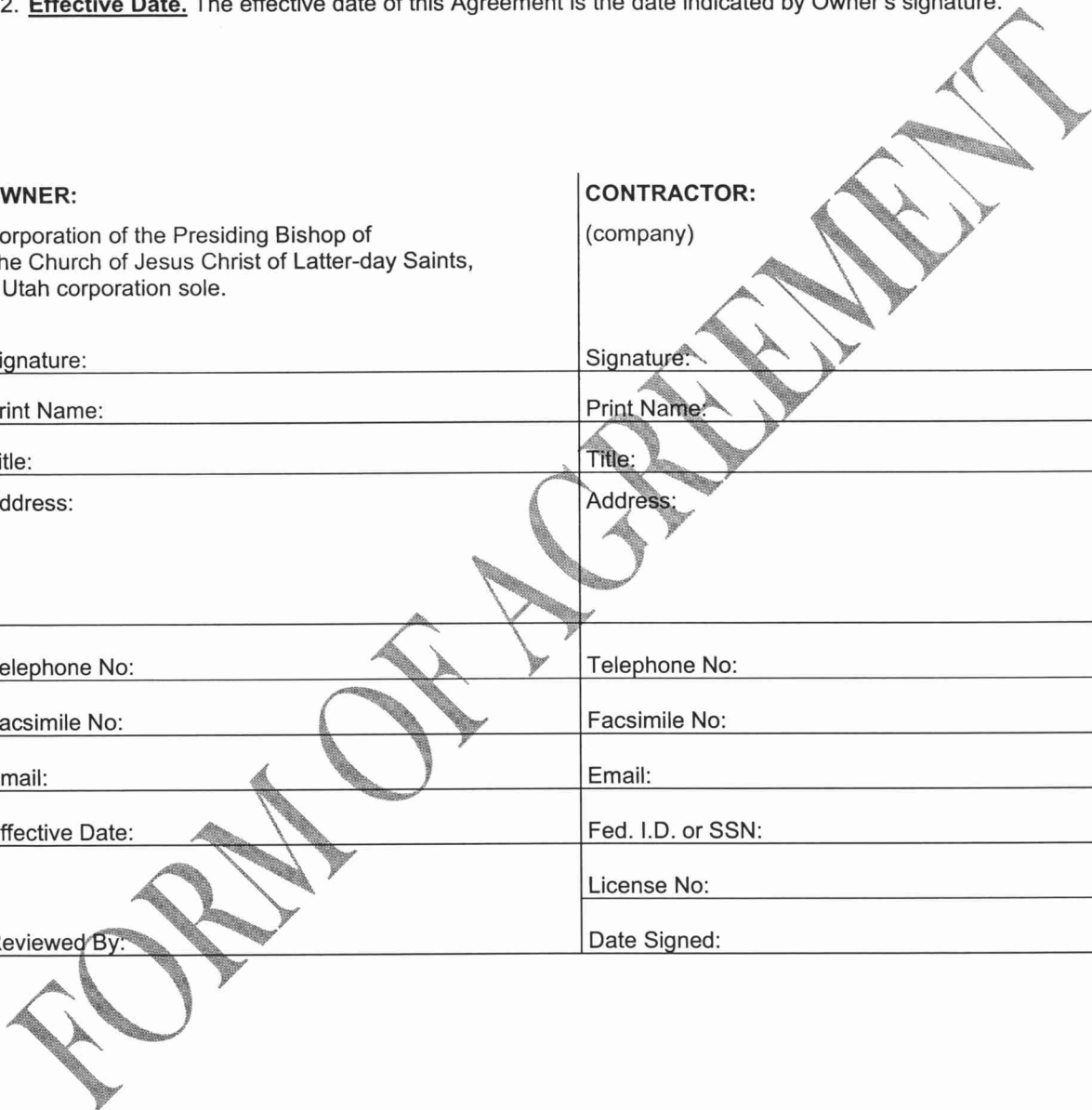
Facsimile No: _____

Email: _____

Fed. I.D. or SSN: _____

License No: _____

Date Signed: _____



SUPPLEMENTARY CONDITIONS

FOR SMALL PROJECT AGREEMENT BETWEEN OWNER AND CONTRACTOR (U.S.)

ITEM 1 - GENERAL

1. Conditions of the Small Project Agreement Between Owner and Contractor (U.S.) apply to each Division of the Specifications.
2. Provisions contained in Division 01 apply to all Divisions of the Specifications.

ITEM 2 - LIQUIDATED DAMAGES PAYABLE TO OWNER – Not Used

ITEM 3 - STATE SPECIFIC SUPPLEMENTARY CONDITIONS

Utah

UTAH STATE SALES TAX:

Add the following to the Small Project Agreement Between Owner and Contractor (U.S.):

1. Contractors should be exempt on purchases of material installed or converted into real property to be used by the Owner. The Contractor will furnish each vendor with a completed Exemption Certificate Form TC-721. The certificate will be prepared by the Contractor for each vendor in order to obtain the exemption.
2. The Owner's tax exempt number is 11871701-002-STC.

UTAH NOTICE OF INTENT TO OBTAIN FINAL COMPLETION:

Add the following to the Small Project Agreement Between Owner and Contractor (U.S.):

- A. Contractor shall file with the State Construction Registry, on its own behalf and/or on behalf of Owner, a notice of intent to obtain final completion at least 45 days before the day on which the Owner or Contractor files or could file a notice of completion under Utah Code Ann. Section 38-1a-506 if:
 1. The completion of performance time under the original contract for construction work is greater than 120 days;
 2. The total original construction contract price exceeds \$500,000; and
 3. The original contractor or owner has not obtained a payment bond in accordance with Utah Code Ann. Section 14-2-1.

UTAH NOTICE OF COMPLETION:

Add the following to the Small Project Agreement Between Owner and Contractor (U.S.):

- A. Within five (5) calendar days of final completion of the Project and in compliance with Section 38-1a-507 Utah Code Annotated, Contractor shall file with the State Construction Registry, and copy to Owner, a notice of completion which shall include, without limitation, the following:
 1. The name, address, telephone number, and email address of the person filing the notice of completion;
 2. The name of the county in which the Project and/or Project site is located;
 3. The date on which final completion is alleged to have occurred;
 4. The method used to determine final completion; and
 5. One of the following:
 - a. The tax parcel identification number of each parcel included in the Project and/or Project site;

- b. The entry number of a preliminary notice on the same project that includes the tax parcel identification number of each parcel included in the Project and/or Project site; or
 - c. The entry number of the building permit issued for the Project.
 - B. Notwithstanding any other provision of the Contract Documents to the contrary, Contractor and Owner agree that any breach or failure to comply with this Section by the Contractor will constitute a breach of contract and the Contractor will be liable for any direct, indirect, or consequential damages to the Owner flowing from this breach.

UTAH STATE PROGRESS PAYMENTS AND FINAL PAYMENT:

Replace paragraph 5 of the Small Project Agreement Between Owner and Contractor (U.S.) with the following:

5. Payment

- a. If the Contractor's Bid Proposal Amount is over \$100,000, Contractor will submit to Owner a schedule of values which allocates the Contractor's Bid Proposal Amount to various portions of the Work. This schedule, when accepted by Owner, will be used as a basis for reviewing Contractor's payment requests.
- b. Progress Payments: Not more than once each month, Contractor will submit a payment request to Owner. Owner will pay Contractor progress payments for work completed within fifteen (15) days after Owner receives:
 1. Contractor's progress payment request for work to date;
 2. A certification by Contractor that Contractor has paid for all labor, materials, and equipment relating to the Work covered by prior payment requests and that Contractor will pay for all labor, materials, and equipment relating to the Work covered by the current payment request; and
 3. Conditional Waiver and Release Upon Progress Payment documents submitted by Contractor (in content complying with Utah Code § 38-1a-802) executed by each of the subcontractors performing work and/or providing materials covered by the Contractor's progress payment request.
- c. Final Payment: Owner will make full and final payment of the Contract Sum due within thirty (30) days of the completion of all of the following requirements:
 1. Contractor has submitted its final payment request;
 2. Contractor has submitted a certification that Contractor has paid for all labor, materials, and equipment relating to the Work covered by prior payment requests and that Contractor will pay for all labor, materials, and equipment relating to the Work covered by the final payment request; and
 3. Contractor has submitted Waiver and Release Upon Final Payment documents (in content complying with Utah Code § 38-1a-802) executed by each of the subcontractors performing work and/or providing materials covered by the Contractor's final payment request.

Acceptance of final payment by Contractor or any Subcontractor will constitute a waiver of claims by the payee except for those claims previously made to Owner in writing and identified by Contractor in its affidavit as still pending.

If the aggregate of previous payments made by Owner exceeds the amount due Contractor, Contractor will reimburse the difference to Owner.

- d. Owner may modify or reject any payment request if, in Owner's opinion, the Work for which payment is requested is not acceptable or is less complete than represented on the payment request.
- e. Upon receipt of any payment from Owner, Contractor will pay to each Subcontractor the amount paid to Contractor on account of such Subcontractor's portion of the Work.
- f. Contractor will maintain a copy of each payment request at the Project site for review by the Subcontractors.
- g. No payment made, either in whole or in part, by Owner will be construed to be an acceptance of defective or improper materials or workmanship.

END OF DOCUMENT

DIVISION 01**SECTION 01 0000****GENERAL REQUIREMENTS: R&I PROJECT**

- 01 1000 SUMMARY**
- 01 1200 MULTIPLE CONTRACT SUMMARY**
- 01 1400 WORK RESTRICTIONS**
- 01 3000 ADMINISTRATIVE REQUIREMENTS**
- 01 3100 PROJECT MANAGEMENT AND COORDINATION**
- 01 3300 SUBMITTAL PROCEDURES**
- 01 3500 SPECIAL PROCEDURES**
- 01 4000 QUALITY REQUIREMENTS**
- 01 4301 QUALITY ASSURANCE – QUALIFICATIONS**
- 01 4523 TESTING AND INSPECTING SERVICES**
- 01 5000 TEMPORARY FACILITIES AND CONTROLS**
- 01 6100 COMMON PRODUCT REQUIREMENTS**
- 01 6200 PRODUCT OPTIONS**
- 01 6400 OWNER-FURNISHED PRODUCTS**
- 01 6600 DELIVERY, STORAGE, AND HANDLING REQUIREMENTS**
- 01 7000 EXECUTION REQUIREMENTS**
- 01 7400 CLEANING AND WASTE MANAGEMENT**
- 01 7700 CLOSEOUT PROCEDURES**
- 01 7800 CLOSEOUT SUBMITTALS**

SECTION 01 1000 SUMMARY

- A. Work Covered By Contract Documents:
 - 1. Provisions contained in Division 01 apply to all other sections and divisions of Specifications. All instructions contained in Specifications are directed to Contractor. Unless specifically provided otherwise, all obligations set forth in Specifications are obligations of Contractor.
 - 2. Comply with applicable laws and regulations.
- B. Work By Owner:
 - 1. Owner will furnish and install some portions of the Work with its own forces. Complete the Work necessary to accommodate the Work to be performed by Owner before scheduled date for performance of such Work.
 - 2. Owner may provide furnishings and/or equipment for Project. Contractor will receive, store, and protect such items on site until the date Owner accepts Project.

SECTION 01 1200 MULTIPLE CONTRACT SUMMARY

- A. Separate Contracts:
 - 1. Contracts may be issued by Owner for performance of certain construction operations at Project site.
 - 2. Contractor will afford other contractors reasonable opportunity to place and store their materials and equipment on site and to perform their work and will properly connect and coordinate its work with theirs where applicable:

SECTION 01 1400 WORK RESTRICTIONS

- A. Project Conditions:
 - 1. During construction period, Contractor will have use of premises for construction operations. Contractor will ensure that Contractor, its employees, subcontractors, and employees comply with following requirements:
 - a. Confine operations to areas within Contract limits shown on Drawings. Do not disturb portions of site beyond Contract limits.
 - b. Do not allow alcoholic beverages, illegal drugs, or persons under their influence on Project Site.
 - c. Do not allow use of tobacco in any form on Project Site.
 - d. Do not allow pornographic or other indecent materials on site.

- e. Do not allow work on Project Site on Sundays except for emergency work.
 - f. Refrain from using profanity or being discourteous or uncivil to others on Project Site or while performing The Work.
 - g. Wear shirts with sleeves, wear shoes, and refrain from wearing immodest, offensive, or obnoxious clothing, while on Project Site.
 - h. Do not allow playing of obnoxious and loud music on Project Site. Do not allow playing of any music within existing facilities.
 - i. Do not build fires on Project Site.
 - j. Do not allow weapons on Project Site, except those carried by law enforcement officers and/or other uniformed security personnel who have been retained by Owner or Contractor to provide security services.
2. Existing Facilities:
 - a. If Owner will occupy existing building, reasonably accommodate use of existing facilities by Owner.

SECTION 01 3000 ADMINISTRATIVE REQUIREMENTS

A. Administrative Requirements:

1. Coordination:
 - a. Coordinate construction activities to ensure efficient and orderly installation of each part of the Work.
 - b. Coordinate construction operations that are dependent upon each other for proper installation, connection, and operation.
 - c. Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials.

SECTION 01 3100 PROJECT MANAGEMENT AND COORDINATION

A. Multiple Contract Coordination:

1. Contractor shall be responsible for coordination of Temporary Facilities and Controls, Construction Waste Management and Disposal services, and Final Cleaning for entire Project unless directed otherwise by Owner's Representative for those who perform work on Project from Notice to Proceed to date of Substantial Completion.

