City of Fife
City Hall Phase 1 – Exterior Envelope Replacement

Contract Documents Project Manual

TCF Project No. 2012-008

October 21, 2016

TCF Architecture

PROJECT MANUAL

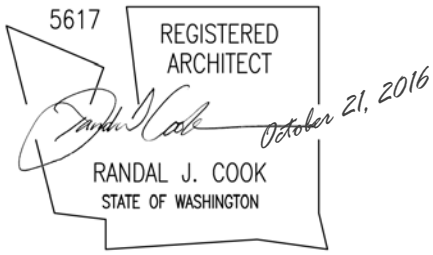
SPECIFICATIONS

FOR

City of Fife
City Hall Phase 1 – Exterior Envelope Replacement

5411 23rd Street East
Fife, WA 98424

The undersigned Architect of Record hereby certifies that the Technical Specifications (Divisions 02-14 except where indicated as prepared by other design professionals of record,) in this 100% Contract Document Submittal, for the City of Fife City Hall Phase 1 – Exterior Envelope Replacement Project were written by me, or under my direct supervision, and that I am duly registered under the laws of the State of Washington and hereby affix my Professional Seal and signature.



ARCHITECT
TCF Architecture pllc
902 North 2nd Street
Tacoma, WA 98403
Phone: (253) 572-3993
Fax: (253) 572-1445

The undersigned Engineer of Record hereby certifies that the Technical Specifications for the Electrical portions of this Project for the Bid Set Submittal for the AWC East Office Expansion were written by me, or under my direct supervision, and that I am duly registered under the laws of the State of Washington and hereby affix my Professional Seal and signature. Those sections prepared under my supervision and being certified by my seal and signature below are all electrical specifications in Division 26.

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ADVERTISEMENT FOR BIDS

Sealed bid proposals will be accepted for the following project:

TITLE: City of Fife
City Hall Phase 1 Exterior Envelope Replacement

OWNER: City of Fife
Public Works Director: Russ Blount, PE, (253) 922-2489 rblount@cityoffife.org
City Engineer: Ken Gill, PE (253) 922-9315 kgill@cityoffife.org

Pierce County prevailing wage requirements are in effect.

The City of Fife is an Affirmative Action/Equal Opportunity Employer and hereby notifies all Bidders that it will affirmatively ensure that in any Contract entered into pursuant to this advertisement disadvantaged business enterprises will be given the full opportunity to submit Bids in response to this invitation. Minority and/or Women Owned Businesses are encouraged to submit bids and all bidders are encouraged to consider minority and women owned businesses as potential subcontractors and material suppliers for this project. The City of Fife does not discriminate on the basis of race, color, national origin, sex, religion, age, or disability in employment or the provisions of services.

All bids shall be submitted on the prescribed Bid Forms and in the manner as stated in this invitation and in the Bid Document and said bids shall be accompanied by a bid deposit in the form of cash, cashier's check, certified check, postal money order, or a surety bond to the City of Fife in the amount of five percent (5%) of the total amount of the bid for Schedule A. **Bid Bonds submitted on other than the bond form provided by the City may be subject to rejection. Faxed bids and/or surety bond will not be accepted.**

Bids must be submitted in a sealed envelope with the outside clearly marked "sealed bid" with the bid opening date and time, and the project name as it appears in this advertisement and the name and address of the bidder. Bids shall be addressed to the **City Clerk, City of Fife-5411 23rd Street, Fife, WA 98424.**

The City of Fife reserves the right to reject any or all bids and to waive irregularities in the bid or in the bidding.

No Bidder may withdraw his proposal after **1:00 P.M. on November 15, 2016**, or before award of Contract, unless said award is delayed for a period exceeding sixty (60) days.

Liquidated Damages: The Project must be physically completed within 150 calendar days. Liquidated damages of $1000.00 will be assessed for each calendar day of delay in completion of the Project.

PROJECT DESCRIPTION: The City of Fife City Hall building is a one-story, wood framed, stucco sided building approximately twenty years old. Generally described, moisture intrusion has damaged the exterior envelope of the building requiring the removal of the existing stucco siding and substantial removal and replacement of structural sheathing, wood stud framing, sill plate and hold-downs, roof truss repair,

along with interior drywall removal and replacement. New exterior envelope systems include metal siding, fiber cement panel rainscreen, and cedar stripping rainscreen. The Work includes removal of materials containing fungal growth.

ESTIMATED BASE BID COST RANGE: $300,000-320,000

TIME OF COMPLETION: 120 Calendar Days to Substantial Completion plus 30 Calendar Days to Final Acceptance

SUBMITTAL TIME/DATE/LOCATION

Submittal Time and Date: 1:00pm Pacific Standard Time, Tuesday, November 15, 2016

Submittal Location: City of Fife: 5411 23rd Street East, Fife, WA 98424

Public Bid Opening will commence at the same location. The City of Fife reserves the right to accept or reject any or all proposals and to waive informalities.

PREBID CONFERENCE: There will be one (1) pre-bid conference scheduled for **11:00 AM on Wednesday, November 2.** All interested bidder contractors and subcontractors are invited to attend for a project presentation and information session and a tour of the Project Work area.

BID DOCUMENTS:

Plans, specifications, and addenda, (Contract Documents) and plan holders list for this project will be available on-line through Builders Exchange of Washington, Inc. by going to **www.bxwa.com.** Click on **"Posted Projects", "Public Works", "City of Fife", "Projects Bidding",** and **"Project Bid Date"**. Bidders must **"Register as a Bidder"** in order to receive automatic e-mail notification of future addenda and to be placed on the **"Bidders List."** This service is provided free of charge to Prime Bidders, Subcontractors, and Vendors bidding this project. Please contact Builders Exchange of Washington at (425) 258-1303 should you require assistance.

Contract Documents are also available at the Owner's website as follows: http://cityoffife.org/city-departments/public-works/project-bids-and-awards

TECHNICAL QUESTIONS: Please direct questions regarding this Project in writing to Scott Olsen, TCF Architecture: scott@tcfarchitecture.com

Carol Etgen, MMC
City Clerk

Published: *Tacoma News Tribune*

Publish Date: October 25, 2016 and November 1, 2016

BID BOND FORM

Herewith find deposit in the form of a certified check, cashier's check, cash or bid bond, in the amount of

_____($_____),
which is not less than five percent (5%) of the total bid.

Sign here _____

.....

BID BOND

KNOW ALL PEOPLE BY THESE PRESENTS:

That I/we, _____ as Principal,

and that I/we, _____ as Surety,
are held firmly bound unto the City of Fife, Washington, as Obligee, in the penal sum of

$_____($_____), for
the payment of which the Principal and the Surety bind themselves, their heirs, executors, administrators, successors, and assigns, jointly and severally, by these presents.

The condition of this obligation is such that if the Obligee shall make any award to the Principal for the **City Hall Phase 1 Exterior Envelope Replacement** Project according to the terms of the proposal or bid made by the Principal thereto, and the Principal shall duly make and enter into a Contract with the Obligee in accordance with the terms of said proposal or bid and award and shall give bond for the faithful performance thereof, with Surety or Sureties approved by the Obligee; or if the Principal shall, in case of failure to do so, pay and forfeit to the Obligee the penal amount of the deposit specified in the call for bids, then this obligation shall be null and void; otherwise it shall be and remain in full force and effect and the Surety shall forthwith pay and forfeit to the Obligee, as penalty and liquidated damages, the amount of this bond.

Signed, sealed, and dated this _____ day of _____, _____.

_____
Principal

_____
Surety

Note: Power of Attorney shall be attached.

_____
Attorney in Fact

.....

Received return deposit in the sum of $_____ ($_____)

Bond No.: _____

SECTION 002113 - INSTRUCTIONS TO BIDDERS

1.1 DEFINITIONS

A. All definitions set forth in the Contract for Construction or in other Contract Documents are applicable to the Bidding Documents.

B. "**Addenda**" are written or graphic instruments issued prior to the execution of the Contract which modify or interpret the Bidding Documents by additions, deletions, clarifications or corrections. The contents of Addenda are issued in no particular order and therefore should be carefully and completely reviewed. Addenda relating to administrative matters, such as, for example, the date or time of meetings or bid receipt, may be issued in writing by fax, mail or other delivery.

C. An "**Alternate Bid**" (or "**Alternate**") is an amount stated in the Bid to be added to ("Additive Alternate") or deducted from ("Deductive Alternate") the amount of the Base Bid if the corresponding change in the Work, as described in the Bidding Documents, is accepted.

D. "**Award**" means the formal decision by the Owner notifying a Bidder with the lowest responsive Bid of the Owner's acceptance of the Bid and intent to enter into a contract with the Bidder.

E. The "**Award Requirements**" include the following statutory requirements as a condition precedent to Award (RCW39.04.350). The lowest responsible Bidder shall:

1. At the time of bid submittal, have a certificate of registration in compliance with chapter 18.27 RCW;
2. Have a current state unified business identifier number;
3. If applicable, have industrial insurance coverage for the Bidder's employees working in Washington as required in Title 51 RCW;
4. Have an employment security department number as required in Title 50 RCW;
5. Have a state excise tax registration number as required in Title 82 RCW;
6. Not be disqualified from bidding on any public works contract under RCW 39.06.010 (unregistered or unlicensed contractors) or RCW 39.12.065(3) (prevailing wage violations);
7. If bidding on a public works project subject to the apprenticeship utilization requirements in RCW 39.04.320, not have been found out of compliance by Washington state apprenticeship and training council for working apprentice out of ratio, without appropriate supervision, or outside their approved work processes as outlined in their standards of apprenticeship under chapter 49.04 RCW for one-year period immediately preceding the date of the bid solicitation;
8. Until December 31, 2015, not have violated RCW 39.04.370 more than one time as determined by the department of labor and industries; and
9. Shall not currently be debarred or suspended by Federal government. The Bidder shall not be listed as having an "active exclusion" on the U.S. government's "System for Award Management" database (www.sam.gov).
10. The Bidder shall not owe delinquent taxes to the Washington State Department of Revenue without a payment plan approved by the Department of Revenue.

Documentation: The Bidder shall not be listed on the Washington State Department of Revenue's "Delinquent Taxpayer List" website: http://dor.wa.gov/content/fileandpaytaxes/latefiling/dtlwest.aspx , or if they are so listed, they must submit a written payment plan approved by the Department of Revenue, to the Contracting Agency by the deadline listed below.

11. The Bidder shall not have a record of excessive claims filed against the retainage or payment bonds for public works projects in the three years prior to the bid submittal date, that demonstrate a lack of effective management by the Bidder of making timely and appropriate payments to its subcontractors, suppliers, and workers, unless there are extenuating circumstances and such circumstances are deemed acceptable to the Contracting Agency.

    Documentation: The Bidder, if and when required as detailed below, shall submit a list of the public works projects completed in the three years prior to the bid submittal date that have had claims against retainage and bonds and include for each project the following information:

    (1.) Name of project;
    (2.) The owner and contact information for the owner;
    (3.) A list of claims filed against the retainage and/or payment bond for any of the projects listed;
    (4.) A written explanation of the circumstances surrounding each claim and the ultimate resolution of the claim.

12. The Bidder and/or its owners shall not have been convicted of a crime involving bidding on a public works contract in the five years prior to the bid submittal date.

    Documentation: The Bidder, if and when required as detailed below, shall sign a statement (on a form to be provided by the Contracting Agency) that the Bidder and/or its owners have not been convicted of a crime involving bidding on a public works contract.

13. The Bidder shall not have had any public works contract terminated for cause or terminated for default by a government agency in the five years prior to the bid submittal date, unless there are extenuating circumstances and such circumstances are deemed acceptable to the Contracting Agency.

    Documentation: The Bidder, if and when required as detailed below, shall sign a statement (on a form to be provided by the Contracting Agency) that the Bidder has not had any public works contract terminated for cause or terminated for default by a government agency in the five years prior to the bid submittal date; or if Bidder was terminated, describe the circumstances.

14. The Bidder shall not have lawsuits with judgments entered against the Bidder in the five years prior to the bid submittal date that demonstrate a pattern of failing to meet the terms of contracts, unless there are extenuating circumstances and such circumstances are deemed acceptable to the Contracting Agency.

    Documentation: The Bidder, if and when required as detailed below, shall sign a statement (on a form to be provided by the Contracting Agency) that the Bidder has not had any lawsuits with judgments entered against the Bidder in the five years prior to the bid submittal date that demonstrate a pattern of failing to meet the terms of contracts, or shall submit a list of all lawsuits with judgments entered against the Bidder in the five years prior to the bid submittal date, along with a written explanation of the circumstances surrounding each such lawsuit.

The Contracting Agency shall evaluate these explanations to determine whether the lawsuits demonstrate a pattern of failing to meet of terms of construction related contracts.

15. The quality of performance of previous contracts, including demonstration of successful completion of projects of similar scope and complexity in the last three (3) years and the designated Project Manager and superintendent shall have a minimum of three (3) years of successful experience in project management and scheduling of projects of similar scope and complexity; and
16. Documentation: The Bidder shall fill out and submit the Reference sheet in **Section 004512**. The Owner shall check the listed reference or other references and if 50% or more of the references are poor due to performance, schedule, administrative paperwork, the Owner will contact the Contractor to discuss the circumstances of the poor references, but reserves the right to consider the Contractor as non-responsive.

F. The "**Base Bid**" is the sum stated in the Bid for which the Bidder offers to perform the Work described in the Bidding Documents as the base to which work may be added or from which work may be deleted for sums stated in Alternate Bids.

G. "**Bid**" is a complete and properly signed proposal to do the Work or designated portion thereof, submitted in accordance with the Bidding Documents, for the sums therein stipulated and supported by any data called for by the Bidding Documents.

H. The "**Bid Date**" is the day and hour(s) specified in the Bidding Documents, as may be changed through an Addendum, by which Bidders are required to submit Bids to the Owner.

I. The "**Bid Form**" is the form(s) that are included with the Bidding Documents through which a Bidder submits a Bid. The Bid Form may consist of several Parts that are submitted at different times.

J. "**Bidder**" is a person or entity who submits a Bid for a prime contract with the Owner for the Work described in the proposed Contract Documents.

K. The "**Bidding Documents**" include the Advertisement or Invitation to Bid, Instructions to Bidders, the Bid Form, any other sample bidding and contract forms, the Bid Bond, and the proposed Contract Documents, including any Addenda issued prior to receipt of bids.

L. The "**Contract Documents**" proposed for the Work consist of the written and executed Agreement Between Owner and Contractor, the General Conditions of the Contract (as well as any Supplemental, Special or other Conditions included in the Project Manual), any Drawings, any Specifications, and all Addenda issued prior to, and all modifications issued after, execution of the Contract. (see Section 1.3)

M. **City** is the City of Fife, the “Owner.”

N. To be considered "**Responsible**," a Bidder must meet the Award Requirements and the following supplemental criteria applicable to this Project (together, the "**Responsibility Criteria**") <u>to the satisfaction of the Architect and the Owner</u>. Refer to Section 1.5

CONSIDERATION OF BIDS, Part C.3 Requirements for Award for mandatory and supplemental bidder criteria.

O. **"Sub-bidder"** is a person or entity who submits a bid to a Bidder for materials, equipment or labor for a portion of the Work.

P. **"Unit Price"** is an amount stated in the Bid as a price per unit of measurement for materials, equipment, or services as described in the Bid Documents or the Proposed Contract Documents.

1.2 BIDDER'S REPRESENTATIONS

By submitting its Bid, each Bidder represents that:

A. BIDDING DOCUMENTS.

1. The Bidder has read and understands the Bidding Documents, and its Bid is made in accordance with them.
2. By signing the Proposal the Bidder will be deemed to have signed and agreed to the requirements of the Non Collusion Declaration. The Non Collusion Declaration can be reviewed under **Section 004115.**
3. By signing the Bid Proposal, the Bidder is aware and has read the City of Fife's Non-Discrimination Assurances See the **Advertisement for Bids**.

B. POSSIBLE SELF-PERFORMED WORK REQUIREMENT.

1. The Bidder will perform with its own forces any percentage of the Work required by the Bidding Documents or the Contract Documents.

C. BASIS.

1. Its Bid is based upon the materials, systems, services, and equipment required by the Bidding Documents, and is made without exception. A conditional or qualified bid will not be accepted.

D. EXAMINATION.

1. The Bidder has carefully examined and understands the Bidding Documents, the Contract Documents (including, without limitation, any liquidated damages and insurance provisions), and the Project site, it has familiarized itself with the local conditions under which the Work is to be performed and has correlated its observations with the requirements of the proposed Contract Documents and it has satisfied itself as to the nature, location, character, quality and quantity of the Work, the labor, materials, equipment, goods, supplies, work, services and other items to be furnished, and all other requirements of the Contract Documents.

2. The Bidder has also satisfied itself as to the conditions and other matters that may be encountered at the Project site or affect performance of the Work or the cost or difficulty thereof, including but not limited to those conditions and matters affecting: transportation, access, disposal, handling and storage of materials, equipment and other items; availability and quality of labor, water, electric power and utilities; availability and condition of roads; climatic conditions and seasons; physical

conditions at the Project site and the surrounding locality; topography and ground surface conditions; and equipment and facilities needed preliminary to and at all times during the performance of the Work.

3. The failure of the Bidder fully to acquaint itself with any applicable condition or matter shall not in any way relieve the Bidder from the responsibility for performing the Work in accordance with, and for the Contract Sum and within the Contract Time provided for in, the Contract Documents.

E. PROJECT MANUAL

1. The Bidder has checked its copies of the Project Manual with the Table of Contents bound therein to ensure the Project Manual is complete.

F. SEPARATE WORK.

1. The Bidder has examined and coordinated all Drawings, Contract Documents, and Specifications with any other contracts to be awarded separately from, but in connection with, the Work being bid upon, so that the Bidder is fully informed as to conditions affecting the Work being bid upon. See Section 011000 "SUMMARY" for a description of work under other contracts, if any.

G. LICENSE REQUIREMENTS.

1. Bidders and their proposed Subcontractors shall be registered and shall hold such licenses as may be required by the laws of Washington, including a certificate of registration under RCW 18.27, for the performance of the Work specified in the Contract Documents.

1.3 BIDDING DOCUMENTS

A. ELECTRONIC FILES

1. Plans, specifications, addenda, and plan holders list for this project will be available on-line through Builders Exchange of Washington, Inc. by going to **www.bxwa.com.** Click on **"Posted Projects", "Public Works", "City of Fife", "Projects Bidding",** and **"Project Bid Date"**. Bidders must **"Register as a Bidder",** in order to receive automatic e-mail notification of future addenda and to be placed on the **"Bidders List".** This service is provided free of charge to Prime Bidders, Subcontractors, and Vendors bidding this project. Please contact Builders Exchange of Washington at (425) 258-1303 should you require assistance.

2. Bidders shall use complete sets of Bidding Documents in preparing Bids and are solely responsible for utilizing established plan holder identification processes to obtain updated bid information; neither the Owner nor the Architect assumes any responsibility for errors or misinterpretations resulting from the use of incomplete and/or superseded sets of Bidding Documents.

B. INTERPRETATION OR CORRECTION OF BIDDING DOCUMENTS

1. The Contract Documents may be divided into parts, divisions, and sections for convenient organization and reference. Generally, there has been no attempt to divide the Specification sections into Work performed by the various building trades, any Work by separate contractors, or any Work required for separate facilities in or phases of the Project.

2. Any discovered omissions, discrepancies, or need for interpretation should be brought in writing to the attention of the following:

   a. Mr. Ken Gill, City Engineer

   b. Written addenda to clarify answers to questions will then be issued if appropriate. All interpretation or explanation of the bid contract documents shall be in the form of an addendum, and no oral statements of City of Fife or any other officer, employee or other agent or representative of City of Fife shall in any way modify the contract or bid documents, whether made before or after letting the contract.

3. Prior to bidding, each Bidder shall ascertain that it has received all Addenda issued. Each Bidder shall acknowledge its receipt of all Addenda in its Bid.

C. SUBSTITUTIONS

1. The materials, products, procedures and equipment described in the Bidding Documents establish a standard of required function, dimension, appearance, and quality that must be met by any proposed substitution.

2. No substitution will be considered prior to receipt of Bids unless the Architect receives a written request for approval on the Owner 's Substitution Request form for the Project, with all data requested on the form completed, at least seven (7) days prior to the date for receipt of Bids.

   a. Each such request shall be submitted with a Request for Substitution form identical to or equivalent in content to the form found in the Project Manual (see Section 012500) and shall include the name of the material or equipment proposed to be replaced and a complete description of the proposed substitution, including drawings, cut sheets, performance and test data, warranty information, and any other information necessary for an evaluation. A statement setting forth any changes in other materials, equipment or other Work that incorporation of the substitute would require shall be included.

   b. The proposer has the burden to prove the merit of the proposed substitute; by proposing the substitution, the Bidder represents that it has personally investigated the proposed material or product and determined that it is equal or better in all respects to that specified, that the same or better warranty will be provided for the substitution, that complete cost data, including all direct and indirect costs of any kind, has been presented, that the substitution will not increase Contract Time, and that it will coordinate the installation of the substitute if accepted and make all associated changes in the Work.

   c. The Architect's decision to approve or disapprove a proposed substitution shall be final. Written requests for approval shall constitute a guarantee by the

Bidder that the articles or materials are in all respects, including warranty and installation, equal or superior to those specified, unless otherwise noted.

d. To the extent the proposed substitution will require additional services by the Architect or its consultants after Bid award, the Bidder, if successful, will be required to pay the Architect or its consultants for these services at their customary hourly rates.

3. If the Architect approves a proposed substitution prior to receipt of Bids, the approval will be set forth in a written Addendum. Bidders shall not rely upon approvals made in any other manner. Substitution request forms returned by the Architect are a courtesy only, and Bidders/Sub-bidders shall rely solely on substitution approvals listed in an Addenda.

4. After the Contract has been executed, the Owner and the Architect may consider a written request for the substitution of material or products in place of those specified in the Contract Documents only under exceptional circumstances as specified therein.

D. ADDENDA

1. All Addenda(s) will be posted on Builder's Exchange. Refer to the Section 1.3 BIDDING DOCUMENTS.

2. Prior to bidding, each Bidder shall ascertain that it has received all Addenda issued. Each Bidder shall acknowledge its receipt of all Addenda in its Bid.

1.4 BIDDING PROCEDURE

A. FORM AND STYLE OF BIDS

1. Bids (including any required attachments) shall be submitted on forms identical to the form included with the Bidding Documents. No oral, email, or telephonic responses or modifications will be considered.

2. All blanks on the Bid Form shall be filled in by typeset (typewriter or printer) or manually in ink.

3. Where so indicated by the makeup of the Bid Form, sums shall be expressed in both words and numeric figures; in case of discrepancy between the two, *the amount written in figures shall govern and the words shall be used to determine any ambiguities in the figures*. Portions of the Bid Form may require the addition of component bids to a total or the identification of component amounts within a total. In case of discrepancy between component amounts listed and their sum(s), the component amounts listed (rather than the sum) shall govern.

4. Any interlineation, alteration or erasure should be initialed by an authorized representative of the Bidder.

5. All requested Alternates and Unit Prices, if applicable, should be bid. The Owner reserves the right, but is not obligated, to reject any Bid on which all requested Alternates are not bid. If no change in the Base Bid is required for an Alternate, enter "*No Change*." If there is no entry, it will be presumed that the Bidder has made no offer to accomplish this Alternate. If it is not otherwise clear from the Bid or nature of the Alternate, it will be presumed that the amount listed for an Alternate is additive rather than deductive. The Alternates are listed in order of the Owner's

priority and will be selected in the order as funding is available. No conditions. The Bidder shall make no conditions or stipulations on the Bid Form nor qualify its Bid in any other manner.

6. The Bidder shall include in the specified location on the Bid Form the legal name of the Bidder and, if requested, a description of the Bidder as a sole proprietor, a partnership, a joint venture, a corporation, or another described form of legal entity. The Bid shall be signed by the person or persons legally authorized to bind the Bidder to a contract. A Bid submitted by an agent shall have a current power of attorney attached certifying the agent's authority to bind the Bidder, and provide other information requested.

7. The Bid Form may contain, for the Owner's accounting purposes only, a breakdown of some or all of the components included in the Base Bid.

8. See Bid Form, **Section 004113**.

B. LISTING OF SUBCONTRACTORS

1. Listing of subcontractors as part of bid is not required for this project.

C. BID SECURITY

1. Each Bid shall be accompanied by a bid security payable to **City of Fife** in the form required in the Bidding Documents and equal to five percent (5%) of the Base Bid only (e.g., not including any Alternates). The bid security constitutes a pledge that the Bidder will enter into the Contract with the Owner in the form provided, in a timely manner, and on the terms stated in its Bid and will furnish in a timely manner the payment and performance bonds, certificates of insurance, Contractor's Construction Schedule, and all other documents required in the Contract Documents. Should the Bidder fail or refuse to enter into the Contract or fail to furnish such documents, the amount of the bid security shall be forfeited to the Owner as liquidated damages, not as a penalty. By submitting its Bid and bid security, the Bidder agrees that any forfeiture is a reasonable prediction at the time of Bid submittal of future damages to the Owner.

2. The bid security shall be in the form of a certified or bank cashier's check payable to **City of Fife** or a bid bond executed by a bonding company acceptable to the Owner and licensed in the State of Washington on the form included with the Bidding Documents or on an acceptable and equivalent form. The Attorney-in-Fact who executes the bond on behalf of the surety shall be licensed to do business in the State of Washington and shall affix to the bond a certified and current copy of his/her Power of Attorney.

3. The Owner will have the right to retain the bid security of Bidders to whom an award is being considered until the earliest of either (a) the Contract has been executed, and payment and performance bonds have been furnished, or (b) the specified time has elapsed so that Bids may be withdrawn, or (c) all Bids have been rejected.

4. Within forty-five (45) days after the Bid Date, the Owner will release or return bid securities to Bidders who’s Bids are not to be further considered in awarding the Contract. Bid securities of the three apparent low Bidders will be held until the Contract has been finally executed, after which all unforfeited bid securities will be returned.

D. SUBMISSION OF BIDS

1. The Bid, the bid security, and any other documents required to be submitted with the Bid shall be enclosed in a sealed opaque envelope within the time established by the Advertisement for Bids. The envelope shall be addressed to the party specified in the Advertisement or Invitation to Bidders and shall be identified with the Project name, and the Bidder's name and address. If the Bid is sent by mail the sealed envelope shall be enclosed in a separate mailing envelope with the notation "*SEALED BID ENCLOSED*" on the face thereof.

2. Bids shall be deposited at the designated location prior to the time and date for receipt of Bids indicated in the Advertisement or Invitation to Bid, or any extension thereof made by Addendum. Bids received after the time and date for receipt of Bids may be returned unopened at the discretion of the Owner.

3. The Bidder assumes full responsibility for timely delivery at the location designated for receipt of Bids.

4. Oral, fax, telephonic, email, electronic, or telegraphic Bids are invalid and will not be considered.

E. MODIFICATION OR WITHDRAWAL OF BID

1. A Bid may not be modified, withdrawn or canceled by the Bidder during a forty-five (45) day period following the time and date designated for the receipt of Bids, and each Bidder so agrees by virtue of submitting its Bid.

2. Prior to the time and date designated for receipt of Bids, any Bid submitted may be modified or withdrawn only by notice to the party receiving Bids at the place designated for receipt of Bids. The notice shall be in writing over the signature of the Bidder or by telegram or fax; if by telegram or fax, written confirmation over the signature of the Bidder shall be mailed and postmarked on or before the date and time set for receipt of Bids. The notice shall be worded so as not to reveal the amount of the original Bid. E-Mail notice will not be considered. It shall be the Bidder’s sole responsibility to verify that the notice has been received by the Owner in time to be withdrawn before the Bid opening.

3. Withdrawn Bids may be resubmitted up to the time designated for the receipt of Bids provided that they are then fully in conformance with these Instructions to Bidders.

4. Bid security shall be in an amount sufficient for the Bid as modified or resubmitted.

F. NOTICE

1. Notice or a request from a Bidder under these Instructions to Bidders must be in writing with the signature of the Bidder and delivered in person or by mail, express delivery, or fax. If the notice is by or fax, written confirmation with the signature of the Bidder must be mailed and postmarked on or before the date and time set for the notice.

1.5 CONSIDERATION OF BIDS

A. OPENING OF BIDS: Unless stated otherwise in the Advertisement or Invitation to Bid or any Addendum thereof, the properly identified Bids received on time will be opened

publicly and will be read aloud. An abstract of the Base Bids and Alternate Bids, if any, will be made available to Bidders and other interested parties.

B. REJECTION OF BIDS: The Owner shall have the right but not the obligation to reject any or all Bids for any reason or for no reason, to reject a Bid not accompanied by required Bid security or by other material or data required by the Bidding Documents, or to reject a Bid which is in any way incomplete or irregular.

C. ACCEPTANCE OF BID (AWARD)

1. The Owner intends (but is not bound) to award a Contract to the lowest Responsible and responsive Bidder, provided the Bid has been submitted in accordance with the requirements of the Bidding Documents and does not exceed the funds available. Award will be made on the basis of the Base Bid. The Owner has the right to waive any informality or irregularity in any Bid(s) received and to accept the Bid which, in its judgment, is in its own best interests.

D. BID PROTEST PROCEDURES

1. A Bidder protesting for any reason the Bidding Documents, a bidding procedure, the Owner 's objection to the Bidder or a person or entity proposed by the Bidder, including but not limited to a finding of non-responsibility, the award of the Contract or any other aspect arising from or relating in any way to the bidding shall cause a written protest to be filed with the Owner within two (2) business days of the event giving rise to the protest and, in any event, no later than two (2) business days after the date upon which Bids are opened. (Intermediate Saturdays, Sundays, and legal holidays are not counted.) The written protest shall include the name of the protesting Bidder, a detailed description of the specific factual and legal grounds for the protest, copies of all supporting documents, and the specific relief requested. The written protest shall be delivered to:

   a. City of Fife

2. Upon receipt of the written protest, the Owner will consider the protest. The Owner may, within three (3) business days of the Owner 's receipt of the protest, provide any other affected Bidder(s) the opportunity to respond in writing to the protest. If the protest is not resolved by mutual agreement of the protesting Bidder and the Owner, the Superintendent of the Owner or his or her designee will review the issues and promptly furnish a final and binding written decision to the protesting Bidder and any other affected Bidder(s) within six (6) business days of the Owner 's receipt of the protest. (If more than one (1) protest is filed, the Owner 's decision will be provided within six (6) business days of the Owner's receipt of the last protest.) If no reply is received from the Owner during the six (6) business-day period, the protest shall be deemed rejected.

3. Failure to comply with these protest procedures will render a protest waived.
4. Timely and proper compliance with and exhaustion of these protest procedures shall be a condition precedent to any otherwise permissible judicial consideration of a protest.

1.6 POST BID INFORMATION

A. INFORMATION FROM APPARENT LOW BIDDER

1. Within two (2) days of the Bid Date, the apparent low Bidder shall submit to the Owner:

   a. additional information regarding the use of their own forces, the use of subcontractors and suppliers;

   b. A completed Acceptance Criteria Form in **Section 004121;**

   c. A listing of Bidder References.

   d. a letter or form from the Bidder's insurance company stating that the insurance required by the Contract Documents will become effective upon execution of the Contract;

   e. a letter or form from the Bidder's surety stating that the bond(s) required by the Contract Documents will become effective upon execution of the Contract;

   f. a detailed breakdown of the Bid in a form acceptable to the Owner;

   g. the names of the persons or entities (including a designation of the Work to be performed with the Contractor's own forces, and the names of those who are to furnish materials or equipment fabricated to a special design) proposed for each of the principal portions of the Work; and

   h. the proprietary names and the suppliers of the principal items or systems of materials and equipment proposed for the Work. Failure to provide such information in a timely manner may constitute an event of breach permitting forfeiture of the Bid security.