B. Project Meetings And Conferences:

1. Attend preconstruction conference and organizational meeting scheduled by Architect or Owner Representative at Project site or other convenient location.
2. Be prepared to discuss items of significance that could affect progress, including such topics as:
 - a. Construction schedule, equipment deliveries, general inspection of tests, preparation of record documents and O&M manuals, project cleanup, security, shop drawings, samples, use of premises, work restrictions, and working hours.
2. Pre-Installation Conferences.
 - a. Attend pre-installation conferences specified in Contract Document.

SECTION 01 3300 SUBMITTAL PROCEDURES

A. Submittal Procedure:

1. Coordination: Coordination preparation and processing of submittals with performance of construction activities. Transmit each submittal sufficiently before performance of related construction activities to avoid delay.
2. Process Time: Allow sufficient review time so installation will not be delayed by time required to process submittals.
3. Identification: Place permanent label or title block on each submittal for identification. Include name of entity that prepared each submittal on label or title block.
4. Transmittal: Package each submittal appropriately for transmittal and handling.

B. Action Submittals:

1. Product Data: Submit product data, as required by individual Sections of Specifications.
2. Shop Drawings: Submit shop drawings for review and designate (stamp) approval of shop drawings.
3. Samples: Samples used for comparison with actual component to be installed. Samples when accepted will be used for quality comparisons throughout course of construction.

C. Informational Submittals:

1. Informational submittals are design data, test reports, certificates, manufacturer's instructions, manufacturer's field reports, and other documentary data affirming quality of products and installations.
 - a. Return copies or PDF files marked with action taken and with corrections or modifications required.

D. Closeout Submittals:

1. Submittals that occur during project closeout.

SECTION 01 3500 SPECIAL PROCEDURES**A. Quality Assurance:**

1. Hot Work Permit (Available from Owner's Representative):
 - a. Required for doing hot work involving open flames or producing heat or sparks such as:
 - 1) Brazing.
 - 2) Cutting.
 - 3) Grinding.
 - 4) Soldering.
 - 5) Thawing pipe.
 - 6) Torch applied roofing.
 - 7) Welding.

SECTION 01 4000 QUALITY REQUIREMENTS**A. Administrative Requirements:**

1. Conflicting Requirements:
 - a. If compliance with two or more standards is specified and standards establish different or conflicting requirements for minimum quantities or quality levels, comply with most stringent requirement.
2. Minimum Quantity or Quality Levels:
 - a. Quantity or quality level shown or specified shall be the minimum provided or performed. Actual installation may comply exactly with minimum quantity or quality specified, or it may exceed minimum within reasonable limits.
3. Submit to Owner permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, and similar documents, correspondence, and records establishing compliance with standards and regulations bearing upon performance of the Work.

B. Quality Assurance:

1. Testing and inspecting services are used to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with Contract Document requirements.
2. Quality Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to verify compliance and guard against defects and deficiencies and substantiate that proposed construction will comply with requirements. Owner or Owner's designated representative(s) will perform quality assurance to verify compliance with Contract Documents.
3. Notify Owner immediately if asbestos-containing materials or other hazardous materials are encountered while performing the Work.

C. Quality Control:

1. Quality Control Services:
 - a. Quality Control will be sole responsibility of Contractor.
 - 1) Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements performed by Contractor.
 - a) They do not include inspections, tests or related actions performed by Architect or Owner Representative, governing authorities or independent agencies hired by Owner or Architect.
 - b) Quality assurance performed by Owner will be used to validate Quality Control performed by Contractor.
 - 2) Where services are indicated as Contractor's responsibility, engage qualified Testing Agency to perform these quality control services:

- a) Contractor will not employ same testing entity engaged by Owner, without Owner's written approval.

D. Repair And Protection:

1. On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
2. Protect construction exposed by or for Quality Assurance and Quality Control activities.
3. Repair and protection are Contractor's responsibility, regardless of assignment of responsibility for Quality Assurance and Quality Control Services.

SECTION 01 4301 QUALITY ASSURANCE - QUALIFICATIONS

A. Qualifications: Qualifications in this Section establish minimum qualification levels required; individual Specification Sections specify additional requirements:

1. Fabricator / Supplier / Installer Qualifications:

- a. Firm experienced in producing products similar to those indicated for this Project and with record of successful in-service performance, as well as sufficient production capacity to produce required units:
 - 1) Where heading '*VMR (Value Managed Relationship) Suppliers / Installers*' is used to identify list of specified suppliers or installers, Owner has established relationships that extend beyond requirements of this Project. No other suppliers / installers will be acceptable. Follow specified procedures to preserve relationships between Owner and specified suppliers / installers and advantages that accrue to Owner from those relationships.
 - 2) Where heading 'Acceptable or Approved Suppliers / Installers / Fabricators' is used to identify list of specified suppliers / installers / fabricators, use only one of listed suppliers / installers / fabricators. No others will be acceptable.

2. Factory-Authorized Service Representative Qualifications:

- a. Authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.

3. Installer Qualifications:

- a. Firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with record of successful in-service performance.

4. Manufacturer Qualifications:

- a. Firm experienced in manufacturing products or systems similar to those indicated for this Project and with record of successful in-service performance, as well as sufficient production capacity to produce required units.

5. Manufacturer's Field Services Qualifications:

- a. Experienced authorized representative of manufacturer to inspect field-assembled components and equipment installation, including service connections.

6. Professional Engineer Qualifications:

- a. Professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of kind indicated:
 - 1) Engineering services are defined as those performed for installations of system, assembly, or products that are similar to those indicated for this Project in material, design, and extent.

7. Specialists:

- a. Certain sections of Specifications require that specific construction activities will be performed by entities who are recognized experts in those operations:
 - 1) Specialists will satisfy qualification requirements indicated and will be engaged for activities indicated.
 - 2) Requirement for special will not supersede building codes and regulations governing the Work.

8. Testing Agency Qualifications:

- a. Independent Testing Agency with experience and capability to conduct testing and inspecting indicated, as documented according to ASTM E329; and with additional qualifications specified in individual Sections; and where required by authorities having jurisdiction, that is acceptable to authorities.
- b. Testing Laboratory:
 - 1) AASHTO Materials Reference Laboratory (AMRL) Accreditation Program.
 - 2) Cement and Concrete Reference Laboratory (CCRL).

- 3) Nationally Recognized Testing Laboratory (NRTL): Nationally recognized testing laboratory according to 29 CFR 1910.7.
- 4) National Voluntary Laboratory (NVLAP): Testing Agency accredited according to National Institute of Standards and Technology (NIST) Technology Administration, U. S. Department of Commerce Accreditation Program.

SECTION 01 4523 TESTING AND INSPECTION SERVICES

A. Submittals:

1. Certificates: Testing Agency will submit certified written report of each inspection, test, or similar service.
2. Tests and Evaluation Reports:
 - a. Testing Agency or Agencies will prepare logs, test reports, and certificates applicable to specific tests and inspections and deliver copies to Owner's Representative and to each of following if involved on project: Architect, Consulting Engineers (Engineer of Record), General Contractor, Authorities Having Jurisdiction (if required).
3. Testing Agency:
 - a. Qualifications of Testing Agency management, personnel, inspector and technicians designated to project.
 - b. Provide procedures for non-destructive testing, equipment calibration records, personnel training records, welding inspection, bolting inspection, shear connector stud inspection, and seismic connection inspections.

B. Quality Assurance:

1. Owner or Owner's designated representative(s) will perform quality assurance. Owner's quality assurance procedures may include observations, inspections, testing, verification, monitoring and any other procedures deemed necessary by Owner to verify compliance with Contract Documents.
2. Owner will employ independent Testing Agencies to perform certain specified testing, as Owner deems necessary.
3. Certification:
 - a. Product producers and associations, which have instituted approved systems of quality control and which have been approved by document approval agencies, are not required to have further testing.
 - b. Concrete mixing plants, plants producing fabricated concrete and wood or plywood products certified by agency, lumber, plywood grade marked by approved associates, and materials or equipment bearing underwriters' laboratory labels require no further testing and inspection.
4. Written Practice for Quality Assurance:
 - a. Testing Agency will maintain written practice for selection and administration of inspection personnel, describing training, experience, and examination requirements for qualification and certification of inspection personnel.
 - b. Written practice will describe testing agency procedures for determining acceptability of structure in accordance with applicable codes, standards, and specifications.
 - c. Written practice will describe Testing Agency inspection procedures, including general inspection, material controls, visual welding inspection, and bolting inspection.

C. Quality Control:

1. Quality Control will be sole responsibility of Contractor. Contractor will be responsible for testing, coordination, start-up, operational checkout, and commissioning of all items of the Work included in Project. All costs for these services will be included in Contractor's cost of the Work.
2. Notify results of all Testing and Inspection performed by Contractor's independent Testing Agencies to Architect and/or Owner's Representative within 24 hours of test or inspection having been performed:
 - a. Testing and Inspection Reports will be distributed as follows:
 - 1) 1 copy to Owner's Representative.
 - 2) 1 copy to Architect.
 - 3) 1 copy to Consulting Engineer(s) (Engineer of Record).
 - 4) 1 copy to Authorities Having Jurisdiction (if required).
3. Contractor's Responsibility:
 - a. Owner's employment of an independent Testing Agency does not relieve Contractor of Contractor's obligation to perform the Work in strict accordance with requirements of Contract Documents.
 - b. Tests and inspections that are not explicitly assigned to Owner are responsibility of Contractor.

- c. Cooperate with Testing Agency(s) performing required inspections, tests, and similar services and provide reasonable auxiliary services as requested. Notify Testing Agency before operations to allow assignment of personnel. Auxiliary services required include but are not limited to:
 - 1) Providing access to the Work and furnishing incidental labor, equipment, and facilities deemed necessary by Testing Agency to facilitate inspections and tests at no additional cost to Owner.
 - 2) Taking adequate quantities of representative samples of materials that require testing or helping Testing Agency in taking samples.
 - 3) Providing facilities for storage and curing of test samples, and delivery of samples to testing laboratories.
 - 4) Providing Testing Agency with preliminary design mix proposed for use for materials mixes that require control by Testing Agency.
- d. For any requested inspection, Contractor will complete prior inspections to ensure that items are ready for inspection.
- e. All Work is subject to testing and inspection and verification of correct operation.
- f. Comply:
 - 1) Upon completion of Testing Agency's inspection, testing, sample-taking, and similar services, repair damaged construction and restore substrates and finishes to eliminate deficiencies, including deficiencies in visual qualities of exposed finishes.
 - 2) Comply with Contract Documents in making such repairs.
- g. Data:
 - 1) Furnish records, drawings, certificates, and similar data as may be required by testing and inspection personnel to assure compliance with Contract Documents.
- h. Defective Work (Non-Conforming Work): Non-conforming Work as covered in General Conditions applies, but is not limited to following requirements Protection:
 - 1) Where results of inspections, tests, or similar services show that the Work does not comply with Contract Document requirements, correct deficiencies in the Work promptly to avoid work delays.
 - 2) Where testing personnel take cores or cut-outs to verify compliance, repair prior to acceptance.
 - 3) Contractor will be responsible for any and all costs incurred resulting from inspection that was scheduled prematurely or retesting due to failed tests.
 - 4) Remove and replace any Work found defective or not complying with contract document requirements at no additional cost to Owner.
 - 5) Should test return unacceptable results, Contractor will bear all costs of retesting and re-inspection as well as cost of all material consumed by testing, and replacement of unsatisfactory material and/or workmanship.
- i. Protection:
 - 1) Protect construction exposed by or for quality assurance and quality control service activities, and protect repaired construction.
- j. Scheduling: Contractor is responsible for scheduling times for inspections, tests, taking samples, and similar activities:
 - 1) Schedule testing and inspections in advance so as not to delay the Work and to eliminate any need to uncover the Work for testing or inspection.
 - 2) Notify Testing Agency and Architect or Owner as noted in Sections in Division 01 thru Division 50 prior to any time required for such services.
 - 3) Incorporate adequate time for performance of all inspections and correction of noted deficiencies.
 - 4) Schedule sequence of activities to accommodate required services with minimum of delay.
 - 5) Schedule sequence of activities to avoid necessity of removing and replacing construction to accommodate testing and inspections.
- k. Test and Inspection Log:
 - 1) Provide system of tracking all field reports, describing items noted, and resolution of each item. Prepare record of tests and inspections. Include following requirements:
 - (a) Date test or inspection was conducted.
 - (b) Description of the Work tested or inspected.
 - (c) Date test or inspection results were transmitted to Architect or Owner Representative.
 - (d) Identification of Testing Agency or inspector conducting test or inspection.
 - 2) Maintain log at Project site. Post changes and modifications as they occur. Provide access to test and inspection log for Architect's or Owner's reference during normal working hours.

D. Tests And Inspections - General:

1. Testing specifically identified to be conducted by Owner, will be performed by an independent entity and will be arranged and paid for by Owner.
 2. Individual Sections in Division 01 through Division 50 indicate if Owner will provide testing and inspection of the Work of that Section.
 3. Owner may engage additional consultants for testing, air balancing, commissioning, or other special services:
 - a. Activities of any such Owner consultants are in addition to Contractor testing of materials or systems necessary to prove that performance is in compliance with Contract requirements.
 - b. Contractor must cooperate with persons and firms engaged in these activities.
 4. Tests include but not limited to those described in detail in 'Field Quality Control' in Part 3 of Individual Sections in Divisions 01 through Division 50.
 5. Taking Specimens:
 - a. Only testing laboratory shall secure, handle, transport, or store any samples and specimens for testing.
 6. Scheduling Testing Agency:
 - a. Contractor will coordinate the Work and facilitate timeliness of such testing and inspecting services so as not to delay the Work.
 - b. Contractor will notify Testing Agency and Architect or Owner Representative to schedule tests and / or inspections.
- E. Testing Agency Services And Responsibility:
1. Testing Agency, including independent testing laboratories, will be licensed and authorized to operate in jurisdiction in which Project is located:
 - a. Approved Testing Agency Qualifications: Requirements of Section 01 4301 apply.
 2. Testing and Inspection Services:
 - a. Testing Agency will not release, revoke, alter, or increase Contract Document requirements or approve or accept any portion of the Work.
 - b. Testing Agency will not give direction or instruction to Contractor.
 - c. Testing Agency will have full authority to see that the Work is performed in strict accordance with requirements of Contract Documents and directions of Owner's Representative and/or Architect.
 - d. Testing Agency will not provide additional testing and inspection services beyond scope of the Work without prior approval of Owner's Representative and/or Architect.
 3. Testing Agency Duties:
 - a. Independent Testing Agency engaged to perform inspections, sampling, and testing of materials and construction specified in individual specification Sections will cooperate with Architect or Owner Representative and Contractor in performance of its duties and will provide qualified personnel to perform required inspections and tests.
 - b. Testing Agency will test or obtain certificates of tests of materials and methods of construction, as described herein or elsewhere in technical specification.
 - c. Testing Agency will provide management, personnel, equipment, and services necessary to perform testing functions as outlined in this section.
 - d. Testing Agency must have experience and capability to conduct testing and inspecting indicated by ASTM standards and that specializes in types of tests and inspections to be performed.
 - e. Testing Agency will comply with requirements of ASTM E329, ASTM E543, ASTM C1021, ASTM C1077, ASTM C1093, ASTM D3666, ASTM D3740, and other relevant ASTM standards.
 - f. Testing Agency must calibrate all testing equipment at reasonable intervals (minimum yearly) with accuracy traceable to either National Bureau of Standards or accepted values of natural physical constants.
 - g. Welding Procedure Review: Testing Agency will provide review and approval or rejection of all welding procedures to be used and verify compliance with all reference standard requirements.
 4. Testing and Inspection Reports:
 - a. Conduct and interpret tests and inspections and state in each report whether tested and inspected Work complies with or deviates from requirements.
 - b. Laboratory Reports: Testing Agency will furnish reports of materials and construction as required, including:
 - 1) Description of method of test.
 - 2) Identification of sample and portion of the Work tested:
 - (a) Description of location in the Work of sample.
 - (b) Time and date when sample was obtained.
 - (c) Weather and climatic conditions at time when sample was obtained.

- 3) Evaluation of results of tests including recommendations for action.
 - c. Inspection Reports:
 - 1) Testing Agency will furnish "Inspection at Site" reports for each site visit documenting activities, observations, and inspections.
 - 2) Include notation of weather and climatic conditions, time and date conditions and status of the Work, actions taken, and recommendations or evaluation of the Work.
 - d. Reporting Testing and Inspection (Conforming Work):
 - 1) Submit testing and inspection reports as required within twenty four (24) hours of test or inspection having been performed.
 - e. Reporting Testing and Inspection Defective Work (Non-Conforming Work):
 - 1) Testing Agency, upon determination of irregularities, deficiencies observed or test failure(s) observed in the Work during performance of its services of test or inspection having been performed, will:
 - (a) Verbally notify results to Architect, Contractor, and Owner's Representative within one hour of test or inspection having been performed (if Defective Work (Non-Conforming Work) is incorporated into project).
 - (b) Submit written inspection report and test results as required within twenty four (24) hours of test or inspection having been performed.
 - f. Final Report:
 - 1) Submit final report of tests and inspections at Substantial Completion, which identify unresolved deficiencies.
- F. Architect's Responsibility:
1. Architect Duties:
 - a. Notify Owner's Representative before each test and/or inspection:
- G. Field Quality Control:
1. Field Tests And Inspections:
 - a. Field Test and Inspection requirements are described in detail in 'Field Quality Control' in Part 3 Execution' of individual Sections in Division 01 thru Division 49.

SECTION 01 5000 TEMPORARY FACILITIES AND CONTROLS

- A. Administrative Requirements:
1. Contractor is responsible for security of materials, tools, and equipment. Do not permit others to use building keys provided by Owner. Safeguard building and contents while the Work is being performed and secure building when the Work is finished for day.
 2. Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations and reduce possibility that air, waterways, and subsoil might be contaminated or polluted, or that other undesirable effects might result:
 - a. Avoid use of tools and equipment that produce harmful noise.
 - b. Restrict use of noisemaking tools and equipment to hours that will minimize complaints from persons or firms near site.
 - c. Protect the Work, materials, apparatus, and fixtures from injury due to weather, theft, and vandalism.
 3. Existing restroom facilities may be used by Contractor. Clean restrooms and portions of existing building used in accessing restrooms daily. If existing facilities are not usable, provide and maintain temporary sanitary toilet.
- B. Temporary Barriers And Enclosures:
1. Protect existing trees and plants. Remove and replace vegetation that dies or is damaged beyond repair due to construction activities.
 2. Erect adequate barricades, warning signs, and lights necessary to protect persons from injury or harm.
 3. Provide temporary enclosures at exterior building openings for security and protection from weather, theft, and vandalism. Erect and maintain dust-proof partitions and enclosures as required to prevent spread of dust and fumes to occupied portions of building.
 4. Proprietary Camera Services: In its absolute discretion, and with or without notice to Contractor, Owner may provide from time to time, but is not obligated to provide, one or more cameras on or about Project site and/or signage or notices of the same:
 - a. If provided by Owner, such camera(s) and/or signage and notices are solely for Owner's benefit and convenience and shall not be for benefit of Contractor, Subcontractor(s) or for any third person.

- b. Owner shall have no liability, obligation, or responsibility to Contractor, Subcontractors, or any third person relative to such camera(s), signage, or notices, or absence of camera(s), signage, or notices, including without limitation, installation, maintenance, operation, repair, testing, functionality, capacity, recording, monitoring, posting, etc., of the same (hereafter 'Proprietary Camera Services').
- c. Contractor, with Owner's prior consent (which shall not be unreasonably withheld), may relocate such camera(s), signage, or notices as necessary to not unreasonably, materially and physically interfere with work at Project Site.
- d. Contractor's obligations under Contract Documents, including but not limited to, Contractor's obligation for security of Project Site, are not modified by Owner's opportunity to provide, actually providing, or not providing Proprietary Camera Services and/or signage or notices regarding the same.
- e. This Specification Section does not preclude Contractor from providing its own camera(s), signage, or notices pursuant to terms and conditions of this Agreement. Neither does this Section reduce, expand or modify any other right or obligation of Owner pursuant to terms of this Agreement.

C. Utilities:

1. Electrical Power: Owner will provide electric power for construction activities within limits available at existing facility.
2. Fire Protection: Exercise caution to avoid fire damage: Do not build fires on site.
3. Heating, Cooling, And Ventilation:
 - a. Permanent mechanical system may be operated upon following conditions:
 - 1) Do not interfere with normal set-back temperature patterns except as approved by Project Manager.
 - 2) Do not operate system when the Work causing airborne dust is occurring or when dust caused by such Work is present without first installing temporary filtering system.
4. Lighting: Existing lighting system may be used by Contractor.
5. Water Service: Contractor will use existing water supply for construction purposes to extent of existing facilities.

SECTION 01 6100 COMMON PRODUCT REQUIREMENTS

A. Administrative Requirements:

1. Provide products that comply with Contract Documents, are undamaged, and, unless otherwise indicated, are new and unused at time of installation. Provide products complete with accessories, trim, finish, safety guards, and other devices and details needed for complete installation and for intended use and effect.

SECTION 01 6200 PRODUCT OPTIONS

A. Product selection is governed by Contract Documents and governing regulations, not by previous Project experience. Procedures governing product selection include:

1. Substitutions And Equal Products:
 - a. Generally speaking, substitutions for specified products and systems, as defined in Uniform Commercial Code, are not acceptable. However, equal products may be approved upon compliance with Contract Document requirements.
 - b. Approved Products / Manufacturers / Suppliers / Installers:
 - 1) Category One:
 - (a) Owner has established 'Value Managed Relationships' that extend beyond requirements of this Project. No substitutions or equal products will be allowed on this Project.
 - (b) Follow specified procedures to preserve relationships between Owner and specified manufacturers / suppliers and advantages that accrue to Owner from those relationships.
 - 2) Category Two:
 - (a) Owner has established National Contracts that contain provisions extending beyond requirements of this Project. No substitutions or equal products will be allowed on this Project.
 - (b) Follow specified procedures to preserve relationships between Owner and specified manufacturers / suppliers and advantages that accrue to Owner from those relationships.
 - 3) Category Three:
 - (a) Specified products are provided to Church Projects under a National Account Program. Use these products to preserve advantages that accrue to Owner from those programs. No substitutions or equal products will be allowed on this Project.

- 4) Category Four:
 - (a) Provide only specified products available from manufacturers listed. No substitutions, private-labeled, or equal products, or mixing of manufacturers' products is allowed on this Project.
 - (b) In Sections where lists recapitulating Manufacturers previously mentioned in Section are included under heading '*Manufacturers*' or '*Approved Manufacturers*', this is intended as convenience to Contractor as listing of contact information only. It is not intended that all manufacturers in list may provide products where specific products and manufacturers are listed elsewhere in Section.
- c. Acceptable Products / Manufacturers / Suppliers / Installers:
 - 1) Type One: Use specified products / manufacturers unless approval to use other products / manufacturers has been obtained from Architect or Owner Representative by Addendum.
 - 2) Type Two: Use specified products / manufacturers unless approval to use other products and manufacturers has been obtained from Architect or Owner Representative in writing before installing or applying unlisted or private-labeled products.
 - 3) Use 'Equal Product Approval Request Form' to request approval of equal products, manufacturers, or suppliers before bidding or before installation, as noted in individual Sections.
- d. Quality / Performance Standard Products / Manufacturers:
 - 1) Class One: Use specified product / manufacturer or equal product from specified manufacturers only.
 - 2) Class Two: Use specified product / manufacturer or equal product from any manufacturer.
 - 3) Products / manufacturers used will conform to Contract Document requirements.

SECTION 01 6400 OWNER-FURNISHED PRODUCTS

A. Administrative Requirements:

1. Install items furnished by Owner or receive and store in safe condition items purchased directly by Owner according to requirements of Contract Documents.

SECTION 01 6600 DELIVERY, STORAGE, AND HANDLING REQUIREMENTS

A. Administrative Requirements:

1. Deliver, store, and handle products according to manufacturer's recommendations, using means and methods that will prevent damage, deterioration, and loss, including theft.

B. Delivery, Storage, and Handling:

1. Delivery and Acceptable Requirements:
 - a. Deliver, store, and handle products according to manufacturer's recommendations, using means and methods that will prevent damage, deterioration, and loss, including theft.
 - b. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
 - c. Deliver products to site in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
 - d. Inspect products upon delivery to ensure compliance with Contract Documents, and to ensure that products are undamaged and properly protected.
2. Storage and Handling Requirements:
 - a. Store products at site in manner that will simplify inspection and measurement of quantity or counting of units.
 - b. Store heavy materials away from Project structure so supporting construction will not be endangered.
 - c. Store products subject to damage by elements above ground, under cover in weather tight enclosure, with ventilation adequate to prevent condensation. Maintain temperature and humidity within range required by manufacturer's instructions.

SECTION 01 7000 EXECUTION REQUIREMENTS

A. Administrative Requirements:

1. Require installer of each major component to inspect both substrate and conditions under which the Work is to be done:
 - a. Notify Owner in writing of unsatisfactory conditions.
 - b. Do not proceed until unsatisfactory conditions have been corrected.
- B. Common Installation Provisions:
 1. Provide attachment and connection devices and methods necessary for securing the Work:
 - a. Secure the Work true to line and level.
 - b. Allow for expansion and building movement.
 2. Recheck measurements and dimensions before starting each installation.
 3. Design, furnish, and install all shoring, bracing, and sheathing as required for safety and for proper execution of the Work and, unless otherwise required, remove same when the Work is completed.
 4. Where mounting heights are not shown, install individual components at standard mounting heights recognized within industry or local codes for that application. Refer questionable mounting height decisions to Owner for final decision.
- C. Protection:
 1. Cover and protect furniture, equipment, and fixtures from soiling and damage when demolition the Work is performed in rooms and areas from which such items have not been removed.
- D. Completion Inspection:
 1. Upon 100 percent completion of Project, Contractor will request Substantial Completion Inspection.
 2. Owner will conduct Substantial Completion Inspection in presence of Contractor and furnish list of items to be corrected.
 3. Contractor will notify Owner in writing when items have been corrected.

SECTION 01 7400 CLEANING AND WASTE MANAGEMENT

- A. Disposal Of Waste:
 1. Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from Project site and legally dispose of them in landfill or incinerator acceptable to authorities having jurisdiction:
 - a. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.
 - b. Remove and transport debris in manner that will prevent spillage on adjacent surfaces and areas.
 2. Burning: Do not burn waste materials.
 3. Disposal: Transport waste materials off Owner's property and legally dispose of them.
- B. Progress Cleaning:
 1. Keep premises broom-clean during progress of the Work.
 2. During handling and installation, protect construction in progress and adjoining materials in place. Apply protective covering where required to ensure protection from soiling, damage, or deterioration until Substantial Completion.
 3. Clean and maintain completed construction as frequently as necessary throughout construction period.
 4. Remove waste materials and rubbish caused by employees, subcontractors, and contractors under separate contract with Owner and dispose of legally.
- C. Final Cleaning:
 1. Clean each surface or unit to condition expected in normal, commercial-building cleaning and maintenance program. Comply with manufacturer's instructions. Remove all rubbish from under and about building and leave building clean and habitable.
 2. In addition to general cleaning noted above, perform cleaning for all trades at completion of the Work in areas where construction activities have occurred.
 3. If Contractor fails to clean up, Owner may do so and charge cost to Contractor.