2. The Bidder will be required to establish to the satisfaction of the Architect and the Owner the reliability and responsibility of the persons or entities proposed to furnish and perform the Work described in the Bidding Documents as well as qualifications set forth in the Sections of the Project Manual pertaining to such proposed Subcontractor’s respective trades. The responsibility of the Bidder may be judged in part by the responsibility of these proposed entities. The following will be considered:

   a. Whether the Bidder can perform the contract within the time specified;
   b. The quality of performance of previous contracts;
   c. The previous and existing compliance by the Bidder with laws relating to the contract; and
   d. Such other information as may be secured having a bearing on the decision to award the contract.

3. In considering a Bidder's responsibility, a Bidder shall be deemed to be unqualified to perform the Contract if, after review and verification of the representations included in the Acceptance Criteria Form (004121) submitted by the Bidder, conditions such as, but not limited to, the following appear:

   a. The Bidder does not have sufficient prior experience (or an acceptable substitute thereof, as described below) with projects of a similar nature in technical, managerial, and financial requirements to that in the present Work

being bid. In addition to such established contractors, a newly established contractor may be considered qualified if it has shown on the Acceptance Criteria Form that it is staffed with sufficient technical, managerial, and financial personnel with prior experience in the nature of construction for which the Bids are invited.

b. The Bidder does not have sufficient capability to undertake the obligations of the Contract. A determination will be made when the Owner 's review of the probable cash flow needs of the Bidder for this Project (including payroll, cost of material and supplies, equipment rental costs, and any other direct or incidental costs of the Contract), concludes that the Bidder does not have sufficient financial resources to enable it to satisfy its financial obligations under the Contract.

c. The Bidder has submitted unrealistic unit prices as determined by other bidders' unit prices for this Project.

d. The Bidder does not have sufficient staff, equipment, or plant available to perform the Contract. The Owner’s determination in this matter will be based upon that represented by Bidder in the Acceptance Criteria Form.

e. The Bidder has a history of unsatisfactory performance of contracts of this or similar nature, regardless of whether such contracts existed between the Owner and the Bidder, or other parties and the Contractor.

(1.) A determination’s of this nature will be made if the Owner, after review of the Bidder previous work experience, determines that the Bidder’s unsatisfactory performance has resulted predominantly from the Bidder's failure rather than a failure to perform by another party. The Owner will give the Contractor an opportunity to explain such nonperformance’s before any final determination is reached.

(2.) A determination of failure to perform will be made if the Owner is satisfied after review of the Bidder’s prior experience, that the Bidder has repeatedly failed to satisfy its obligations under past contracts and the Owner cannot reasonably assume satisfactory performance of the Contract by the Bidder.

(3.) In reaching its determination, the Owner may consider statements of other parties to the prior unperformed contracts, as well as the representations of the Bidder on its Acceptance Criteria Form.

4. No later than ten (10) days prior to the Bid Date, a potential Bidder may request in writing that the Owner modify the responsibility criteria listed above, in Section 1.1 or elsewhere in the bidding documents. The Owner will evaluate the information submitted by the potential Bidder and respond before the Bid Date. If the evaluation results in a change of the criteria, the Owner will issue an Addendum identifying the new criteria.

5. Prior to the Award of the Contract, the Owner will notify the Bidder in writing if either the Owner or the Architect, after due investigation, has reasonable objection to the Bidder or a person or entity proposed by the Bidder, and the Owner will provide the reasons for the determination. The Bidder may appeal the determination within two (2) business days of its receipt of the objection by presenting additional information to the Owner, and the Owner will consider the additional information

before issuing its final determination. The Bidder may, after the Owner 's objection or determination, and at Bidder's option, (1) withdraw the Bid, (2) submit an acceptable substitute person or entity with no change in the Contract Time and no adjustment in the Base Bid or any Alternate Bid, even if there is a cost to the Bidder occasioned by the substitution, or (3) appeal by filing a protest in accordance with paragraph 1.5 D. In the event of withdrawal, bid security will not be forfeited.

6. Persons and entities proposed by the Bidder and to whom the Owner or the Architect have made no reasonable objection must be used on the Work for which they were proposed and shall not be changed except with the written consent of the Owner and the Architect.

7. The Bidder’s representations concerning its qualifications will be construed as a covenant under the Contract. Should it appear that the Bidder has made a material misrepresentation on its References or other Supplemental Bidder Criteria, the Owner shall have the right to terminate the Contract for Contractor’s breach, and the Owner may then pursue such remedies as exist elsewhere under this Contract, or as otherwise are provided at law or equity.

B. INFORMATION FROM OTHER BIDDERS: All other Bidders designated by the Owner as under consideration for award of a Contract shall also provide a properly executed Acceptance Criteria Form, if so requested by the Owner.

C. BIDDING MISTAKES: The Owner will not be obligated to consider notice of claimed bidding mistakes received more than three (3) business days after the bid opening. In accordance with Washington law, a low bidder that claims error and fails to enter into the Contract is prohibited from bidding on the Project if a subsequent call for bids is made for the Project.

1.7 PERFORMANCE BOND, LABOR AND MATERIAL PAYMENT AND MAINTENANCE BOND

A. BOND REQUIREMENTS: Within ten (10) days after the issuance of the Owner's notice of intent to award the Contract, and prior to the date of execution of the Contract, the Bidder shall furnish evidence satisfactory to the Owner of its ability to obtain statutory bonds pursuant to RCW 39.08 covering the faithful performance of the Contract and the payment of all obligations arising thereunder in the form and amount prescribed in the Contract Documents. The cost of such bonds shall be included 100% of the Base Bid plus Alternative(s) added.

B. TIME OF DELIVERY AND FORM OF BONDS: The Bidder shall deliver the required bonds to the Owner within seven (7) days after the date of execution of the Contract and prior to commencing operations at the site.

C. TIME OF DELIVERY AND FORM OF BONDS. The Bidder shall deliver the bonds and other items required by the Contract Documents to the Owner pursuant to the Contract Documents. The bonds shall be written in the form approved by the Owner for public work, as required by RCW 39.08. The bonds shall be written by a surety firm licensed to do business in the State of Washington. The Bidder shall require the Attorney-in-Fact who executes the required bonds on behalf of the surety to affix thereto a certified and current copy of his/her Power of Attorney.

1.8 FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR

A. FORM TO BE USED: The Agreement for the Work will be written on the form(s) contained in the Bidding Documents, including any General, Supplemental or Special Conditions, and the other Contract Documents included with the Project Manual.

B. CONFLICTS: In case of conflict between the provisions of these Instructions and any other Bidding Document, these Instructions shall govern. In case of conflict between the provisions of the Bidding Documents and the Contract Documents, the Contract Documents shall govern.

END OF SECTION 002113

BIDDER'S CHECKLIST

The following forms and information must be turned in at the time of the Bid opening:

1. Bid Form Packet (004113) with all Secctions completed.
2. Non-collusion Certificate, notary required
3. Bid Bond Form

SECTION 003100 - INFORMATION AVAILABLE TO BIDDERS

Each bidder must be fully familiar with the following documents which have been prepared for this project by separate consultants:

1.1 HAZARDOUS MATERIAL INVESTIGATION

A. Limited Hazardous Material Investigation Summary, dated September 26, 2016. PBS Engineering and Environmental. Project No. 41397.000.

1.2 FUNGAL / MOISTURE ASSESSMENT

A. Summary Report of Fungal/Moisture Assessment dated May 9, 2016. PBS Engineering and Environmental. Project No. 41397.000.

1.3 COORDINATION OF AVAILABLE INFORMATION WITH PROJECT

A. In preparing their bid, each Bidder is to consider and evaluate the available information for the above referenced project in relation to the Drawings and Project Manual prepared for this project. Site verification of the project site is required of all bidders prior to bidding this project.

END OF SECTION 003100

PBS | Engineering + Environmental
Est. 1982

September 26, 2016

Mr. Russ Blount
City of Fife
5411 23rd Ave. St. E.
Fife, WA 98424

RE: Limited Hazardous Material Investigation Summary
City of Fife – City Hall Building
PBS Project #41397.000

Dear Mr. Blount:

PBS Engineering and Environmental, Inc. (PBS) performed an inspection of the above referenced property to determine the presence of asbestos-containing materials (ACM) and lead-containing paints (LCP). The primary intent of this letter is to ensure compliance with the Puget Sound Clean Air Agency (PSCAA) and Washington State Department of Labor and Industries' requirement that a "good faith inspection" for ACMs be performed prior to renovation/demolition activities.

The building has significant water intrusion and building material damage. The owner is planning to perform repairs to correct the water damaged building components.

Building Description

The Fife City Hall building is a single story slab on grade office building constructed in approximately 1996. The project area is in the southern portion of the building contains the Council Chambers, two Meeting Rooms and three administrative offices.

The project area is oriented approximately southwest to northeast of the main office building. The structure is wood-framed on a concrete foundation. Interior surfaces within the building include carpeting and bare concrete flooring. The walls are typically gypsum wallboard. The walls are insulated with fiberglass insulation between the interior gypsum wallboard and the exterior stucco siding. The ceiling consists of gypsum wallboard as a hard lid. The attic is insulated with fiberglass insulation. The roof constructed with a sloped metal roof over plywood sheeting.

Survey Process

PBS inspected all accessible areas of the project area. It is PBS' understanding that the scope of work at this facility includes a demolition of water damaged exterior and interior sections of the perimeter walls. We did not perform subsurface/subgrade investigations.

Bandon | Bend | Boise | Eugene | Portland | Seattle | Tri-Cities | Vancouver

2517 Eastlake Avenue East, Suite 100, Seattle, WA 98102
206.233.9639 Main
206.762.4780 Fax
www.pbsenv.com

All accessible areas of the structures were inspected by AHERA Certified Building Inspector Cel Alvarez (Certification #155219, expiration 1/26/17) on September 16th, 2016. When observed suspect-ACMs were sampled, assigned a unique identification number and transmitted for analysis to Asbestos NW (NVLAP #200993-0) under chain-of-custody protocols. Samples were analyzed according to EPA Method 600R-93/116 using Polarized Light Microscopy (PLM), which has a reliable limit of quantification of 1% asbestos by volume.

Asbestos-Containing Materials (ACM)

The attached Asbestos Bulk Sample Inventory identifies all suspect materials that were sampled and analyzed for asbestos.

No materials tested were found to contain asbestos in the project area.

Unidentified ACM may exist in concealed locations associated within the project area. Concealed ACM that may exist in these areas include, but are not limited to, the following:

- Roofing vapor barrier
- Sub-slab vapor barrier and mastics

Materials sampled and found not to contain asbestos include:

- Exterior Stucco - Throughout;
- Exterior vapor barrier between exterior stucco and interior wall systems – Throughout;
- Gypsum wallboard and joint compound – Throughout;
- Interior caulk on window and door frames – Throughout;
- All exterior sealants – Throughout;
- All cove base and associated mastic - Throughout;
- All carpet mastic - Throughout;

Caution should be exercised during construction, as concealed ACM may exist in various concealed locations. Any material not previously identified in this survey should be sampled to determine its asbestos content prior to impact. Work that may impact asbestos should only be performed by personnel having proper training and utilizing proper worker protection according to WISHA standards. Work impacting asbestos is subject to the requirements of various regulations, including, but not limited to: 40 CFR Part 61, NESHAPS; 40 CFR Part 763, AHERA; WAC 296-62 and 296-65; and Puget Sound Clean Air Agency Regulation III, Article 4, Asbestos Control Standard.

Lead-Containing Paint (LCP)

Three (3) representative painted coatings were sampled for lead content. The samples were assigned a unique identification number and transmitted to EMSL Labs (CA - Metals Cert #2733) under chain-of-custody protocols for analysis using Flame Atomic Absorption.

Lead was not found above the limits of detection in any of the samples collected. See Attachments for locations and results of paint sampling.

The presence of lead in paint coatings requires construction work to be performed in compliance with State of Washington and Federal regulations. Employers of personnel impacting lead-containing paint and coatings are required to comply with WAC 296-155.

Painted surfaces that were not sampled as part of this survey are presumed to contain lead until sampling determines otherwise.

Please let us know if you any questions regarding this report.

Sincerely,
PBS Engineering and Environmental, Inc.

Report prepared by:

Cel Alvarez
AHERA Building Inspector #155219
(Exp. 1/26/17)

Report reviewed by:

Gregg Middaugh
Senior Project Manager

Attachments:
- PLM Asbestos Sample Inventory
- PLM Asbestos Sample Data
- AA Lead Paint Chip Sample Inventory
- AA Lead Sample Data
- PBS Inspector Certification

Fife City Hall

PBS Engineering+Environmental
Project #41397.000

PLM ASBESTOS SAMPLE INVENTORY

PBS Sample #	Material Type	Sample Location	Laboratory Description	Lab Result	Lab
41397.000 -01	Exterior stucco	NE corner, north elevation	Layer 1: Gray sandy brittle material with paint	NAD	ANW
41397.000 -02	Exterior stucco	East elevation	Layer 1: Gray sandy brittle material with paint	NAD	ANW
41397.000 -03	Exterior stucco	SE corner, south elevation	Layer 1: Gray sandy brittle material with paint	NAD	ANW
41397.000 -04	Exterior stucco	SW corner, south elevation	Layer 1: Gray sandy brittle material with paint	NAD	ANW
41397.000 -05	Exterior stucco	West elevation	Layer 1: Gray sandy brittle material with paint	NAD	ANW
41397.000 -06	Exterior gray window caulk	East elevation	Layer 1: Gray soft/elastic material	NAD	ANW
41397.000 -07	Exterior gray window caulk	West elevation	Layer 1: Gray soft/elastic material	NAD	ANW
41397.000 -08	Pipe penetration sealant	SE corner, east elevation, AC unit pipe penetration	Layer 1: Gray soft/elastic material	NAD	ANW
41397.000 -09	Gray caulking/sealant	East elevation, near AC unit, switch box	Layer 1: Gray soft/elastic material	NAD	ANW
41397.000 -10	Gray caulking	**NE corner, gutter drain**	Layer 1: White soft/elastic material	NAD	ANW
41397.000 -11	Gray caulking	South elevation, louvered vents	Layer 1: Tan soft/elastic material	NAD	ANW
41397.000 -12	Gray caulking	East elevation, exterior door frame	Layer 1: Gray soft/elastic material	NAD	ANW
41397.000 -13	Gray caulking	West elevation, exterior door frame	Layer 1: Gray soft/elastic material	NAD	ANW
41397.000 -14	Gray caulking	East elevation, louvered vents	Layer 1: Tan soft/elastic material	NAD	ANW
41397.000 -15	Vapor barrier	South perimeter wall	Layer 1: Brown paper	NAD	ANW
41397.000 -16	White caulking	Room 109, vestibule, door frame	Layer 1: Tan soft/elastic material	NAD	ANW

Fife City Hall

PBS Engineering+Environmental
Project #41397.000

PBS Sample #	Material Type	Sample Location	Laboratory Description	Lab Result	Lab
41397.000 -17	Cream mastic	South wall, Council Chambers, 6" wood cove base	Layer 1: White soft/elastic material	NAD	ANW
41397.000 -18	White caulking	Room 110, east side, interior window	Layer 1: White soft/elastic material	NAD	ANW
41397.000 -19	White caulking	Room 105, west side, interior window	Layer 1: Tan soft/elastic material	NAD	ANW
41397.000 -20	Tan carpet mastic Carpet backing	Room 110, SE corner floor	Layer 1: Yellow mastic Layer 2: Tan fibrous material	NAD NAD	ANW ANW
41397.000 -21	Tan carpet mastic Carpet backing	Room 105, SW corner floor	Layer 1: Yellow mastic Layer 2: Tan fibrous material	NAD NAD	ANW ANW
41397.000 -22	Joint compound	Room 105, SW corner wall	Layer 1: White powdery material with paint and paper	NAD	ANW
	Gypsum wallboard		Layer 2: White chalky material with paper	NAD	ANW
41397.000 -23	Joint compound	Room 103, SW corner wall	Layer 1: White powdery material with paint and paper	NAD	ANW
	Gypsum wallboard		Layer 2: White chalky material with paper	NAD	ANW
41397.000 -24	Joint compound	Room 110, NE corner	Layer 1: White powdery material with paint and paper	NAD	ANW
	Gypsum wallboard		Layer 2: White chalky material with paper	NAD	ANW
41397.000 -25	4" Beige cove base Cream mastic	Room 110, NE corner	Layer 1: Tan rubbery material Layer 2: Off white mastic	NAD NAD	ANW ANW
41397.000 -26	4" Beige cove base Cream mastic	Room 105, SW corner	Layer 1: Tan rubbery material Layer 2: Off white mastic	NAD NAD	ANW ANW

Fife City Hall

PBS ENGINEERING AND ENVIRONMENTAL

AA LEAD PAINT CHIP SAMPLE INVENTORY

PBS Sample #	Paint Color / Component or Substrate	Sample Location	Results (mg/kg)	Results (%)	Lab
41397.000 -Pb-01	Light brown paint/Stucco	NW corner, exterior, NW corner	<10	<0.010	NVL
41093.000 -Pb-02	Beige paint/Gypsum wallboard	Room 105, west wall	<10	<0.010	NVL
41093.000 -Pb-03	Brown paint/Gypsum wallboard	Room 105, south wall	<10	<0.010	NVL

September 26, 2016

mg/kg = Milligrams per kilogram
< = Less than the Limit of Detection

PBS

Project: City of Fife - Council Chambers

Project #: 41397.000

Analysis requested: Asbestos Bulk

Date: 9/16/16

Relinq'd by/Signature: [signature]

Date/Time: 9/12/16 12:25

Received by/Signature:

Date/Time:

Fax results to:

- ☐ Brian Stanford
- ☐ Ernest Edwards
- ☒ Gregg Middaugh
- ☐ Mark Hiley
- ☐ Prudy Stoudt-McRae
- ☒ Cel Alvarez
- ☐ Janet Murphy
- ☐ Willem Mager
- ☐ Ferman Fletcher
- ☐ Tim Ogden
- ☐ Mike Smith
- ☐ Chuck Greeb

TURN AROUND TIME:

- ☐ 1 Hour
- ☐ 2 Hours
- ☐ 4 Hours
- ☒ 24 Hours
- ☐ 48 Hours
- ☐ 3-5 Days
- ☐ Other

SAMPLE DATA FORM

Lab #	Sample #	Material	Location	Lab
	41397-01	Stucco	NE Corner; N. elevation	
	-02		East elevation	
	-03		SE corner; S. elevation	
	-04		SW corner; S. elevation	
	-05		West elevation	
	-06	Exterior Gray window caulk	East elevation	
	-07		West elevation	
	-08	Pipe penetration sealant	AC unit pipe, SE corner; east elevation	
	-09	Caulking/sealant Gray	Switch Box; East elev. Near AC unit	
	-10	Caulking Gray	Gutter drain; NE corner	
	-11	Caulking Gray	Louved vents, S. elevation	
	-12	Caulking Gray	Exterior door at east elevation	
	-13	" "	Ext. door at west elevation	
	-14	Caulking Gray	Ext. Louved vent; east elevation	
	-15	Vapor Barrier	Perimeter wall; South	

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PBS ENGINEERING+ENVIRONMENTAL, 2517 Eastlake Ave E., #100, Seattle, WA 98102, (206)233-9639, FaX: (206)762-4780

PBS

Project: City of Fife - Council Chambers

Project #: 41397.000

Analysis requested: Asbestos Bulk

Date: 9/16/16

Relinq'd by/Signature: [signature]

Date/Time: 9/16/16 12:25

Received by/Signature:

Date/Time:

Fax results to:

- ☐ Brian Stanford
- ☐ Ernest Edwards
- ☒ Gregg Middaugh
- ☐ Mark Hiley
- ☐ Prudy Stoudt-McRae
- ☒ Cel Alvarez
- ☐ Janet Murphy
- ☐ Willem Mager
- ☐ Ferman Fletcher
- ☐ Tim Ogden
- ☐ Mike Smith
- ☐ Chuck Greeb

TURN AROUND TIME:

- ☐ 1 Hour
- ☐ 2 Hours
- ☐ 4 Hours
- ☒ 24 Hours
- ☐ 48 Hours
- ☐ 3-5 Days
- ☐ Other

Lab #	Sample #	Material	Location	Lab
	41397-16	White Caulking	Vestible, Rm 109, Door Frame	
	17	Cream Mastic	6" wood Base board, Council Chambers, S. wall	
	18	White Caulking	Rm 110, East side, Interior Window	
	19	" "	Rm 105, West side, Interior Window	
	20	Tan Carpet Mastic	Rm 110, SE Corner Floor	
	21	" " "	Rm 105, SW corner Floor	
	22	TC/GWB	Rm 105, SW corner	
	23		Rm ~~105~~ 103, SW Corner	
	24		Rm 110, NE Corner	
	25	4" Brege Cove Base/cream mastic	Rm 110, NE corner	
	26	" " "	Rm 105 SW corner	

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OrderID: 511601420

PBS #511601420

Project: City of Fife - Council Chambers

Project #: 41397.000

Analysis requested: Lead Bulk

Date: 9/16/16

Relinq'd by/Signature:

Date/Time: ~~9/16/16 12:25~~ CA 9/19/16 12:10

Received by/Signature:

Date/Time: 9/19/16 12:10

Fax results to:

- ☐ Brian Stanford
- ☐ Ernest Edwards
- ☒ Gregg Middaugh
- ☐ Mark Hiley
- ☐ Prudy Stoudt-McRae
- ☒ Cel Alvarez
- ☐ Janet Murphy
- ☐ Willem Mager
- ☐ Ferman Fletcher
- ☐ Tim Ogden
- ☐ Mike Smith
- ☐ Chuck Greeb

TURN AROUND TIME:

- ☐ 1 Hour
- ☐ 2 Hours
- ☐ 4 Hours
- ☒ 24 Hours
- ☐ 48 Hours
- ☐ 3-5 Days
- ☐ Other_____

BULK SAMPLE DATA FORM

Lab #	Sample #	Material	Location	Lab
	41397-PB-01	Light Brown Paint	N.W. corner on stucco wall	
	↓ ↓ -02	Biege Paint	Rm 105, West wall, GWB,	
	↓ ↓ -03	Brown Paint	Rm 105, South wall, GWB	

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PBS ENGINEERING+ENVIRONMENTAL, 2517 Eastlake Ave E., #100, Seattle, WA 98102, (206)233-9639, FaX: (206)762-4780

EMSL Analytical, Inc.
3317 3rd Ave S, Suite D 2nd floor, Seattle, WA 98134
Phone/Fax: 2062696310 / (206) 900-8789
http://www.emsl.com seattlelab@emsl.com

EMSL Order:	511601420
CustomerID:	PBSE51
CustomerPO:	
ProjectID:	

Attn: **Greg Middaugh**
PBS Engineering & Environmental, Inc.
2517 Eastlake Ave. East Ste. 100
Seattle, WA 98102

Phone: (206) 233-9639
Fax: (206) 762-4780
Received: 09/19/16 12:10 PM
Collected:

Project: **41397.000, City of Fife - Council Chambers**

Test Report: Lead in Paint Chips by Flame AAS (SW 846 3050B/7000B)*

Client Sample Description	*Lab ID*	*Collected*	*Analyzed*	*Lead Concentration*
41397-PB-1	*511601420-0001*		9/20/2016	<0.010 % wt
	Site: Light Brown Paint			
41397-PB-2	*511601420-0002*		9/20/2016	<0.010 % wt
	Site: Beige Paint			
41397-PB-3	*511601420-0003*		9/20/2016	<0.010 % wt
	Site: Brown Paint			

Lauren Kerber

Lauren Kerber, Laboratory Manager
or other approved signatory

*Analysis following Lead in Paint by EMSL SOP/Determination of Environmental Lead by FLAA. Reporting limit is 0.010 % wt based on the minimum sample weight per our SOP. Unless noted, results in this report are not blank corrected. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities. Samples received in good condition unless otherwise noted. "<" (less than) result signifies that the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request. The QC data associated with the sample results included in this report meet the recovery and precision requirements unless specifically indicated otherwise. Definitions of modifications are available upon request.

Samples analyzed by EMSL Analytical, Inc. Seattle, WA

Initial report from 09/20/2016 09:08:01

ASBESTOS NORTHWEST

NVLAP
200993-0

30620 Pacific Hwy S, #103,
Federal Way, WA 98003
(253) 941-4343

Attn: PBS Environmental,

Enclosed please find the analytical report for one or more samples submitted for analysis by Polarized Light Microscopy.

The samples were analyzed in accordance with EPA method 600/R-93/116 and 600/M4-82-020. The analyst used a stereomicroscope to visually inspect the sample to determine homogeneity and material descriptions. The sample was then viewed under the polarized light microscope to determine the presence and percentage of asbestos and non-asbestos fibers.

The limit of detection for PLM 600/R-93/116 is approximately 1%. The EPA recommends that samples found to have asbestos percentages 1%-10% be point counted to acquire a more accurate percentage. We provide 400 point counts and 1000 point counts. The limits of detection are 0.25% and 0.10% respectively.

After analysis is complete, all paperwork will be filed together, and kept in a secure locked filing cabinet away from other clients and laboratory staff. Asbestos Northwest ensures that the files will not be tampered with at any time, and will be removed from the filing cabinet only if the client requests a modification on the report or re-analysis. If you have any concerns or comments, feel free to contact Asbestos Northwest.

Thank you,

Cathy Butler

-These results are only applicable to the samples enclosed, and may not be reproduced, except in full, without the approval of the laboratory. This report may not be used to claim product endorsement by NVLAP, NIST, or any other agency.-

PBS 201611785

Project: City of Fife - Council Chambers

Project #: 41397.000

Analysis requested: Asbestos Bulk

Date: 9/16/16

Relinq'd by/Signature: [signature]

Date/Time: 9/12/16 12:25

Received by/Signature: Sean Bush

Date/Time: 9-16 1:30

Fax results to:

- ☐ Brian Stanford
- ☐ Ernest Edwards
- ☒ Gregg Middaugh
- ☐ Mark Hiley
- ☐ Prudy Stoudt-McRae
- ☒ Cel Alvarez
- ☐ Janet Murphy
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- ☐ Mike Smith
- ☐ Chuck Greeb

TURN AROUND TIME:

- ☐ 1 Hour
- ☐ 2 Hours
- ☐ 4 Hours
- ☒ 24 Hours
- ☐ 48 Hours
- ☐ 3-5 Days
- ☐ Other_____

Lab #	Sample #	Material	Location	Lab
	41397-01	Stucco	NE Corner; N. elevation	
	-02		East elevation	
	-03		SE corner; S. elevation	
	-04		SW corner; S. elevation	
	-05		West elevation	
	-06	Exterior Gray window caulk	East elevation	
	-07		West elevation	
	-08	Pipe penetration sealant	AC unit pipe, SE corner; east elevation	
	-09	Caulking/sealant Gray	Switch Box; East elev.; Near AC unit	
	-10	Caulking Gray	Gutter drain; NE corner	
	-11	Caulking Gray	Louered vents, S. elevation	
	-12	Caulking Gray	Exterior door at east elevation	
	-13	" "	Ext. door at west elevation	
	-14	Caulking Gray	Ext. Louered vent; east elevation	
	-15	Vapor Barrier	Perimeter wall; South	

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PBS ENGINEERING+ENVIRONMENTAL, 2517 Eastlake Ave E., #100, Seattle, WA 98102, (206)233-9639, FaX: (206)762-4780

PBS 201611785

Project: City of Fife - Council Chambers

Project #: 41397.000

Analysis requested: Asbestos Bulk

Date: 9/16/16

Relinq'd by/Signature: [illegible]

Date/Time: 9/16/16 12:25

Received by/Signature: Sean [illegible]

Date/Time: 9-16

Fax results to:

- ☐ Brian Stanford
- ☐ Ernest Edwards
- ☒ Gregg Middaugh
- ☐ Mark Hiley
- ☐ Prudy Stoudt-McRae
- ☒ Cel Alvarez
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- ☐ 3-5 Days
- ☐ Other_____

Lab #	Sample #	Material	Location	Lab
	41397-16	White Caulking	Vestible Rm 109, Door Frame	
	17	Cream Mastic	6" wood Base board Council Chambers, S. wall	
	18	White Caulking	Rm 110, East side, Interior Window	
	19	" "	Rm 105, west side, Interior Window	
	20	Tan Carpet Mastic	Rm 110, SE Corner Floor	
	21	" " "	Rm 105, SW corner Floor	
	22	TC/GWB	Rm 105, SW corner	
	23		Rm ~~105~~ 103, SW corner	
	24		Rm 110, NE Corner	
	25	4" Biege Cove Base/cream mastic	Rm 110, NE corner	
	26	" " "	Rm 105 SW corner	

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PBS

201611785

Project: City of Fife - Council Chambers

Project #: 41397.000

Analysis requested: Lead Bulk

Date: 9/16/16

Relinq'd by/Signature: [illegible]

Date/Time: 9/16/16 12:25

Received by/Signature: [illegible]

Date/Time: 9-16

Fax results to:

- ☐ Brian Stanford
- ☐ Ernest Edwards
- ☒ Gregg Middaugh
- ☐ Mark Hiley
- ☐ Prudy Stoudt-McRae
- ☒ Cel Alvarez
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	↓ ↓ -02	Biege Paint	Rm 105, West wall, GWB,	
	↓ ↓ -03	Brown Paint	Rm 105, South wall, GWB	

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ASBESTOS NORTHWEST
Asbestos Northwest, LLC
30620 Pacific Hwy S, #103, Federal Way, WA 98003
Ph: (253) 941-4343 Fax: (253) 941-4175

NVLAP 200993-0

Batch Number: 201611785

PLM Analysis by EPA Method 600/M4-82-020 and 600/R-93/116

Attn: Gregg Middaugh
PBS Environmental
2517 Eastlake Ave, E Suite 100 Seattle, WA 98102

Date Received: 9/16/2016
Date Analyzed: 9/16/2016
Samples Received: 29
Samples Analyzed: 29
Project #: 41397

Project: City Of Fife Council Chambers

Client Sample ID	Lab Sample ID	Layer	Description	Matrix	% Non-Asbestos Fibers	% Asbestos Fibers and Type
41397-01	1	1	Gray sandy/brittle material with paint	Filler, Binder, Sand, Paint	2% Cellulose	**None Detected**
41397-02	2	1	Gray sandy/brittle material with paint	Filler, Binder, Sand, Paint	2% Cellulose	**None Detected**
41397-03	3	1	Gray sandy/brittle material with paint	Filler, Binder, Sand, Paint	2% Cellulose	**None Detected**
41397-04	4	1	Gray sandy/brittle material with paint	Filler, Binder, Sand, Paint	2% Cellulose	**None Detected**
41397-05	5	1	Gray sandy/brittle material with paint	Filler, Binder, Sand, Paint	2% Cellulose	**None Detected**
41397-06	6	1	Gray soft/elastic material	Binder/filler	5% Cellulose, Glass fibers	**None Detected**
41397-07	7	1	Gray soft/elastic material	Binder/filler	5% Cellulose, Glass fibers	**None Detected**
41397-08	8	1	Gray soft/elastic material	Binder/filler	5% Cellulose, Glass fibers	**None Detected**
41397-09	9	1	Gray soft/elastic material	Binder/filler	5% Cellulose, Glass fibers	**None Detected**
41397-10	10	1	White soft/elastic material	Binder/filler	5% Cellulose, Glass fibers	**None Detected**
41397-11	11	1	Tan soft/elastic material	Binder/filler	5% Cellulose, Glass fibers	**None Detected**
41397-12	12	1	Gray soft/elastic material	Binder/filler	5% Cellulose, Glass fibers	**None Detected**

Analyzed By: Cathy Butler

Reviewed By: Dan Lafley

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Batch Number: 201611785

PLM Analysis by EPA Method 600/M4-82-020 and 600/R-93/116

Attn: Gregg Middaugh
PBS Environmental
2517 Eastlake Ave, E Suite 100 Seattle, WA 98102

Project: City Of Fife Council Chambers

Date Received: 9/16/2016
Date Analyzed: 9/16/2016
Samples Received: 29
Samples Analyzed: 29
Project #: 41397

Client Sample ID	Lab Sample ID	Layer	Description	Matrix	% Non-Asbestos Fibers	% Asbestos Fibers and Type
41397-13	13	1	Gray soft/elastic material	Binder/filler	5% Cellulose, Glass fibers	**None Detected**
41397-14	14	1	Tan soft/elastic material	Binder/filler	5% Cellulose, Glass fibers	**None Detected**
41397-15	15	1	Brown paper	Filler, Binder	90% Cellulose, Synthetic fibers	**None Detected**
41397-16	16	1	Tan soft/elastic material	Binder/filler	5% Cellulose, Glass fibers	**None Detected**
41397-17	17	1	White soft/elastic material	Binder/filler	5% Cellulose, Glass fibers	**None Detected**
41397-18	18	1	White soft/elastic material	Binder/filler	5% Cellulose, Glass fibers	**None Detected**
41397-19	19	1	Tan soft/elastic material	Binder/filler	5% Cellulose, Glass fibers	**None Detected**
41397-20	20	1	Yellow mastic	Mastic/binder	2% Cellulose	**None Detected**
		2	Tan fibrous material	Filler, binder	70% Cellulose, Synthetic fibers	**None Detected**
41397-21	21	1	Yellow mastic	Mastic/binder	2% Cellulose	**None Detected**
		2	Tan fibrous material	Filler, binder	70% Cellulose, Synthetic fibers	**None Detected**
41397-22	22	1	White powdery material with paint and paper	Binder/filler, Paint	30% Cellulose	**None Detected**
		2	White chalky material with paper	Filler/binder, Gypsum/binder	25% Cellulose	**None Detected**

Cathy Butler

Analyzed By: Cathy Butler

Reviewed By: Dan Lafley

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Ph: (253) 941-4343 Fax: (253) 941-4175

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Batch Number: 201611785

PLM Analysis by EPA Method 600/M4-82-020 and 600/R-93/116

Attn: Gregg Middaugh
PBS Environmental
2517 Eastlake Ave, E Suite 100 Seattle, WA 98102

Date Received: 9/16/2016
Date Analyzed: 9/16/2016
Samples Received: 29
Samples Analyzed: 29
Project #: 41397

Project: City Of Fife Council Chambers

Client Sample ID	Lab Sample ID	Layer	Description	Matrix	% Non-Asbestos Fibers	% Asbestos Fibers and Type
		2	White chalky material with paper	Filler/binder, Gypsum/binder	25% Cellulose	**None Detected**
41397-24	24	1	White powdery material with paint and paper	Binder/filler, Paint	30% Cellulose	**None Detected**
		2	White chalky material with paper	Filler/binder, Gypsum/binder	25% Cellulose	**None Detected**
41397-25	25	1	Tan rubbery material	Rubber/binder	None Detected	**None Detected**
		2	Off white mastic	Mastic/binder	5% Cellulose, Wollastonite	**None Detected**
41397-26	26	1	Tan rubbery material	Rubber/binder	None Detected	**None Detected**
		2	Off white mastic	Mastic/binder	5% Cellulose, Wollastonite	**None Detected**

Lead Analysis by 3M Swap Wipe

41397-PB-01	1	Lead Swab	Brown Paint		**No Lead Detected**
41397-PB-02	2	Lead Swab	Beige Paint		**No Lead Detected**
41397-PB-03	3	Lead Swab	Brown Paint		**No Lead Detected**

Cathy Butler

Analyzed By: Cathy Butler

Reviewed By: Dan Lafley

Certificate of Completion

This is to certify that

Celerino A. Alvarez

has satisfactorily completed
4 hours of refresher training as an

Asbestos Building Inspector

to comply with the training requirements of
TSCA Title II / 40 CFR 763 (AHERA)

155219
Certificate #

Instructor
EPA Provider Certificate #1085

ARGUS PACIFIC
TRAINING • CONSULTING
A Terracon COMPANY

Jan 27, 2016
Date(s) of Training
Exam Score:
Expiration Date: Jan 26, 2017

ARGUS PACIFIC, INC. • 1900 W NICKERSON ST, SUITE 315 • SEATTLE, WASHINGTON • 98119 • 206.285.3373 • WWW.ARGUSPACIFIC.COM

PBS | Engineering + Environmental

May 9, 2016

Mr. Russ Blount
Public Works Director
Fife City Hall
5411 23rd Street E.
Fife, WA 98424

Re: Summary Report of Fungal/Moisture Assessment
City of Fife – City Hall Building
Fife, Washington
PBS Project No.: 41397.000

Dear Mr. Cook:

PBS Engineering and Environmental, Inc. (PBS) performed a limited fungal and moisture assessment of the City Hall Building located at 5411 23rd St E., Fife, Washington. The purpose of this letter report is to provide you with a brief summary of our observations, testing activities, conclusions and recommendations related to known water intrusion.

BACKGROUND

It is our understanding that water intrusion has been occurring for many years at the storefront windows near the main entry and along the southwest perimeter wall of the City Council Chamber. PBS understands that fungal growth was noted behind covebase on gypsum wallboard in various locations along the southwest perimeter wall. We also understand that a contractor hired by the City of Fife removed a 4'x4' section of gypsum wallboard in the Council Chamber Audio Visual Room. The contractor noted wood wall framing degradation and fungal growth. The City of Fife requested PBS to perform an assessment related to water intrusion and fungal contamination. The scope of our investigation included a non-destructive visual and moisture assessment of select interior and exterior perimeter walls.

FINDINGS

PBS performed the assessment of the Fife City Hall Building on April 20, 2016. The following is a summary of our findings.

Field Observations

PBS observed the following during the site assessment:

- Fungal growth on gypsum wallboard behind base trim in the Lobby - Room 141, Conference Room 110, Council Chamber - Room 107, Council Work Room 105, Council Chamber Audio Visual Room 108, Office - Room 103 and Civil Service Office - Room 113. See attached Field Sketch.

Bandon | Bend | Boise | Eugene | Portland | Seattle | Tri-Cities | Vancouver

2517 Eastlake Avenue East, Suite 100, Seattle, WA 98102
206.233.9639 Main
206.762.4780 Fax
www.pbsenv.com

- Fungal growth on wood wall framing in the southwest perimeter wall of the Council Chamber Audio Visual Room 108. This wood wall framing is significantly water damaged and potentially structurally compromised.
- No fungal growth was observed behind base trim in Directors Office 115, Finance Staff Room 122, Building /Engineering Staff Room 126, Lunch Room 128, Sprinkler Room 133, Directors Office 139 or in the attic space above the Council Chamber.
- The exterior finish is stucco. The stucco has visible cracks and expansion joint sealants have detached/failed in various areas.
- Sealants around the vents located on the southwest exterior wall of the Council Chamber have failed.
- Sealants around windows have detached/failed in various areas.
- There have been reports of water leaks at the southwest facing perimeter wall and underneath the storefront windows near the main entry.

PBS performed a moisture assessment using an infrared camera and penetrating moisture meter. The moisture assessment was performed in the areas discussed above. Background moisture levels ranged from 7%-10% on the wood equivalent scale. Excess moisture (i.e. greater than 15% on the wood equivalent scale) was observed in the following areas:

- 17%-33% in the gypsum wallboard at the base of the southwest perimeter wall of the Council Chamber,
- 23%-40% in the gypsum wallboard under the windows at the base of the east perimeter wall of Conference Room 110,
- 40% in the gypsum wallboard behind at the base of the east perimeter wall of the Council Chamber Audio Visual Room. Note that the water damaged southwest perimeter wood wall framing was 12% moisture content.
- 33%-40% in the gypsum wallboard at the base of the south and west perimeter walls of the Council Chamber Work Room.
- 21% in the gypsum wallboard at the base trim at the west perimeter wall of Office 103.

CONCLUSIONS AND RECOMMENDATIONS

Based on our limited observations, PBS concludes and recommends the following:

1. There have been water leaks in the Council Chamber Audio Visual Room and at the Lobby storefront windows. PBS found fungal growth and excess moisture in various locations. PBS recommends that a forensic architect further evaluate the entire building envelope to determine specific causes for water intrusion, identify all locations where water damage is likely present and recommend envelope repairs.

2. PBS investigated behind vinyl and MDF base trim in approximately sixteen (16) locations throughout the perimeter of the building. Fungal growth was observed in ten (10) of those locations, mainly in the southwestern half of the building. See attached field sketch. Fungal growth in an occupied building has the potential to cause adverse health impacts to sensitive individuals. Exploratory investigations inside the building should be limited to help prevent potential migration of fungal contaminants. All exposed fungal growth in the building should be cleaned by trained personnel or sealed behind an airtight barrier such as polyethylene sheeting. PBS recommends further evaluation of interior spaces to determine full extent of impacted wallboard and carpeting materials.

All cleaning, demolition or other impacts to fungal contaminated building materials should be performed in accordance with industry standards including, but not limited to, the EPA guidance document “Mold Remediation in Schools and Commercial Buildings”.

3. Significant wood wall framing damage was observed in the wall cavity at the Council Chamber Audio Visual Room. PBS recommends that a structural engineer evaluate the integrity of all potentially water damaged building structure.

REPORT QUALIFICATIONS

This investigation was limited to selected interior areas and was not comprehensive of the entire building. Other conditions may exist beyond the scope of this investigation or in areas of the building that were not included in this investigation. No destructive investigation was performed.

When an indoor air quality study is conducted, the findings and conclusions are limited to the tests and observations associated with that study. The findings and conclusions of this report are not scientific certainties, but rather, probabilities based on professional judgment concerning the significance of the data gathered during the course of the investigation. This investigation was limited in scope and was not intended to be an exhaustive study but, rather, a screening.

Please contact me if you have any questions or require additional information.

Sincerely,
PBS Engineering and Environmental,

Gregg Middaugh
Senior Project Manager - Industrial Hygiene

SECTION 004113 - BID FORM

Date: November 15, 2016

To: CITY OF FIFE

Ladies & Gentlemen:

The Undersigned Bidder declares that the only persons or parties interested in this bid are those named herein, that this Bid is, in all respects, fair and without fraud, that it is made without collusion with any official or representative of the Owner, and that the Bid is made without any connection or collusion with any person submitting or considering the submission of another Bid on this Contract.

The Bidder further agrees that it has exercised its own judgment regarding the interpretation of existing conditions information and has utilized all data which it believes pertinent from the Architect, Owner, and other sources in arriving at its conclusions. The Bidder further declares that it has carefully examined the Contract Documents for the Work, that it has personally inspected the site, that it has satisfied itself as to the quantities involved, including materials and equipment, and conditions of work and the fact that the description of the quantities of work and materials herein is brief and is intended only to indicate the general nature of the Work contained in the detailed requirements of the Contract Documents, and that this Bid is made according to the provisions and under the terms of the Contract Documents, which are hereby made a part of this Bid.

The Undersigned Bidder states that it has the ability and means to complete the Work in a timely manner and proposes to furnish all labor, materials, machinery, tools, and other means of construction, and to perform all work required by and in strict accordance with the Contract Documents for the following sums:

DO NOT INCLUDE SALES TAX IN ANY OF THESE PRICES.

1.1 LUMP SUM BID:

For the Bid, as defined in the Project Manual, the sum of:

Base Bid Amount in Written Form:

_____

_____DOLLARS

Base Bid Amount in Numeric Form

$_____

TRENCH EXCAVATION SAFETY COSTS:
Included in the above Base Bid is an amount for Trench Excavation Safety for any trenching exceeding a depth of four feet. In accordance with Chapter 39.04 RCW and WAC 296-155-850, all costs for adequate trench safety systems are required to be identified in this Bid. The Bidder certifies that the following amount is included in the Base Bid for Trench Excavation Safety Provisions. If no amount is entered, the Owner will presume that the Bidder represents that there are no Trench Excavation Safety costs for this Project.

Trench Safety System Costs Included are:

$_____.

1.2 UNIT PRICES:

The undersigned proposes to perform the following additional items of work as defined in Section 012200 "Unit Prices" for additional work beyond the Base Bid Work. **Note: See Section 012200 Unit Prices for minimum quantities of work to be provided under the Base Bid for these same items.**

1. UNIT PRICE NO. 1: Removal and Replacement of Sheathing: Add:

   Unit Price (words then figures): _____

   _____DOLLARS ($_____)

2. UNIT PRICE NO. 2: Exterior Stud Wall Repair: Add:

   Unit Price (words then figures): _____

   _____DOLLARS ($_____)

3. UNIT PRICE NO. 3: Foundation Sill Plate Removal and Replacement: Add:

   Unit Price (words then figures): _____

   _____DOLLARS ($_____)

4. UNIT PRICE NO. 4: Structural Hold-down Removal and Replacement: Add:

   Unit Price (words then figures): _____

   _____DOLLARS ($_____)

5. UNIT PRICE NO. 5: Roof Truss Repair: Add

   Unit Price (words then figures): _____

   _____DOLLARS ($_____)

SALES TAX

None of the above bid prices includes State or Local Sales Tax.

1.5 TIME OF COMPLETION

150 Calendar Days, measured as 120 days to substantial completion, plus 30 days to Final Acceptance.

1.6 CONTRACT, BONDS & INSURANCE

Should the Undersigned be notified of the acceptance of this bid within 45 days after the time set for opening bids, the Undersigned agrees to execute a Contract for the above Work, for a compensation computed from the above sums, and to furnish performance, payment and maintenance bonds and insurance certificates as required by the Contract Documents.

1.7 BID GUARANTEE

The Undersigned further agrees that the bid bond accompanying this Bid shall be left in escrow with the Owner, that its amount or penal sum is the measure of damages which the Owner will sustain by the failure of the Undersigned to execute the Contract and submit proper bonds and other documents required; and that if the Undersigned fails to deliver the said documents within 10 days after issue date of Owner's written Notice of Intent to Award Contract to the Undersigned, then the check shall become the property of the Owner or the bid bond shall remain in full effect. But if the Bid or designated portion thereof is not accepted within 45 days after the date of opening bids, or if the Undersigned delivers said executed Contract and bonds and the other required documents, then the check shall be returned to the Undersigned or the bid bond shall become void.

1.8 PRODUCTS & INSTALLATION PROCEDURES

The Undersigned has thoroughly familiarized itself with all specified products and installation procedures and included in this Project and the submittal of this Bid constitutes acceptance of products and procedures specified.

1.9 ADDENDA

Receipt of the following Addenda to the Contract Documents is acknowledged:

Addendum No. _____ Date _____ Addendum No. _____ Date_____

Addendum No. _____ Date _____ Addendum No. _____ Date_____

1.10 PREVAILING WAGE RATES

A. The Contractor stipulates and agrees that he has reviewed the applicable prevailing wage rate schedule for both State and Federal prevailing wage rates, has contacted State and Federal departments to verify current rates, and has made appropriate provision in the submitted Bid for payment of these prevailing wage rates.

1.11 BIDDER RESPONSIBILITY CRITERIA

A. Before award of a public works contract, a bidder must meet the following responsibility criteria to be considered responsible bidder and qualified to be awarded a public works project. The bidder must:

1. At the time of bid submittal, have a certificate of registration in compliance with chapter 18.27 RCW;

2. Have a current state unified business identifier number;

3. If applicable, have industrial insurance coverage for the Bidder's employees working in Washington as required in Title 51 RCW;

4. Have an employment security department number as required in Title 50 RCW;

5. Have a state excise tax registration number as required in Title 82 RCW;

6. Not be disqualified from bidding on any public works contract under RCW 39.06.010 (unregistered or unlicensed contractors) or RCW 39.12.065(3) (prevailing wage violations);

7. Not be debarred or suspended by the Federal Government under the U.S. Government's "System for Award Management" "active exclusion" database (www.sam.gov).

8. If bidding on a public works project subject to the apprenticeship utilization requirements in RCW 39.04.320, not have been found out of compliance by Washington state apprenticeship and training council for working apprentice out of ratio, without appropriate supervision, or outside their approved work processes as outlined in their standards of apprenticeship under chapter 49.04 RCW for one-year period immediately preceding the date of the bid solicitation;

9. Have violated RCW 39.04.370 more than one time as determined by the department of labor and industries; and

10. The Bidder shall not owe delinquent taxes to the Washington State Department of Revenue. The Bidder shall not be listed on the Washington State Department of Revenue's "Delinquent Taxpayer List" website: http://dor.wa.gov/content/fileandpaytaxes/latefiling/dtlwest.aspx , or if they are so listed, they must submit a written payment plan approved by the Department of Revenue, to the Contracting Agency at the request of the Contracting Agency.

11. The Bidder's standard subcontract form shall include the subcontractor responsibility language required by RCW 39.06.020, and the Bidder shall have an established procedure which it utilizes to validate the responsibility of each of its subcontractors. The Bidder's subcontract form shall also include a requirement that each of its subcontractors shall have and document a similar procedure to determine whether the sub-tier subcontractors with whom it contracts are also "responsible" subcontractors as defined by RCW 39.06.020. The Bidder shall, if and when required by the Contracting Agency, submit a copy of its standard subcontract form for review by the Contracting Agency, and a written description of its procedure for validating the responsibility of subcontractors with which it contracts.

12. The Bidder shall not have a record of prevailing wage violations as determined by WA Labor & Industries in the five years prior to the bid submittal date that demonstrates a pattern of failing to pay workers prevailing wages, unless there are extenuating

circumstances and such circumstances are deemed acceptable to the Contracting Agency. The Bidder shall submit a list of all prevailing wage violations in the five years prior to the bid submittal date, along with an explanation of each violation and how it was resolved.

13. The Bidder shall not have a record of excessive claims filed against the retainage or payment bonds for public works projects in the three years prior to the bid submittal date, that demonstrate a lack of effective management by the Bidder of making timely and appropriate payments to its subcontractors, suppliers, and workers, unless there are extenuating circumstances and such circumstances are deemed acceptable to the Contracting Agency.

14. The Bidder and/or its owners shall not have been convicted of a crime involving bidding on a public works contract in the five years prior to the bid submittal date.

15. The Bidder shall not have had any public works contract terminated for cause or terminated for default by a government agency in the five years prior to the bid submittal date, unless there are extenuating circumstances and such circumstances are deemed acceptable to the Contracting Agency.

16. The Bidder shall not have lawsuits with judgments entered against the Bidder in the five years prior to the bid submittal date that demonstrate a pattern of failing to meet the terms of contracts, unless there are extenuating circumstances and such circumstances are deemed acceptable to the Contracting Agency.

17. The quality of performance of previous contracts, including demonstration of successful completion of projects of similar scope and complexity in the last three (3) years and the designated Project Manager and superintendent shall have a minimum of three (3) years of successful experience in project management and scheduling of projects of similar scope and complexity.

B. As evidence that the Bidder meets the mandatory and supplemental responsibility criteria stated above, the apparent two lowest Bidders must submit to the Contracting Agency by 12:00 P.M. (noon) of the second business day following the bid submittal deadline, a written statement verifying that the Bidder meets all of the mandatory and supplemental criteria together with supporting documentation including but not limited to that detailed above (sufficient in the sole judgment of the Contracting Agency) demonstrating compliance with all responsibility criteria. The Contracting Agency reserves the right to request such documentation from other Bidders as well, and to request further documentation as needed to assess Bidder responsibility. The Contracting Agency also reserves the right to obtain information from third-parties and independent sources of information concerning a Bidder's compliance with the mandatory and supplemental criteria, and to use that information in their evaluation. The Contracting Agency may (but is not required to) consider mitigating factors in determining whether the Bidder complies with the requirements of the supplemental criteria.

C. The basis for evaluation of Bidder compliance with these mandatory and supplemental criteria shall include any documents or facts obtained by Contracting Agency (whether from the Bidder or third parties) including but not limited to: (i) financial, historical, or operational data from the Bidder; (ii) information obtained directly by the Contracting Agency from others for whom the Bidder has worked, or other public agencies or private

enterprises; and (iii) any additional information obtained by the Contracting Agency which is believed to be relevant to the matter.

D. If the Contracting Agency determines the Bidder does not meet the bidder responsibility criteria above and is therefore not a responsible Bidder, the Contracting Agency shall notify the Bidder in writing, with the reasons for its determination. If the Bidder disagrees with this determination, it may appeal the determination within two (2) business days of the Contracting Agency's determination by presenting its appeal and any additional information to the Contracting Agency. The Contracting Agency will consider the appeal and any additional information before issuing its final determination. If the final determination affirms that the Bidder is not responsible, the Contracting Agency will not execute a contract with any other Bidder until at least two business days after the Bidder determined to be not responsible has received the Contracting Agency's final determination.

E. Request to Change Supplemental Bidder Responsibility Criteria Prior To Bid: Bidders with concerns about the relevancy or restrictiveness of the Bidder Responsibility Criteria may make or submit requests to the Contracting Agency to modify the criteria. Such requests shall be in writing, describe the nature of the concerns, and propose specific modifications to the criteria. Bidders shall submit such requests to the Contracting Agency no later than five (5) business days prior to the bid submittal deadline and address the request to the Project Engineer or such other person designated by the Contracting Agency in the Bid Documents.

1.13 NON - COLLUSION DECLARATION

See Section 004115 "Non-Collusion Declaration." Return this Declaration page with the Bid Proposal Package. Bids returned without the Non-Collusion Declaration will be considered nonresponsive and ineligible for award.

CONTRACTOR SIGNATURE AND INFORMATION

Name of Firm_____

By (Printed name)_____

By (Signature)_____Title_____

Address_____

City and Zip_____

Telephone No.:_____Fax No.:_____

Email Address:_____

State of Washington Contractor's License No._____

Department of Labor & Industries Reg. No._____

Washington State Department of Revenue No._____

If a Bidder is a corporation, write in the state of incorporation, and, if a partnership, give full names and addresses of all partners below.

If a Corporation, State of Incorporation: _____

If a Partnership, list all Partners:

Name: _____

Address: _____

Name: _____

Address: _____

Name: _____

Address: _____

Name: _____

Address: _____

Name: _____

Address: _____

END OF SECTION 004113

CITY OF FIFE
NON-COLLUSION CERTIFICATE

STATE OF WASHINGTON)
)ss
COUNTY OF PIERCE)

The undersigned, being duly sworn, deposes and says that the person, firm, association, co-partnership or corporation herein named, has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in the preparation and submission of a proposal to the City of Fife for consideration in the award of a Contract on the improvement described as follows:

City Hall Phase 1 Exterior Envelope Replacement

_____
Name of Firm

_____
Title

_____
Signature of Authorized Member

Sworn before me this

_____ day of _____, _____.

_____
(Notary Public) (Corporate Seal)

My commission expires _____, _____.

ACCEPTANCE CRITERIA FORM

Submitted within 2 days from the Bid Opening Date.

1. Do you owe delinquent taxes to the Washington State Department of Revenue?

   ☐ Yes

   ☐ No

   If yes, do you have a payment plan that has been approved by the Washington State Department of Revenue?

   ☐ Yes

   ☐ No

2. Are you currently debarred or suspended by the Federal government?

   ☐ Yes

   ☐ No

3. Subcontractor Responsibility:
   Does the Bidders standard subcontract form include subcontractor responsibility language as required by RCW 39.06.020?

   ☐ Yes

   ☐ No

   Does the Bidder have an established procedure which it utilizes to validate the responsibility of each of its subcontractors?

   ☐ Yes

   ☐ No

   Does the Bidder's subcontract form include a requirement that each of its subcontractors shall have and document a similar procedure to determine whether the sub-tier subcontractors with whom it contracts are also "responsible" subcontractors as defined by RCW 39.06.020?

   ☐ Yes

   ☐ No

4. Do you have a record of prevailing wage violations as determined by WA Labor and Industries in the five years prior to the bid submittal date?

   ☐ Yes

☐ No

If yes, please submit a list of all prevailing wage violations in the five years prior to the bid submittal date, along with an explanation of each violation and how is was resolved.

_____
_____
_____
_____
_____
_____
_____
_____

5. Do you have a record of excessive claims filed against the retainage or payment bonds for public works projects in the three years prior to the bid submittal date?

   ☐ Yes

   ☐ No

   If yes, please submit a list of the public works projects completed in the three years prior to the bid submittal date and include the following information for each:

   - Name of project;
   - The owner and contact information for the owner;
   - A list of claims filed against the retainage and/or payment bond for any of the projects listed;
   - A written explanation of the circumstances surrounding each claim and the ultimate resolution of the claim.

6. Have you been convicted of a crime involving bidding on a public works contract in the five years prior to the bid submittal date?

   ☐ Yes

   ☐ No

   By signing this Acceptance Criteria Form the Bidder and Owner have not been convicted of a crime involving bidding on a public works contract.

7. Have you had any public works contract terminated for cause or terminated for default by a government agency in the five years prior to the bid submittal date?

   ☐ Yes

   ☐ No

   If yes, please describe the circumstances in the space provided below.

_____
_____
_____
_____
_____
_____
_____
_____

8. Do you have any lawsuits with judgments entered against you in the five years prior to the bid submittal date that demonstrates a pattern of failing to meet the terms and contracts?

   ☐ Yes

   ☐ No

   By signing this Acceptance Criteria Form the Bidder and Owner have not had any lawsuits with judgments entered against the Bidder in the five years prior to the bid submittal date that demonstrate a pattern of failing to meet the terms of contracts, or shall submit a list of all lawsuits with judgments entered against the Bidder in the five years prior to the bid submittal date, along with a written explanation of the circumstances surrounding each such lawsuit.

OWNER SIGNATURE AND INFORMATION

Name of Firm_____

By (Printed name)_____

By (Signature)_____Title_____

Address_____

City and Zip_____

Telephone No.:_____Fax No.:_____

Email Address:_____

SECTION 004363 - PREVAILING WAGE RATES

PART 1 - GENERAL

1.1 PREVAILING WAGE RATES - FEDERAL

A. The attached Federal prevailing wage rates: November 15, 2016

1.2 PREVAILING WAGE RATES – STATE OF WASHINGTON

A. This Contract is subject to the requirements of Chapter 39.12 RCW, and as it may be amended, relating to prevailing wages. NO WORKER, LABORER OR MECHANIC EMPLOYED IN THE PERFORMANCE OF ANY PART OF THIS CONTRACT SHALL BE PAID LESS THAN THE PREVAILING RATE OF WAGE as determined by the Industrial Statistician of the Department of Labor and Industries for the State of Washington. Prior to commencing work under this Contract, the City must receive an approved copy of the "Statement of Intent to Pay Prevailing Wages on Public Works Contracts" from the Department of Labor & Industries. It is the Contractor's responsibility to obtain and file the "Statement of Intent to Pay Prevailing Wage". The Contractor shall be responsible for all filing fees. Each invoice may include a signed statement that prevailing wages have been paid by the Contractor and all subcontractors.

B. The attached prevailing wage rates are those issued by the State of Washington, Department of Labor and Industries effective for Jefferson County. This information is provided for the Bidders' reference. It is anticipated that the Department of Labor and Industries may issue revisions to these prevailing wage rates before, during or after the bid period. The Contractors shall comply with payment of prevailing wages pursuant to RCW 39.12. All Bidders shall verify that their bids include current prevailing wage rates for this Project, whether included in this document or not.

C. Prevailing wage information is available by calling:

Department of Labor and Industries
(360) 902-5335

Current Prevailing Wage Rates are also available at L&I's web site at:

www.lni.wa.gov/prevailingwage

D. See the Form of Agreement/General Conditions for more information.

END OF SECTION 004363

State of Washington
Department of Labor & Industries

Prevailing Wage Section - Telephone 360-902-5335
PO Box 44540, Olympia, WA 98504-4540

Washington State Prevailing Wage

The PREVAILING WAGES listed here include both the hourly wage rate and the hourly rate of fringe benefits. On public works projects, worker's wage and benefit rates must add to not less than this total. A brief description of overtime calculation requirements are provided on the Benefit Code Key.