SECTION 01 7700 CLOSEOUT PROCEDURES

- A. General:

1. Closeout process consists of three specific project closeout inspections. Contractor shall plan sufficient time in construction schedule to allow for required inspections before expiration of Contract Time.
 2. Contractor shall conduct his own inspections of The Work and shall not request closeout inspections until The Work of the contract is reasonably complete and correction of obvious defects or omissions are complete or imminent.
 3. Date of Substantial Completion shall not occur until completion of construction work, unless agreed to by Architect / Owner's Representative and included on Certificate of Substantial Completion.
- B. Preliminary Closeout Review:
1. When Architect, Owner and Contractor agree that project is ready for closeout, Pre-Substantial Inspection shall be scheduled. Preparation of floor substrate to receive carpeting and any work which could conceivably damage or stain carpet must be completed, as carpet installation will be scheduled immediately following this inspection.
 2. Prior to this inspection, completed test and evaluation reports for HVAC system and font, where one occurs, are to be provided to Project Manager, Architect, and applicable consultants.
 3. Architect, Owner and Contractor review completion of punch list items. When Owner and Architect confirm that Contractor has achieved Substantial Completion of The Work, Owner, Architect and Contractor will execute Certificate of Substantial Completion that contains:
 - a. Punch list of items requiring completion and correction will be created.
 - b. Time frame for completion of punch list items will be established, and date for Substantial Completion Inspection shall be set.
- C. Substantial Completion Inspection:
1. When Architect, Owner and Contractor agree that project is ready for Substantial Completion, an inspection is held. Punch list created at Pre-Substantial Inspection is to be substantially complete.
 2. Prior to this inspection, Contractor shall discontinue or change over and remove temporary facilities from the site, along with construction tools, mock-ups and similar elements.
 3. Architect, Owner and Contractor review completion of punch list items. When Owner and Architect confirm that Contractor has achieved Substantial Completion of The Work, Owner, Architect and Contractor will execute Certificate of Substantial Completion that contains:
 - a. Date of Substantial Completion.
 - b. Punch List Work not yet completed, including seasonal and long lead items.
 - c. Amount to be withheld for completion of Punch List Work.
 - d. Time period for completion of Punch List Work.
 - e. Amount of liquidated damages set forth in Supplementary Conditions to be assessed if Contractor fails to complete Punch List Work within time set forth in Certificate.
 4. Contractor shall present Closeout Submittals to Architect and place tools, spare parts, extra stock, and similar items required by Contract Documents in locations as directed by Facilities Manager.
- D. Final Acceptance Meeting:
1. When punch list items except for any seasonal items or long lead items which will not prohibit occupancy are completed, Final Acceptance Meeting is held.
 2. Owner, Architect and Contractor execute Owner's Project Closeout - Final Acceptance form, and verify:
 - a. All seasonal and long lead items not prohibiting occupancy, if any, are identified, with committed to completion date and amount to be withheld until completion.
 - b. Owner's maintenance personnel have been instructed on all system operation and maintenance as required by the Contract Documents.
 - c. Final cleaning requirements have been completed.
 3. If applicable, once any seasonal and long lead items are completed, Closeout Inspection is held where Owner and Architect verify that The Work has been satisfactorily completed, and Owner, Architect and Contractor execute Closeout portion of the Project Closeout - Final Acceptance form.
 4. When Owner and Architect confirm that The Work is satisfactorily completed, Architect will authorize final payment.

SECTION 01 7800 CLOSEOUT SUBMITTALS

A. Administrative Requirements:

1. Project Record Documents:
 - a. Do not use record documents for construction purposes:
 - 1) Protect from deterioration and loss in secure, fire-resistive location.

- 2) Provide access to record documents for reference during normal Working hours.
 - b. Maintain clean, undamaged set of Drawings. Mark set to show actual installation where installation varies from the Work as originally shown. Give particular attention to concealed elements that would be difficult to measure and record at later date:
 - 1) Mark record sets with red erasable pencil. Use other colors to distinguish between variations in separate categories of the Work.
 - 2) Mark new information that is important to Owner, but was not shown on Contract Drawings.
 - 3) Note related Change Order numbers where applicable.
 2. As Built Record Drawings:
 - a. Provide two full-size sets of prints and PDF file of As Built Record Drawings to Facilities Management Office, printed from the updated AutoCAD drawing files or updated Revit model files, as specified by Owner, that have been modified to show actual dimensions and location of equipment, material, utility lines, and other work as actually constructed, based upon information provided by Contractor. Architect will submit updated As Built Record Drawings in PDF (ISO32000 format) to Owner. In addition, Architect will submit to Owner updated AutoCAD as built record drawing files with associated plot style tables or the Revit as built record model files, as specified by Owner.
- B. Operations And Maintenance Manual:
 1. General:
 - a. Include closeout submittal documentation as required by Contract Documentation. Include only closeout submittals as defined in individual specification section.
 - b. Submittal Format: Digital copies unless otherwise noted, required for each individual specification section that include 'Closeout Submittals'.
 2. Project Manual:
 - c. Copy of complete Project Manual including Addenda, Modifications as defined in General Conditions, and other interpretations issued during construction:
 - (1) Mark these documents to show variations in actual Work performed in comparison with text of specifications and Modifications.
 - (2) Show substitutions, selection of options, and similar information, particularly on elements that are concealed or cannot otherwise be readily discerned later by direct observation.
 3. Maintenance Contracts: (digital format only).
 4. Operations and Maintenance Data (digital format only):
 - a. Operations and maintenance submittals includes cleaning instructions, maintenance instructions, operations instructions, equipment list, and parts lists.
 5. Warranty Documentation: Digital format of final, executed warranties.
 6. Record Documentation:
 - a. Documentation includes Certifications, color and pattern selections, Design Date, Geotechnical Evaluation Reports (soils reports), Manufacture Reports, Literature or cut sheets, Shop Drawings, Source Quality Control, Special Procedures, and Testing and Inspection Reports.
 7. Software: Audio and Video System software, programming and set-files.
 8. Irrigation Plan: Laminated and un-laminated reduced sized hard copies.
 9. Landscape Management Plan (LMP):
 - a. Irrigation Section:
 - (1) Documentation required by Sections under 32 8000 Heading: Irrigation.
 - b. Landscaping Section:
 - (1) Documentation required by Sections under 32 8000 Heading: Irrigation.
- C. Warranties:
 1. When written guarantees beyond one (1) year after substantial completion are required by Contract Documents, secure such guarantees and warranties properly addressed and signed in favor of Owner. Include these documents in Operations & Maintenance Manual(s) specified above.
 2. Delivery of guarantees and warranties will not relieve Contractor from obligations assumed under other provisions of Contract Documents.

END OF SECTION

DIVISION 02: EXISTING CONDITIONS

02 4000 DEMOLITION AND STRUCTURE MOVING

02 4119 SELECTIVE STRUCTURE DEMOLITION

END OF TABLE OF CONTENTS

SECTION 02 4119**SELECTIVE STRUCTURE DEMOLITION****PART 1 - GENERAL****1.1 SUMMARY**

- A. Includes But Not Limited To:
 - 1. Demolition and removal of selected portions of building or structure.

1.2 REFERENCES

- A. Reference Standards:
 - 1. National Fire Protection Association / American National Standards Institute:
 - a. NFPA 241, 'Standard for Safeguarding Construction, Alteration, and Demolition Operations', 2013 Edition.
 - 2. American Society of Safety Engineers:
 - a. ASSE A10.6-2006, 'Safety Requirements for Demolition Operations'.

1.3 ADMINISTRATIVE REQUIREMENTS

- A. Coordination:
 - 1. Storage or sale of removed items or materials will not be permitted on-site.
- B. Pre-Installation Conference:
 - 1. Before beginning Selective Demolition work, in addition to requirements of Section 01 3100, meet on site to confirm work to be demolished, items to be salvaged or reused, and coordination with Owner.
- C. Scheduling:
 - 1. Indicate detailed sequence of selective demolition and removal work, with starting and ending dates for each activity, on Schedule specified in Section 01 3200.

1.4 SUBMITTALS

- A. Informational Submittals:
 - 1. Special Procedure Submittals:
 - a. Inventory:
 - 1) After selective demolition is complete, submit list of items that have been removed and salvaged.

1.5 QUALITY ASSURANCE

- A. Regulatory Agency Sustainability Approvals:
 - 1. Comply with governing EPA notification regulations before beginning selective demolition.
 - 2. Comply with hauling and disposal regulations of authorities having jurisdiction.
 - 3. Standards: Comply with ANSI A10.6 and NFPA 241.

1.6 FIELD CONDITIONS

- A. Existing Conditions:
 - 1. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.

PART 2 - PRODUCTS: Not Used

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verification Of Conditions:
 - 1. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.
 - a. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.
- B. Evaluation And Assessment:
 - 1. Hazardous Materials:
 - a. It is not expected that hazardous materials will be encountered in the Work. Identified hazardous materials will be removed by Owner before start of the Work.
 - b. If materials suspected of containing hazardous materials are encountered, do not disturb and immediately notify Architect.
 - 2. Inventory and record condition of items to be removed and reinstalled and items to be removed and salvaged.
 - 3. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure nature and extent of conflict. Promptly submit written report to Architect.
 - 4. Engage a professional engineer to survey condition of building to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of structure or adjacent structures during selective demolition operations.
 - 5. Perform surveys as the Work progresses to detect hazards resulting from selective demolition activities.

3.2 PREPARATION

- A. Temporary Facilities:
 - 1. Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
 - 2. Maintain fire-protection facilities in service during selective demolition operations.
- B. Temporary Shoring:
 - 1. Provide and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.
 - 2. Strengthen or add new supports when required during progress of selective demolition.
- C. Utility Services:
 - 1. Existing Services/Systems: Maintain services/systems indicated to remain and protect them against damage during selective demolition operations.
 - 2. Service/System Requirements: Locate, identify, disconnect, and seal or cap off indicated utility services and mechanical/electrical systems serving areas to be selectively demolished.
 - a. Arrange to shut off indicated utilities with utility companies.

- b. If services/systems are required to be removed, relocated, or abandoned, before proceeding with selective demolition, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.

3.3 SELECTIVE DEMOLITION

A. General:

1. Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
2. Demolish and remove existing construction only to extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
 - a. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.
 - b. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
 - c. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain fire watch and portable fire-suppression devices during flame-cutting operations.
 - d. Maintain adequate ventilation when using cutting torches.
 - e. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
 - f. Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.
 - g. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
 - h. Dispose of demolished items and materials promptly.

B. Removed and Salvaged Items:

1. Relics, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, antiques, and other items of interest or value to Owner that may be encountered during selective demolition remain Owner's property. Carefully remove and salvage each item or object in a manner to prevent damage and deliver promptly to Owner.
 - a. Clean salvaged items as directed by Owner.
 - b. Pack or crate items after cleaning. Identify contents of containers.
 - c. Store items in a secure area until delivery to Owner.
 - d. Transport items to Owner's storage area designated by Owner.
 - e. Protect items from damage during transport and storage.

C. Removed and Reinstalled Items:

1. Clean and repair items to functional condition adequate for intended reuse. Paint equipment to match new equipment.
2. Pack or crate items after cleaning and repairing. Identify contents of containers.
3. Protect items from damage during transport and storage.
4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.

D. Existing Items to Remain:

1. Protect construction indicated to remain against damage and soiling during selective demolition.
2. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations after selective demolition operations are complete.

3.4 CLEANING

A. General:

1. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations.
2. Return adjacent areas to condition existing before selective demolition operations began.

B. Waste Management:

1. Disposal of Demolished Materials:
 - a. Remove demolished materials from Project site and legally dispose of them in an EPA-approved landfill. Do not burn demolished materials.
 - 1) Do not allow demolished materials to accumulate on-site.
 - 2) Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
 - 3) Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.

END OF SECTION

DIVISION 07: THERMAL AND MOISTURE PROTECTION

07 3000 STEEP SLOPE ROOFING

07 3113 ASPHALT SHINGLES

07 6000 FLASHING AND SHEET METAL

07 6310 STEEP SLOPE ROOF FLASHING: Asphalt Shingles

07 9000 JOINT PROTECTION

07 9213 ELASTOMERIC JOINT SEALANTS

END OF TABLE OF CONTENTS

SECTION 07 3113**ASPHALT SHINGLES****PART 1 - GENERAL****1.1 SUMMARY**

- A. Includes But Not Limited To:
 - 1. Furnish and install Asphalt Shingle Roofing System as described in Contract Documents.
- B. Products Installed But Not Furnished Under This Section:
 - 1. Miscellaneous flashing and sheet metal:
 - a. Drip metal.
 - b. Wall flashings.
 - 2. Pipe and flue roof jacks.
- C. Related Requirements:
 - 1. Section 07 6310: 'Steep Slope Roof Flashing: Asphalt Tile' for furnishing of roof flashing, pipe jacks, drip edge and miscellaneous flashing and sheet metal.

1.2 REFERENCES

- A. Definitions:
 - 1. Flame Spread Classification: Categories as per ASTM E84/UL 723 or CAN/ULC-S102:
 - a. Class A: Highest fire-resistance rating for roofing as per ASTM E108. Indicated roofing is able to withstand severe exposure to fire exposure to fire originating from sources outside building.
 - b. Class B: Fire-resistance rating indicating roofing materials are able to withstand moderate exposure to fire originating from sources outside of building.
 - c. Class C: Fire-resistance rating indicating roofing materials are able to withstand light exposure to fire originating from sources outside of building.
 - 2. Wind Uplift: Wind-induced forces on roof system or components in roof system. Wind uplift generally includes negative pressure component caused by wind being deflected around and across surfaces of building and positive pressure component from air flow beneath roof deck.
- B. Reference Standards:
 - 1. ASTM International:
 - a. ASTM D226-09/D226M-17, 'Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing'.
 - b. ASTM D1970/D1970M-18, 'Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection'.
 - c. ASTM D3018/D3018M-11(2017), 'Standard Specification for Class A Asphalt Shingles Surfaced with Mineral Granules'.
 - d. ASTM D3019/D3019M-17, 'Standard, 'Standard Specification for Lap Cement Used with Asphalt Roll Roofing, Non-Fibered, Asbestos-Fibered, and Non-Asbestos-Fibered'.
 - e. ASTM D3161/D3161M-16a, 'Standard Test Method for Wind-Resistance of Asphalt Shingles (Fan-Induced Method)'.
 - f. ASTM D3462/D3462M-16, 'Standard Specification for Asphalt Shingles Made from Glass Felt and Surfaced with Mineral Granules'.
 - g. ASTM D4869/D4869M-16a, 'Standard Specification for Asphalt-Saturated Organic Felt Underlayment Used in Steep Slope Roofing'.
 - h. ASTM D7158/D7158M-17, 'Standard Test Method for Wind Resistance of Asphalt Shingles (Uplift Force/Uplift Resistance Method)'.
 - i. ASTM E84-18b, 'Standard Test Method for Surface Burning Characteristics of Building Materials'.

- j. ASTM E108-17, 'Standard Test Methods for Fire Tests of Roof Coverings'.
- k. ASTM F1667-18, 'Standard Specification for Driven Fasteners: Nails, Spikes, and Staples'.
- 2. Canadian Standards Association (CSA Group):
 - a. CSA A123.5-16, 'Asphalt Shingles Made from Organic Felt and Surfaced with Mineral Granules / Asphalt Shingles Made From Glass Felt and Surfaced With Mineral Granules'.
- 3. International Building Code (IBC) (2018 Edition or latest edition adopted by AHJ):
 - a. Chapter 15, 'Roof Assemblies And Rooftop Structures'.
- 4. National Fire Protection Association:
 - a. NFPA 101: 'Life Safety Code' (2015 Edition).
- 5. Underwriters Laboratories (UL):
 - a. UL 580: 'Tests for Uplift Resistance of Roof Assemblies' (5th Edition).
 - b. UL 723, 'Tests for Safety Test for Surface Burning Characteristics of Building Materials' (11th Edition).
 - c. UL 790, 'Standard Test Methods for Fire Tests of Roof Coverings' (8th Edition).
 - d. UL 2218, 'Standard for Impact Resistance of Prepared Roof Covering Materials' (2nd Edition).

1.3 ADMINISTRATIVE REQUIREMENTS

- A. Pre-Installation Conference:
 - 1. Participate in MANDATORY pre-installation conference:
 - a. Roofing Installer's Foreman and those responsible for installation of roofing to be in attendance. Include Shingle Manufacturer's Representative if available.
 - 2. Schedule pre-installation conference at project site after completion of the installation of roof sheathing but before installation of any roofing system component.
 - 3. In addition to agenda items specified in Section 01 3100, review following:
 - a. Review Shingle Manufacturer's Ambient Conditions requirements.
 - b. Review existing roof conditions including moisture on deck, protruding deck fasteners, specified gaps between sheathing, and other items affecting issuance of roofing warranty.
 - c. Review proper flashing, penetrations, secondary underlayment, sealants, and nailing requirements.
 - d. Review racking installation method is not permitted.
 - e. Review Ladder Anchor requirements for roof bracket attached to roof to provide safety for access on to roof.
 - f. Review Cleaning and Disposal requirements.
 - g. Review safety issues.
- B. Sequencing:
 - 1. Sequence of Roofing Materials:
 - a. Apply continuous 12 inches (300 mm) wide strip at edge of eaves and rakes of secondary underlayment.
 - b. Metal drip edge.
 - c. Secondary underlayment.
 - d. Primary underlayment.
 - e. Asphalt shingles.
 - f. Counter flashings over step flashing.

1.4 SUBMITTALS

- A. Action Submittals:
 - 1. Product Data:
 - a. Color and style selection.
 - 2. Samples:
 - a. Full size shingle.
- B. Informational Submittals:
 - 1. Certificates:

- a. Installers:
 - 1) Provide current Certification for completion of certified training from Shingle Manufacturer.
 - 2) Installer's signed certificate stating roofing system complies with Contract Documents performance requirements and work only performed by trained and authorized personnel in those procedures.
 2. Tests And Evaluation Reports:
 3. Reports:
 - a. Manufacturer's test reports.
 - b. Wind speed coverage for warranted wind speed.
 - c. High wind reports and approvals if required by AHJ.
 4. Manufacturers' Instructions:
 - a. Shingle Manufacturer's installation instructions and details for installation of secondary underlayment at penetrations, dormers, eaves, rakes, etc, to fit environmental conditions at Project.
 5. Qualification Statement:
 - a. Installer:
 - 1) Asphalt Shingles:
 - a) Provide Qualification documentation.
- C. Closeout Submittals:
1. Include following in Operations And Maintenance Manual specified in Section 01 7800:
 - a. Warranty Documentation:
 - 1) Asphalt Shingles:
 - a) Final, executed copy of 'Roofing Manufacturer System Warranty' including wind speed coverage and required Owner mandatory information.
 - b) Final, executed copy of 'Roof Installer Workmanship Warranty' including required Owner mandatory information.
 - 2) Verify mandatory information as specified in Special Procedure Submittal has been included in Final Warranty.
 - b. Record Documentation:
 - 1) Manufacturers Documentation:
 - a) Manufacturer's literature.
 - b) Color selections.
 - c) Test and evaluation reports.
 - 2) Roofing Inspection Documentation:
 - a) Include copy of roof inspection report.
 - 3) Certificate: Installer statement of compliance for performance requirements.
 - 4) Certificate: Installer completion of certified training.
 - 5) Test And Evaluation Report: UL fire-resistance rating test report.
 - 6) Test And Evaluation Report: NFPA 101 Class A approval.
 - 7) Test And Evaluation Report: Wind resistance requirements required.
- D. Maintenance Material Submittals:
1. Extra Stock Materials:
 - a. Provide one (1) square minimum of bundled shingles.

1.5 QUALITY ASSURANCE

- A. Regulatory Agency Sustainability Approvals:
1. Building Codes:
 - a. Meet requirements for NFPA 101 Class A roof assembly.
 - b. Roof system will meet requirements of all federal, state, and local codes having jurisdiction.
 2. Fall Protection: Meet requirement of fall protection as required by federal, state, and local codes having jurisdiction.
 3. Fire Characteristics:
 - a. Provide shingles and related roofing materials with fire-test-response characteristics indicated, as determined by testing identical products per test method indicated below by UL

- or another testing and inspecting agency acceptable to authorities having jurisdiction.
Identify materials with appropriate markings of applicable testing and inspecting agency:
- 1) Exterior Fire-Test Exposure: Class A; UL 790, CAN/ULC-S102, or ASTM E108, for application and roof slopes indicated.
 - a) Materials shall be identified with appropriate markings of applicable testing agency.
 4. Impact Resistance:
 - a. Meet UL 2218 impact resistant testing.
 - b. Meet UL 2218 Class 4 impact resistant rating for hail.
 5. Wind Resistance:
 - a. Meet ASTM D3161/D3161M for wind resistance.
 - 1) Installation shall comply with IBC Table 1507.2.7, 'Attachment'.
 6. Wind Speed:
 - a. As required to meet local codes having jurisdiction.
 7. Wind Uplift Resistance:
 - a. Meet UL 580 wind uplift of roof assemblies.
 - b. Meet UL 1897 uplift test for roof covering systems.
 - c. Meet ASTM D7158/D7158M for wind resistance for uplift force/uplift resistance.
- B. Qualifications:
1. Manufacturer:
 - a. Asphalt Shingles:
 - 1) Asphalt shingles are required to be produced under quality control program administered by inspection agency currently accredited by ICBO ES or recognized by National Evaluation Service, Inc. Quality control manual developed in consultation with approved agency, and complying with ICBO ES Acceptance Criteria for Quality Control Manuals (AC10), must be submitted.
 - b. Underlayment:
 - 1) Underlayment is required to be manufactured under approved quality control program with inspections by inspection agency accredited by International Accreditation Service (IAS) or otherwise acceptable to ICC-ES.
 - 2) Quality documentation complying with ICC-ES Acceptance Criteria for Quality Documentation (AC10) shall be submitted for roof underlayment.
 2. Roof Installer Foreman Qualifications:
 - a. Requirements of Section 01 4301 applies but not limited to the following:
 - 1) Provide documentation if requested by Architect.
 - a) Approved and authorized by Roofing Manufacturer to install Manufacturer's product and eligible to receive Manufacturer's warranty before bid.
 - b) Completed Shingle Manufacturer's certified trained.
 - c) Have thorough knowledge of installing asphalt shingle roofing and have minimum of five (5) years roofing experience.
 - d) Current license for the city, county, and state where project is located and license for specific type of roofing work to be performed.
 - e) Roofing Installer's foreman shall be skilled in his trade and qualified to lay out and supervise the Work.
 - f) Flashing installation shall be performed by personnel trained and authorized by Roofing Manufacturer.
 3. Roof Installer:
 - a. Provide 'Roof Installer Workmanship Warranty' as specified in Warranty in Part 1 of this specification.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Delivery And Acceptance Requirements:
1. Make no deliveries to job site until installation is about to commence, or until approved storage area is provided.
 2. Deliver products job site in Manufacturer's original unopened containers or wrappings with labels intact and legible bearing all seals and approvals.
 3. Deliver materials in sufficient quantities to allow continuity of work.
 4. Remove any material not approved from job site.

B. Storage And Handling Requirements:

1. Storage Requirements:
 - a. Follow Manufacturer's instructions and precautions for storage and protection of materials.
 - b. Protect roof materials from physical damage, moisture, soiling, and other sources in a clean, dry, protected location.
 - c. Stacking:
 - 1) Shingles: Bundles should be stacked flat.
 - 2) Underlayment:
 - a) Do not double-stack pallets.
 - b) Stack rolls upright until installation.
 - d. Temperature:
 - 1) Shingles:
 - a) Store in covered ventilated area at maximum temperature of 110 deg F (43 deg C).
 - b) Use extra care in handling shingles when temperature is below 40 deg F (4.4 deg C).
 - 2) Underlayment: Store in area with temperature between 40 deg F and 100 deg F (4.4 deg C and 38 deg C).
 - e. Unacceptable Material:
 - 1) Remove from job site materials that are determined to be damaged by Architect or by Roofing Manufacturer and replace at no additional cost to Owner.
2. Handling Requirements:
 - a. Handle rolled goods to prevent damage to edge or ends.
3. Roof Top Loading:
 - a. Lay shingle bundles flat.
 - b. Do not bend over ridge.

1.7 FIELD CONDITIONS**A. Ambient Conditions:**

1. General:
 - a. Proceed with installation only when existing and forecasted weather conditions permit roofing to be performed according to manufacturer's written instructions and warranty requirements.
2. Shingles:
 - a. Do not install shingles at lower temperatures than allowed by Shingle Manufacturer for application.
3. Underlayment:
 - a. Install self-adhering sheet underlayment within range of ambient and substrate temperatures recommended by manufacturer.

1.8 WARRANTY**A. Special Warranty:**

1. Shingle Manufacturer's special forty (40) year minimum labor and material warranty written for The Church of Jesus Christ of Latter-day Saints program, including but not limited to:
 - a. CertainTeed:
 - 1) First ten (10) years minimum of warranty will provide for full replacement cost, including tear-off and disposal, for any failure, including material defects and workmanship. Remaining thirty (30) years of warranty will provide for pro-rated replacement cost.
 - b. Malarkey:
 - 1) First ten (10) years minimum of warranty will provide for full replacement cost, including tear-off and disposal, for any failure, including material defects and workmanship. Remaining thirty (30) years of warranty will provide for pro-rated replacement cost.
 - c. Owens Corning:
 - 1) First ten (10) years minimum of warranty will provide for full replacement cost, including tear-off and disposal, for any failure, including material defects and workmanship. Remaining thirty (30) years of warranty will provide for pro-rated replacement cost.
2. Standard Wind Areas:

- a. Roofing system will resist blow-offs in winds up to 110 mph (177 kph) for ten (10) years when installed as specified below.
- b. Meet requirements of ASTM D3161/D3161M UL Class D.

PART 2 - PRODUCTS

2.1 SYSTEM

A. Manufacturers:

1. Manufacturer Contact List:

- a. CertainTeed Roofing Products, Valley Forge, PA www.certainteed.com.
 - 1) Contact Information: Wendy Fox, (800) 404-9880 wfox@dataworksintl.com.
- b. Malarkey Roofing Products, Portland OR:
 - 1) Contact Information: Joe Russo (425) 418-3456 Joe.Malarkey@outlook.com.
- c. Owens Corning, Toledo, OH www.ownscorning.com.
 - 1) Duration Premium shingles are available in all areas of the USA and Canada including all Duration Premium colors under Church contract. Request shingles through local distribution. Any distribution questions, contact Area Sales Manager.
 - 2) For all other questions, Contact: Sam Baroudi (419) 248-7754 sam.baroudi@ownscorning.com. or Robert Hill (801) 553-2417 Robert.Hill@ownscorning.com.