Journey Level Prevailing Wage Rates for the Effective Date: 11/15/2016

County	Trade	Job Classification	Wage	Holiday	Overtime	Note
Pierce	Asbestos Abatement Workers	Journey Level	$45.25	5D	1H	
Pierce	Boilermakers	Journey Level	$64.29	5N	1C	
Pierce	Brick Mason	Journey Level	$54.32	5A	1M	
Pierce	Brick Mason	Pointer-Caulker-Cleaner	$54.32	5A	1M	
Pierce	Building Service Employees	Janitor	$9.47		1	
Pierce	Building Service Employees	Shampooer	$10.08		1	
Pierce	Building Service Employees	Waxer	$10.08		1	
Pierce	Building Service Employees	Window Cleaner	$13.22		1	
Pierce	Cabinet Makers (In Shop)	Journey Level	$28.36		1	
Pierce	Carpenters	Acoustical Worker	$55.51	5D	4C	
Pierce	Carpenters	Bridge, Dock And Wharf Carpenters	$55.51	5D	4C	
Pierce	Carpenters	Carpenter	$55.51	5D	4C	
Pierce	Carpenters	Carpenters on Stationary Tools	$55.64	5D	4C	
Pierce	Carpenters	Creosoted Material	$55.61	5D	4C	
Pierce	Carpenters	Floor Finisher	$55.51	5D	4C	
Pierce	Carpenters	Floor Layer	$55.51	5D	4C	
Pierce	Carpenters	Scaffold Erector	$55.51	5D	4C	
Pierce	Cement Masons	Journey Level	$55.56	7A	1M	
Pierce	Divers & Tenders	Diver	$108.77	5D	4C	8A
Pierce	Divers & Tenders	Diver On Standby	$66.05	5D	4C	
Pierce	Divers & Tenders	Diver Tender	$59.88	5D	4C	
Pierce	Divers & Tenders	Surface Rcv & Rov Operator	$59.88	5D	4C	
Pierce	Divers & Tenders	Surface Rcv & Rov Operator Tender	$55.76	5A	4C	
Pierce	Dredge Workers	Assistant Engineer	$56.44	5D	3F	
Pierce	Dredge Workers	Assistant Mate (Deckhand)	$56.00	5D	3F	
Pierce	Dredge Workers	Boatmen	$56.44	5D	3F	
Pierce	Dredge Workers	Engineer Welder	$57.51	5D	3F	
Pierce	Dredge Workers	Leverman, Hydraulic	$58.67	5D	3F	

Pierce	Dredge Workers	Mates	$56.44	5D	3F	
Pierce	Dredge Workers	Oiler	$56.00	5D	3F	
Pierce	Drywall Applicator	Journey Level	$55.51	5D	1H	
Pierce	Drywall Tapers	Journey Level	$55.66	5P	1E	
Pierce	Electrical Fixture Maintenance Workers	Journey Level	$17.76		1	
Pierce	Electricians - Inside	Cable Splicer	$63.44	5C	1G	
Pierce	Electricians - Inside	Journey Level	$59.79	5C	1G	
Pierce	Electricians - Inside	Lead Covered Cable Splicer	$67.09	5C	1G	
Pierce	Electricians - Inside	Welder	$63.44	5C	1G	
Pierce	Electricians - Motor Shop	Craftsman	$15.37		1	
Pierce	Electricians - Motor Shop	Journey Level	$14.69		1	
Pierce	Electricians - Powerline Construction	Cable Splicer	$71.85	5A	4D	
Pierce	Electricians - Powerline Construction	Certified Line Welder	$65.71	5A	4D	
Pierce	Electricians - Powerline Construction	Groundperson	$44.12	5A	4D	
Pierce	Electricians - Powerline Construction	Heavy Line Equipment Operator	$65.71	5A	4D	
Pierce	Electricians - Powerline Construction	Journey Level Lineperson	$65.71	5A	4D	
Pierce	Electricians - Powerline Construction	Line Equipment Operator	$55.34	5A	4D	
Pierce	Electricians - Powerline Construction	Pole Sprayer	$65.71	5A	4D	
Pierce	Electricians - Powerline Construction	Powderperson	$49.16	5A	4D	
Pierce	Electronic Technicians	Journey Level	$32.39		1	
Pierce	Elevator Constructors	Mechanic	$85.45	7D	4A	
Pierce	Elevator Constructors	Mechanic In Charge	$92.35	7D	4A	
Pierce	Fabricated Precast Concrete Products	Journey Level - In-Factory Work Only	$9.47		1	
Pierce	Fence Erectors	Fence Erector	$22.56		1	
Pierce	Flaggers	Journey Level	$38.36	7A	3I	
Pierce	Glaziers	Journey Level	$58.31	7L	1Y	
Pierce	Heat & Frost Insulators And Asbestos Workers	Journeyman	$65.43	5J	1S	
Pierce	Heating Equipment Mechanics	Journey Level	$75.46	7F	1E	
Pierce	Hod Carriers & Mason Tenders	Journey Level	$46.66	7A	3I	
Pierce	Industrial Power Vacuum Cleaner	Journey Level	$9.47		1	
Pierce	Inland Boatmen	Boat Operator	$56.78	5B	1K	
Pierce	Inland Boatmen	Cook	$53.30	5B	1K	
Pierce	Inland Boatmen	Deckhand	$53.30	5B	1K	
Pierce	Inland Boatmen	Deckhand Engineer	$54.32	5B	1K	
Pierce	Inland Boatmen	Launch Operator	$55.57	5B	1K	
Pierce	Inland Boatmen	Mate	$55.57	5B	1K	

Pierce	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Cleaner Operator, Foamer Operator	$9.73		1	
Pierce	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Grout Truck Operator	$11.48		1	
Pierce	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Head Operator	$12.78		1	
Pierce	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Technician	$9.47		1	
Pierce	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Tv Truck Operator	$10.53		1	
Pierce	Insulation Applicators	Journey Level	$55.51	5D	4C	
Pierce	Ironworkers	Journeyman	$65.53	7N	1O	
Pierce	Laborers	Air, Gas Or Electric Vibrating Screed	$45.25	7A	3I	
Pierce	Laborers	Airtrac Drill Operator	$46.66	7A	3I	
Pierce	Laborers	Ballast Regular Machine	$45.25	7A	3I	
Pierce	Laborers	Batch Weighman	$38.36	7A	3I	
Pierce	Laborers	Brick Pavers	$45.25	7A	3I	
Pierce	Laborers	Brush Cutter	$45.25	7A	3I	
Pierce	Laborers	Brush Hog Feeder	$45.25	7A	3I	
Pierce	Laborers	Burner	$45.25	7A	3I	
Pierce	Laborers	Caisson Worker	$46.66	7A	3I	
Pierce	Laborers	Carpenter Tender	$45.25	7A	3I	
Pierce	Laborers	Caulker	$45.25	7A	3I	
Pierce	Laborers	Cement Dumper-paving	$46.09	7A	3I	
Pierce	Laborers	Cement Finisher Tender	$45.25	7A	3I	
Pierce	Laborers	Change House Or Dry Shack	$45.25	7A	3I	
Pierce	Laborers	Chipping Gun (under 30 Lbs.)	$45.25	7A	3I	
Pierce	Laborers	Chipping Gun(30 Lbs. And Over)	$46.09	7A	3I	
Pierce	Laborers	Choker Setter	$45.25	7A	3I	
Pierce	Laborers	Chuck Tender	$45.25	7A	3I	
Pierce	Laborers	Clary Power Spreader	$46.09	7A	3I	
Pierce	Laborers	Clean-up Laborer	$45.25	7A	3I	
Pierce	Laborers	Concrete Dumper/chute Operator	$46.09	7A	3I	
Pierce	Laborers	Concrete Form Stripper	$45.25	7A	3I	
Pierce	Laborers	Concrete Placement Crew	$46.09	7A	3I	
Pierce	Laborers	Concrete Saw Operator/core Driller	$46.09	7A	3I	
Pierce	Laborers	Crusher Feeder	$38.36	7A	3I	
Pierce	Laborers	Curing Laborer	$45.25	7A	3I	
Pierce	Laborers		$45.25	7A	3I	

		Demolition: Wrecking & Moving (incl. Charred Material)				
Pierce	Laborers	Ditch Digger	$45.25	7A	3I	
Pierce	Laborers	Diver	$46.66	7A	3I	
Pierce	Laborers	Drill Operator (hydraulic,diamond)	$46.09	7A	3I	
Pierce	Laborers	Dry Stack Walls	$45.25	7A	3I	
Pierce	Laborers	Dump Person	$45.25	7A	3I	
Pierce	Laborers	Epoxy Technician	$45.25	7A	3I	
Pierce	Laborers	Erosion Control Worker	$45.25	7A	3I	
Pierce	Laborers	Faller & Bucker Chain Saw	$46.09	7A	3I	
Pierce	Laborers	Fine Graders	$45.25	7A	3I	
Pierce	Laborers	Firewatch	$38.36	7A	3I	
Pierce	Laborers	Form Setter	$45.25	7A	3I	
Pierce	Laborers	Gabian Basket Builders	$45.25	7A	3I	
Pierce	Laborers	General Laborer	$45.25	7A	3I	
Pierce	Laborers	Grade Checker & Transit Person	$46.66	7A	3I	
Pierce	Laborers	Grinders	$45.25	7A	3I	
Pierce	Laborers	Grout Machine Tender	$45.25	7A	3I	
Pierce	Laborers	Groutmen (pressure)including Post Tension Beams	$46.09	7A	3I	
Pierce	Laborers	Guardrail Erector	$45.25	7A	3I	
Pierce	Laborers	Hazardous Waste Worker (level A)	$46.66	7A	3I	
Pierce	Laborers	Hazardous Waste Worker (level B)	$46.09	7A	3I	
Pierce	Laborers	Hazardous Waste Worker (level C)	$45.25	7A	3I	
Pierce	Laborers	High Scaler	$46.66	7A	3I	
Pierce	Laborers	Jackhammer	$46.09	7A	3I	
Pierce	Laborers	Laserbeam Operator	$46.09	7A	3I	
Pierce	Laborers	Maintenance Person	$45.25	7A	3I	
Pierce	Laborers	Manhole Builder-mudman	$46.09	7A	3I	
Pierce	Laborers	Material Yard Person	$45.25	7A	3I	
Pierce	Laborers	Motorman-dinky Locomotive	$46.09	7A	3I	
Pierce	Laborers	Nozzleman (concrete Pump, Green Cutter When Using Combination Of High Pressure Air & Water On Concrete & Rock, Sandblast, Gunite, Shotcrete, Water Bla	$46.09	7A	3I	
Pierce	Laborers	Pavement Breaker	$46.09	7A	3I	
Pierce	Laborers	Pilot Car	$38.36	7A	3I	
Pierce	Laborers	Pipe Layer Lead	$46.66	7A	3I	
Pierce	Laborers	Pipe Layer/tailor	$46.09	7A	3I	
Pierce	Laborers	Pipe Pot Tender	$46.09	7A	3I	

Pierce	Laborers	Pipe Reliner	$46.09	7A	3I	
Pierce	Laborers	Pipe Wrapper	$46.09	7A	3I	
Pierce	Laborers	Pot Tender	$45.25	7A	3I	
Pierce	Laborers	Powderman	$46.66	7A	3I	
Pierce	Laborers	Powderman's Helper	$45.25	7A	3I	
Pierce	Laborers	Power Jacks	$46.09	7A	3I	
Pierce	Laborers	Railroad Spike Puller - Power	$46.09	7A	3I	
Pierce	Laborers	Raker - Asphalt	$46.66	7A	3I	
Pierce	Laborers	Re-timberman	$46.66	7A	3I	
Pierce	Laborers	Remote Equipment Operator	$46.09	7A	3I	
Pierce	Laborers	Rigger/signal Person	$46.09	7A	3I	
Pierce	Laborers	Rip Rap Person	$45.25	7A	3I	
Pierce	Laborers	Rivet Buster	$46.09	7A	3I	
Pierce	Laborers	Rodder	$46.09	7A	3I	
Pierce	Laborers	Scaffold Erector	$45.25	7A	3I	
Pierce	Laborers	Scale Person	$45.25	7A	3I	
Pierce	Laborers	Sloper (over 20")	$46.09	7A	3I	
Pierce	Laborers	Sloper Sprayer	$45.25	7A	3I	
Pierce	Laborers	Spreader (concrete)	$46.09	7A	3I	
Pierce	Laborers	Stake Hopper	$45.25	7A	3I	
Pierce	Laborers	Stock Piler	$45.25	7A	3I	
Pierce	Laborers	Tamper & Similar Electric, Air & Gas Operated Tools	$46.09	7A	3I	
Pierce	Laborers	Tamper (multiple & Self-propelled)	$46.09	7A	3I	
Pierce	Laborers	Timber Person - Sewer (lagger, Shorer & Cribber)	$46.09	7A	3I	
Pierce	Laborers	Toolroom Person (at Jobsite)	$45.25	7A	3I	
Pierce	Laborers	Topper	$45.25	7A	3I	
Pierce	Laborers	Track Laborer	$45.25	7A	3I	
Pierce	Laborers	Track Liner (power)	$46.09	7A	3I	
Pierce	Laborers	Traffic Control Laborer	$41.02	7A	3I	8R
Pierce	Laborers	Traffic Control Supervisor	$41.02	7A	3I	8R
Pierce	Laborers	Truck Spotter	$45.25	7A	3I	
Pierce	Laborers	Tugger Operator	$46.09	7A	3I	
Pierce	Laborers	Tunnel Work-Compressed Air Worker 0-30 psi	$83.12	7A	3I	8Q
Pierce	Laborers	Tunnel Work-Compressed Air Worker 30.01-44.00 psi	$88.15	7A	3I	8Q
Pierce	Laborers	Tunnel Work-Compressed Air Worker 44.01-54.00 psi	$91.83	7A	3I	8Q
Pierce	Laborers	Tunnel Work-Compressed Air Worker 54.01-60.00 psi	$97.53	7A	3I	8Q
Pierce	Laborers	Tunnel Work-Compressed Air Worker 60.01-64.00 psi	$99.65	7A	3I	8Q
Pierce	Laborers	Tunnel Work-Compressed Air Worker 64.01-68.00 psi	$104.75	7A	3I	8Q

Pierce	Laborers	Tunnel Work-Compressed Air Worker 68.01-70.00 psi	$106.65	7A	3I	8Q
Pierce	Laborers	Tunnel Work-Compressed Air Worker 70.01-72.00 psi	$108.65	7A	3I	8Q
Pierce	Laborers	Tunnel Work-Compressed Air Worker 72.01-74.00 psi	$110.65	7A	3I	8Q
Pierce	Laborers	Tunnel Work-Guage and Lock Tender	$46.76	7A	3I	8Q
Pierce	Laborers	Tunnel Work-Miner	$46.76	7A	3I	8Q
Pierce	Laborers	Vibrator	$46.09	7A	3I	
Pierce	Laborers	Vinyl Seamer	$45.25	7A	3I	
Pierce	Laborers	Watchman	$34.86	7A	3I	
Pierce	Laborers	Welder	$46.09	7A	3I	
Pierce	Laborers	Well Point Laborer	$46.09	7A	3I	
Pierce	Laborers	Window Washer/cleaner	$34.86	7A	3I	
Pierce	Laborers - Underground Sewer & Water	General Laborer & Topman	$45.25	7A	3I	
Pierce	Laborers - Underground Sewer & Water	Pipe Layer	$46.09	7A	3I	
Pierce	Landscape Construction	Irrigation Or Lawn Sprinkler Installers	$17.07		1	
Pierce	Landscape Construction	Landscape Equipment Operators Or Truck Drivers	$14.55		1	
Pierce	Landscape Construction	Landscaping Or Planting Laborers	$17.07		1	
Pierce	Lathers	Journey Level	$55.51	5D	1H	
Pierce	Marble Setters	Journey Level	$54.32	5A	1M	
Pierce	Metal Fabrication (In Shop)	Fitter	$15.25		1	
Pierce	Metal Fabrication (In Shop)	Laborer	$10.32		1	
Pierce	Metal Fabrication (In Shop)	Machine Operator	$13.98		1	
Pierce	Metal Fabrication (In Shop)	Welder	$13.98		1	
Pierce	Millwright	Journey Level	$57.01	5D	4C	
Pierce	Modular Buildings	Journey Level	$9.47		1	
Pierce	Painters	Journey Level	$40.60	6Z	2B	
Pierce	Pile Driver	Journey Level	$55.76	5D	4C	
Pierce	Plasterers	Journey Level	$53.20	7Q	1R	
Pierce	Playground & Park Equipment Installers	Journey Level	$9.73		1	
Pierce	Plumbers & Pipefitters	Journey Level	$65.52	5A	1G	
Pierce	Power Equipment Operators	Asphalt Plant Operator	$58.69	7A	3C	8P
Pierce	Power Equipment Operators	Assistant Engineers	$55.21	7A	3C	8P
Pierce	Power Equipment Operators	Barrier Machine (zipper)	$58.17	7A	3C	8P
Pierce	Power Equipment Operators	Batch Plant Operator: Concrete	$58.17	7A	3C	8P
Pierce	Power Equipment Operators	Bobcat	$55.21	7A	3C	8P
Pierce	Power Equipment Operators	Brokk - Remote Demolition Equipment	$55.21	7A	3C	8P
Pierce	Power Equipment Operators	Brooms	$55.21	7A	3C	8P

Pierce	Power Equipment Operators	Bump Cutter	$58.17	7A	3C	8P
Pierce	Power Equipment Operators	Cableways	$58.69	7A	3C	8P
Pierce	Power Equipment Operators	Chipper	$58.17	7A	3C	8P
Pierce	Power Equipment Operators	Compressor	$55.21	7A	3C	8P
Pierce	Power Equipment Operators	Concrete Pump: Truck Mount With Boom Attachment Over 42m	$58.69	7A	3C	8P
Pierce	Power Equipment Operators	Concrete Finish Machine -laser Screed	$55.21	7A	3C	8P
Pierce	Power Equipment Operators	Concrete Pump - Mounted Or Trailer High Pressure Line Pump, Pump High Pressure	$57.72	7A	3C	8P
Pierce	Power Equipment Operators	Concrete Pump: Truck Mount With Boom Attachment Up To 42m	$58.17	7A	3C	8P
Pierce	Power Equipment Operators	Conveyors	$57.72	7A	3C	8P
Pierce	Power Equipment Operators	Cranes, 100 Tons - 199 Tons, Or 150 Ft Of Boom (including Jib With Attachments)	$59.28	7A	3C	8P
Pierce	Power Equipment Operators	Cranes: 20 Tons Through 44 Tons With Attachments	$58.17	7A	3C	8P
Pierce	Power Equipment Operators	Cranes: 200 tons to 299 tons, or 250' of boom (including jib with attachments)	$59.88	7A	3C	8P
Pierce	Power Equipment Operators	Cranes: 300 tons and over, or 300' of boom (including jib with attachments)	$60.47	7A	3C	8P
Pierce	Power Equipment Operators	Cranes: 45 Tons Through 99 Tons, Under 150' Of Boom (including Jib With Attachments)	$58.69	7A	3C	8P
Pierce	Power Equipment Operators	Cranes: A-frame - 10 Tons And Under	$55.21	7A	3C	8P
Pierce	Power Equipment Operators	Cranes: Friction 200 tons and over. Tower Cranes: over 250' in height from base to boom.	$60.47	7A	3C	8P
Pierce	Power Equipment Operators	Cranes: Friction cranes through 199 tons	$59.88	7A	3C	8P
Pierce	Power Equipment Operators	Cranes: Through 19 Tons With Attachments A-frame Over 10 Tons	$57.72	7A	3C	8P
Pierce	Power Equipment Operators	Crusher	$58.17	7A	3C	8P
Pierce	Power Equipment Operators	Deck Engineer/deck Winches (power)	$58.17	7A	3C	8P
Pierce	Power Equipment Operators	Derricks, On Building Work	$58.69	7A	3C	8P
Pierce	Power Equipment Operators	Dozers D-9 & Under	$57.72	7A	3C	8P
Pierce	Power Equipment Operators	Drill Oilers: Auger Type, Truck Or Crane Mount	$57.72	7A	3C	8P
Pierce	Power Equipment Operators	Drilling Machine	$59.28	7A	3C	8P
Pierce	Power Equipment Operators	Elevator And Man-lift: Permanent And Shaft Type	$55.21	7A	3C	8P

Pierce	Power Equipment Operators	Finishing Machine, Bidwell And Gamaco & Similar Equipment	$58.17	7A	3C	8P
Pierce	Power Equipment Operators	Forklift: 3000 Lbs And Over With Attachments	$57.72	7A	3C	8P
Pierce	Power Equipment Operators	Forklifts: Under 3000 Lbs. With Attachments	$55.21	7A	3C	8P
Pierce	Power Equipment Operators	Grade Engineer: Using Blueprints, Cut Sheets,etc.	$58.17	7A	3C	8P
Pierce	Power Equipment Operators	Gradechecker/stakeman	$55.21	7A	3C	8P
Pierce	Power Equipment Operators	Guardrail punch/Auger	$58.17	7A	3C	8P
Pierce	Power Equipment Operators	Hard Tail End Dump Articulating Off- Road Equipment 45 Yards. & Over	$58.69	7A	3C	8P
Pierce	Power Equipment Operators	Hard Tail End Dump Articulating Off-road Equipment Under 45 Yards	$58.17	7A	3C	8P
Pierce	Power Equipment Operators	Horizontal/directional Drill Locator	$57.72	7A	3C	8P
Pierce	Power Equipment Operators	Horizontal/directional Drill Operator	$58.17	7A	3C	8P
Pierce	Power Equipment Operators	Hydralifts/Boom Trucks Over 10 Tons	$57.72	7A	3C	8P
Pierce	Power Equipment Operators	Hydralifts/boom Trucks, 10 Tons And Under	$55.21	7A	3C	8P
Pierce	Power Equipment Operators	Loader, Overhead 8 Yards. & Over	$59.28	7A	3C	8P
Pierce	Power Equipment Operators	Loader, Overhead, 6 Yards. But Not Including 8 Yards	$58.69	7A	3C	8P
Pierce	Power Equipment Operators	Loaders, Overhead Under 6 Yards	$58.17	7A	3C	8P
Pierce	Power Equipment Operators	Loaders, Plant Feed	$58.17	7A	3C	8P
Pierce	Power Equipment Operators	Loaders: Elevating Type Belt	$57.72	7A	3C	8P
Pierce	Power Equipment Operators	Locomotives, All	$58.17	7A	3C	8P
Pierce	Power Equipment Operators	Material Transfer Device	$58.17	7A	3C	8P
Pierce	Power Equipment Operators	Mechanics, All (Leadmen - $0.50 Per Hour Over Mechanic)	$59.28	7A	3C	8P
Pierce	Power Equipment Operators	Motor patrol graders	$58.69	7A	3C	8P
Pierce	Power Equipment Operators	Mucking Machine, Mole, Tunnel Drill, Boring, Road Header And/or Shield	$58.69	7A	3C	8P
Pierce	Power Equipment Operators	Oil Distributors, Blower Distribution & Mulch Seeding Operator	$55.21	7A	3C	8P
Pierce	Power Equipment Operators	Outside Hoists (elevators And Manlifts), Air Tuggers,strato	$57.72	7A	3C	8P
Pierce	Power Equipment Operators	Overhead, Bridge Type Crane: 20 Tons Through 44 Tons	$58.17	7A	3C	8P
Pierce	Power Equipment Operators	Overhead, Bridge Type: 100 Tons And Over	$59.28	7A	3C	8P

Pierce	Power Equipment Operators	Overhead, Bridge Type: 45 Tons Through 99 Tons	$58.69	7A	3C	8P
Pierce	Power Equipment Operators	Pavement Breaker	$55.21	7A	3C	8P
Pierce	Power Equipment Operators	Pile Driver (other Than Crane Mount)	$58.17	7A	3C	8P
Pierce	Power Equipment Operators	Plant Oiler - Asphalt, Crusher	$57.72	7A	3C	8P
Pierce	Power Equipment Operators	Posthole Digger, Mechanical	$55.21	7A	3C	8P
Pierce	Power Equipment Operators	Power Plant	$55.21	7A	3C	8P
Pierce	Power Equipment Operators	Pumps - Water	$55.21	7A	3C	8P
Pierce	Power Equipment Operators	Quad 9, HD 41, D10 And Over	$58.69	7A	3C	8P
Pierce	Power Equipment Operators	Quick Tower - No Cab, Under 100 Feet In Height Based To Boom	$55.21	7A	3C	8P
Pierce	Power Equipment Operators	Remote Control Operator On Rubber Tired Earth Moving Equipment	$58.69	7A	3C	8P
Pierce	Power Equipment Operators	Rigger And Bellman	$55.21	7A	3C	8P
Pierce	Power Equipment Operators	Rigger/Signal Person, Bellman (Certified)	$57.72	7A	3C	8P
Pierce	Power Equipment Operators	Rollagon	$58.69	7A	3C	8P
Pierce	Power Equipment Operators	Roller, Other Than Plant Mix	$55.21	7A	3C	8P
Pierce	Power Equipment Operators	Roller, Plant Mix Or Multi-lift Materials	$57.72	7A	3C	8P
Pierce	Power Equipment Operators	Roto-mill, Roto-grinder	$58.17	7A	3C	8P
Pierce	Power Equipment Operators	Saws - Concrete	$57.72	7A	3C	8P
Pierce	Power Equipment Operators	Scraper, Self Propelled Under 45 Yards	$58.17	7A	3C	8P
Pierce	Power Equipment Operators	Scrapers - Concrete & Carry All	$57.72	7A	3C	8P
Pierce	Power Equipment Operators	Scrapers, Self-propelled: 45 Yards And Over	$58.69	7A	3C	8P
Pierce	Power Equipment Operators	Service Engineers - Equipment	$57.72	7A	3C	8P
Pierce	Power Equipment Operators	Shotcrete/gunite Equipment	$55.21	7A	3C	8P
Pierce	Power Equipment Operators	Shovel , Excavator, Backhoe, Tractors Under 15 Metric Tons.	$57.72	7A	3C	8P
Pierce	Power Equipment Operators	Shovel, Excavator, Backhoe: Over 30 Metric Tons To 50 Metric Tons	$58.69	7A	3C	8P
Pierce	Power Equipment Operators	Shovel, Excavator, Backhoes, Tractors: 15 To 30 Metric Tons	$58.17	7A	3C	8P
Pierce	Power Equipment Operators	Shovel, Excavator, Backhoes: Over 50 Metric Tons To 90 Metric Tons	$59.28	7A	3C	8P
Pierce	Power Equipment Operators	Shovel, Excavator, Backhoes: Over 90 Metric Tons	$59.88	7A	3C	8P
Pierce	Power Equipment Operators	Slipform Pavers	$58.69	7A	3C	8P
Pierce	Power Equipment Operators	Spreader, Topsider & Screedman	$58.69	7A	3C	8P
Pierce	Power Equipment Operators	Subgrader Trimmer	$58.17	7A	3C	8P

Pierce	Power Equipment Operators	Tower Bucket Elevators	$57.72	7A	3C	8P
Pierce	Power Equipment Operators	Tower crane over 175' through 250' in height, base to boom	$59.88	7A	3C	8P
Pierce	Power Equipment Operators	Tower Crane Up: To 175' In Height, Base To Boom	$59.28	7A	3C	8P
Pierce	Power Equipment Operators	Transporters, All Track Or Truck Type	$58.69	7A	3C	8P
Pierce	Power Equipment Operators	Trenching Machines	$57.72	7A	3C	8P
Pierce	Power Equipment Operators	Truck Crane Oiler/driver - 100 Tons And Over	$58.17	7A	3C	8P
Pierce	Power Equipment Operators	Truck Crane Oiler/driver Under 100 Tons	$57.72	7A	3C	8P
Pierce	Power Equipment Operators	Truck Mount Portable Conveyor	$58.17	7A	3C	8P
Pierce	Power Equipment Operators	Welder	$58.69	7A	3C	8P
Pierce	Power Equipment Operators	Wheel Tractors, Farmall Type	$55.21	7A	3C	8P
Pierce	Power Equipment Operators	Yo Yo Pay Dozer	$58.17	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Asphalt Plant Operator	$58.69	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Assistant Engineers	$55.21	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Barrier Machine (zipper)	$58.17	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Batch Plant Operator: Concrete	$58.17	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Bobcat	$55.21	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Brokk - Remote Demolition Equipment	$55.21	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Brooms	$55.21	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Bump Cutter	$58.17	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Cableways	$58.69	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Chipper	$58.17	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Compressor	$55.21	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Concrete Pump: Truck Mount With Boom Attachment Over 42m	$58.69	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Concrete Finish Machine -laser Screed	$55.21	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Concrete Pump - Mounted Or Trailer High Pressure Line Pump, Pump High Pressure	$57.72	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Concrete Pump: Truck Mount With Boom Attachment Up To 42m	$58.17	7A	3C	8P
Pierce		Conveyors	$57.72	7A	3C	8P

	Power Equipment Operators-Underground Sewer & Water					
Pierce	Power Equipment Operators-Underground Sewer & Water	Cranes, 100 Tons - 199 Tons, Or 150 Ft Of Boom (including Jib With Attachments)	$59.28	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Cranes, 200 tons to 299 tons, or 250' of boom (including jib with attachments)	$59.88	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Cranes, Over 300 Tons, Or 300' Of Boom Including Jib With Attachments	$60.47	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Cranes: 20 Tons Through 44 Tons With Attachments	$58.17	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	cranes: 300 tons and over, or 300' of boom (including jib with attachments)	$60.47	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Cranes: 45 Tons Through 99 Tons, Under 150' Of Boom (including Jib With Attachments)	$58.69	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Cranes: A-frame - 10 Tons And Under	$55.21	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Cranes: Friction 200 tons and over. Tower Cranes: over 250' in height from base to boom.	$60.47	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Cranes: Friction cranes through 199 tons	$59.88	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Cranes: Through 19 Tons With Attachments A-frame Over 10 Tons	$57.72	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Crusher	$58.17	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Deck Engineer/deck Winches (power)	$58.17	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Derricks, On Building Work	$58.69	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Dozers D-9 & Under	$57.72	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Drill Oilers: Auger Type, Truck Or Crane Mount	$57.72	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Drilling Machine	$59.28	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Elevator And Man-lift: Permanent And Shaft Type	$55.21	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Finishing Machine, Bidwell And Gamaco & Similar Equipment	$58.17	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Forklift: 3000 Lbs And Over With Attachments	$57.72	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Forklifts: Under 3000 Lbs. With Attachments	$55.21	7A	3C	8P
Pierce			$58.17	7A	3C	8P

	Power Equipment Operators-Underground Sewer & Water	Grade Engineer: Using Blueprints, Cut Sheets,etc.				
Pierce	Power Equipment Operators-Underground Sewer & Water	Gradechecker/stakeman	$55.21	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Guardrail punch/Auger	$58.17	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Hard Tail End Dump Articulating Off- Road Equipment 45 Yards. & Over	$58.69	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Hard Tail End Dump Articulating Off-road Equipment Under 45 Yards	$58.17	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Horizontal/directional Drill Locator	$57.72	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Horizontal/directional Drill Operator	$58.17	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Hydralifts/Boom Trucks Over 10 Tons	$57.72	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Hydralifts/boom Trucks, 10 Tons And Under	$55.21	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Loader, Overhead 8 Yards. & Over	$59.28	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Loader, Overhead, 6 Yards. But Not Including 8 Yards	$58.69	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Loaders, Overhead Under 6 Yards	$58.17	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Loaders, Plant Feed	$58.17	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Loaders: Elevating Type Belt	$57.72	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Locomotives, All	$58.17	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Material Transfer Device	$58.17	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Mechanics, All (Leadmen - $0.50 Per Hour Over Mechanic)	$59.28	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Motor patrol graders	$58.69	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Mucking Machine, Mole, Tunnel Drill, Boring, Road Header And/or Shield	$58.69	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Oil Distributors, Blower Distribution & Mulch Seeding Operator	$55.21	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Outside Hoists (elevators And Manlifts), Air Tuggers,strato	$57.72	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Overhead, Bridge Type Crane: 20 Tons Through 44 Tons	$58.17	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Overhead, Bridge Type: 100 Tons And Over	$59.28	7A	3C	8P
Pierce			$58.69	7A	3C	8P

	Power Equipment Operators-Underground Sewer & Water	Overhead, Bridge Type: 45 Tons Through 99 Tons				
Pierce	Power Equipment Operators-Underground Sewer & Water	Pavement Breaker	$55.21	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Pile Driver (other Than Crane Mount)	$58.17	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Plant Oiler - Asphalt, Crusher	$57.72	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Posthole Digger, Mechanical	$55.21	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Power Plant	$55.21	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Pumps - Water	$55.21	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Quad 9, HD 41, D10 And Over	$58.69	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Quick Tower - No Cab, Under 100 Feet In Height Based To Boom	$55.21	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Remote Control Operator On Rubber Tired Earth Moving Equipment	$58.69	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Rigger And Bellman	$55.21	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Rigger/Signal Person, Bellman (Certified)	$57.72	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Rollagon	$58.69	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Roller, Other Than Plant Mix	$55.21	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Roller, Plant Mix Or Multi-lift Materials	$57.72	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Roto-mill, Roto-grinder	$58.17	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Saws - Concrete	$57.72	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Scraper, Self Propelled Under 45 Yards	$58.17	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Scrapers - Concrete & Carry All	$57.72	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Scrapers, Self-propelled: 45 Yards And Over	$58.69	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Service Engineers - Equipment	$57.72	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Shotcrete/gunite Equipment	$55.21	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Shovel , Excavator, Backhoe, Tractors Under 15 Metric Tons.	$57.72	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Shovel, Excavator, Backhoe: Over 30 Metric Tons To 50 Metric Tons	$58.69	7A	3C	8P

Pierce	Power Equipment Operators-Underground Sewer & Water	Shovel, Excavator, Backhoes, Tractors: 15 To 30 Metric Tons	$58.17	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Shovel, Excavator, Backhoes: Over 50 Metric Tons To 90 Metric Tons	$59.28	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Shovel, Excavator, Backhoes: Over 90 Metric Tons	$59.88	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Slipform Pavers	$58.69	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Spreader, Topsider & Screedman	$58.69	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Subgrader Trimmer	$58.17	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Tower Bucket Elevators	$57.72	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Tower crane over 175' through 250' in height, base to boom	$59.88	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Tower Crane: Up To 175' In Height, Base To Boom	$59.28	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Transporters, All Track Or Truck Type	$58.69	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Trenching Machines	$57.72	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Truck Crane Oiler/driver - 100 Tons And Over	$58.17	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Truck Crane Oiler/driver Under 100 Tons	$57.72	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Truck Mount Portable Conveyor	$58.17	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Welder	$58.69	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Wheel Tractors, Farmall Type	$55.21	7A	3C	8P
Pierce	Power Equipment Operators-Underground Sewer & Water	Yo Yo Pay Dozer	$58.17	7A	3C	8P
Pierce	Power Line Clearance Tree Trimmers	Journey Level In Charge	$47.08	5A	4A	
Pierce	Power Line Clearance Tree Trimmers	Spray Person	$44.64	5A	4A	
Pierce	Power Line Clearance Tree Trimmers	Tree Equipment Operator	$47.08	5A	4A	
Pierce	Power Line Clearance Tree Trimmers	Tree Trimmer	$42.01	5A	4A	
Pierce	Power Line Clearance Tree Trimmers	Tree Trimmer Groundperson	$31.65	5A	4A	
Pierce	Refrigeration & Air Conditioning Mechanics	Mechanic	$66.81	5A	1G	
Pierce	Residential Brick Mason	Journey Level	$23.77		1	
Pierce	Residential Carpenters	Journey Level	$41.69	5D	4C	
Pierce	Residential Cement Masons	Journey Level	$55.56	7A	1M	
Pierce		Journey Level	$41.69	5D	4C	