B. Components:

1. Shingles And Underlayment:

- a. Fiberglass mat shingles meeting or exceeding requirements of:
 - 1) UL Class A Fire Resistance.
 - 2) ASTM D3018/D3018M, Type I (self sealing).
 - 3) Standard Wind Areas: ASTM D3161/D3161M UL Class D.
 - a) .
 - 4) ASTM E108 Class A.
 - 5) ASTM D3462/D3462M where required by local codes.
 - 6) Secondary Underlayment: Meet requirements of ASTM D1970/D1970M and UL 790 Class A Fire Resistance.
 - 7) Primary (Synthetic) Underlayment: Meet requirements of ASTM D226/D226M and ASTM D4869/D4869M (physical properties only) or ASTM D1970/D1970M and ASTM E108 Class A Fire.Addendum.
 - 8) Color as selected by Architect from Shingle Manufacturer's full color line.
- b. Category Three Approved Manufactures and Products. See Section 01 6200 for definitions of Categories:
 - 1) CertainTeed:
 - a) Shingles:
 - (1) Standard Wind: Hatteras / Landmark Premium.
 - (2) Impact Resistant: Landmark IR.
 - (3) Hip And Ridge Shingles: Shadow Ridge or Laminate Accessory for shingle used.
 - b) Primary Underlayment Under Shingles:
 - (1) Synthetic Underlayment: Diamond Deck.
 - c) Secondary Underlayment Under Shingles:
 - (1) WinterGuard Granular.
or
 - (2) WinterGuard Sand.
and
 - (3) WinterGuard High Tack/High Temperature under metal or horizontal to vertical transitions.
 - 2) Malarkey:
 - a) Shingles:
 - (1) Standard Wind: Polymer Modified SBS Legacy.

- (4) Hip And Ridge Shingles: Modified SBS Hip and Ridge Strips #225 10 inches (254 mm) or #227 12 inches (305 mm).
 - b) Primary Underlayment Under Shingles:
 - (1) Synthetic Underlayment: Secure Start #1030.
 - (2) Polymer Modified SBS Underlayment: Right Start UDL.
 - c) Secondary Underlayment Under Shingles:
 - (1) Arctic Seal Self-Adhering underlayment #401.
 - 3) Owens Corning:
 - a) Note:
 - (1) Duration Premium shingles are available in all areas of the USA and Canada including all Duration Premium colors under Church contract. Request shingles through local distribution.
 - (2) Any questions, contact Manufactures Area Sales Manager.
 - b) Shingles:
 - (1) Standard Wind: Duration Premium shingles.
 - (2) Hip And Ridge Shingles: DecoRidge Hip & Ridge.
 - c) Primary Underlayment Under Shingles:
 - (1) Synthetic Underlayment: Deck Defense High Performance Roof Underlayment.
 - d) Secondary Underlayment Under Shingles:
 - (1) Weatherlock G Granulated Self-Sealing Ice & Water Barrier.
and
 - (2) Weatherlock Specialty Tile & Metal for High Temperature under metal or horizontal to vertical transitions. .
- C. Elastomeric Roofing Sealant:
- 1. Design Criteria:
 - a. Meet requirements of ASTM D3019/D3019M.
 - b. Non-asphalt roofing cement (not permitted).
 - c. Elastomeric.
 - d. Cold temperature pliability.
 - e. Compatible with roof penetration boots.
 - 2. Category Four Products And Manufacturers. See Section 01 6200 for definitions of Categories:
 - a. Flintbond SBS Modified Bitumen Caulk by CertainTeed.
- D. Fasteners:
- 1. Primary Underlayment:
 - a. Corrosion resistant roofing nails with one inch (25 mm) diameter head and 3/4 inch (19 mm) long shank minimum.
 - 1) If shingles applied as underlayment is laid, use metal or plastic head Simplex roofing nails.
 - 2) If shingles not applied as underlayment is laid, use plastic head only.
 - b. Staples not permitted.
 - 2. Shingles:
 - a. Design Criteria:
 - 1) Meet following requirements for nails:
 - a) Comply with ASTM F1667, Type I, Style 20-Roofing Nails.
 - b) Eleven gauge galvanized steel or equivalent corrosion-resistant roofing nail.
 - c) Nail head sizes: 3/8 inch (9.5 mm) nominal diameter.
 - d) Sufficient length to penetrate through roof sheathing 1/4 inch (6 mm) or 3/4 inch (19 mm) minimum into solid wood decking.
 - e) Hot-dipped galvanized or electroplated fasteners comply with requirements of ASTM A153, Class D.
 - f) Stainless-steel fasteners meet requirements of Type 304 (UNS S30400) or Type 316 (UNS S31600).
 - b. General:
 - 1) Hot-dipped galvanized, electroplated non-corrosive gun-driver nails, or stainless-steel fasteners may be used.
 - 2) Fasteners within 15 miles (24.1 km) of coastal areas (oceanside) applications must use hot-dipped galvanized or stainless steel.

- 3) All exposed fasteners (including ridge shingles) must use hot-dipped galvanized or stainless steel.
 - 4) Staples not permitted:
 - a) Architect/Roof Consultant may approve in writing, staple gun that installs exposed fasteners with staples.
- E. Ladder Anchor:
1. Description:
 - a. Roof Bracket attached to roof allowing removable ladder to meet ANSI and OSHA guidelines to provide safety for access on to roof.
 2. Design Criteria:
 - a. Anchor to meet requirements for strength and permanent deformation at working load and working load with applied safety factor. No fracture or detachment is allowed at ultimate load of 1,100 pounds (499 kg).
 - b. Adapts to any roof pitch.
 3. Components:
 - a. Roof Plate and Fascia Mount.
 - 1) Dimensions: 22 inches (559 mm) x 13-1/2 inches (343 mm).
 - 2) Weight Capacity: 375 lbs (170 kg).
 - 3) Accessory Weight: 13 lb (5.9 kg).
 - b. Thirteen (13) strong-drive timber screws.
 - c. One (1) Eternabond double stick putty tape.
 4. Category Four Approved Products. See Section 01 6200 for definitions of Categories:
 - a. LedgeLock Mounting Bracket Model 57566 by Little Giant Ladder Systems, Springville, UT www.littlegiantladders.com.
 - 1) To order, call (888) 320-2488.

PART 3 - EXECUTION

3.1 INSTALLERS

- A. Category Three Approved Manufacture's Roofing Installers: See Section 01 4301.
1. Utah Area:
 - a. Approved Installers:
 - 1) CertainTeed:
 - a) AMCO American Roofing Co., Salt Lake City, UT – Contact: Keith J Yorgason (801) 269-1276.
 - b) Far West Roofing, Bluffdale, UT – Contact Douglas Cooper (801) 253-7799.
 - c) Heritage Roofing, Bluffdale, UT – Contact: James Smith (801) 576-8447.
 - d) Island Heights Construction Inc., Logan, UT – Contact: Casey Ringer (435) 753-7403.
 - e) JTS Roofing Inc., Ogden, UT – Contact: Todd Shupe (801) 627-6450.
 - f) Mountain Peak Builders, Inc., Logan, UT – Contact: Zane Rust (435) 787-4174.
 - g) North Face Roofing, Inc., Park City, UT – Craig Peters (801) 455-8492.
 - h) Perkes Roofing, Ogden, UT – Contact: Mark Perkes (801) 731-6918.
 - i) Redd Roofing Co., Ogden, UT – Lance Redd (801) 621-1363.
 - j) Stout Roofing Inc., St George, UT - Contact: Kelly Casey (435) 635-4288.
 - k) Stuart Roofing, Ogden, UT, Forest Stuart (801) 394 1923.
 - l) VIP Roofing, Centerville, UT – Contact: Max Ker (801) 631-6182.
 - m) White Roofing Co., Nephi, UT – Contact: Charles Shannon White (801) 376-1088.
 - 2) Owens-Corning:
 - a) American Roofing Co. (AMCO), Salt Lake City, UT – Contact: Keith J Yorgason (801) 269-1276.

3.2 EXAMINATION

- A. Verification Of Conditions:
1. Examine deck to determine if it is satisfactory for installation of roofing system. Conditions include, but are not limited to, moisture on deck, protruding deck fasteners, specified gaps between sheathing, and other items affecting issuance of roofing warranty.
 - a. Report unsatisfactory conditions in writing to Architect.
 - b. Commencement of Work by installer is considered acceptance of substrate.

3.3 PREPARATION

- A. Protection Of In-Place Conditions:
1. Install only as much roofing as can be made weathertight each day, including flashing and detail work.
- B. Surface Preparation:
1. Clean roof deck:
 - a. Remove dirt, protruding nails, shingle nails, and debris, before installation of underlayment.
 2. Roof deck must be dry to help prevent buckling of deck, which can result in deck movement and damage to primary underlayment.
 3. Following Manufacturer's recommendations for placing materials on roof.
 - a. Prevent material from sliding off roof.
 4. The existing drip edge metal along with all pre-cut hip & ridge shingles will be removed.

3.4 INSTALLATION

- A. General:
1. Schedule and execute work without exposing interior building areas to effects of inclement weather. Protect existing building and its contents against all risks.
- B. Sequence of Roofing Materials as shown and noted on Contract Drawings:
1. 12 inch strip Secondary Underlayment at Eave.
 2. Metal Drip Edge.
 3. General Primary Underlayment.
 4. Asphalt Shingles, Step Flashings.
 5. Counter Flashing.
- C. Underlayment:
1. General:
 - a. Temporary Roof:
 - 1) Do not use permanent underlayment installation as temporary roof.
 - 2) If temporary roof is used, remove completely before installation of permanent underlayment.
 - b. Follow Shingle Manufacturer's recommendations for installation of primary and secondary underlayment, particularly at eaves, rakes, and penetrations, unless specified installation procedures and Contract Drawing details are more stringent.
 - c. Avoid scuffing underlayment that can compromise surface and cause leaking. If scuffing occurs, following Manufacturer's recommendation for repair.
 - d. Staples are not permitted.
 - e. Weather conditions:
 - 1) Do not leave underlayment exposed to weather more than thirty (30) days after beginning of underlayment installation even if Manufacture allows longer period of time.
 - 2) If underlayment is exposed for more than thirty (30) days after beginning of underlayment installation, treat as temporary roof under first paragraph above.
 - 3) If moisture is deposited on exposed underlayment, obtain written approval from Shingle Manufacturer's Representative before installing shingles.

- f. Install valley secondary underlayment and valley primary underlayment after installation of general secondary underlayment, but before installation of general primary underlayment.
 2. Primary Underlayment:
 - a. Apply 48 inch (1 200 mm) wide courses over complete deck, including areas covered with secondary underlayment unless specified otherwise.
 - 1) Overlap underlayment before fastening.
 - 2) Maintain end laps of 6 inch (150 mm) and side laps of 3 inch (76 mm).
 - 3) Stop primary underlayment between 3 and 6 inches (75 and 150 mm) of inside edge of strip of secondary underlayment installed over edge of formed valley metal.
 - b. Nailing Synthetic Underlayment:
 - 1) Use low-profile plastic or steel cap corrosion resistant nails with 1 inch (25 mm) diameter heads to fasten underlayment in place. (Fastening underlayment without caps is not permitted).
 - 2) Nails must be driven properly. Improperly driven fasteners such as over-driving, under-driving and nails driven at an angle are not permitted.
 - 3) Fasteners should be long enough to penetrate at least 3/4 inch (19 mm) into roof sheathing. Fasteners must be lie flush to roof deck at 90 degree angle to roof deck and tight with underlayment.
 - 4) Do not nail through metal flashing, except drip edge, when installing primary underlayment.
 - 5) Follow Shingle Manufacturer's installation instructions for following:
 - a) Securing underlayment to roof deck adjusting for roof slope nailing requirements.
 - b) Side lap, end lap, and overlapping nailing requirements.
 - c) Rake and eave nailing requirements.
 - d) High wind condition nailing requirements.
 - e) Sealants recommendations.
 3. Secondary Underlayment:
 - a. Under Shingles:
 - 1) Lap end joints 6 inches (150 mm) and side joints 3 inch (76 mm) minimum.
 - 2) Apply continuous 12 inches (300 mm) wide strip at edge of eaves and rakes before installing drip edge.
- D. Shingles:
1. Before installing shingles, inspect underlayment and metal installation with Architect and Owner. Correct improperly installed and damaged material before beginning shingle installation.
 2. Racking installation method is not permitted by Owner and will be considered non-conforming work.
 3. Starter shingles:
 - a. Manufacturer's starter shingles are required for Shingle Warranty.
 - b. Install shingles at eave and rakes in accordance with Shingle Manufacturer's instructions.
 - c. Cut shingles in accordance with Shingle Manufacturer's instructions, or use approved starter course.
 - d. Nail to eave granule side up in continuous mastic bed with cut edge down-slope and edge overhanging eave 3/8 inch (9 mm) so sealing tabs are at edge of eave.
 - e. Install shingles with maximum exposure recommended by Shingle Manufacturer.
 - f. Lay first course directly over starter strip with ends flush with starter strip at eaves and so joints in starter strip are offset 4 inches (100 mm) minimum from joints in first course.
 4. Lay shingles so end joints are offset in accordance with Shingle Manufacturer's installation procedures.
 5. Insure alignment by snapping chalk line at least each fifth course to control horizontal and vertical alignment.
 6. Run courses true to line with end joints properly placed. Leave shingles flat without wave and properly placed.
 7. Hip and ridge shingles:
 - a. Manufacturer's hip and ridge shingles are required for Shingle Warranty.
 - b. Install specified hip and ridge shingles in accordance with Shingle Manufacturer's instructions.
 - c. Run ridge shingles as directed by Architect.
 8. Nailing:
 - a. General:

- 1) Six (6) Nail Pattern as recommended by Shingle Manufacturer for Shingle Warranty in each shingle.
 - 2) Place in relation to top edge of shingle as required by Shingle Manufacturer.
 - 3) Place nails one inch (25 mm) from each end of shingle and remainder evenly spaced between.
 - 4) Should any nail fail to penetrate sheathing by 1/4 inch (6 mm) minimum, drive additional nail nearby.
- b. Nailing guns:
- 1) Nails must be driven properly. Improperly driven fasteners such as over-driving, under-driving and nails driven at an angle are not permitted.
 - 2) Adjust nail gun pressure for nailing flush and tight to deck without cutting shingle surface.
 - 3) Drive nails perpendicular to shingle surface so nail head is flat against shingle.
 - 4) Should any nail fail to penetrate sheathing by 1/4 inch (6 mm) minimum, drive additional nail nearby.
9. Hand-Sealing:
- a. If ambient temperature or exposure to sun will not be sufficient to secure adhesive strip to under-lying shingle within one week, hand seal shingles with elastomeric roofing sealant.
10. Over valley metal:
- a. Do not drive nails through valley metal.
 - b. Run chalk line so valley metal will be exposed 6 inches (150 mm) wide at top and diverge 3/32 inch (one mm) per ft (300 mm) down to eaves.
 - c. Neatly trim shingles to this line.
 - d. Seal trimmed shingle edges to valley metal with continuous bead of elastomeric roofing sealant applied within one inch (25 mm) of shingle edge.
11. Vent pipe sleeve flange:
- a. Vent pipe sleeve flange as specified in Section 07 6310.
 - b. Fit shingles under lower edge and over sides and upper edge.
 - c. Set vent pipe flange in elastomeric roofing sealant.
 - d. Embed shingles in elastomeric roofing sealant where they overlap flange.
 - e. Apply bead of elastomeric roofing sealant at junction of vent pipe and vent flashing.
- E. Ladder Anchor:
1. Follow Manufacturer's written instructions including but not limited to:
 - a. Existing Projects:
 - 1) Ladder anchor to be located on roof as selected by Architect, Roof Consultant, or Owner's Representative.
 - 2) Locate center of existing roof trussed rafter.
 - 3) Modify existing fascia as required for proper anchoring to roof.
 - 4) Center ladder anchor on roof trussed rafter.
 - 5) Attach Roof Plate to Fascia Mount.
 - 6) Attach Roof Plate under roof material and on top of roof underlayment with timber screws.
 - 7) Attach Fascia Mount to metal fascia system with timber screws.
 - 8) Apply additional layer on secondary underlayment on top of Roof Plate before applying roofing material.

3.5 FIELD QUALITY CONTROL

- A. Non-Conforming Work:
1. Correct any work found defective or not complying with Contract Document requirements at no additional cost to the Owner.
 2. Raking installation method is not permitted by Owner and will be considered to be not complying with Contract Document requirements and must be corrected at no additional cost to Owner.

3.6 CLEANING

A. General:

1. All tools and unused materials must be collected at end of each workday and stored properly off finished roof surface and protected from exposure to elements.
2. Leave metals clean and free of defects, stains, and damaged finish.
 - a. Replace fascia metal that is scratched through finish to base metal.
3. Properly clean finished roof surface after completion.
4. Verify drains and gutters are not clogged.
5. Clean shingles and building of soiling caused by this installation.
6. Clean and restore all damaged surfaces to their original condition.

B. Waste Management:

1. Disposal:
 - a. All work areas are to be kept clean, clear and free of debris always.
 - b. Do not allow trash, waste, or debris to collect on roof. These items shall be removed from roof daily.
 - c. Remove debris resulting from work of this Section from roof and site. Dispose of or recycle all trash and excess material in manner conforming to current EPA regulations and local laws.

3.7 PROTECTION

- A. Do not permit traffic over finished roof surface.

END OF SECTION

SECTION 07 6310**STEEP SLOPE ROOF FLASHING: Asphalt Shingles****PART 1 - GENERAL****1.1 SUMMARY**

- A. Products Furnished But Not Installed Under This Section:
1. Roof flashing including:
 - a. Pipe flashing for vent piping and flues.
 - b. Roof jacks.
 - c. Saddles and curb flashings.
 - d. Miscellaneous flashing.
- B. Related Requirements:
1. Section 07 3113: 'Asphalt Shingles' for installation.
 2. Section 07 9213: 'Elastomeric Joint Sealants' for quality of sealants.

1.2 REFERENCES

- A. Definitions:
1. Base Flashing: That portion of flashing attached to or resting on roof deck to direct flow of water onto the roof covering.
 2. Cap Flashing: Material used to cover top edge of base flashings or other flashings to prevent water seepage behind base flashing. Cap flashing overlaps base flashing.
 3. Collar: Pre-formed flange placed over vent pipe to seal roof around vent pipe opening. Also called vent sleeve.
 4. Drip Edge: Non-corrosive, non-staining material used along eaves and rakes to allow water runoff to drip clear of underlying building.
 5. Flange: Metal pan extending up and down roof slope around flashing pieces. Usually at plumbing vents.
 6. Flashing: Components used to prevent seepage of water into a building around any intersection or projection in a roof such as vent pipes, adjoining walls, and valleys.
 7. Metal Flashing: Roof components made from sheet metal that are used to terminate roofing membrane or other material alongside roof perimeters as well as at roof penetrations.
 8. Penetration: Any object that pierces surface of roof.
 9. Pipe Boot: Prefabricated flashing piece used to flash around circular pipe penetrations. Also known as a Roof Jack.
 10. Roof Jack: Term used to describe a Pipe Boot or Flashing Collar.
 11. Valley: Internal angle formed by intersection of two sloping roof planes to provide water runoff.
 12. Vent: Any outlet for air that protrudes through roof deck such as pipe or stack. Any device installed on roof, gable or soffit for purpose of ventilating underside of roof deck.
 13. Vent Sleeve: See collar.
- B. Reference Standards:
1. ASTM International:
 - a. ASTM A653/A653M-18, 'Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process'.
 - b. ASTM A792/A792M-10(2015), 'Standard Specification for Steel Sheet, 55 % Aluminum-Zinc Alloy-Coated by the Hot-Dip Process'.
 2. ASTM International: (specifically referenced for pipe flashing only):
 - a. ASTM B117-18, 'Standard Practice for Operating Salt Spray (Fog) Apparatus'.
 - b. ASTM E283-04(2012), 'Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen'.

- c. ASTM E330/E330M-14, 'Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference'.
- d. ASTM E331-00(2016), 'Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference'.
- e. ASTM E2140-01(2017), 'Standard Practice for Water Penetration of Metal Roof Panel Systems by Static Water Pressure Head'.

1.3 SUBMITTALS

- A. Informational Submittals:
 1. Tests And Evaluation Reports:
 - a. Manufacturer's test reports:

1.4 WARRANTY

- A. Pipe Flashing:
 1. Manufacturer's warranty against defects in materials and workmanship when correctly installed in appropriate application for life of original roofing material from installation or replacement or fifty (50) years whichever is greater..
- B. Pipe Flashing For Concentric Piping Flashing Retrofitting:
 1. Manufacturer's twenty (20) warranty pipe flashing will not fail (does not allow water to leak through flashing) due to normal weather and atmospheric conditions from date of installation.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Manufacturers:
 1. Type Two Acceptable Manufacturers:
 - a. Aztec Washer Co., Poway, CA www.aztecwasher.com.
 - b. CMG – Coated Metals Group, Denver, CO www.cmgmetals.com.
 - c. Drexel Metals, LLC, Ivyland, PA www.drexmet.com.
 - d. Fabral, Lancaster, PA www.fabral.com.
 - e. Firestone Metal Products, Anoka, MN www.unaclad.com.
 - f. MBCI, Houston, TX www.mbc.com.
 - g. Metal Sales Manufacturing Corp, Sellersburg, IN www.mtlsales.com.
 - h. O'Neal Flat Rolled Metals (member of O'Neal Industries), Brighton, CO www.ofrmetals.com.
 - i. Petersen Aluminum Corp, Elk Grove, IL www.pac-clad.com.
 - j. Ryerson, Chicago, IL www.ryerson.com.
 - k. Equal as approved by Architect before installation. See Section 01 6200.
- B. Formed Drip Edge:
 1. Metal:
 - a. Steel: Minimum 24 ga (0.635 mm), hot-dipped galvanized to meet requirements of ASTM A653/A653M, 1.25 oz/sq ft. or galvalume meeting requirements of ASTM A792/A792M AZ50, 50 ksi.
- C. Fabrication:
 1. Profiles, bends, and intersections shall be even and true to line.
- D. Finishes:
 1. Face coating polyvinylidene Fluoride (PVF₂) Resin-base finish (Kynar 500 or Hylar 5000) for coil coating components containing seventy (70) percent minimum PVF₂ in resin portion of formula.

- Thermo-cured two coat system consisting of corrosion inhibiting epoxy primer and top coat factory applied over properly pre-treated metal.
2. Reverse side coating of steel flashings to be thermo-cured system consisting of corrosion inhibiting epoxy primer applied over properly pre-treated metal.
 3. Color as selected by Architect from Manufacturer's standard colors.

2.2 ACCESSORIES

- A. Pipe Flashing For Plumbing Vent Lines metal flues, and HVAC Air Piping:
1. Description:
 - a. Ultra-pure high consistency molded one hundred (100) percent silicone rubber pipe boot that prevents cracking and splitting for life of roof.
 2. Design Criteria:
 - a. Meet following Tests:
 - 1) ASTM B117 (Salt Spray Test).
 - 2) ASTM E283 (Air Leakage).
 - 3) ASTM E 330 (Uniform Structural Load).
 - 4) ASTM E331 (Water Penetration).
 - 5) ASTM E2140 (Water).
 - b. Material warranty of product for life of roof.
 3. 24 ga (0.635 mm) coated galvanized steel plate.
 4. Minimum 4 inch (100 mm) flashing on each side, 6 inch (150 mm) flashing at top, 3 inch (76 mm) flashing at bottom with nailing slots.
 5. UV stable solid molded PVC compression collar.
 6. Use Ultimate Pipe Flashing for PVC, ABS and IP.
 7. Use Ultimate Pipe Flashing and Easy Sleeve for Copper, Cast Iron, or irregular and damaged pipes:
 - a. Black PVC with integral cap.
 8. Sizes: 1-1/4 inch (32 mm), 1-1/2 inch (38 mm), 2 inch (50 mm), 3 inch (76 mm), and 4 inch (100 mm).
 9. Slope: Flat to 18/12 pitch.
 10. Flashing Finish: Face coating polyvinylidene Fluoride (PVF₂) Resin-base finish (Kynar 500) for coil coating components containing seventy (70) percent minimum PVF₂ in resin portion of formula. Thermo-cured two coat system consisting of corrosion inhibiting epoxy primer and top coat factory applied over properly pre-treated metal.
 11. Color: Brown (no other color available).
 12. Category Four Approved System Manufacturers. See Section 01 6200 for definitions of Categories:
 - a. Ultimate Pipe Flashing by Lifetime Tool & Building Products LLC, Winchester, VA www.lifetimetool.com (877) 904-1002.
 - b. Ultimate Pipe Flashing and Easy Sleeve by Lifetime Tool & Building Products LLC, Winchester, VA www.lifetimetool.com (877) 904-1002.
- B. Roof Jacks For Metal Flues: Factory-made galvanized steel.
- C. Pipe Flashing For Concentric Piping Flashing Retrofitting:
1. Description:
 - a. Black EPDM Pipe flashing for existing Concentric Piping for reroofing existing roofs (cutting Concentric Roof Termination cap off and replacing is not permitted).
 - b. Weather resistance to withstand ultra violet light and ozone.
 - c. Malleable base to conform to different roof pitches.
 - d. Pipe size: 1/2 inch (12.7 mm) to 4 inch (101 mm).
 - 1) On-site customization.
 - e. Fasteners included.
 2. Type One Acceptable Products:
 - a. Aztec RF101BP.
 - b. Equal as approved by Architect before bidding. See Section 01 6200.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Interface With Other Work:
 - 1. Coordinate with pipe installers for proper size of roof jacks and pipe flashing.

- B. Pipe Flashing:
 - 1. Follow Manufacturer's installation instructions.

- C. Pipe Flashing For Concentric Piping Flashing Retrofitting:
 - 1. Follow Manufacturer's installation instructions including but not limited to:
 - a. Choose appropriate retrofit size.
 - b. Wrap pipe flashing around pipe.
 - c. Apply 100 percent silicone sealant between base, roof, and top of flashing.
 - d. Use fasteners provided.
 - e. Apply cable tie as directed.

END OF SECTION

SECTION 07 9213**ELASTOMERIC JOINT SEALANTS****PART 1 - GENERAL****1.1 SUMMARY**

- A. Includes But Not Limited To:
1. Furnish and install sealants not specified to be furnished and installed under other Sections.
 2. Quality of sealants to be used on Project not specified elsewhere, including submittal, material, and installation requirements.
- B. Related Requirements:
1. Removing existing sealants specified in Sections where work required.
 2. Furnishing and installing of sealants is specified in Sections specifying work to receive new sealants.

1.2 REFERENCES

- A. Definitions:
1. Sealant Types and Classifications:
 - a. ASTM Specifications:
 - 1) Type:
 - a) Type S: Single-component sealant.
 - b) Type M: Multi-component sealant.
 - 2) Grade:
 - a) Grade P: Pourable or self-leveling sealant used for horizontal traffic joints.
 - b) Grade NS: Non-sag or gunnable sealant used for vertical and non-traffic joints.
 - 3) Classes: Represent movement capability in percent of joint width.
 - a) Class 100/50: Sealant that, when tested for adhesion or cohesion under cyclic movement shall withstand of at least 100 percent increase and decrease of at least 50 percent of joint width as measured at time of application.
 - b) Class 50: Sealant that, when tested for adhesion or cohesion under cyclic movement shall withstand increase and decrease of at least 50 percent of joint width as measured at time of application.
 - c) Class 25: Sealant that, when tested for adhesion or cohesion under cyclic movement shall withstand increase and decrease of at least 25 percent of joint width as measured at time of application.
 - d) Class 12: Sealant that, when tested for adhesion and cohesion under cyclic movement shall withstand increase and decrease of at least 12 percent of joint width as measured at time of application.
 - 4) Use:
 - a) T (Traffic): Sealant designed for use in joints in pedestrian and vehicular traffic areas such as walkways, plazas, decks and parking garages.
 - b) NT (Non-Traffic): Sealant designed for use in joints in non-traffic areas.
 - c) I (Immersion): Sealant that meets bond requirements when tested by immersion (Immersion rated sealant applications require primer).
 - d) M (Mortar): Sealant that meets bond requirements when tested on mortar specimens.
 - e) G (Glass): Sealant that meets bond requirements when tested on glass specimens.
 - f) A (Aluminum): Sealant that meets bond requirements when tested on aluminum specimens.
 - g) O (Other): Sealant that meets bond requirements when tested on substrates other than standard substrates, being glass, aluminum, mortar.