	Residential Drywall Applicators					
Pierce	Residential Drywall Tapers	Journey Level	$55.66	5P	1E	
Pierce	Residential Electricians	JOURNEY LEVEL	$29.29		1	
Pierce	Residential Glaziers	Journey Level	$38.40	7L	1H	
Pierce	Residential Insulation Applicators	Journey Level	$18.70		1	
Pierce	Residential Laborers	Journey Level	$20.99		1	
Pierce	Residential Marble Setters	Journey Level	$22.67		1	
Pierce	Residential Painters	Journey Level	$26.13		1	
Pierce	Residential Plumbers & Pipefitters	Journey Level	$47.77	5A	1G	
Pierce	Residential Refrigeration & Air Conditioning Mechanics	Journey Level	$38.75	5A	1G	
Pierce	Residential Sheet Metal Workers	Journey Level (Field or Shop)	$45.99	7F	1R	
Pierce	Residential Soft Floor Layers	Journey Level	$45.86	5A	3D	
Pierce	Residential Sprinkler Fitters (Fire Protection)	Journey Level	$42.73	5C	2R	
Pierce	Residential Stone Masons	Journey Level	$22.67		1	
Pierce	Residential Terrazzo Workers	Journey Level	$9.47		1	
Pierce	Residential Terrazzo/Tile Finishers	Journey Level	$19.32		1	
Pierce	Residential Tile Setters	Journey Level	$9.47		1	
Pierce	Roofers	Journey Level	$46.12	5A	2O	
Pierce	Roofers	Using Irritable Bituminous Materials	$49.12	5A	2O	
Pierce	Sheet Metal Workers	Journey Level (Field or Shop)	$75.46	7F	1E	
Pierce	Shipbuilding & Ship Repair	Boilermaker	$41.72	7M	1H	
Pierce	Shipbuilding & Ship Repair	Carpenter	$33.71	6E	1B	
Pierce	Shipbuilding & Ship Repair	Electrician	$33.71	6E	1B	
Pierce	Shipbuilding & Ship Repair	Heat & Frost Insulator	$65.43	5J	1S	
Pierce	Shipbuilding & Ship Repair	Laborer	$19.10		1	
Pierce	Shipbuilding & Ship Repair	Machinist	$33.71	6E	1B	
Pierce	Shipbuilding & Ship Repair	Operator	$33.71	6E	1B	
Pierce	Shipbuilding & Ship Repair	Painter	$38.74	6A	1R	
Pierce	Shipbuilding & Ship Repair	Pipefitter	$33.71	6E	1B	
Pierce	Shipbuilding & Ship Repair	Rigger	$15.77		1	
Pierce	Shipbuilding & Ship Repair	Sandblaster	$38.74	6A	1R	
Pierce	Shipbuilding & Ship Repair	SHEET METAL	$35.83		1	
Pierce	Shipbuilding & Ship Repair	Shipfitter	$33.71	6E	1B	
Pierce	Shipbuilding & Ship Repair	Trucker	$15.75		1	
Pierce	Shipbuilding & Ship Repair	Warehouse	$13.75		1	
Pierce	Shipbuilding & Ship Repair	Welder/burner	$33.71	6E	1B	
Pierce	Sign Makers & Installers (Electrical)	Sign Installer	$26.17		1	
Pierce		Sign Maker	$20.33		1	

	Sign Makers & Installers (Electrical)					
Pierce	Sign Makers & Installers (Non-Electrical)	Sign Installer	$33.43		1	
Pierce	Sign Makers & Installers (Non-Electrical)	Sign Maker	$22.79		1	
Pierce	Soft Floor Layers	Journey Level	$45.86	5A	3D	
Pierce	Solar Controls For Windows	Journey Level	$10.31		1	
Pierce	Sprinkler Fitters (Fire Protection)	Journey Level	$72.49	5C	1X	
Pierce	Stage Rigging Mechanics (Non Structural)	Journey Level	$13.23		1	
Pierce	Stone Masons	Journey Level	$54.32	5A	1M	
Pierce	Street And Parking Lot Sweeper Workers	Journey Level	$21.69		1	
Pierce	Surveyors	All Classifications	$35.68	Null	1	
Pierce	Telecommunication Technicians	Journey Level	$28.29		1	
Pierce	Telephone Line Construction - Outside	Cable Splicer	$37.60	5A	2B	
Pierce	Telephone Line Construction - Outside	Hole Digger/Ground Person	$20.79	5A	2B	
Pierce	Telephone Line Construction - Outside	Installer (Repairer)	$36.02	5A	2B	
Pierce	Telephone Line Construction - Outside	Special Aparatus Installer I	$37.60	5A	2B	
Pierce	Telephone Line Construction - Outside	Special Apparatus Installer II	$36.82	5A	2B	
Pierce	Telephone Line Construction - Outside	Telephone Equipment Operator (Heavy)	$37.60	5A	2B	
Pierce	Telephone Line Construction - Outside	Telephone Equipment Operator (Light)	$34.94	5A	2B	
Pierce	Telephone Line Construction - Outside	Telephone Lineperson	$34.93	5A	2B	
Pierce	Telephone Line Construction - Outside	Television Groundperson	$19.73	5A	2B	
Pierce	Telephone Line Construction - Outside	Television Lineperson/Installer	$26.31	5A	2B	
Pierce	Telephone Line Construction - Outside	Television System Technician	$31.50	5A	2B	
Pierce	Telephone Line Construction - Outside	Television Technician	$28.23	5A	2B	
Pierce	Telephone Line Construction - Outside	Tree Trimmer	$34.93	5A	2B	
Pierce	Terrazzo Workers	Journey Level	$48.86	5A	1M	
Pierce	Tile Setters	Journey Level	$48.86	5A	1M	
Pierce	Tile, Marble & Terrazzo Finishers	Journey Level	$20.74		1	
Pierce	Traffic Control Stripers	Journey Level	$44.35	7A	1K	
Pierce	Truck Drivers	Asphalt Mix	$22.49		1	

Pierce	Truck Drivers	Dump Truck	$22.56		1	
Pierce	Truck Drivers	Dump Truck And Trailer	$22.56		1	
Pierce	Truck Drivers	Other Trucks	$30.20		1	
Pierce	Truck Drivers	Transit Mixer	$33.17	6I	2H	
Pierce	Well Drillers & Irrigation Pump Installers	Irrigation Pump Installer	$16.09		1	
Pierce	Well Drillers & Irrigation Pump Installers	Oiler	$15.39		1	
Pierce	Well Drillers & Irrigation Pump Installers	Well Driller	$18.30		1	

CONTRACT

THIS Agreement, made effective as of the _____ day of _____, 2016, between

CITY OF FIFE, WASHINGTON ("**OWNER**")
5411 23rd Street East
Fife, WA 98424

Contact: Tel: Fax:

and

_____ ("**CONTRACTOR**")

Contact: Tel: Fax:

Tax Id No.:

for the following Project:

City Hall Phase 1 Exterior Envelope Replacement project ("PROJECT")

The Owner and Contractor agree as follows:

1. Contract Documents. SEE A201

2. Date of Commencement and Physical Completion Date. The Contractor shall obtain final completion of the Project within 150 calendar days from receipt of the Notice to Proceed.

3. Contract Sum. Subject to additions and deductions by change order, the contract sum is the bid amount of $_____, plus applicable tax. The contract sum shall include all items and services necessary for the proper execution and completion of the Project.

4. Liquidated Damages. Timely performance and completion of the Project is essential to Owner and time limits are of the essence. In the event Contractor fails to physically complete the work in 150 calendar days, plus any authorized extensions thereof, the Contractor shall pay Owner liquidated damages of $1,000.00 for each calendar day of delay in completion of the Project. No deduction or payment of liquidated damages will, in any degree, release the Contractor from further obligations and liabilities to complete the entire contract.

5. Changes. After execution of the Contract, changes in the Project may be accomplished by change order. Owner, without invalidating the Contract, may order changes in the Project within the general scope of the Contract consisting of additions, deletions or other revisions, the Contract Sum and Contract completion date being adjusted accordingly. Change orders shall be in writing signed by the parties.

6. Payment and Performance Bond. SEE A201

7. Permits, Fees, Notices, and Compliance with Laws.

7.1 Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for all permits, fees, licenses and inspections by governmental agencies necessary for the proper execution and completion of the Work that are customarily secured after execution of the Contract and legally required at the time bids are received or negotiations concluded.

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

7.3 Contractor shall obtain a City of Fife business license pursuant to the provisions of Chapter 5.01 FMC prior to receipt of written Notice to Proceed.

8. Termination of Contract. This Contract may be terminated by Owner at any time upon the default of the Contractor or upon public convenience, in which Contractor shall be entitled to just and equitable compensation for any satisfactory work completed prior to the date of termination. Contractor shall not be entitled to any reallocation of cost, profit or overhead. Contractor shall not in any event be entitled to anticipated profit on work not performed because of such termination. Contractor shall use its best efforts to minimize the compensation payable under this Contract in the event of such termination. If the contract is terminated for default, the Contractor shall not be entitled to receive any further payments under the contract until all work called for has been fully performed. Any extra cost or damage to Owner resulting from such default(s) shall be deducted from any money due or coming due to the Contractor. The Contractor shall bear any extra expenses incurred by Owner in completing the work, including all increased costs for completing the work, and all damage sustained, or which may be sustained by Owner by reason of such default.

9. Warranty. SEE A201

10. Indemnification/Hold Harmless. SEE A201

11. Independent Contractor. Contractor is and shall be at all times during the term of this Agreement an independent contractor.

12. Disputes. Any action for claims arising out of or relating to this Agreement shall be governed by the laws of the State of Washington. Venue shall be in Pierce County Superior Court.

13. Attorneys Fees. In any suit or action instituted to enforce any right granted in this Agreement, the substantially prevailing party shall be entitled to recover its costs, disbursements, and reasonable attorneys fees from the other party.

14. Extent of Agreement/Modification. This Agreement, together with attachments or addenda, represents the entire and integrated Agreement between the parties hereto and supersedes all prior negotiations, representations, or agreements, either written or oral. This Agreement may be amended, modified or added to only by written instrument properly signed by both parties.

OWNER:
CITY OF FIFE

By: _____
Subir Mukerjee, City Manager

Date: _____

CONTRACTOR:

By: _____

Name: _____

Title:_____

Date:_____

SECTION 004512 - REFERENCES

1.1 REFERENCES

Provide the names of your last five completed publicly bid projects, which are demonstratively equal in scope and magnitude to this construction project. Include in the reference a summary of the construction project and contact information for the owner's representative. Also provide information regarding claim(s) and/or lien(s), the base bid amount and total change order amount for each project. In the project summary explain why the claims or liens occurred and how you resolved them. Similar references from other Public Works entities of equal or greater scope and magnitude will be evaluated.

1. Company Name:_____
Company Address:_____
City Telephone:_____
Owner's representative:_____
Project Summary:_____
_____
_____
_____
_____
Base Bid Amount $_____ Change Order Amount $_____
Claims _____
Liens_____

2. Company Name:_____
Company Address:_____
City Telephone:_____
Owner's representative:_____
Project Summary:_____
_____
_____
_____
_____
Base Bid Amount $_____ Change Order Amount $_____
Claims _____
Liens_____

3. Company Name:_____
Company Address:_____
City Telephone:_____
Owner's representative:_____
Project Summary:_____
_____
_____
_____
_____
Base Bid Amount $_____ Change Order Amount $_____
Claims _____
Liens_____

4. Company Name:_____
Company Address:_____
City Telephone:_____
Owner's representative:_____
Project Summary:_____
_____
_____
_____
Base Bid Amount $_____ Change Order Amount $_____
Claims _____
Liens_____

5. **Company Name:**_____
Company Address:_____
City Telephone:_____
Owner's representative:_____
Project Summary:_____
_____
_____
_____
_____
Base Bid Amount $_____ Change Order Amount $_____
Claims _____
Liens_____

Bidding Company Name_____

CITY OF FIFE
PERFORMANCE & PAYMENT BOND WITH GUARANTY
(PUBLIC WORKS CONTRACTS)

Name of Project _____
Contractor(Principal) _____
Project/Contract # _____
Surety _____
Bond Amount $_____
Bond #_____

1. Date and Parties

This performance and payment bond with guaranty is dated, for reference purposes only, the _____ day of _____, 201__ and is executed by _____ _____, as Principal(s), and _____, as Surety.

2. General Recitals

A. Principal has entered into a public works contract (the "Contract") with the City of Fife for certain work described as follows:
_____
_____
(the "Work").

B. This bond is furnished in accordance with RCW 39.08 to secure faithful performance of the Contract and payment of all persons covered under RCW 39.08.010.

3. Bond Amount

The Principal and the Surety agree and do jointly and severally bind themselves, their heirs, executors, administrators, and assigns, unto the City in the sum of _____ dollars ($ _____).

4. Agreement to Perform

A. Principal, his or its heirs, executors, administrators, successors, or assigns, shall abide by, and well and truly keep and perform the covenants, conditions and agreements in the Contract, and shall faithfully perform all the provisions of the Contract and shall also well and truly perform and fulfill all the undertakings, covenants, terms, conditions and agreements of any and all duly authorized modifications of the Contract that may hereafter be made, at the time and in the manner therein specified.

B. Principal shall pay all laborers, mechanics, and subcontractors and material suppliers, and all persons who shall supply such person or persons, or subcontractors, with provisions and supplies for the carrying on of such Work.

C. Principal shall pay the taxes, increases, and penalties incurred on the Work under Titles 50, 51, and 82 RCW.

D. The Principal further agrees to correct any defects in materials, workmanship, or installation of the Work which shall develop or be discovered within one (1) year after final acceptance of the Work.

5. Indemnity Agreement

A. The Principal hereby agrees to indemnify and hold the City harmless from any and all claims that may be made against the City resulting directly or indirectly from any action or inaction of the Principal or his agents, employees or independent contractors relating directly or indirectly to work performed or to be performed under the terms of this agreement. This indemnity and hold harmless shall include City Costs related to defending against said claims, or in enforcing the terms of this agreement.

B. For purposes of this document, the term "City Costs" shall mean all City expenditures, obligations or debt incurred, including, but not limited to: construction, labor, equipment and material costs; City staff time; legal consultant fees; taxes and penalties; engineering consultant fees; financial consultant fees; publication, service or process and filing fees; mailing fees; cost of right-of way, real property and easement acquisition; and fees and costs to other governmental jurisdictions, that are made or incurred by the City, whether or not legal action is commenced.

6. Obligation of Surety

A. If the Principal (or any of the employees, subcontractors, or lower tier subcontractors of the Principal) fails to abide by, and well and truly keep and perform the covenants, conditions and agreements in the Contract, or fails to faithfully perform any of the provisions of the Contract or fails to well and truly perform and fulfill any of the undertakings, covenants, terms, conditions and agreements of any and all duly authorized modifications of the Contract that may hereafter be made, at the time and in the manner therein specified, then the Surety shall be liable to the City for City Costs resulting from said failure to perform, but not to exceed the Bond amount.

B. If the Principal (or any subcontractors or lower tier subcontractors of the Principal) fails to pay any laborers, mechanics, or subcontractors or material suppliers, and all persons who shall supply such person or persons, or subcontractors, with provisions and supplies for the carrying on of such Work, then the Surety shall be liable to the City for City Costs

resulting from such failure to pay and to the persons covered by RCW 39.08.010, but not to exceed the Bond amount.

C. If the Principal (or any subcontractors or lower tier subcontractors of the Principal) fails to pay the taxes, increases, and penalties incurred on the Work under Titles 50, 51, and 82 RCW, then the Surety shall be liable to the City for City Costs resulting from such failure to pay and to the State of Washington, but not to exceed the Bond amount.

D. If the Principal fails to correct any defects in materials, workmanship, or installation of the Work which shall develop or be discovered within one (1) year after final acceptance of the Work, then the Surety shall be liable to the City for City Costs resulting from such failure, but not to exceed one tenth of the Bond amount.

E. The Surety agrees that no change, extension of time, alteration or addition to the terms of the contract or to the Work to be performed thereunder or the specifications accompanying the same shall in any way affect its obligation on this Bond, and it does hereby waive notice of any change, extension of tie, alterations or additions to the terms of the Contract or the Work or to the specifications.

F. The Surety agrees that modifications and changes may be made in the terms and provisions of the Contract without notice to Surety, and any such modifications or changes increasing the total amount to be paid to the Principal shall automatically increase the obligation of the Surety on this Bond in a like amount. However, such increase shall not exceed twenty-five percent (25%) of the original amount of this Bond without the consent of the Surety.

7. Address for Notices

All notices required hereunder shall be considered properly delivered when personally delivered, when received by facsimile, or on the third day following mailing, postage prepaid, certified mail, return receipt requested, to:

Principal:	Surety:
_____	_____
Name	Name
_____	_____
Street address	Street address
_____	_____
City, State and zip code	City, state and zip code
_____	_____
Facsimile number	Facsimile number

8. Default

A. If the Principal (or any of the employees, subcontractors, or lower tier subcontractors of the Principal) fails to faithfully, fully, and timely perform the Contract or any amendments thereto as required hereunder, fails to pay any laborers, mechanics, or subcontractors or material suppliers, or any persons who shall supply such person or persons, or subcontractors, with provisions and supplies for the carrying on of such Work, or fails to pay the taxes, increases, and penalties incurred on the Work under Titles 50, 51, and 82 RCW, then the City shall notify the Principal and the Surety that such failures must be cured to the satisfaction of the City Public Works Department within seven days from the date of the Notice, or such longer time as may be determined by the City Public Works Director. If the failures are not so cured and approved within the period stated in the notice then the Surety, upon written demand by the City, shall immediately tender to the City the full amount of the Bond (less any amount previously paid to claimants in accordance with RCW 39.08) and the City will complete the Work and/or make the payments, as the case may be, deduct from the amount tendered the City Costs, and refund the remainder, if any, to the Surety.

B. If the Principal fails to correct any defects in materials, workmanship, or installation of the Work, as required hereunder, then the City shall notify the Principal and Surety that the Work must be corrected to the satisfaction of the City Public Works Department within seven days from the date of the Notice, or such longer time as may be determined by the City Public Works Director. If the Work is not corrected and approved within the period stated in the notice, then the Surety, upon written demand by the City, shall immediately tender to the City one tenth of the Bond amount (or the total amount remaining on the Bond whichever is less), and the City will correct the Work, and deduct from the amount tendered the City Costs. The City shall retain the remainder until the end of the warranty period. If at the end of the warranty period the tendered monies have not been expended for City Costs associated with correction of Work, then the remaining amount shall be refunded to the Surety.

C. If the amount of the Bond is inadequate to pay for City Costs, either because the City Costs exceed the Bond amounts or the Surety is no longer solvent or fails to timely tender the appropriate amount, then the City shall forthwith notify the Principal and he shall tender the deficiency to the City within five days of said notification. If the City commences legal action to collect said deficiency then the prevailing party in said legal action shall be entitled to judgment for their reasonable costs and attorney fees incurred therein. Each Principal is jointly and severally liable for the obligations set forth herein.

9. Action by Claimants.

A. All such persons mentioned in RCW 39.08.010 shall have a right of action in his, her, or their own name or names on the Bond for work done by such laborers or mechanics, and for materials furnished or provisions and goods supplied and furnished in the prosecution of the Work: PROVIDED, That such persons shall not have any right of action on this Bond for any sum whatever, unless within thirty days from and after the completion of the Contract with an acceptance of the Work by the City Council, the laborer, mechanic or subcontractor, or material

supplier, or person claiming to have supplied materials, provisions or goods for the prosecution of such Work, shall present to and file with the City a notice in writing in accordance with RCW 39.08.030.

B. Every person, firm or corporation furnishing materials, supplies or provisions to be used in the construction, performance, carrying on, prosecution or doing of any of the Work, shall, not later than ten days after the date of the first delivery of such materials, supplies or provisions to any subcontractor or agent of any person, firm or corporation having a subcontract for the construction, performance, carrying on, prosecution or doing of such Work, deliver or mail to the Principal a notice in writing stating in substance and effect that such person, firm or corporation has commenced to deliver materials, supplies or provisions for use thereon, with the name of the subcontractor or agent ordering or to whom the same is furnished and that the Principal and the Bond will be held for the payment of the same, and no suit or action shall be maintained in any court against the Principal or this Bond to recover for such material, supplies or provisions or any part thereof unless the provisions of this section and RCW 39.08.065 have been complied with.

C. The State of Washington shall have a right of action on the Bond for taxes, increases, and penalties incurred on the Work under Titles 50, 51, and 82 RCW.

9. Modification.

This document cannot be modified, nor the obligations created hereunder terminated, without the City's express written consent.

10. Governing Law--Venue.

Any action for claims arising out of or relating to this Agreement shall be governed by the laws of the State of Washington. Venue shall be in Pierce County Superior Court.

PRINCIPAL:

_____
By:_____
Title _____

SURETY:

_____
By:_____
Title _____

PRINCIPAL:

_____
By:_____
Title _____

Accepted by the City this _____ day of
_____, 201__.
By:_____
Title _____

[Power of Attorney must be attached to Bond]

AIA® Document A201™ – 2007

General Conditions of the Contract for Construction

for the following PROJECT:
(Name and location or address)
CITY OF FIFE
City Hall Phase 1 Envelope Replacement

TCF Project No. 2012-008

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

THE OWNER:
(Name, legal status and address)
City of Fife
5411 23rd Street East)
Fife, WA 98424

THE ARCHITECT:
(Name, legal status and address)
TCF Architecture, PLLC
902 N 2nd Street
Tacoma, WA 98403

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3 CONTRACTOR

4 ARCHITECT

5 SUBCONTRACTORS

6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

7 CHANGES IN THE WORK

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User Notes: (1999332660)

14 TERMINATION OR SUSPENSION OF THE CONTRACT

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ARTICLE 1 GENERAL PROVISIONS

§ 1.1 BASIC DEFINITIONS

§ 1.1.1 THE CONTRACT DOCUMENTS

The Contract Documents are complimentary, enumerated in the Agreement between the Owner and Contractor (hereinafter the Agreement) and consist of the Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of the ~~Contract,~~ Contract and information reflected therein, other documents listed in the Agreement and Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive or (4) a written order for a minor change in the Work issued by the Owner and Architect. Unless specifically enumerated in the Agreement, the Contract Documents do not include other documents such as the advertisement or invitation to bid, Instructions to Bidders, sample forms, other information furnished by the Owner in anticipation of receiving bids or proposals, the Contractor's bid or proposal, or portions of Addenda relating to bidding requirements. In the event of a conflict or discrepancy among or in the Contract Documents, interpretation shall be governed in the following priority, with an Addendum or a revision to a Contract Document having precedence over the original document and later Addenda having precedence over earlier:

.1 Agreement (revised A102-2007,) and amendments, with written amendments having precedence;
.2 Any Special Conditions;
.3 Any Supplementary Conditions;
.4 These revised General Conditions (A201-2007); and
.5 Drawings (large-scale having precedence over small-scale, and written or computed dimensions having precedence over scaled dimensions,) Schedules, and Specifications.

If there is any inconsistency or ambiguity internally between the Drawings, Schedules, or Specifications, the Contractor shall make an inquiry to the Architect and Owner to determine how to proceed. Unless otherwise ordered in writing by the Architect or Owner, the Contractor shall provide the better quality of, or the greater quantity of, any work or materials as reasonably interpreted by the Architect or the Owner, at no change in the Contract Sum or Contract Time. In the event that Work is shown on Drawings but not contained in Specifications or Schedules, the Work as shown shall be provided at no change in the Contract Sum or Contract Time, according to Specifications to be issued by the Architect consistent with and reasonably inferable from the work shown on the Drawings.

§ 1.1.2 THE CONTRACT

The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the Contractor and the Architect or the Architect's consultants, (2) between the Owner and a Subcontractor or a ~~Sub-subcontractor,~~ Sub-subcontractor (although the Owner does not waive any third-party beneficiary rights it may otherwise have as to Subcontractors or any tier), (3) between the Owner and the Architect or the Architect's consultants or (4) between any persons or entities other than the Owner and the Contractor. The Architect shall, however, be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of the Architect's duties. This Contract is a standard form created by the AIA and modifications that have been agreed between the parties. As such, the parties agree that neither party shall be considered the author of the Contract, and any ambiguities shall be neutrally construed.

§ 1.1.3 THE WORK

The term "Work" means the ~~construction and services~~ construction, services and administrative procedures required by the Contract Documents, whether completed or partially completed, and whether new construction or modification of existing structures, and includes all other labor, materials, equipment and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project. Where the Work requires construction that modifies or interfaces with existing structures, the Contractor shall ensure that the Work is compatible and interfaces with the as-built conditions of the existing structures.

§ 1.1.4 THE PROJECT

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

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§ 1.1.5 THE DRAWINGS

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

§ 1.1.6 THE SPECIFICATIONS

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

§ 1.1.7 INSTRUMENTS OF SERVICE

Instruments of Service are representations, in any medium of expression now known or later developed, of the tangible and intangible creative work performed by the Architect and the Architect's consultants under their respective professional services agreements. Instruments of Service may include, without limitation, ~~studies, surveys, models, sketches, drawings, specifications, and other similar materials.~~Drawings, Specifications, studies, surveys, models, sketches, and other similar materials through which the Work to be executed by the Contractor is described.

§ 1.1.8 ~~INITIAL DECISION MAKER~~PROJECT MANUAL

The ~~Initial Decision Maker is the person identified in the Agreement to render initial decisions on Claims in accordance with Section 15.2 and certify termination of the Agreement under Section 14.2.2.~~ Project Manual is a volume usually assembled for the Work that may include the bidding requirements, sample forms, the Agreement, these General Conditions and other Contract Documents, including the Specifications for the Work.

§ 1.2 CORRELATION AND INTENT OF THE CONTRACT DOCUMENTS

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

§ 1.2.2 Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any ~~trade.~~trade, nor shall it remove the obligation to complete all of the Work when coordination between the specifications and the drawings or coordination between subcontracts is required.

§ 1.2.3 Unless otherwise stated in the Contract Documents, words not defined in the Contract Documents that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings. Computed dimensions shall take precedence over scale dimensions and large scale drawings shall take precedence over small scale drawings.

§ 1.2.4 If there is any inconsistency in the Contract Drawings, or between the Contract Drawings and the Specifications, unless otherwise ordered in writing by the Architect or Owner, the Contractor shall provide the better quality of or greater quantity of work or materials as reasonably interpreted by the Architect or the Owner. If the Contractor discovers that the Specifications, Drawings, or Project Manual fail to particularly describe the material or kind of goods to be used in any place, then the Contractor shall make inquiry of the Architect and Owner as to what is best suited. The material that a competent contractor, having participated in a Preconstruction Phase and following accepted construction industry standards, would use to produce first quality finished Work shall be considered a part of the Contract. If the Contractor discovers such inconsistency or ambiguity and fails to notify the Architect, there shall be no adjustment to the Contract Sum or Contract Time.

§ 1.3 CAPITALIZATION

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

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§ 1.4 INTERPRETATION

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

§ 1.4.1 Reference in the singular to an article, device, item or piece of equipment shall include the larger of the number of such articles indicated in the Contract Documents or the number required to complete the installation.

§ 1.5 OWNERSHIP AND USE OF DRAWINGS, SPECIFICATIONS AND OTHER INSTRUMENTS OF SERVICE

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

§ 1.5.2 The Contractor, Subcontractors, Sub-subcontractors and material or equipment suppliers are authorized to use and reproduce the Instruments of Service provided to them solely and exclusively for execution of the ~~Work.~~ Work under the Contract Documents and with respect to the Project. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. All copies of the Instruments of Service, except the Contractor's Record Set, shall be returned or suitably accounted for to the Architect, on request, upon completion of the Work. The Contractor may retain one record set. The Contractor, Subcontractors, Sub-subcontractors, and material or equipment suppliers may not use the Instruments of Service on other projects or for additions to this Project outside the scope of the Work without the specific written consent of the Owner, Architect and the Architect's consultants.

§ 1.6 TRANSMISSION OF DATA IN DIGITAL FORM

If the parties intend to transmit Instruments of Service or any other information or documentation in digital form, they shall endeavor to establish necessary protocols governing such transmissions, unless otherwise already provided in the Agreement or the Contract Documents. Any electronic files or information on computer media will be provided for the convenience of the Contractor and for informational purposes only. Neither the Architect nor the Owner shall be liable for any inaccuracy or incompleteness in information contained in an electronic copy of an Instrument of Service. If, for any reason, a conflict occurs between information in digital form and the stamped, signed documents, the information on the stamped, signed documents shall govern and be considered correct. Any additions or modification to the information contained on, or generated from the electronic files or computer media made by anyone other than the Architect may result in adverse consequences, which the Architect can neither predict not control and for which the Architect will not be held responsible.

ARTICLE 2 OWNER

§ 2.1 GENERAL

§ 2.1.1 The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Owner shall designate in writing a representative who shall have express authority to bind the Owner with respect to all matters requiring the Owner's approval or authorization. Except as otherwise provided in Section 4.2.1, the Architect does not have such authority. The term "Owner" means the Owner or ~~the Owner's authorized representative.~~Owner's authorized representative. A WAIVER OF ANY PROVISION OF THE CONTRACT DOCUMENTS CAN ONLY BE MADE IN WRITING AND BY THE OWNER'S AUTHORIZED REPRESENTATIVE. No other person is authorized to grant such waivers on behalf of the Owner.

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

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§ 2.2 INFORMATION AND SERVICES REQUIRED OF THE OWNER

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

§ 2.2.2 Except for permits and fees that are the responsibility of the Contractor under the Contract Documents, including those required under Section 3.7.1, the Owner shall secure and pay for necessary environmental approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities. The Contractor is responsible to secure and pay for licenses and all other permits, approvals, easements, assessments and charges subject to Section 3.7.1, if required in the Contract Documents.

§ 2.2.3 The Owner ~~shall~~ may furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the site. The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work. The Contractor should assume that the locations of any underground or hidden utilities, underground tanks, plumbing or electrical runs indicated in the surveys or Contract Documents are shown in approximate locations, but the Contractor is responsible for making all utility location verifications. The Contractor is responsible for performing all utilities investigation and location work to determine the precise locations thereof. The Contractor shall not damage or interrupt utilities services of any kind. The Contractor shall bear the risk of loss arising out of its Work, which directly or indirectly damages or interrupts any utilities or utilities services, or causes or contributes to damages of any nature, except in the case where the loss resulted because the utility location information provided by Owner or Utility Provider was inaccurate.

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

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

§ 2.3 OWNER'S RIGHT TO STOP THE WORK

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

§ 2.4 OWNER'S RIGHT TO CARRY OUT THE WORK

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a ~~ten-day~~ seven (7) day period after receipt of written notice from the Owner to commence and continue to make reasonable progress toward the correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such deficiencies. In such case an appropriate Change Order shall be issued deducting from payments then or thereafter due the Contractor the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Architect's additional services made necessary by such default, neglect or failure. ~~Such action by the Owner and amounts charged to the Contractor are both subject to prior approval of the Architect.~~ The right of the Owner to correct the Work pursuant to this Section 2.4 shall not give rise to any duty on the part of the Owner to exercise this right for the benefit of itself or

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others. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner.

ARTICLE 3 CONTRACTOR

§ 3.1 GENERAL

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

§ 3.1.2 The Contractor shall perform the Work in accordance with the Contract ~~Documents.~~Documents and submittals accepted pursuant to Section 3.12.

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

§ 3.1.4 The Contractor shall be, and operate as, an independent contractor in the performance of the Work and shall have complete control over and responsibility for all personnel performing the Work. The Contractor is not authorized to enter into any agreements or undertakings for, or on behalf of, the Owner or to act as or be an agent or employee of the Owner. The Contractor will cooperate with the Owner and Architect to create an environment of mutual respect and focus on the success of the Project. The Contractor will endeavor to promote harmony and cooperation among and between the Owner, the Architect, the Contractor, and other persons or entities employed by each of them, in order to further the interests of the Owner and effect prompt completion of the Project within the requirements of the Contract Time and Contract Sum.

§ 3.2 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR

§ 3.2.1 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed and correlated personal observations with requirements of the Contract Documents. By executing this Contract the Contractor represents and acknowledges that the Contract Sum is reasonable compensation for all the Work, that the Contract Time is adequate for the performance of the Work, and that it has carefully examined the Contract Documents and the Project site, including any existing structures and access thereto, and any drawings of the existing conditions available from the Owner, and that it has satisfied itself as to the nature, location, character, quality and quantity of the Work, the physical labor, materials, equipment, goods, products, supplies, work, services and other items to be provided and all other requirements of the Contract Documents, as well as the surface conditions and other foreseeable matters that may be encountered at the Project site or affect performance of the Work or the cost or difficulty thereof, including but not limited to those conditions and matters affecting: transportation, access, local regulations, disposal, handling and storage of materials, equipment and other items; availability and quality of labor, water, electric power, utilities, drainage; availability and condition of roads; normal climatic conditions and seasons; physical conditions at the Project site and the surrounding locality; topography and ground surface conditions; and equipment and facilities needed preliminary to and at all times during the performance of the Work. The failure of the Contractor fully to acquaint itself with any such condition or matter shall not in any way relieve the Contractor from the responsibility for performing the Work in accordance with the Contract Documents and within the Contract Time and the Contract Sum.

§ 3.2.2 Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Drawings, Specifications and other Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 2.2.3, shall take field measurements ~~of any existing conditions~~ of, and verify any, existing conditions, including all general reference points and any interfering existing conditions, related to that portion of the Work, and shall observe any conditions at the site affecting ~~it.~~ it and shall carefully compare such field measurements and conditions and other information known to the Contractor with the Contract Documents before commencing such activities. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Architect and Owner any errors, inconsistencies or omissions discovered by or made known to the Contractor as

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a request for information in such form as the Owner or Architect may require. It is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents.

§ 3.2.3 The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, building codes, rules and regulations, or lawful orders of public authorities, but the Contractor shall promptly report to the Architect any nonconformity discovered by or made known to the Contractor as a request for information in such form as the Owner or Architect may require. The Contractor shall comply with all applicable Federal, State, County and City laws, ordinances, rules, and regulations, including amendments to each, and including but not limited to the latest applicable versions of:

.1 International Building Code;
.2 Uniform Plumbing Code;
.3 Uniform Mechanical Code;
.4 National Electrical Code;
.5 Washington State Energy Code;
.6 Washington State Rules and Regulations for Barrier-Free Design;
.7 Americans with Disabilities Act (ADA);
.8 Federal and State Safety Codes as adapted and/or modified by State and Local Ordinances; and
.9 Any applicable Municipal Codes.

§ 3.2.4 If the Contractor believes that additional cost or time is involved because of ~~clarifications or instructions the Architect issues~~ any design errors or omissions or inconsistencies noted by the Contractor during this review, or clarifications or instructions issued by the Owner or the Architect in response to the Contractor's notices or requests for information pursuant to Sections 3.2.2 or 3.2.3, the Contractor shall make any Claims as provided in Article 15. If the Contractor fails to perform the obligations of Sections 3.2.2 or 3.2.3, the Contractor shall pay such costs and damages to the Owner as would have been avoided if the Contractor had performed such obligations. If the Contractor performs those obligations, the Contractor shall not be liable to the Owner or Architect for damages resulting from errors, inconsistencies or omissions in the Contract Documents, for differences between field measurements or conditions and the Contract Documents, or for nonconformities of the Contract Documents to applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public ~~authorities.~~ authorities unless the Contractor recognized or reasonably should have recognized such error, inconsistency, omission or difference and failed to report it to the Owner and Architect. If the Contractor performs any construction activity that it knows or reasonably should have known involves an error, inconsistency or omission in the Contract Documents or reports referenced therein without such notice to the Owner and the Architect, the Contractor shall be responsible for such performance and shall bear the attributable costs for correction.

§ 3.2.5 The Contractor shall perform such detailed examination, inspection and quality surveillance of the Work as will ensure that the Work is progressing and is being completed in strict accordance with the Contract Documents. The Contractor shall plan and lay out all Work in advance of operations so as to coordinate all work without delay or revision. The Contractor shall be responsible for inspection of portions of the Work already performed to determine that such portions are in proper condition to receive subsequent Work. Under no conditions shall a section of Work proceed prior to preparatory work having been completed and made satisfactory to receive the related Work. The Contractor shall ensure that the responsible Subcontractor has carefully examined all preparatory work that has been executed to receive its work and has notified the Contractor (who shall notify the Owner and Architect in writing) of any defects or imperfections in preparatory work that will, in any way, affect satisfactory completion of the Work. The lack of such notification shall constitute an acceptance of preparatory work, and a waiver of any later Claim of defect therein.

§ 3.2.6 Any investigations of hidden or subsurface conditions have been made for design purposes. The results of these investigations may be included in the Project Manual or otherwise available for the convenience of the Contractor but are not a part of the Contract Documents. While the Contractor may reasonably rely upon such investigation results, there is no guarantee, express or implied, that the conditions indicated are representative of those existing throughout the site or that unforeseen developments may not occur. The Contractor is solely responsible for reasonably interpreting the information and extrapolating beyond the testing location, including each individual boring, test pit or other location.

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§ 3.2.7 The Contractor shall do no Work without applicable Drawings, Specifications, or written modifications or, where required, Shop Drawings, Product Data, or Samples, unless instructed to do so in writing by the Architect and Owner.

§ 3.3 SUPERVISION AND CONSTRUCTION PROCEDURES

§ 3.3.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, ~~sequences~~ sequences, assembly details and procedures and for coordinating all portions of the Work under the Contract, unless the Contract Documents give other specific instructions concerning these matters. The Contractor shall review any such instructions and any construction or installation procedures specified in the Contract Documents, shall advise the Architect and Owner (1) if the specified instruction or procedure deviates from what the Contractor considers to be good construction practice, (2) if following the instruction or procedure will affect any warranties, or (3) if the Contractor objects to the instruction or procedure, and shall propose alternative instructions or procedures acceptable to the Contractor, for which no increase in the Contract Sum or Contract Time will be made. The Contractor shall not proceed with such alternative instruction or procedure without the written acceptance of the Owner and the Architect, and the Contractor shall be solely responsible for the jobsite safety of such means, methods, techniques, sequences or procedures. If the Contract Documents give specific instructions concerning construction means, methods, techniques, assembly details, sequences or procedures, the Contractor shall evaluate the jobsite safety thereof and, except as stated below, shall be fully and solely responsible for the jobsite safety of such means, methods, techniques, sequences or procedures. If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely written notice to the Owner and Architect and shall not proceed with that portion of the Work without further written instructions from the Architect. If the Contractor is then instructed by the Owner to proceed with the required means, methods, techniques, sequences or procedures without acceptance of changes proposed by the Contractor, the Owner shall be solely responsible for any resulting non-consequential loss or damage arising solely from those Owner-required means, methods, techniques, sequences or procedures.

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

§ 3.3.3 The Contractor shall be responsible for inspection of portions of Work already performed to determine that such portions are in proper condition to receive subsequent Work. Under no condition shall a section of Work proceed prior to preparatory work having been completed, cured, dried and otherwise made satisfactory to receive the related Work. Responsibility for timely installation of all materials and equipment rests solely with the Contractor, who shall maintain coordination control at all times. The Contractor shall require its Subcontractors of any tier to be familiar with all aspects of the Contract Documents related to their Work. The Contractor shall ensure that the responsible Subcontractor has carefully examined all preparatory work that has been executed to receive its Work and has notified the Contractor (who shall notify the Owner and Architect in writing) of any defects or imperfections in preparatory work that will, in any way, affect satisfactory completion of the Work. The lack of such notification or the failure of the Contractor to inspect such portions of the Work shall constitute an acceptance of preparatory work and a waiver of any later claim of defect therein.

§ 3.3.4 The Contractor shall perform such detailed examination, inspection and quality control and surveillance of the Work as will ensure that the Work is progressing and is being completed in strict accordance with the Contract Documents, including the then current issue of the Drawings and Specifications. The Contractor shall be responsible for examination, inspection and quality control and surveillance of all Work performed by any Subcontractor of any tier. The Contractor shall determine when it is necessary to perform, and shall perform, tests (as a Cost of the Work and in addition to those requested by the Owner or required by the Specifications or any other provision of the Contract Documents) to verify its inspections or to ensure that the Work is being completed in strict accordance with the Contract Documents. Inspection by or on behalf of the Owner shall not constitute approval of the Work.

§ 3.3.5 The Contractor shall plan and lay out all Work in advance of operations so as to coordinate all Work without delay or revision. The Contractor is responsible for coordination of all the Drawings related to specific locations. The Contractor shall establish and maintain existing lot lines, restrictions, existing survey markers of any kind and

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bench marks. The Contractor shall establish and maintain all other lines, levels and bench marks necessary for the execution of the Work and take necessary steps to prevent their dislocation or destruction. The Contractor shall employ a professional land surveyor registered in the State of Washington to initially lay out and be responsible for the accuracy of the Work and to create and submit to the Owner an as-built survey and accurate utility as-builts for use by the Owner. The Contractor shall provide an as-built surveyed site plan noting all site improvements, including, but not limited to, building corners, storm sewer, drains, grade and invert elevations.

§ 3.3.6 The Contractor shall maintain, and contemporaneously provide to the Owner, a Daily Report for each work day during the Contract Time, whether or not any Work is performed, and for each non-work day in which Work is performed on the site. The Daily Report must identify all activities performed related to the Work, including but not limited to, numbers of workers by trade, equipment in use and stored, inspections, and performance of Change Order and Construction Change Directive Work. The Daily Report shall be completed on a form provided by the Contractor and approved by the Owner and Architect. The Contractor shall submit a Daily Report to the Owner and the Architect on the work day following the day covered in the report, unless other submittal timing is approved by the Owner and Architect.

§ 3.4 LABOR AND MATERIALS

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

§ 3.4.2 ~~Except in the case of minor changes in the Work authorized by the Architect in accordance with Sections 3.12.8 or 7.4, the~~ After the Contract has been executed, the Owner and Architect may consider a written request for the substitution of material or products in place of those specified in the Contract Documents only under exceptional circumstances described in and following the procedures of the Contract Documents. The written request must be submitted on the Architect's substitution form and include the specifications for the material or product and any proposed change in the Contract Sum or Contract Time. The Contractor may make substitutions only with the written consent of the ~~Owner,~~ Owner and Architect, after evaluation by the Architect and in accordance with a Change Order or Construction Change Directive. By requesting a substitution, the Contractor represents that it has personally investigated the proposed material or product and determined that it is equal or better in all respects to that specified (or if not equal or better in all respects, the Contractor shall identify such deficiencies,) that the same or better warranty will be provided for the substitution, that complete cost data, including all direct and indirect costs of any kind, has been presented, that it waives any other known or unknown Claim for an increase in the Contract Sum or Contract Time, that is has coordinated with affected Subcontractors, the substitution will not impact other parts of the Work, and that it will coordinate the installation of the substitute if accepted and make all associated changes to the Work. The Contractor will be responsible for the reasonable costs of any time the Owner and/or the Architect expend in reviewing a substitution request. Neither the Owner nor the Architect will be responsible for the performance of the substituted product.

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

§ 3.4.3.1 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work, including observance of any drug testing and all smoking, tobacco, drug, alcohol, parking, safety, weapons, background checks, sexual harassment and other rules governing the conduct of personnel at the Project Site. The Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them. The Contractor shall ensure that all persons performing the Work comply with the Owner's policies, and will not and do not engage in inappropriate conduct or inappropriate contact with staff. Without limiting the generality of the foregoing, the Contractor shall ensure by appropriate provisions in each subcontract agreement that the Contractor may remove from the Work and Work site any Subcontractor or Subcontractor's employee who has engaged in such action. At no change to the Contract Sum or Contract time, the Contractor shall remove from the Work and Work site any employee or other person pursuant to this Section 3.4.3. Failure to comply with these requirements is grounds for immediate termination of the Agreement for cause.

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§ 3.4.3.2 No employees of either the Contractor or any of its Subcontractors of any tier shall harass, intimidate, have physical contact with, or engage in other verbal or physical conduct or communication of a sexual, intimidating or harassing nature with Owner's employees or the public in general, nor create an intimidating, hostile or offensive environment. The Contractor shall remove from the Work and Work site any employee or other person who has engaged in such actions or who the Owner reasonably considers objectionable. Without limiting the generality of the foregoing, the Contractor shall ensure by appropriate provisions in each subcontract agreement that the Contractor may remove from the Work and Work site any Subcontractor or Subcontractor's employee who has engaged in such action. At no change to the Contract Sum or Contract time, the Contractor shall remove from the Work and Work site any employee or other person pursuant to this Section. Failure to comply with these requirements is grounds for immediate termination of the Agreement for cause.

§ 3.5 WARRANTY

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

§ 3.5.1 The Contractor warrants to the Owner and Architect that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or explicitly permit otherwise. The Contractor further warrants that the Work will be performed in a workmanlike manner, will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require. Work, materials, or equipment not conforming to these requirements, including substitutions not properly approved and authorized, is considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse by the Owner, alterations to the Work not executed or supervised by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by the Owner or Architect, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment. The Contractor is not relieved of its general warranty obligations by the specification of a particular product or procedure in the Contract Documents. Warranties in the Contract Documents shall survive completion, acceptance and final payment.

§ 3.5.2 The Contractor shall collect, assign, and deliver to the Owner all written warranties required by the Contract Documents. These warranties shall first be executed by the applicable Subcontractor and those suppliers and manufacturers providing materials for the Work, and shall subsequently be countersigned by the Contractor to extend to the Owner all rights, claims, benefits and interests that the Contractor may have under express or implied warranties or guarantees against the Subcontractor, supplier, or manufacturer for defective or non-conforming Work. Warranty language shall comply with the Contract Documents and shall be submitted to the Owner and Architect at least thirty (30) days prior to ordering the warranted material or equipment.

§ 3.6 TAXES

The Contractor shall pay ~~sales, consumer, use~~ all taxes, including sales, consumer, use, B & O, income, and similar taxes for the Work provided by the Contractor that are legally enacted when bids are ~~received or negotiations concluded,~~ received, whether or not yet effective or merely scheduled to go into effect. The only taxes excluded from the Contract Sum and separately reimbursable are state and local sales taxes on the Contract Sum.

§ 3.7 PERMITS, FEES, NOTICES AND COMPLIANCE WITH LAWS

§ 3.7.1 Unless otherwise provided in the Contract Documents, the Owner will secure and pay for only the permits and governmental fees listed in the Summary of Work, as its responsibility and the Contractor shall secure and pay for all other permits, fees, and licenses necessary for the execution of the Work, including without limitation, utility connection fees, other Subcontractor permits and fees, including plan check fees for deferred submittals, review and application fees for shop drawings, or bidder designed systems, any inspection fees not covered by the initial building permit fee, including re-inspection fees, and renewal fees, Department of Labor and Industries fees, as well as for other permits, fees, licenses, and inspections by government agencies necessary for proper execution and completion of the Work that are ~~customarily secured after execution of the Contract and~~ legally required at the

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time bids are received or negotiations ~~concluded.~~concluded other than those that the Specifications explicitly indicate the Owner is providing. The Contractor will pay for all license fees, renewals and penalties.

§ 3.7.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work. The Contractor shall coordinate and schedule all Work with entities with jurisdiction over the site, permitting agencies, utility companies, and other such agencies with jurisdictional authority necessary for completion of the Work. The Contractor shall keep the Owner informed of communications from these authorities and utilities. The Owner will assist the Contractor with such coordination and scheduling, but the Owner is not responsible for delays caused by such permitting agencies utility companies, and other such agencies determined to have jurisdictional authority. The Contractor shall be responsible for providing all information, documents, and fees to the permitting agencies, utility companies, and other such agencies determined to have jurisdictional authority within thirty (30) days after issuance of the Notice to Proceed to the extent necessary for site access and, for other purposes, as soon as necessary to obtain and coordinate permits, utility and other such connections. The Contractor shall obtain all permit renewals during the course of the Work at the Contractor's expense. The Contractor will be responsible for providing information and fees to the Department of Labor and Industries.

§ 3.7.3 If the Contractor observes that portions of the Contract Documents are at variance with applicable laws, statutes, ordinances, building codes, rules, or regulations, or lawful orders of public authorities, the Contractor shall promptly notify the Architect and Owner in writing, and necessary changes shall be accomplished by appropriate Modification. If the Contractor performs Work knowing it to be contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor shall assume ~~appropriate~~ responsibility for such Work and shall bear the costs attributable to correction.

§ 3.7.4 Concealed or Unknown Conditions. If the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in any soils reports available from the Owner to the Contractor, or in the Contract Documents or (2) unknown physical conditions of an unusual nature, that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall promptly provide written notice to the Owner and the Architect before conditions are disturbed and in no event later than ~~21~~ seven (7) days after first observance of the conditions. The Architect will promptly investigate such conditions and, if the Architect determines that they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend an equitable adjustment in the Contract Sum or Contract Time, or ~~both.~~ both, consistent with the requirements of the Contract Documents. If the Architect determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Architect shall promptly notify the ~~Owner and Contractor in writing, stating the reasons. If either party disputes the Architect's determination or recommendation, that party may proceed as provided in Article 15.~~ Contractor in writing. Any claim of the Contractor arising from the Architect's determination or recommendation shall be made in accordance with the dispute resolution procedure in Article 15. No increase to the Contract Sum or the Contract Time shall be allowed if the Contractor knew, or reasonably should have known, of the concealed conditions prior to executing the Contract.

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

§ 3.8 ALLOWANCES

§ 3.8.1 The Contractor shall include in the Contract Sum all ~~allowances~~ Allowances stated in the Contract Documents. Items covered by ~~allowances~~ Allowances shall be supplied for such amounts and by such persons or

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entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities to whom the Contractor has made reasonable and timely written objection.

§ 3.8.2 Unless otherwise provided in the Contract Documents,

.1 Allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, except sales tax, less applicable trade discounts;

.2 Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit and other expenses contemplated for stated ~~allowance~~ Allowance amounts shall be included in the Contract Sum but not in the ~~allowances;~~ Allowances; and

.3 Whenever costs are more than or less than ~~allowances,~~ Allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between ~~actual~~ actual, reasonable costs and the ~~allowances~~ Allowances under Section 3.8.2.1 and (2) changes in Contractor's costs under Section ~~3.8.2.2.~~3.8.2.2, except where the Allowance is based upon a unit price specified in the Agreement.

Allowances are defined in the Contract Documents as being due to the uncertainty in the scope, price and quantity of the Allowance items at the time the Contract was executed. Whenever actual costs are more or less than the Allowance, the Contract Sum will be adjusted accordingly by the Change Order. The Contractor must provide the Owner with written notice of its intent to exceed an Allowance amount, with estimates and justification (providing the Owner with the opportunity to approve or reject the excess costs,) before exceeding an Allowance amount.

§ 3.8.3 Materials and equipment under an ~~allowance~~ Allowance shall be selected by the Owner ~~with reasonable promptness.~~in sufficient time to avoid delay in the Work.

§ 3.9 SUPERINTENDENT

§ 3.9.1 The Contractor shall employ a ~~competent superintendent and necessary assistants~~ competent, computer literate, and experienced project manager, project engineer, superintendent and necessary assistants as identified in the Contractor's proposal, who shall be in attendance at the Project site during performance of the Work. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor. Important communications shall be confirmed in writing. Other communications shall be similarly confirmed on written request in each case.

§ 3.9.2 The ~~Contractor, as soon as practicable after award of the Contract, shall furnish in writing to the Owner through the Architect the name and qualifications of a proposed superintendent. The Architect may reply within 14 days to the Contractor in writing stating (1) whether the Owner or the Architect has reasonable objection to the proposed superintendent or (2) that the Architect requires additional time to review. Failure of the Architect to reply within the 14 day period shall constitute notice of no reasonable objection.~~ superintendent and project engineer shall be employees of the Contractor. The Contractor shall also have available for work on site experienced, skilled employees, such as carpenters, laborers, erection specialists, etc., to perform work as needed. After Substantial Completion, a qualified, experienced representative of the Contractor, with authority to bind the Contractor, shall be present on site for the time required to achieve Final Completion within the specified time. Similarly, appropriate Subcontractor supervisory personnel (foreman level or above) shall also be present at the Project site whenever Subcontractor work of any tier is being performed, whether before or after Substantial Completion. Neither the superintendent nor the Contractor's project manager or project engineer shall be changed without the approval of the Owner, which shall not be unreasonably withheld.

§ 3.9.3 The ~~Contractor shall not employ a proposed superintendent to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not change the superintendent without the Owner's consent, which shall not unreasonably be withheld or delayed.~~ Contractor, within ten (10) days after award of the Contract, shall furnish in writing to the Owner, through the Architect, the name and qualifications of a proposed superintendent and, project manager. The Owner or Architect may reply within a reasonable time to the Contractor stating (1) whether the Owner or the Architect has reasonable objection to the proposed superintendent or project manager or (2) that the Owner or Architect requires additional time to review. Failure of the Owner or Architect to reply within a reasonable time shall constitute notice of no reasonable objection. Within ten (10) days of the issuance of the Notice to Proceed, the Contractor shall also provide to the Owner and Architect:

.1 A chain-of-command organizational chart which includes all supervisory personnel, including the project manager, superintendent, and other key personnel that the Contractor intends to use on the

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Work. The chart shall specify any limits of authority for each person, including any limitation on his or her ability to speak for and bind the Contractor, as well as any limits on decision-making authority with respect to specific dollar values, Contract Time, and issues affecting quality of the Work.

.2 Complete resumes, including all past and current projects, for the proposed project manager and the superintendent. The Owner intends to review the resumes and verify references, and it reserves the right to reject personnel reasonably believed to be unsuitable for, or incompatible with, the Project. The Contractor shall replace any rejected personnel with an agreeable replacement at no increase in the Contract Sum or Contract Time.

.3 A list of telephone numbers for all key personnel of the Contractor and its principal Subcontractors for purposes of contacting personnel after hours in the event of an emergency. The list shall be periodically updated as necessary to ensure the Owner and Architect have the most current information.

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

§ 3.10 CONTRACTOR'S CONSTRUCTION SCHEDULES

§ 3.10.1 The Contractor, promptly ~~after being awarded the Contract,~~ and within ten (10) days after issuance of the Notice to Proceed, shall prepare and submit for the Owner's and Architect's information a ~~Contractor's construction schedule for the Work.~~ preliminary Contractor's construction schedule for the Work, which shall be consistent with the requirements of the Contract Documents. Prior to submitting its first Application for Payment, the Contractor, after consultation with its Subcontractors, shall submit two (2) hard color copies, and an electronic copy of the Contractor's Construction Schedule consistent with the requirements of the Contract Documents. The schedule shall not exceed time limits current under the Contract Documents, shall be revised at ~~appropriate intervals~~ least monthly as required by the conditions of the Work and Project, shall be related to the entire Project ~~to the extent required by the Contract Documents,~~ and shall provide for expeditious and practicable execution of the Work. The Contractor shall request payment for this line item with each Application for Payment, based upon the overall percentage of completion of the Project. For any month that the Contractor fails to submit a satisfactory Construction Schedule or an accurate schedule update identifying accurately the current status of the Work, the Contractor shall not be entitled to any payment for scheduling for that month, and the percentage of the scheduling line item represented by that month's percentage of completion of the Work shall, at the Owner's option, be permanently deducted from the Contract Sum by Change Order.

§ 3.10.1.1 The Contractor shall promptly notify the Owner and the Architect in writing of any proposed changes in the Project Schedule or Contract Time or of any event which could delay performance of any item of the Work, stating the cause of the delay, expected duration of the delay, the anticipated effect of the delay on the Project Schedule and the action being taken to correct the delay. Notification of potential delay does not constitute a change in the Contract Time; only a Change Order signed by the Owner can amend the Contract Time. The Contractor shall comply with Article 15 with regard to any delays that it believes are the responsibility of the Owner or are otherwise the subject of a Claim for additional Contract Time.

§ 3.10.1.2 If any Project Schedule submitted sets forth a date for Substantial Completion for the Work or any phase of the Work beyond the date of Substantial Completion established in the Contract Documents (as the same may be extended as provided in the Contract Documents), the Contractor shall submit to the Architect and Owner for their review and approval a narrative description of the means and methods which the Contractor proposes to use to expedite the progress of the Work to ensure timely completion of the various phases of the Work and the Work as a whole. Regardless of the cause of any delay, the Contractor shall exercise reasonable efforts to bring the Project back into compliance with the Project Schedule.

§ 3.10.1.3 To the extent that the Contractor or Subcontractor or material supplier of any tier is responsible for the delay, the Contractor shall take all necessary action to bring the Project back into compliance with the Project Schedule, including without limitation increasing the number of personnel on the Project and implementing overtime and double shifts.

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§ 3.10.2 The Contractor shall prepare ~~a submittal schedule,~~ for the Owner and Architect's approval, a submittal schedule coordinated with the Contractor's Construction Schedule, promptly after being awarded the Contract and ~~thereafter as necessary~~ update it thereafter at least monthly to maintain a current submittal schedule, and shall submit the schedule(s) for the ~~Architect's approval. The~~ Owner and Architect's review. The Owner and Architect's approval shall not unreasonably be delayed or withheld. The submittal schedule shall (1) be coordinated with the Contractor's ~~construction schedule,~~ Construction Schedule, and (2) allow the Owner and Architect reasonable time to review submittals in accordance with the Specifications and submittal procedures. The Architect will endeavor to complete submittal reviews within five (5) working days, and within ten (10) working days for submittals that must be reviewed by Architect's Consultants or which are complex and inter-related with other submittals. Neither the Owner nor the Architect can guarantee response times from governmental authorities, such as permitting agencies or review of any required deferred submittals. If the Contractor fails to submit ~~a~~ an acceptable submittal schedule, the Contractor shall not be entitled to any increase in Contract Sum or extension of Contract Time based on the time required for review of submittals.

§ 3.10.3 The Contractor shall perform the Work in ~~general~~ accordance with the most recent schedules submitted to the Owner ~~and Architect.~~ and Architect, and shall promptly notify the Owner of any substantial deviations from those schedules, including deviations that may affect the critical path.

§ 3.10.4 The Contractor shall attend and participate in and ensure applicable Subcontractors of any tier attend and participate in:

.1 A preconstruction meeting;

.2 Regular on-site Project status meetings scheduled by the Owner or by the Architect to review progress of the Work, to discuss the Contractor's progress reports, to obtain necessary Owner's or Architects approvals, and generally keep the Owner and architect informed and involved in the progress of the Project; and

.3 Other meetings scheduled from time to time by the Owner or by the Architect to review progress of the Work and other pertinent matters.

§ 3.11 DOCUMENTS AND SAMPLES AT THE SITE

The Contractor shall maintain at the site for the Owner and update at least weekly one record copy of the Drawings, Specifications, Addenda, ~~Change Orders~~ Change Orders, Construction and Change Directives and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and one record copy of ~~approved~~ accepted Shop Drawings, Product Data, Samples and similar required submittals. These shall be available to the Owner and Architect and shall be delivered to the Architect for submittal to the Owner upon completion of the Work as a record of the Work as constructed. The Contractor shall review and follow the record drawing standards referenced in the Contract Documents. The location of all existing or new hidden piping, valves, conduit, cabling and utilities, as located during the course of construction, shall be appropriately marked until the actual field location dimensions and coordinates are incorporated on the as-built drawings, and mechanical and electrical deviations and changes shall be included. The Contractor shall note on the as-built drawings any change made to the building enclosure design documents during construction. As applicable, the documents shall include all Architectural, Mechanical, Electrical, Structural, Landscape and Civil as-built drawings, whether changes occur or not using Owner-approved CAD software. These documents, as well as the approved permit set of plans, shall be available to the Architect and Owner at the site and reviewed with them on a monthly basis.

Upon Final Completion of the Work, the Contractor shall transfer all as-built information in a clear and legible manner as described in the Contract Documents and in compliance with all requirements of local governmental entities, shall certify in writing that these documents reflect complete and accurate "as-built" conditions and shall deliver the following in a clear, clean and legible manner and in compliance with all requirements of local governmental authorities: (1) complete, integrated copies of the documents in both paper form in good condition and in electronic form in that same format as originally created by the Architect; (2) the approved permit set of plans; and (3) full size record documents, Shop Drawings, Specifications, Addenda, Operations and Maintenance manuals and warranties to the Architect for submittal to the Owner in accordance with the provisions of the Contract Documents. Satisfactory maintenance of up-to-date as-built drawings on a monthly basis will be a requirement for approval of progress payments.

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§ 3.12 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

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

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

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

§ 3.12.4 Shop Drawings, Product Data, Samples and similar submittals are not Contract Documents. Their purpose is for the Contractor to demonstrate the way by which the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents for those portions of the Work for which the Contract Documents require submittals. Review and acceptance of such submittals by the Owner or Architect is subject to the limitations of Section ~~4.2.7. Informational submittals upon which the~~ 4.2.7 and shall not constitute an approval of the Contractor's means and methods or a waiver or modification of any requirement of the Contract Documents. Informational submittals upon which the Owner or Architect is not expected to take responsive action may be so identified in the Contract Documents. Submittals that are not required by the Contract Documents may be ~~returned by the~~ (but are not required to be) returned by the Owner or Architect without action.

§ 3.12.5 The Contractor shall be responsible for tracking the status of submittals. The Contractor shall review for compliance with the Contract Documents, note any deviations from the Contract Documents, approve in writing and submit to the Architect Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents in accordance with the submittal schedule ~~approved~~ accepted by the Owner and Architect or, in the absence of an ~~approved~~ accepted submittal schedule, with reasonable promptness and frequency and in such sequence and uniform flow rate consistent with the submittal schedule as to cause no delay in the Work or in the activities of the Owner or of separate ~~contractors.~~contractors and shall notify the Owner and Architect of any expedited review required. The Architect may return without action submittals that are not marked as reviewed for compliance with the Contract Documents and approved by the Contractor; such return will not constitute an Owner-caused delay to the Contractor. At the time of submission, the Contractor shall inform the Architect in writing if expedited review is requested or if there is any deviation in the Shop Drawings, Product Data or Samples from the requirements of the Contract Documents. So far as practicable, each Shop Drawing or Product Data submittal shall bear a cross reference note referring to Drawing or detail numbers on the Drawings showing the same Work in order to facilitate checking of Shop Drawing or Product Data and their prompt return to the Contractor. Shop Drawings for interrelated Work shall be submitted at approximately the same time. The Contractor shall stamp and initial its approval on all submittals prior to submitting them to the Architect indicating that the Contractor has satisfied its responsibilities under the Contract Documents for review of the submittals. Unless otherwise directed in writing, the Contractor shall submit one reproducible copy and five black line print copies to the Architect for is use and distribution. The Architect will retain the reproducible copy. The Contractor shall keep accurate records of the receipt, review and delivery of all submittals and shall submit to the Owner reports every other week on the status of their review identifying the location and the causes of any failure to promptly receive such submissions and suggesting responsibility.

§ 3.12.6 By approving and submitting Shop Drawings, Product Data, Samples and similar submittals, the Contractor represents to the Owner and Architect that the Contractor has (1) reviewed and approved them, (2) determined and verified materials, field measurements and field construction criteria related thereto, or will do so and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents. Each submittal shall bear a stamp or specific written indication that the Contractor has satisfied it's responsibilities under the Contract Documents with respect to the review of submission. Submittals that are simply passed through by the Contractor's clerical staff are not sufficient to meet these requirements. Each submittal shall be accompanied by a completed Submittal Cover Sheet, which shall clearly identify applicable Specification Section and paragraph number(s), material, supplier, pertinent data such as catalog numbers and the use for which it is intended.

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

§ 3.12.8 The Work shall be in accordance with ~~approved~~ accepted submittals except that the Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Architect's ~~approval~~ review or acceptance of Shop Drawings, Product Data, Samples or similar submittals unless the Contractor has specifically informed the Architect in writing of such deviation at the time of submittal and (1) the Architect has given its explicit written approval to the specific deviation as a minor change in the Work, or (2) a Change Order or Construction Change Directive has been issued authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples or similar submittals by the Architect's ~~approval thereof.~~approval, review or acceptance thereof. Any corrections or modifications to Shop Drawings made by the Architect shall be deemed accepted by the Contractor, without change in Contract Sum or Contract Time, unless the Contractor provides the Architect with written notice at least three (3) working days before commencing any Work from such Shop Drawings and complies with the change procedures in the Contract Documents. The Contractor shall make all corrections requested Contract Sum or Contract Time.