2. Silicone: Any member of family of polymeric products whose molecular backbone is made up of alternating silicon and oxygen atoms and which has pendant hydrocarbon groups attached to silicon atoms. Used primarily as a sealant. Offers excellent resistance to water and large variations in temperature (minus 100 deg F to + 600 deg F) (minus 73.3 deg C to + 316 deg C).

B. Reference Standards:

1. ASTM International:
 - a. ASTM C920-14a, 'Standard Specification for Elastomeric Joint Sealants'.
 - b. ASTM C1193-16, 'Standard Guide for Use of Joint Sealants'.
 - c. ASTM C1330-18, 'Standard Specification for Cylindrical Sealant Backing for Use with Cold Liquid Applied Sealants'.
 - d. ASTM C1481-12(2017) 'Standard Guide for Use of Joint Sealants with Exterior Insulation & Finish Systems (EIFS)'.
 - e. ASTM D5893/D5893M-16, 'Standard Specification for Cold Applied, Single Component, Chemically Curing Silicone Joint Sealant for Portland Cement Concrete Pavements'.

1.3 ADMINISTRATIVE REQUIREMENTS

A. Scheduling:

1. Schedule work so waterproofing, water repellents and preservative finishes are installed after sealants, unless sealant manufacturer approves otherwise in writing.
2. Ensure sealants are cured before covering with other materials.

1.4 SUBMITTALS

A. Action Submittals:

1. Product Data:
 - a. Manufacturer's specifications and other data needed to prove compliance with the specified requirements.
 - b. Manufacturer's literature for each Product.
 - c. Schedule showing joints requiring sealants. Show also backing and primer to be used.

B. Informational Submittals:

1. Certificates:
 - a. Manufacturer's Certificate:
 - 1) Certify products are suitable for intended use and products meet or exceed specified requirements.
 - 2) Certificate from Manufacturer indicating date of manufacture.
2. Manufacturers' Instructions:
 - a. Manufacturer's installation recommendations for each Product.
 - b. Manufacturer's installation for completing sealant intersections when different materials are joined.
 - c. Manufacturer's installation for removing existing sealants and preparing joints for new sealant.

1.5 QUALITY ASSURANCE

A. Qualifications:

1. Manufacturer: Company specializing in manufacturing products specified in this section with minimum ten (10) years documented experience.
2. Applicator Qualifications:
 - a. Company specializing in performing work of this section.
 - b. Provide if requested, reference of projects with minimum three (3) years documented experience, minimum three (3) successfully completed projects of similar scope and complexity, and approved by manufacturer.

- c. Designate one (1) individual as project foreman who shall be on site at all times during installation.
- B. Preconstruction Testing:
 1. Pre-construction testing is not required when sealant manufacturer can furnish data acceptable to Architect based on previous testing for materials matching those of the Work.
- C. Mockups:
 1. Provide mockups including sealant and joint accessories to illustrate installation quality and color if requested by Architect or Project Manager.
 - a. Incorporate accepted mockup as part of Work.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Delivery and Acceptance Requirements:
 1. Deliver and keep in original containers until ready for use.
 2. Inspect for damage or deteriorated materials.
- B. Storage and Handling Requirements:
 1. Handle, store, and apply materials in compliance with applicable regulations and material safety data sheets (MSDS).
 2. Handle to prevent inclusion of foreign matter, damage by water, or breakage.
 3. Store in a cool dry location, but never under 40 deg F (4 deg C) or subjected to sustained temperatures exceeding 90 deg F (32 deg C) or as per Manufacturer's written recommendations.
 4. Do not use sealants that have exceeded shelf life of product.

1.7 FIELD CONDITIONS

- A. Ambient Conditions:
 1. Do not install sealant during inclement weather or when such conditions are expected. Allow wet surfaces to dry.
 2. Follow Manufacturer's temperature recommendations for installing sealants.

1.8 WARRANTY

- A. Manufacturer Warranty:
 1. Signed warranties against adhesive and cohesive failure of sealant and against infiltration of water and air through sealed joint for period of three (3) years from date of Substantial Completion.
 - a. Manufacturer's standard warranty covering sealant materials.
 - b. Applicator's standard warranty covering workmanship.

PART 2 - PRODUCTS

2.1 SYSTEMS

- A. Manufacturers:
 1. Manufacturer Contact List:
 - a. Dow Corning Corp., Midland, MI www.dowcorning.com.
 - b. Franklin International, Inc. Columbus, OH www.titebond.com.
 - c. GE Sealants & Adhesives (see Momentive Performance Materials Inc.).
 - d. Laticrete International Inc., Bethany, CT www.laticrete.com.
 - e. Momentive Performance Materials Inc. (formally GE Sealants & Adhesives), Huntersville, NC www.ge.com/silicones.

- f. Sherwin-Williams, Cleveland, OH www.sherwin-williams.com.
- g. Sika Corporation, Lyndhurst, NJ www.sikaconstruction.com or Sika Canada Inc, Pointe Claire, QC www.sika.ca.
- h. Tremco, Beachwood, OH www.tremcosealants.com or Tremco Ltd, Toronto, ON (800) 363-3213.

B. Materials:**1. Design Criteria:**

- a. Compliance: Meet or exceed requirements of these standards:
 - 1) ASTM C920: Elastomeric joint sealant performance standard.
 - 2) ASTM D5893/D5893M: Silicone Joint Sealant for Concrete Pavements.
- b. Comply with Manufacturer's ambient condition requirements.
- c. Sealants must meet Manufacturer's shelf-life requirements.
- d. Sealants must adhere to and be compatible with specified substrates.
- e. Sealants shall be stable when exposed to UV, joint movements, and environment prevailing at project location.
- f. Primers (Concrete, stone, masonry, and other nonporous surfaces typically do not require a primer. Aluminum and other nonporous surfaces except glass require use of a primer. Installer Option to use Adhesion Test to determine if primer is required or use primer called out in related sections):
 - 1) Adhesion Test:
 - a) Apply silicone sealant to small area and perform adhesion test to determine if primer is required to achieve adequate adhesion. If necessary, apply primer at rate and in accordance with Manufacturer's instructions. See 'Field Quality Control' in Part 3 of this specification for Adhesive Test.
 - 2) If Primer required, shall not stain and shall be compatible with substrates.
 - 3) Allow primer to dry before applying sealant.

2. Sealants At Exterior Sheet Metal And Miscellaneous:

- a. Description:
 - 1) Weathersealing expansion, contraction, perimeter, and other movement joints which may include all or part of the following for project:
 - a) Flashings.
 - b) Gutters.
 - c) Penetrations in soffits and fascias.
 - d) Roof vents and flues.
 - e) Lightning protection components.
- b. Design Criteria:
 - 1) Meet following standards for Sealant:
 - a) ASTM C920: Type S Grade NS, Class 25 (min) Use NT, M, G, A and O.
 - 2) Limitations:
 - a) Do not use below-grade applications.
 - b) Do not use on surfaces that are continuously immersed or in contact with water.
 - c) Do not use on wet, damp, frozen or contaminated surfaces.
 - d) Do not use on building materials that bleed oils, plasticizers or solvents, green or partially vulcanized rubber gaskets or tapes.
- c. Category Four Approved Products. See Section 01 6200 for definitions of Categories:
 - 1) Dow Corning: 790 Silicone Building Sealant.
 - 2) Momentive Performance Materials (formerly, GE Sealants & Adhesives): GE SCS2350 Silicone Elastomeric Sealant.
 - 3) Tremco: Tremsil 600 Silicone Sealant.

PART 3 - EXECUTION**3.1 EXAMINATION****A. Verification Of Conditions:**

- 1. Examine substrate surfaces and joint openings are ready to receive Work.
 - a. Verify each sealant is compatible for use with joint substrates.

- b. Verify joint surfaces are clean and dry.
- c. Ensure concrete surfaces are fully cured.
2. Sealants provided shall meet Manufacturer's shelf-life requirements.
3. Notify Architect of unsuitable conditions in writing.
 - a. Do not proceed until unsatisfactory conditions are corrected.
4. Commencement of Work by installer is considered acceptance of substrate.

3.2 PREPARATION

A. Surface Preparation:

1. Remove existing joint sealant materials where specified.
 - a. Clean joint surfaces of residual sealant and other contaminants capable of affecting sealant bond to joint surface using manufacturer's recommended joint preparation methods.
 - b. Repair deteriorated or damaged substrates as recommended by Sealant Manufacturer to provide suitable substrate. Allow patching materials to cure.
2. Surfaces shall be clean, dry, free of dust, oil, grease, dew, frost or incompatible sealers, paints or coatings that may interfere with adhesion. Prepare substrates in accordance with Manufacturer's instructions:
 - a. Porous surfaces: Clean by mechanical methods to expose sound surface free of contamination and laitance followed by blasting with oil-free compressed air.
 - b. Nonporous surfaces: Use two-cloth solvent wipe in accordance with ASTM C1193. Allow solvent to evaporate prior to sealant application.
 - c. High-pressure water cleaning: Exercise care that water does not enter through failed joints.
 - d. Primers:
 - 1) Primers enhance adhesion ability.
 - 2) Use of primers is not a substitution for poor joint preparation.
 - 3) Primers should be used always in horizontal application where there is ponding water.
3. Field test joints in inconspicuous location.
 - a. Verify joint preparation and primer required to obtain optimum adhesion of sealants to joint substrate.
 - b. When test indicates sealant adhesion failure, modify joint preparation primer, or both and retest until joint passes sealant adhesion test.
4. Masking: Apply masking tape as required to protect adjacent surfaces and to ensure straight bead line and facilitate cleaning.

B. Joints:

1. Prepare joints in accordance with ASTM C1193.
 - a. Clean joint surfaces of contaminants capable of affecting sealant bond to joint surface using Manufacturer's recommended instructions for joint preparation methods.
 - b. Remove dirt, dust, oils, wax, paints, and contamination capable of affecting primer and sealant bond.
 - c. Clean concrete joint surfaces to remove curing agents and form release agents.

C. Protection:

1. Protect elements surrounding the Work of this section from damage or disfiguration.

3.3 APPLICATION

A. General:

1. Apply silicone sealant in accordance with Manufacturer's instructions.
2. Do not use damaged or deteriorated materials.
3. Install primer and sealants in accordance with ASTM C1193 and Manufacturer's instructions.
4. Apply primer where required for sealant adhesion.
5. Install sealants immediately after joint preparation.
6. Do not use silicone sealant as per the following:
 - a. Apply caulking/sealant at temperatures below 40 deg F (4 deg C).
 - b. Below-grade applications.

- c. Brass and copper surfaces.
 - d. Materials bleeding oils, plasticizers, and solvents.
 - e. Structural glazing and adhesive.
 - f. Surfaces to be immersed in water for prolonged time.
- B. Bond Breaker:
1. Install bond breaker where joint backing is not used or where backing is not feasible.
 - a. Apply bond-breaker tape in shallow joints as recommended by Sealant Manufacturer.
- C. Sealant:
1. Apply sealant with hand-caulking gun with nozzle of proper size to fit joints. Use sufficient pressure to insure full contact to both sides of joint to full depth of joint. Apply sealants in vertical joints from bottom to top.
 2. Fill joint opening to full and proper configuration.
 3. Apply in continuous operation.
 4. Tool joints immediately after application of sealant if required to achieve full bedding to substrate or to achieve smooth sealant surface. Tool joints in opposite direction from application direction, i.e., in vertical joints, from the top down. Do not 'wet tool' sealants.
 5. Depth of sealant bite shall be 1/4 inch (6 mm) minimum and 1/2 inch (12.7 mm) maximum, but never more than one half or less than one fourth joint width.
- D. Caulk gaps between painted or coated substrates and unfinished or pre-finished substrates. Caulk gaps larger than 3/16 inch (5 mm) between painted or coated substrates.

3.4 TOLERANCES

- A. Provide joint tolerances in accordance with Manufacturer's printed instructions.

3.5 FIELD QUALITY CONTROL

- A. Adhesion Test (Installer Option to use adhesion test to determine if primer is required).
1. Perform adhesion tests in accordance with Manufacturer's instructions and ASTM C1193, Method A, Field-Applied Sealant joint Hand-Pull Tab:
 - a. Perform five (5) tests for first 1,000 linear feet (300 meters) of applied silicone sealant and one (1) test for each 1,000 linear feet (300 meters) seal thereafter or perform one (1) test per floor per building elevation minimum.
 - b. For sealants applied between dissimilar materials, test both sides of joints.
 2. Sealants failing adhesion test shall be removed, substrates cleaned, sealants re-installed, and re-testing performed.
 3. Maintain test log and submit report to Architect indicating tests, locations, dates, results, and remedial actions.

3.6 CLEANING

- A. Remove masking tape and excess sealant.
- B. Clean adjacent materials, which have been soiled, immediately (before setting) as recommended by Manufacturer.
- C. Waste Management: Dispose of products in accordance with manufacturer's recommendation.

END OF SECTION