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

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

§ 3.13 USE OF SITE

~~The Contractor shall confine operations at the site to areas permitted by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.~~§ 3.13.1 The Contractor shall confine operations at the site to areas designated by the Owner, and permitted by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities and the Contract Documents and shall not unreasonably encumber the site with materials or equipment. Materials and equipment on site shall be used directly in the Work and not stored on site after their use is complete. There shall be no use of existing on-site facilities (parking, toilets, etc.) without the Owner's prior approval.

§ 3.13.2 Portions of the site may be occupied and in use during construction. The Contractor is responsible to coordinate its Work with any such occupation or use at no increase to the Contract Sum or Contract Time and at no disruption to the occupancy or use.

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§ 3.14 CUTTING AND PATCHING

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

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

§ 3.14.3 Existing structures and facilities including, but not limited to, buildings, landscaping, utilities, topography, streets, curbs, and walks that are damaged or removed due to excavations or other construction operations of the Contractor shall be patched, repaired, or replaced by the Contractor to the satisfaction of the Architect, the owner of such structures and facilities, and governmental authorities having jurisdiction. In the event the governmental authorities require that the repairing and patching be done with their own labor and/or materials, the Contractor shall abide by such regulations and shall pay for such work at no additional cost to the Owner.

§ 3.15 CLEANING UP

§ 3.15.1 The Contractor shall keep the premises and surrounding ~~area~~ area, including roads, free from accumulation of waste materials or rubbish caused by operations under the Contract. The Contractor shall provide portable containers on site for use by all trades. At the Owner's request and in any event, at completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery and surplus materials from and about the Project.

§ 3.15.2 If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so upon three (3) days' notice to the Contractor and the Owner shall be entitled to reimbursement from the ~~Contractor.~~Contractor, by offset, deductive Change Order, or otherwise, for any clean-up costs.

§ 3.15.3 The Contractor shall use only those waste containers provided to it by reputable waste and/or recycling firm(s); waste materials shall all be appropriately and legally disposed of, off-site.

§ 3.16 ACCESS TO WORK

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

§ 3.17 ROYALTIES, PATENTS AND COPYRIGHTS

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

§ 3.18 INDEMNIFICATION

§ 3.18.1 To the fullest extent permitted by law and subject to the following conditions including the subparagraphs below, the Contractor shall defend, indemnify and hold harmless the Owner, officials, employees, consultants, and the Architect, Architect's consultants, and agents and employees (collectively, the "Indemnified Parties") of any of them from and against claims, damages, losses ~~and expenses, including but not limited to attorneys' fees,~~ (including loss of use) and expenses, direct and indirect or consequential, including but not limited to costs, design professional and consultant fees, and attorneys' fees incurred on such claims and in proving the right to indemnification, arising out of or resulting from ~~performance of the Work, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by the negligent~~ acts or omissions of the Contractor, a

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~~Subcontractor,~~ Subcontractor or any tier, their agents and anyone directly or indirectly employed by any of them or anyone for whose acts they may be ~~liable, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder.~~ liable ("Indemnitor"). Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity that would otherwise exist as to a party or person described in this Section 3.18.

§ 3.18.1.1 The Contractor will fully defend and indemnify the Indemnified Parties for the sole negligence or willful misconduct of the Indemnitor.

§ 3.18.1.2 Where any such claims, damages, losses, or expenses arise from the concurrent negligence of (1) the Owner, and (2) the Indemnitor, the Contractor's obligations to indemnify and defend the Indemnified Parties under this Section 3.18 shall be effective only to the extent of the Indemnitors negligence.

§ 3.18.1.3 The Contractor agrees to being added by the Owner or Architect as a party to any arbitration or litigation with third parties in which the Owner or Architect alleges indemnification or contribution from the Contractor, any of its Subcontractors of any tier, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable. The Contractor agrees that it will require that all of its Subcontractors of any tier will, in their subcontracts, to similarly stipulate; in the event any does not, the Contractor shall be liable in place of such Subcontractor(s) of any tier. To the extent that any portion of this Section 3.18 is stricken by a court or arbitrator for any reason, all remaining provisions shall retain their vitality and effect. The obligations of the Contractor under this Section 3.18 shall not be construed to negate, abridge, or otherwise reduce any other right or obligations of indemnity, which would otherwise exist as to any party or person described in this Section 3.18. To the extent the wording of this Section 3.18 would reduce or eliminate an available insurance coverage, this Section 3.18 shall be considered modified to the extent that such insurance coverage is not affected. This Section 3.18 shall survive completion, acceptance, final payment and termination of the Contract.

§ 3.18.2 In claims against any person or entity indemnified under this Section 3.18 by an employee of the Contractor, a ~~Subcontractor,~~ Subcontractor of any tier, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under Section 3.18.1 shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for the Contractor or a Subcontractor of any tier under workers' compensation acts, disability benefit acts or other employee benefit acts. After mutual negotiation of the parties, the Contractor waives immunity as to the Owner, the Architect and their consultants only under Title 51 RCW, "Industrial Insurance." IF THE CONTRACTOR DOES NOT AGREE WITH THIS WAIVER, IT MUST PROVIDE A WRITTEN NOTICE TO THE OWNER PRIOR TO THE DATE FOR THE RECEIPT OF BIDS, OR THE CONTRACTOR WILL BE DEEMED TO HAVE NEGOTIATED AND WAIVED THIS IMMUNITY.

ARTICLE 4 ARCHITECT

§ 4.1 GENERAL

§ 4.1.1 The Owner shall retain an architect lawfully licensed to practice architecture or an entity lawfully practicing architecture or engineering in the jurisdiction where the Project is located. That person or entity is identified as the Architect in the Agreement and is referred to throughout the Contract Documents as if singular in number. The term "Architect" means the Architect or the Architect's authorized representative and does not include any employees of the Owner.

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

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

§ 4.2 ADMINISTRATION OF THE CONTRACT

§ 4.2.1 The Architect will provide administration of the Contract as described in the Contract Documents and will be an Owner's ~~representative~~ representative, but not the Owner's agent, during construction until the date the Architect issues the final Certificate ~~for Payment.~~ for Payment, and from time to time during the one (1) year period for

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correction of the Work. The Architect will have authority to act on behalf of the Owner only to the extent provided ~~in the Contract Documents.~~in the Contract Documents, unless otherwise modified in writing in accordance with other provisions of the Contract. The Architect is not the agent of the Owner and is not authorized to agree on behalf of the Owner to changes in the Contract Sum or Contract Time, nor to accept notice or Claims on behalf of the Owner.

§ 4.2.2 The Architect will visit the site at intervals appropriate to the stage of construction, or as otherwise agreed with the Owner, to become generally familiar with and to keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and to determine in general if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. ~~The Architect will not~~ Neither the Architect nor the Owner will have control over, charge of, or responsibility for, the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents, except as provided in Section 3.3.1. The presence of the Architect or the Owner at the site shall not in any manner be construed as assurance that the Work is being completed in compliance with the Contract Documents, nor as evidence that any requirement of the Contract Documents of any kind, including notice, has been met or waived. The Contractor shall reimburse the Owner for any amounts paid to the Architect for site visits made necessary by the fault of the Contractor or by defects and deficiencies in the Work.

§ 4.2.3 On the basis of the site visits, the Architect will keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and report to the Owner (1) known deviations from the Contract Documents and from the most recent construction schedule submitted by the Contractor, and (2) defects and deficiencies observed in the Work. ~~The Architect will not~~ Neither the Architect nor the Owner will be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. ~~The Architect will not~~ Neither the Architect nor the Owner will have control over or charge of ~~and will not~~ or be responsible for acts or omissions of the Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work. Neither the Architect nor the Owner will be responsible for defining the extent of any subcontractor or dealing with disputes between the Contractor and third parties.

§ 4.2.4 COMMUNICATIONS FACILITATING CONTRACT ADMINISTRATION

Except as otherwise provided in the Contract Documents or when direct communications have been specially authorized, the Owner and Contractor shall endeavor to communicate with each other through the Architect about matters arising out of or relating to the Contract. The Contractor also shall provide the Owner with a direct copy of all written communications to the Architect, including all transmittals, notices, requests, substitutions, RFIs, Claims, and potential changes in the Contract Sum or Contract Time, but not including Shop Drawings, Product Data or Samples. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and material suppliers shall be through ~~the Contractor.~~ the Contractor, except to discuss Claims, potential disputes, and as otherwise provided in the Contract Documents. Communications by and with separate contractors shall be through the Owner. Communications may be simultaneously copied to other recipients.

§ 4.2.5 Based on the Architect's observations and evaluations of the Work and the Contractor's Applications for Payment, the Architect will ~~review and certify~~ make recommendations to and otherwise assist the Owner to determine the amounts due the Contractor and will issue Certificates for Payment in such amounts.

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

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§ **4.2.7** The Architect will review and ~~approve,~~ accept, or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data and Samples, and other submittals required by the Contract Documents, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Architect's action will be taken with reasonable promptness in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time in the Architect's professional judgment to permit adequate review. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, weights or gauges, fabrication processes, coordination with the work of other trades, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect's review of the Contractor's submittals shall not relieve the Contractor of the obligations under Sections 3.3, 3.5 and 3.12. The Architect's review shall not constitute approval of safety precautions or, unless otherwise specifically stated by the Architect, of any construction means, methods, techniques, sequences or procedures. The Architect's approval or acceptance of a specific item shall not indicate approval of an assembly of which the item is a component. The Contractor shall clearly note, and the Architect shall not be required to search out, any deviations from the Contract Documents not clearly identified by the Contractor, nor shall the Architect be required to review partial submissions, or those for which submission for correlated items have not been received. Regardless of how a submittal is marked, the Contractor should not presume that the Architect has reviewed a submittal in every aspect.

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

§ **4.2.9** The Architect will ~~conduct inspections~~ make observations and recommendations and otherwise assist the Owner to determine the date or dates of Substantial Completion and the date of ~~final completion;~~ Final Completion; issue Certificates of Substantial Completion pursuant to Section 9.8; receive and forward to the Owner, for the Owner's review and records, written warranties and ~~related~~ other documents required by the Contract and assembled by the Contractor pursuant to Section 9.10; and issue a final Certificate for Payment upon compliance with the requirements of the Contract Documents and pursuant to Section 9.10.

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

§ **4.2.11** The Architect will interpret and decide matters concerning performance under, and requirements of, the Drawings and Specifications, and assist the Owner in the interpretation of all other Contract Documents on written request of either the Owner or Contractor. The Architect's response to such requests will be made in ~~writing~~ writing, copied to the Owner and will be made within any time limits agreed upon or otherwise with reasonable promptness. If no agreement is made concerning the time within which interpretations required of the Architect shall be provided in compliance with Section 4.2.11, then delay shall not be recognize on account of failure by the Architect to provide such interpretations until fifteen (15) days after written request is made of them.

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

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

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

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ARTICLE 5 SUBCONTRACTORS

§ 5.1 DEFINITIONS

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

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

§ 5.1.3 A "Subcontractor of any tier" is a Subcontractor or a lower-tier Subcontractor.

§ 5.1.4 The designation of terms in this Article 5 is not meant to change or alter the definitions contained in RCW 60.28, "Lien for Labor, Materials, Taxes on Public Works," RCW 39.12 "Prevailing Wages on Public Works," or other statutory definitions or a subcontractor for the purposes of such statutes.

§ 5.2 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK

§ 5.2.1 ~~Unless otherwise stated in the Contract Documents or the bidding requirements, the Contractor, as soon as practicable after award of the Contract,~~ Within ten (10) days after the Owner's request, the Contractor shall furnish in writing to the Owner ~~through~~ and the Architect the names of all persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for each principal portion of the Work. ~~The Architect may reply within 14 days~~ The Contractor shall organize this list of Subcontractors in the same sequence as the Index of Specification Sheets, and state the Work category followed by the name of the Subcontractor and/or fabricator (or "Contractor" where the portion of the Work is by the Contractor's own forces), including the address, telephone number, individual name of the project contact, and his or her email address. The list shall be accompanied by evidence of any qualifications required within the technical sections of the Project Manual and satisfactory to the Architect and Owner. The list shall be updated promptly as part of the payment process if additional Subcontractors of any tier are engaged. If the Agreement is executed, no progress payment will become due until this information is so furnished. No action or inaction of the Owner or Architect in response to receipt of the names of the proposed Subcontractors or any tier shall constitute approval of any Subcontractor of any tier or of its performance. The Architect may reply promptly to the Contractor in writing stating (1) whether or not the Owner or the ~~Architect~~ Architect, after due investigation, has reasonable objection to any such proposed person or entity or (2) that the Owner or Architect requires additional time for review. Failure of the Owner or Architect to reply ~~within the 14-day period~~ promptly shall constitute notice of no reasonable objection. If the Owner makes a reasonable objection, the Contractor shall replace the Subcontractor with no increase to the Contract Sum or Contract Time. Such a replacement shall not relieve the Contractor of its responsibility for the performance of the Work and compliance with all requirements of the Contract within the Contract Sum and Contract Time.

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

§ 5.2.3 If the Owner or Architect has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner or Architect has no reasonable objection. If the proposed but rejected Subcontractor was qualified, "responsible" and reasonably capable of performing the Work, the Contract Sum ~~and~~ and/or Contract Time ~~shall~~ may be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be ~~issued before commencement of the substitute Subcontractor's Work.~~ issued. However, no increase in the Contract Sum or Contract Time shall be allowed for such change unless the Contractor has acted promptly and responsively in submitting names as required. Such a replacement shall not relieve the Contractor of its responsibility for the performance of the Work or compliance with all of the requirements of the Contract within the Contract Sum and Contract Time. The Contractor's listing or use of any Subcontractor that is not "responsible" shall be sufficient cause for the Owner to declare that the Contractor is not a responsible bidder, unless the Contractor agrees to substitute a responsible Subcontractor at no change to the Contract Sum or Contract Time.

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§ 5.2.4 The Contractor shall not substitute a Subcontractor, person or entity previously selected if the Owner or Architect makes reasonable objection to such substitution. If the Owner reasonably concludes that any portion of the Work subcontracted by the Contractor is not being performed in accordance with the Contract Documents, the Contractor shall, upon request of the Owner, remove the Subcontractor performing such Work. This removal shall not relieve the Contractor of its responsibility for the performance of the Work or compliance with all of the requirements of the Contract within the Contract Sum and Contract Time.

§ 5.2.5 The Contractor shall perform with its own organization and under its immediate supervision a portion of the Work, not including general conditions, amounting to not less than the percentage (if any) of the total Contract Sum specified in the Contract Documents or Bidding Documents.

§ 5.2.6 The contractor shall verify responsibility criteria for each first-tier Subcontractor. A Subcontractor of any tier that engages other lower-tier Subcontractors must verify responsibility criteria for each of its lower-tier Subcontractors. Verification shall include that each lower-tier Subcontractor, at the time of subcontract execution, meets the responsibility criteria listed in the bid documents for the bid package.

§ 5.3 SUBCONTRACTUAL RELATIONS

~~By appropriate agreement, written where legally required for validity, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work, which the Contractor, by these Documents, assumes toward the Owner and Architect. Each subcontract agreement shall preserve and protect the rights of the Owner and Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement that may be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.~~§ 5.3.1 By appropriate agreement, written where legally required for validity, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work, which the Contractor, by these Documents, assumes toward the Owner and Architect. Each subcontract agreement shall preserve and protect the rights of the Owner and Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement that may be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors. The Contractor shall provide to the Owner copies of the written agreements between the Contractor and any Subcontractor on request.

§ 5.3.2 The Contractor shall schedule, supervise and coordinate the operations of all Subcontractors of any tier, including any suppliers of early procurement items and any assigned Subcontractors. No subcontracting of any of the Work shall relieve the Contractor from its responsibility for the complete performance of the Work in accordance with the Contract Documents or from its responsibility for the performance of all obligations of the Contract Documents. The Contractor will be solely responsible for any scope gaps in it contracts with Subcontractors, including gaps that result from Subcontractor exclusions. The Contractor is responsible for the timely, accurate and appropriate Subcontractor coordination of the Work of lower tier Subcontractors in accordance

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with the overall Work, including communications, meetings, Drawings, Specifications, illustrations, and other necessary associated activities required for the successful coordination of all trades, schedules, materials and workmanship. The Owner shall provide to the Contractor copies of the written Owner-supplier agreements to any early procurement contracts, to the extent that such agreements are identified in the Contract Documents.

§ 5.3.3 The Contractor agrees to diligently, and using its best efforts, cause each Subcontractor of any tier to correct, at the Subcontractor's own expense, all Work performed by the Subcontractor of any tier that is defective in material or workmanship or otherwise fails to conform to the Contract Documents, including all necessary removal, replacement and/or repair of any other portion of the Project, which may be damaged in removing, replacing or repairing any portion of the Project. If any Subcontractor of any tier defaults in its obligation promptly to correct any such deficiency, the Contractor shall be responsible for correcting the deficiency.

§ 5.3.4 The Contractor shall give, and shall cause its Subcontractors of any tier to give, all required notices and comply with all applicable health and safety laws, Rules, regulations, codes and lawful orders of public authorities and of quasi-governmental authorities relating to the Work, including without limitation all OSHA, and WISHA requirements, and the Contractor shall, and shall cause applicable Subcontractors of any tier to, indemnify, defend and hold harmless the Owner from and against any and all claims, liabilities, fines, and attorneys' fees arising from any failure of the Contractor or Subcontractor of any tier to have complied with any such requirements in any respect.

§ 5.4 CONTINGENT ASSIGNMENT OF SUBCONTRACTS

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

.1 assignment is effective only after termination of the Contract by the Owner ~~for cause~~ pursuant to Section 14.2 or 14.4 and only for those subcontract agreements that the Owner accepts by notifying the Subcontractor and Contractor in writing; and

.2 assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

When the Owner accepts the assignment of a subcontract agreement, the Owner assumes the Contractor's rights and obligations under the ~~subcontract.~~subcontract, but only for events and payment obligations that arise after the date of the assignment.

§ 5.4.2 Upon such assignment, if the Work has been suspended for more than ~~30~~ sixty (60) days, the Subcontractor's compensation shall be equitably adjusted for increases in cost resulting from the suspension.

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

§ 5.5 LIENS

§ 5.5.1 The Contractor shall promptly pay (and secure the discharge of any liens asserted by) all persons properly providing labor, equipment, materials or other items in connection with the performance of the Work (including but not limited to, any Subcontractors of any tier) to the extent that the Owner has paid the Contractor for such. The Contractor shall provide to the Owner such releases of liens and Claims and other documents monthly with its payment application to evidence such payment (and discharge.) The Owner may, at its option, withhold payment, in whole or in part, to the Contractor until such documents are provided. The Contractor may provide other security acceptable to the Owner, such as a bond, in lieu of paying disputed liens or Claims.

§ 5.5.2 The Contractor shall defend, indemnify, and hold harmless the Owner from any liens, including all expenses, Architect costs and attorneys' fees, except to the extent a lien has been filed because of failure of payment by the Owner for the Work in any such lien.

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ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

§ 6.1 OWNER'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS

§ 6.1.1 The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and to award separate contracts in connection with other portions of the Project or other construction or operations on the site under Conditions of the Contract identical or substantially similar to these including those portions related to insurance and waiver of subrogation. If the Contractor claims that delay or additional cost is involved because of such action by the Owner, the Contractor shall make such Claim as provided in Article ~~15.~~15, except that the Contractor shall have no Claim for such construction or operations to the extent disclosed in the Bidding Documents or Contract Documents or known to the Contractor prior to the execution of the Contract Sum Amendment. The Contractor is also responsible to coordinate its Work with any other entities performing work on or adjacent to the site, such as work in the right of way and work by utility companies and the Contractor shall incorporate such work into its project schedule.

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

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

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

§ 6.2 MUTUAL RESPONSIBILITY

§ 6.2.1 The Contractor shall afford the Owner and separate contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents. If the Contractor receives items from a separate contractor or from the Owner for storage, erection or installation, the Contractor shall acknowledge receipt for items delivered, and thereafter will be held responsible for the care, storage and any necessary replacement of items received.

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

§ 6.2.3 The Contractor shall reimburse and indemnify the Owner for costs the Owner incurs that are payable to a separate contractor because of the Contractor's delays, improperly timed activities or defective construction. The Owner shall be responsible to the Contractor for costs the Contractor incurs because of a separate contractor's delays, improperly timed activities, damage to the Work or defective ~~construction.~~construction of a separate contractor. If a separate contractor sues or initiates any proceeding against the Owner on account of any damages or delays alleged to have been caused by the Contractor, the Owner shall notify the Contractor. The Contractor shall defend all such proceedings at its own expense, and shall defend, indemnify, and hold the Owner harmless from any damages awarded on such claims, including all attorneys' fees and other costs incurred by the Owner.

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

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

§ 6.2.6 Should the Contractor, or any of its Subcontractors of any tier, cause damage of any kind, including but not limited to delay, to any other contractor or subcontractor on the Project, the Contractor shall, upon due notice, promptly attempt to settle with such other contractor or subcontractor by agreement or otherwise to resolve the dispute.

§ 6.3 OWNER'S RIGHT TO CLEAN UP

If a dispute arises among the Contractor, separate contractors and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish, the Owner may clean up and ~~the Architect will~~ allocate the cost among those ~~responsible.~~responsible plus a ten percent (10%) mark-up on such costs.

ARTICLE 7 CHANGES IN THE WORK

§ 7.1 GENERAL

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

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

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

§ 7.1.4 Before effectuating a change in the Work, or in the Contract Documents, the Owner may request the Contractor through a Change Order proposal to propose the amount of change in the Contract Sum, if any, and the extent of change in the Contract Time, if any, arising from the proposed change in the Work. The Contractor shall submit its responsive proposal as soon as possible and within fourteen (14) days, and shall in good faith specify the components and amounts by which the Contract Sum and/or Contract Time would change. Labor, materials and equipment shall be limited to and itemized in the manner described in Section 7.5 for the Contractor and major Subcontractors. If the Contractor fails to respond within this time, the Owner may withhold some or all of a progress payment otherwise due until the tardy proposal is received. If the Owner explicitly accepts the proposal in writing, the Owner and Contractor will be immediately bound to the terms of the proposal, the change will be included promptly in a future Change Order, and the change in the Work described in the proposal shall commence expeditiously. The Owner may reject the proposal, in which case the Owner may either not effectuate the change in the Work or may order the change through a Construction Change Directive or supplemental instruction or an order for a minor change in the Work. The Architect and the Owner may confer directly with Subcontractors of any tier concerning any item proposed to the Owner under this Article. The Owner shall accept or reject a Change Order proposal within sixty (60) days of its submission. If the Owner does not accept or reject the Change Order proposal within such sixty (60) day period, the Change Order proposal will be deemed denied.

§ 7.1.5 If the Contractor adds a reservation of rights that has not been initialed by the Owner to any Change Order, Construction Change Directive, Change Order Proposal, Application for Payment or any other document, all amounts and all work therein shall be considered disputed and not due or payable unless and until costs are re-negotiated or the reservation is withdrawn or changed in a manner satisfactory to an, in all cases, initialed by the Owner. If the Owner makes payment for a Change Order or an Application for Payment that contains a reservation of rights not initialed by the Owner to indicate agreement with the reservation, and if the Contractor negotiates the check for such payment, then the reservation of rights shall be deemed waived, withdrawn and of no effect.

§ 7.2 CHANGE ORDERS

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

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

§ 7.3 CONSTRUCTION CHANGE DIRECTIVES

§ 7.3.1 A Construction Change Directive is a written order prepared by the Architect and signed by the Owner and Architect, directing a change in the Work prior to agreement on adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions or other revisions, the Contract Sum and Contract Time being adjusted accordingly. The Owner's use of a Construction Change Directive does not constitute the Owner's agreement that the directive constitutes a change in the Work, the Contract Sum or Contract Time. For any change in the Work, whether initiated by a Construction Change Directive or Change Order Proposal, the Contractor must submit its proposed price and any proposed extension of Contract Time, to the Owner within ten (10) days of the date of the Construction Change Directive or Change Order Proposal. If the Contractor fails to submit a proposed price and time within this time period, the Owner may establish what it believes to be a fair price of all changed work, and any additional Contract Time, and this price and time submitted by the Owner shall be final and binding upon the parties, as if they had signed a Change Order in this amount, without recourse to submitting any claims or litigation. Payment for any Changes to the Work shall not exceed the labor and equipment indicated on the daily work logs.

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

§ 7.3.3 If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following ~~methods:~~methods or as otherwise mutually agreed by the Owner and Contractor:

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

§ 7.3.4 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed (e.g. more than fifty percent (50%)) in a proposed Change Order or Construction Change Directive so that application of such unit prices to quantities of Work proposed will cause substantial inequity to the Owner or Contractor, the applicable unit prices but not the Contract Time or any other portion of the Contract Sum shall be equitably adjusted.

§ 7.3.5 Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work ~~involved and advise the Architect~~ involved. As soon as possible, and within seven (7) days of receipt, the Contractor shall advise the Architect in writing of the Contractor's agreement or disagreement with the proposed adjustment or the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time. The Contractor's response shall reasonably specify the reasons for its disagreement and the adjustment or other terms that it proposes. Without such timely written response, the Contractor shall conclusively be deemed to have accepted the Owner's adjustment. The Contractor's disagreement shall not relieve the Contractor of its obligation to comply promptly with any written notice issued by the Owner or the Architect. The adjustment shall then be determined by the Owner, with the assistance of the Architect, in accordance with the provisions of the Contract Documents. The ultimate adjustment shall not exceed the larger amount submitted.

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

§ 7.3.7 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, ~~the Architect shall determine the method and the adjustment on the basis of reasonable expenditures and~~

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~~savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, an amount for overhead and profit as set forth in the Agreement, or if no such amount is set forth in the Agreement, a reasonable amount. In such case, and also under Section 7.3.3.3, the Contractor shall keep and present,~~ or if cost is to be determined under Section 7.3.3.3, the Contractor shall provide a not-to-exceed price for the Construction Change Directive Work within fourteen (14) days of receipt of the Construction Change Directive, and the Contractor shall keep and present, itemized in the categories of Section 7.5 for Subcontractors of any tier and of Article 6 of the Agreement for the Contractor, and in such form as the Architect or Owner may prescribe, an itemized accounting together with appropriate supporting data.~~Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.3.7 shall be limited to the following:~~

~~.1 Costs of labor, including social security, old age and unemployment insurance, fringe benefits required by agreement or custom, and workers' compensation insurance;~~

~~.2 Costs of materials, supplies and equipment, including cost of transportation, whether incorporated or consumed;~~

~~.3 Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;~~

~~.4 Costs of premiums for all bonds and insurance, permit fees, and sales, use or similar taxes related to the Work; and~~

~~.5 Additional costs of supervision and field office personnel directly attributable to the change.~~

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.5 In order to facilitate checking of such quotations, all proposals, except those so minor that their propriety can be seen by inspection, shall be accompanied by complete itemization of costs, including labor, equipment, material and subcontract costs, which shall be itemized in the manner described in Section 7.5 for Subcontractors of any tier and of Article 6 of the Agreement for the Contractor. When major cost items arise from Subcontractors of any tier, these items shall also be similarly itemized. Approval may not be given without such itemization. Failure to provide data within twenty-one (21) days of the Owner or Architect's request shall constitute waiver of any Claim for changes in the Contract Time or Contract Sum. The total cost of any change, including a Claim under Article 15, shall be limited to the reasonable value, as determined by the Owner (subject to appeal through dispute resolution procedure of Article 15,) of the items in Section 7.5 for Subcontractors of any tier and of Article 6 of the Agreement for Work performed by the Contractor. Unless otherwise agreed in writing by the Owner, the cost shall not exceed the lower of the prevailing cost for the work in the locality of the Project or the cost of the work in the current edition of R.S. Means Company, Inc., Building Construction Cost Data as adjusted to local costs and conditions. The Architect and the Owner may communicate directly with Subcontractors or any tier concerning costs of any Work included in a Construction Change Directive. If the Contractor disagrees with the method or the adjustment in the Contract Time, the adjustment or method shall be referred to the Architect for determination, and any adjustment shall be limited to the change in the actual critical path of the Contractor's Construction Schedule directly caused thereby.

§ 7.3.8 The amount of credit to be allowed by the Contractor to the Owner for a deletion or change that results in a net decrease in the Contract Sum shall be the largest of (1) the reasonable and prevailing value of the deletion or change, (2) the line item value in the Schedule of Values, or (3) the actual net cost as confirmed by the ~~Architect.~~ Owner. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.

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

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§ 7.3.10 When the Owner and Contractor agree with a determination made by the Architect concerning the adjustments in the Contract Sum ~~and~~ and/or Contract Time, or otherwise reach agreement upon the adjustments, such agreement shall be effective immediately and ~~the Architect will prepare a~~ will be recorded by preparation and execution of an appropriate Change Order. Change Orders may be issued for all or any part of a Construction Change Directive. Any adjustment in the Contract Time arising from a Change or a Claim shall be limited to the change in the actual critical path of the Contractor's Construction Schedule directly caused thereby.

§ 7.4 MINOR CHANGES IN THE WORK

The Architect ~~has~~ and the Owner have authority to order minor changes in the Work ~~not~~ (sometimes called a Design Clarification)not involving adjustment in the Contract Sum or extension of the Contract Time and not inconsistent with the intent of the Contract Documents. Such changes will be effected by written order such as a Design Clarification, Field Authorization or an Architect's Supplemental Instruction signed by the Architect and which shall be binding on the Owner and Contractor. The Contractor shall carry out such written orders promptly. If the Contractor believes that such order causes an increase in the Contract Sum or Contract Time, the Contractor must submit a notice and Claim pursuant to Article 15.

§ 7.5 PRICING COMPONENTS

For the Contractor, the value of any changed Work or any Claim for an increase or decrease in the Contract Sum, shall be limited to the Cost of the Work defined in the revised A102-2007 Agreement. For Subcontractors or any tier, the total cost of any Change in the Work or of any other increase or decrease in the Contract Sum, including Claim, shall be limited to the following components.

§ 7.5.1 Direct Labor Costs: These are the actual labor costs determined by the number of additional craft hours and the hourly costs necessary to perform the change in the Work. The hourly cost shall be based upon the following:

.1 Basic wages and fringe benefits: The hourly wage (without mark-up or labor burden) and fringe benefits paid by the Subcontractor as established by the Washington Department of Labor and Industries or contributed to the labor trust funds as itemized fringe benefits, whichever is applicable, for the laborers, apprentices, journeymen, and foremen performing and/or directly supervising the Change in the Work on the site. The premium portion of overtime wages is not included unless pre-approved in writing by the Owner. Costs paid or incurred by the Subcontractor for vacations, per diem, subsistence, housing, travel, bonuses, stock options, or discretionary payments to employees are not separately reimbursable. The Subcontractor shall provide to the Owner copies of certified payroll statements upon the Owner's request.

.2 Worker's insurance: Direct contributions to the State of Washington as industrial insurance; medical aid; and supplemental pension by class and rates established by the Washington Department of Labor and Industries.

3. Federal insurance: Direct contributions required by the Federal Insurance Compensation Act (FICA); Federal Unemployment Tax Act (FUTA); and State Unemployment Compensation Act (SUCA).

Upon the Owner's request, the Contractor shall substantiate all claimed wage rates and shall provide a breakdown of the various components of the labor costs in a form provided or approved by the Owner.

§ 7.5.2 Direct Material Costs: This is an itemization, including material invoice, of the quantity and cost of additional materials reasonable and necessary to perform the change in the Work. The unit cost shall be based upon the net cost after all discounts or rebates, freight costs, express charges, or special delivery costs, when applicable. No lump sum costs will be allowed except when approved in advance by the Architect or Owner. Discounts and rebates based on prompt payment need not be included, however, if the Subcontractor offered, but the Owner declined, the opportunity to take advantage of such discount or rebate.

§ 7.5.3 Construction Equipment Usage Costs: This is an itemization of the actual length of time that construction equipment necessary and appropriate for the Work is used solely on a change in the Work at the site multiplied by the applicable rental cost as established by the lower of the local prevailing rate published in The Rental Rate Blue Book by Data Quest, San Jose, California, as modified by the AGC/WSDOT agreement, or the actual rate paid to an unrelated third party as evidenced by rental receipts. Rates and quantities of equipment rented that exceed the local fair market rental costs shall be subject to the Owner's prior approval. If more than one rate is applicable, the lowest available rate will be utilized. Rates and quantities of equipment rented that exceed the local fair market

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rental costs shall be subject to the Owner's prior written approval. Total rental charges for equipment rented that exceed the local fair market rental costs shall be subject to the Owner's prior written approval. Total rental charges for equipment or tools shall not exceed 75% of the fair market purchase value of the equipment or the tool. Actual, reasonable mobilization costs are permitted if the equipment is brought to the site solely for the change in the Work. Mobilization and standby costs shall not be charged for equipment already present on the site.

The rates in effect at the time of the performance of the changed Work are the maximum rates allowable for equipment of modern design and in good working condition and include full compensation for providing all fuel, oil, lubrication, repairs, maintenance, and insurance. No gas surcharges shall be charged. Equipment not of modern design and/or not in good working condition will have lower rates. Hourly, weekly and/or monthly rates, as appropriate, will be applied to yield the lowest total cost. The rate for equipment necessarily standing-by for future use (and standing by for no longer than one (1) week) on the changed Work shall be 50% of the rate established above. The total cost of rental allowed shall not exceed the cost of purchasing the equipment outright. If equipment is required, for which a rental rate is not established by The Rental Rate Blue Book, an agreed rental rate shall be established for the equipment, which rate and use must be approved by the Owner prior to performing the Work.

§ 7.5.4 Lower-Tier Subcontractor Costs: These are payments a Subcontractor makes to lower-tier Subcontractors for changed Work performed by such lower-tier Subcontractors. The Subcontractors' cost of changed Work shall be determined in the same manner as prescribed in this Section 7.5 and, among other things, shall not include consultant costs, attorneys' fees, or Claim preparation expenses.

§ 7.5.5 Subcontractor's Fee: This is the allowance for all combined overhead, profit and other costs, including all office, home office and site overhead (including project manager, project engineer, other engineers, project foreman, estimator, superintendent and their vehicles and clerical assistants,) taxes (except for sales tax,) employee per diem, subsistence and travel costs, warranty, safety costs, printing and copying, layout and control, quality control/assurance, purchasing, small or hand tool (a tool that costs $500 or less and is normally provided by the performing contractor) or expendable charges, preparation of as-built drawings, impact on unchanged Work, Claim and Change preparation, and delay and impact costs of any kind (cumulative, ripple or otherwise,) added to the total cost to the Owner of any Change Order, Construction Change Directive, Claim or any other claim of any kind on this Project. No Fee shall be due, however, for direct settlements of Subcontractor claims by the Owner after Substantial Completion. The fee shall be limited in all cases as per negotiated and agreed-upon between the contractor and the Owner, as stipulated in the executed Agreement.

If a change in the Work involves both additive and deductive items, the appropriate Fee allowed will be added to the net difference of the items. If the net difference is negative, no Fee will be added to the negative figure as a further deduction. The parties acknowledge that the fees listed in this Section 7.5.5 are substantially greater than the fees and overhead normally included in determining the Subcontractor's bid; that these higher percentages are a sufficient amount to compensate the Subcontractor for all effects and impacts of Changes in the Work; and that the resultant overcompensation of the Subcontractor for some Changes compensates the Subcontractor for any Changes for which the Subcontractor believes the percentage is otherwise insufficient.

§ 7.5.6 Cost of Change in Insurance or Bond Premiums: This is defined as:

.1 Subcontractor's liability insurance: The actual cost (expressed as a percentage submitted with the certificate of insurance and subject to audit) of any changes in Subcontractor's liability insurance arising directly from the changed Work; and

.2 Public works bond: The actual cost (expressed as a percentage submitted with evidence of bondability and subject to audit) of the change in the Subcontractor's premium for the Subcontractor's statutorily or contractually required performance and payment bond arising directly from the changed Work.

Upon request, the Subcontractor shall provide the Owner with supporting documentation from its insurer or surety of any associated cost incurred.

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ARTICLE 8 TIME

§ 8.1 DEFINITIONS

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

§ 8.1.2 Within ten (10) days of issuance of the Owner's notice of award of the Contract, the Contractor shall submit evidence of bondability, evidence of insurability, and all other documents required by that time by the Contract Documents. The date of commencement of the Work is the date established ~~in the Agreement.~~by the Owner in a Notice to Proceed, which may not be issued until the Contractor has complied with the terms of the notice of award of the Contract. Separate notices to proceed may be given for different phases of the Work, if applicable. Work on the site may begin when applicable permits have been issued and the Contractor complies with the requirements of the Notice to Proceed and submits the bonds, certificates of insurance, and other documents required by the Contract Documents.

§ 8.1.3 The date of Substantial Completion (or a designated portion thereof) is the date set by the Owner and certified by the Architect in accordance with Section 9.8.

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

§ 8.2 PROGRESS AND COMPLETION

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

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

§ 8.2.3 The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract ~~Time.~~Time and shall achieve Final Completion within thirty (30) days thereafter unless otherwise specified in the Contract Documents.

§ 8.2.4 THE TIMELY COMPLETION OF THIS PROJECT IS ESSENTIAL TO THE OWNER. The Owner will incur serious and substantial damages if Substantial Completion of the work does not occur within the Contract Time; however; it would be difficult if not impossible to determine the amount of such damages, which could include, for example: personnel and overtime costs, transportation costs, governmental fees, storage costs, portable rental costs, loss of use and lost opportunities. Consequently, provisions for liquidated damages as a reasonable estimate of loss may be included in the Contract Documents. The Owner's right to liquidated damages is not affected by partial completion, occupancy, or beneficial occupancy. The Contractor shall provide sufficient forces, construction plant and equipment, and shall work such hours, including night shifts, overtime operations and weekend and holiday work as may be necessary to insure the production of the Work in accordance with the date of Substantial Completion and the approved Contractor's Construction Schedule. If the Contractor fails substantially to perform in a timely manner in accordance with the Contract Documents and, through the fault of the Contractor or Subcontractor(s) of any tier fails to meet the Contractor's Construction Schedule, the Contractor shall take such steps as may be necessary to immediately improve its progress by increasing the number of workers, shifts, overtime operations or days of work or other means and methods, all without additional cost to the Owner.

§ 8.2.5 If the Work is to be performed in phases, with separate dates set forth for Substantial Completion elsewhere in the Contract Documents, then the specified liquidated damages shall apply separately to each such phase unless otherwise specified.

§ 8.2.6 Any provisions in the Contract for liquidated damages are intended to be in lieu of the liability of the Contractor for special, incidental and consequential damages (such as cost of capital and loss of profits, use and revenue) sustained by the Owner and shall not relieve or release the Contractor from liability for any and all damages suffered by the Owner due to other breaches of the Contract or suffered by separate contractors.

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§ 8.2.7 It is the Contractor's option, but not its right, to attempt to complete the Project earlier than the dates specified in the Contract Documents. Thus, any claim based upon delay shall be evaluated based upon the dates specified in the Contract Documents, not an earlier projected completion that the Contractor may propose.

§ 8.3 DELAYS AND EXTENSIONS OF TIME

§ 8.3.1 If the Contractor is delayed at any time in the commencement or progress of the Work (1) by an act or neglect of the Owner or Architect, or of an employee of either, or of a separate contractor employed by the Owner; or ~~by changes ordered in the Work; or by~~ (2) by changes ordered in the Work, only to the extent reflected in approved Change Orders providing for specific extensions of the Contract Time; or (3) by unanticipated, abnormal weather (see Section 15.1.5.2; or (4) by unexpected industry-wide labor disputes, fire, unusual delay in ~~deliveries,~~ deliveries outside of the control of the Contractor or Subcontractors of any tier, governmental delays (including unanticipated permit delays not caused by the Owner or Contractor,) unavoidable casualties or other causes beyond the Contractor's control; or (5) by delay authorized by the Owner pending mediation and ~~arbitration; or~~ litigation; or (6) by other causes that the Owner in consultation with the Architect determines may justify delay, then the Contractor shall reasonably attempt to mitigate the delay, and the Contract Time shall be extended by Change Order for such reasonable time ~~as the Architect may determine.~~ limited to the change in the actual critical path of the Contractor's Construction Schedule directly caused thereby, as the Architect and Owner may determine consistent with the provisions of the Contract Documents. In no event however, shall the Contractor be entitled to any extension of time absent proof of (1) delay to an activity on the critical path of the Construction Schedule, so as to actually delay the Project completion beyond the date of Substantial Completion, or (2) delay transforming an activity into the critical path of the Construction Schedule, so as to actually delay the Project completion beyond the date of Substantial Completion.

§ 8.3.2 Claims relating to time shall be made in accordance with applicable provisions of Article ~~15.~~ 15 and shall include any proposed changes in the Contractor's Construction Schedule or the Contract Time, a description of any event that could delay performance of any item of the Work, the expected duration of the delay, the anticipated effect on the Construction Schedule (if any,) and the action being taken to correct the delay situation. That the Owner or Architect may be aware of the occurrence or existence of a delay through means other than the Contractor's written notification shall not constitute a waiver of a timely or written notice or Claim. The Contractor has an obligation to minimize and mitigate schedule impacts.

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

.1 If the delay was not caused by the Owner, the Contractor, a Subcontractor of any tier, or the Architect, or anyone acting on behalf of any of them, the Contractor is entitled only to an increase in the Contract Time in accordance with the Contract Documents, but not an increase in the Contract Sum. If the delay was caused by the Contractor, a Subcontractor of any tier, or anyone acting on behalf of any of them, the Contractor is not entitled to an increase in the Contract Time or the Contract Sum. The Contractor shall be entitled to a change in the Contract Sum only if the delay was caused by the Owner or Architect, or anyone acting on behalf of them. The Contractor shall not recover damages, an equitable adjustment or an increase in the Contract Sum or Contract Time from the Owner where the Contractor could have reasonably avoided the delay by the exercise of due diligence. The Contractor shall be able to recover an increase in the Contract Sum, provided it is consistent with the terms of the Contract Documents, only if the delay was in the critical path, was unreasonable and was caused by the Owner or anyone acting on its behalf as permitted under the Contract Documents. The Owner is not obligated directly or indirectly for damages, an equitable adjustment, or an increase in the Contract Sum for any delay suffered by a Subcontractor of any tier that does not increase the Contract Time.

.2 In the event the Contractor (including Subcontractors of any tier) is held to be entitled to damages from the Owner for delay beyond the payment permitted in Section 7.5.5, it is agreed that the total combined damages to the Contractor and any Subcontractors of any tier, for each day of delay, shall be limited to the same daily liquidated damage rate specified in the Contract Documents due the Owner for the Contractor's delay in achieving Substantial Completion. By submitting a proposal for the Work, and by signing the Agreement, the Contractor represents that it would be difficult if not impossible to determine the amount of any delay damages due it, that it has taken this provision for liquidated damages into consideration in its bid, and that these liquidated

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damages are a reasonable estimate of its loss. No damages will be allowed for any time prior to fourteen (14) days before receipt of written notice of the Claim of the delay pursuant to Article 15.

.3 The Contractor shall not in any event be entitled to damages arising out of actual or alleged loss of efficiency; morale, fatigue, attitude, or labor rhythm; constructive acceleration; home office overhead; expectant underrun; trade stacking; reassignment of workers; rescheduling of Work, concurrent operations; dilution of supervision; learning curve; beneficial or joint occupancy; logistics; ripple; season change; extended or increased overhead or general conditions; profit upon damages for delay; impact damages including cumulative impacts; or similar damages. Any effects that such alleged costs may have upon the Contractor or its Subcontractors of any tier is fully compensated through the Cost of the Work, the percentage Fee on Change Orders paid through Section 7.5.5, and any liquidated damages paid hereunder.

.4 The Contractor shall not be entitled to any adjustment in the Contract Time or Contract Sum, or to any additional payment of any sort, by reason of the loss or use of any float time, including time not on the Critical Path or time between the Contractor's anticipated completion date and the end of the Contract Time, whether or not the float time is described as such on the Contractor's Construction Schedule.

ARTICLE 9 PAYMENTS AND COMPLETION

§ 9.1 CONTRACT SUM

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

§ 9.2 SCHEDULE OF VALUES

~~Where the Contract is based on a stipulated sum or Guaranteed Maximum Price,~~ At least fourteen (14) days before the first Application for Payment, the Contractor shall submit to the Owner and Architect, before the first Application for Payment, a schedule of values allocating the entire Contract Sum to the various portions of the Work and prepared in such form and supported by such data to substantiate its accuracy as the Owner and Architect may require. At a minimum, the Work shall be itemized by Specification section or system; separate values for labor, materials, and equipment shall be provided; and line items on the Schedule of Values shall be tied to the Contractor's Construction Schedule. Quantities shall be provided for each section or system of the Work. If an example of the Schedule of Values in included in the Contract Documents, the Contractor shall itemize and prepare the Schedule of Values as indicated by the example with respect to form, content, and level detailing. This schedule, unless objected to by the Owner or Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment.

.1 Payment applicable to the expenses of the Contractor's bond and/or insurance will be made only upon receipt of paid invoices from the surety and/or insurance carrier.

.2 No payment will be made for shop drawings or submittals until on-site receipt of materials, except for structural steel, fire sprinkler, automatic temperature control, and fire alarm shop drawings after satisfactory completion of review by the Architect.

.3 The Schedule of Values shall also allocate five percent (5%) of the Contract Sum as Retainage.

.4 Itemize separately line item costs for permits, bonds, insurance, layout and supervision, scheduling, and temporary facilities.

§ 9.3 APPLICATIONS FOR PAYMENT

§ 9.3.1 ~~At least ten days before the date established for each progress payment, the Contractor shall submit to the Architect an itemized Application for Payment prepared in accordance with the schedule of values, if required under Section 9.2, for completed portions of the Work. Such application shall be notarized, if required, and supported by such data substantiating the Contractor's right to payment as the Owner or Architect may require, such as copies of requisitions from Subcontractors and material suppliers, and shall reflect retainage if provided for in the Contract Documents.~~Progress payments will be made monthly for Work duly certified, approved, and performed during the calendar month preceding the Application. These amounts are paid in trust to the Contractor for distribution to Subcontractors to the extent and in accordance with the approved Application for Payment.

§ 9.3.1.1 **Draft Application:** During the last week of each month, the Contractor shall submit to the Architect a report on the current progress of the Work as compared to the Contractor's Construction Schedule, an updated Construction Schedule, and a draft, itemized Application for Payment for Work performed during that calendar

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month on a form supplied or approved by the Owner. This shall not constitute a payment request. The Contractor, the Owner, and the Architect shall meet within the next seven (7) days and confer regarding the current progress of the Work and the amount of payment to which the Contractor is entitled. The Architect or Owner may request the Contractor to provide data substantiating the Contractor's right to payment as the Owner or Architect may require, such as copies of requisitions from Subcontractors or any tier, lien releases, and certified payroll records, and reflecting retainage as provided elsewhere in the Contract Documents. The Contractor shall not be entitled to make a payment request, nor is any payment due the Contractor, until such data is provided. As provided in Section 7.3.9, such applications ~~may include requests for payment~~ may, if payment is approved by the Owner and Architect, include requests for payment of undisputed amounts on account of changes in the Work that have been properly authorized by Construction Change Directives, or by interim determinations of the Owner, with the assistance of the Architect, but not yet included in Change Orders.

§ 9.3.1.2 Payment Request: After the Contractor, the Owner, and the Architect have met and conferred regarding the updated draft Application, and the Contractor has provided all progress information required and all data requested by the Owner or Architect under Section 9.3.1.1 above, and after the Contractor has provided the Owner and Architect with current meeting minutes, daily reports, as-built drawings, and an updated Construction Schedule, the Contractor may submit a payment request no earlier than the tenth (10th) day of the following month in the agreed-upon amount, in the form of a notarized, itemized Application for Payment for Work properly performed during the prior calendar month on a form supplied or approved by the Owner. The Contractor shall also submit an unconditional lien release on a form supplied or approved by the Owner for amounts paid by the Owner to the Contractor for prior Applications for Payment and a conditional release for the current Application. THE SUBMISSION OF THE APPLICATION CONSTITUTES A CERTIFICATION BY THE CONTRACTOR THAT THE WORK IS CURRENT ON THE CONTRACTOR'S CONSTRUCTION SCHEDULE, unless otherwise noted on the Application. If requested by the Owner, the Contractor shall also submit proof of payment to Subcontractors for prior months, including lien releases and cancelled checks. Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or material supplier, unless such Work has been performed by others whom the Contractor intends to pay. A payment request shall not be valid unless it complies with the requirements of the Contract Documents.

§ 9.3.1.3 Disputed Amounts: If the Contractor believes it is entitled to payment for Work performed during the prior calendar month in addition to the agreed-upon amount, the Contractor may, also by the tenth (10th) day of the month, submit to the Owner and Architect, along with the approved payment request, a separate written payment request specifying the exact additional amount due, the category in the Schedule of Values in which the payment is due, the specific Work for which the additional amount is due, and why the additional payment is due.

§ 9.3.1.4 Validity of Payment Request: A payment request shall not be valid unless it complies with the requirements of the Contract Documents. If a separate payment request concerning a disputed amount does not comply with the requirements of the Contract, the Owner will provide a written statement to the Contractor stating why the disputed amount is not owed and/or why the separate payment request does not comply with the requirements of the Contract.

§ 9.3.1.5 Payments to Subcontractors: No payment request shall include amounts the Contractor does not intend to pay to a Subcontractor because of a dispute or other reason. If, after making a request for, but before paying a Subcontractor for its performance covered by the payment request, the Contractor discovers that part or all of the payment otherwise due to the Subcontractor is subject to withholding from the Subcontractor under the subcontract (such as unsatisfactory performance or non-payment of lower tier Subcontractors,) the Contractor may withhold the amount as allowed under the subcontract, but it shall give the Subcontractor, the Owner, and the Architect written notice of the remedial actions that must be taken as soon as practicable after determining the cause for the withholding but not before the due date for the Subcontractor payment, and pay the Subcontractor within seven (7) working days after the Subcontractor satisfactorily completes the remedial action identified in the notice.

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

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shall include the costs of applicable insurance, storage and transportation to the site for such materials and equipment stored off the site.

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

§ 9.3.4 Retainage: Pursuant to RCW 60.28, a sum of 5 percent of the monies earned by the Contractor will be retained from payment. Such retainage shall be used as a trust fund for the protection and payment of: (i) The claims of any person arising under the contract; and (ii) the state with respect to taxes, increases, and penalties imposed pursuant to Titles 50, 51, and 82 RCW which may be due from such contractor. Retainage shall be released in accordance with RCW 60.28.

§ 9.4 CERTIFICATES FOR PAYMENT

§ 9.4.1 The Architect will, within seven (7) days after receipt of the Contractor's approved Application for Payment, either issue to the Owner a Certificate for Payment, with a copy to the Contractor, for such amount as the Architect determines is properly due, or notify the Contractor and Owner in writing of the Architect's reasons for withholding certification in whole or in part as provided in Section 9.5.1.

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

§ 9.5 DECISIONS TO WITHHOLD CERTIFICATION

§ 9.5.1 The Architect may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Architect's opinion the representations to the Owner required by Section 9.4.2 cannot be made. If the Architect is unable to certify payment in the amount of the Application, the Architect will notify the Contractor and Owner as provided in Section 9.4.1. If the Contractor and Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment for the amount for which the Architect is able to make such representations to the Owner. The Owner may, with or without the Architect's concurrence, withhold payment, and the Architect may also withhold a Certificate for Payment or, because of subsequently discovered ~~evidence,~~ evidence or subsequent observations, it may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Architect's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from acts and omissions described in Section 3.3.2, because of

- .1 defective Work not remedied;
- .2 third party claims (except where an insurer has unconditionally accepted coverage) filed or reasonable evidence indicating probable filing of such claims unless security acceptable to the Owner is provided by the Contractor;
- .3 failure of the Contractor to make payments properly to Subcontractors or for labor, materials or equipment;
- .4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;

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.5 damage to the Owner or a separate ~~contractor;~~contractor (except where an insurer has unconditionally accepted coverage);

.6 reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; ~~or~~

.7 ~~repeated~~ unsatisfactory prosecution of the Work by the Contractor, including but not limited to failure to carry out the Work in accordance with the Contract ~~Documents.~~ Documents;

.8 delay by the Contractor and/or Subcontractor(s) of any tier, failure to comply with the Contractor's Construction Schedule requirements;

.9 failure to submit affidavits pertaining to wages paid as required by statute;

.10 failure to submit a properly updated construction Schedule;

.11 failure to comply with a requirement of the Contract Documents in which the Owner has reserved the right to withhold payment;

.12 failure to properly maintain as-builts;

.13 Failure to properly submit daily construction records; or

.14 failure to properly submit certified payroll.

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

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

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

§ 9.6 PROGRESS PAYMENTS

§ 9.6.1 After the Architect has issued a Certificate for Payment, and it has been approved by the Owner, the Owner shall make payment in the manner and within the time provided in the Contract ~~Documents, and shall so notify the Architect.~~Documents. The Owner will make a progress payment within fifteen (15) days of its receipt and approval of the Architect's Certificate of Payment. The Owner shall be entitled to withhold payment to the extent provided by the Contract Documents, notwithstanding the issuance of a Certificate of Payment.

§ 9.6.2 The Contractor shall pay each Subcontractor promptly, and no later than seven (7) days after receipt of payment from the Owner out of the amount paid to the Contractor on account of such Subcontractor's portion of the Work, the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner. If the Contractor does not receive payment for any cause that is not the fault of a particular Subcontractor, but does receive payment for materials supplied or Work performed by that Subcontractor, the Contractor shall pay the Subcontractor in accordance with its subcontract for its satisfactorily completed Work, less the retained percentage.

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

§ 9.6.4 The Owner has the right to request written evidence from the Contractor that the Contractor has properly paid Subcontractors and material and equipment suppliers amounts paid by the Owner to the Contractor for subcontracted ~~Work. If the Contractor fails to furnish such evidence within seven days,~~ Work, and the Owner shall have the right to contact Subcontractors to ascertain whether they have been properly paid. Neither the Owner nor

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Architect shall have an obligation to pay or to see to the payment of money to a Subcontractor, except as may otherwise be required by law.

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

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

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

§ 9.7 FAILURE OF PAYMENT

If the Architect ~~does not~~ improperly fails to issue a Certificate for Payment, through no fault of the Contractor, within ~~seven~~ fifteen (15) days after receipt of the Contractor's ~~Application for Payment,~~ timely and complete Application for Payment under Section 9.3.1.2 (subject to approved payment schedule,) or if the Owner does not pay the Contractor within ~~seven~~ fifteen (15) days after the date established in the Contract Documents the amount due and owing to the Contractor certified by the Architect or awarded by binding dispute resolution, then the Contractor may, upon ~~seven~~ fifteen (15) additional days' written notice to the Owner and Architect, stop the Work until payment of the amount owing has been received. The Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shut-down, delay and ~~start-up, plus interest as provided for in the Contract Documents.~~start-up.

§ 9.8 SUBSTANTIAL COMPLETION

§ 9.8.1 Substantial Completion is the stage in the progress of the ~~Work~~ Work, or portion or phase thereof designated and approved by the Architect and Owner, when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can ~~occupy or utilize the Work for its intended use.~~fully occupy or utilize the Work, or the designated portion thereof, for its intended use, including FF&E, and staff occupancy. The fact that the Owner may occupy the Work or a designated portion thereof does not indicate that the Work is acceptable in whole or in part. All Work, other than incidental corrective or punch list Work and final cleaning, shall be completed, including but not limited to the following:

- **.1** Obtain applicable occupancy permits, including fire/life safety systems and health department approval, pressure vessel permits, elevator permits, and similar approvals or certificates by governing authorities and franchised services, assuring the Owner's full access and use of completed Work.
- **.2** Submit the Contractor's punch list of items to be completed or corrected and written request for inspection.
- **.3** Complete final start-up, testing, and commence instruction and training sessions on all major building systems including HVAC and controls, intercom, data communications, fire alarm, telephone, fire sprinkler, security and clocks.
- **.4** Make final changeover of locks and transmit new keys to the Owner, and advise the Owner of the changeover in security provisions.
- **.5** Discontinue, or change over and remove, temporary facilities and services from the Project site.
- **.6** Advise the Owner on coordination of shifting insurance coverages, including proof of extended coverages as required.
- **.7** Complete final cleaning.

The Work is not Substantially Complete unless the Owner and Architect reasonably judge that the Work can achieve Final Completion within thirty (30) days (or such other period of time as is specified in the Contract Documents;) appropriate cleaning has occurred; all designated systems and parts are usable; utilities are connected and operating normally and training sessions have occurred; all required temporary occupancy permits, pressure vessel permits, elevator permits, and similar approvals or certificates by governing authorities and franchised services, assuring the Owner's full access to the Work have been issued; O&M Manuals have been submitted for review; and the Work is

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accessible by normal vehicular and pedestrian traffic routes. The fact that the Owner may occupy the Work or a designated portion thereof does not indicate that the Work is Substantially Complete or is acceptable in whole or in part, nor does such occupation toll or change any liquidated damages due the Owner.

§ 9.8.1.2

§ 9.8.1.3

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

§ 9.8.3 Upon receipt of the Contractor's list, and upon verification by the Architect that all permits, approvals, testing, training and other submittals and administrative actions required under the Contract Documents for obtaining Substantial Completion have been satisfied, the Architect and, at its option, the Owner will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Architect's inspection discloses any item, whether or not included on the Contractor's list, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work or designated portion thereof for its intended use, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Architect. In such case, the Contractor shall then submit a request for another inspection by the Architect to determine Substantial Completion. If the Owner or Architect determines that the Work or designated portion is not substantially complete, the Contractor shall expeditiously complete the Work or designated portion, and again request an inspection. The Contractor shall pay the costs associated with any reinspections.

§ 9.8.4 When the Work or designated portion thereof is substantially complete, the Architect will prepare a Certificate of Substantial Completion ~~that~~ which, upon approval of the Owner, shall establish the date of Substantial Completion, shall establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance, and shall fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion. The Contractor shall attach and submit with the executed Certificate of Substantial Completion, the Certificate of Occupancy, as well as a written list of each outstanding and unresolved Claim; any Claim not so submitted and identified, other than retainage and the undisputed balance of the Contract Sum, shall be deemed waived and abandoned. If the Owner or Architect determines that the Work or designated portion is not substantially complete, the Contractor shall expeditiously complete the work or designated portion, again request an inspection, and pay the costs associated with the re-inspection, including Architect and consultant fees.

§ 9.8.5 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in such Certificate. ~~Upon such acceptance~~ Any items not included by the Architect, but required or necessary for Final Completion of the Contract, shall be supplied and installed by the Contractor as part of the Contract Sum, notwithstanding their not being recorded by the Architect. Upon written acceptance of the Certificate of Substantial Completion by the Owner and Contractor, and upon the Contractor's Application for Payment and consent of surety, if any, the Owner shall make payment ~~of retainage applying to such Work or designated portion thereof.~~ as provided in the Contract Documents. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents. No further payment will be due, or owing, until the payment following Final Completion.

§ 9.8.6 The Contractor shall prepare, continue to monitor with the Architect, and cause to be completed, all punch lists with respect to the activity of each Subcontractor of any tier and report weekly to the Owner on outstanding punch list items. Beginning forty-five (45) days before the scheduled date of Substantial Completion, the Contractor shall prepare reports weekly, identifying items to be completed in order to obtain necessary occupancy certificates and permits, and make recommendations to the Owner with respect to effectuating the earliest possible completion. The Contractor shall include this report as a schedule item on its CPM schedule.

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§ 9.9 PARTIAL OCCUPANCY OR USE

§ 9.9.1 The Owner ~~may~~ may, upon written notice to the Contractor, take possession of, operate, occupy or use any completed or partially completed portion of the Work at any stage ~~when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is consented to by the insurer as required under Section 11.3.1.5 and~~ and the Contractor shall cooperate with such occupancy and use, including without limitation, any FF&E, or staff move-in. Occupancy shall not occur until such occupancy or use is authorized by public authorities having jurisdiction over the Project. Such partial occupancy or use may commence whether or not the portion is substantially ~~complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage, if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents.~~ complete. Unless otherwise agreed, in writing, such possession, use or operation shall not be deemed an acceptance of any portion of the Work, nor accelerate the time for any payment to the Contractor under the Contract, nor prejudice any rights of the Owner under the Contract or under any insurance, bond, guaranty or other requirement of the Contract, nor relieve the Contractor of the risk or loss or any of its obligations under the Contract, nor establish a Date of Substantial or Final Completion, nor establish a date for termination or partial termination of the running of any liquidated damages, nor constitute a waiver of any Owner claims. If the Contractor fails to achieve Substantial Completion of the Work within the Contract Time, or fails to achieve Final Completion of the Work within thirty (30) days of Substantial Completion (or such other period of time as is specified in the Contract Documents,) the Owner may take possession of, use or operate all or any part of the Work without an increase in the Contract Sum or Contract Time on account of such possession or use. When the Contractor considers a portion substantially complete, the Contractor shall prepare and submit a list to the Owner and Architect as provided under Section 9.8.2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. ~~The stage of the progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, by decision of the Architect.~~

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

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

§ 9.10 ~~FINAL COMPLETION AND FINAL PAYMENT~~FINAL COMPLETION, FINAL ACCEPTANCE AND FINAL PAYMENT

§ 9.10.1

§ 9.10.1 ~~Upon receipt of the Contractor's written notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect will promptly make such inspection and, when the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will promptly issue a final Certificate for Payment stating that to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's on-site visits and inspections, the Work has been completed in accordance with terms and conditions of the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Architect's final Certificate for Payment will constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.~~**Final Completion:**

§ 9.10.1.1 The Contractor shall cause punch list items to be completed within thirty (30) days of Substantial Completion (or such other period of time as is specified in the Contract Documents) within such reasonable period as may be required to correct the item (in the event that the punch list items are, because of their nature, incapable of correction during that period) provided that the Contractor commences to correct the item within that period and thereafter diligently and in good faith pursues the corrective action to completion. If, after the Date of Substantial Completion, the Owner considers that the punch list items are unlikely to be completed within thirty (30) days of the Date of Substantial Completion (or such other period of time as specified in the Contract Documents,) the Owner may, upon seven (7) days' written notice to the Contractor, take over and perform some or all of the punch list items. Moreover, and without limiting any other available remedy, the Owner may take over and complete any portion of the Work at any time more than thirty (30) days following the Substantial Completion if Final Completion has not been achieved.

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§ 9.10.1.2 Upon receipt of the Contractor's written notice that the Contractor has inspected the punch list items, the punchlist items are completed, and the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect will promptly make such inspection accompanied by the Contractor (if requested by the Architect or Owner.) If the Architect or Owner determines that some or all of the punch list items have not been completed, the Contractor shall be responsible to the Owner for all costs, including re-inspection fees, for any subsequent review to determine completion of the punch list. When the Architect finds all punch list items complete and the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will promptly notify the Owner and the Contractor in in writing that, to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's on-site visits and inspections, the Work has been completed in accordance with terms and conditions of the Contract Documents. The Architect's final Certificate of Payment will constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

§ 9.10.1.3 The Contractor is liable for, and the Owner may deduct from any amounts due the Contractor, all Architect, engineer or other design consultant fees, and all construction management fees, incurred by the Owner for services performed more than thirty (30) days after Substantial Completion of the Work (or such other period of time as is specified in the Contract Documents,) whether or not those services would have been performed prior to that date had Final Completion been achieved in a timely manner.

§ 9.10.1.4 When the Architect finds that the Work has been concluded, a final occupancy permit has been issued, and the Contractor has submitted all the items identified in Section 9.10.1.5 to the Architect, the Contractor may submit a final Application for Payment. The Architect will then promptly issue a final Certificate for Payment stating that the entire balance found to be due the Contractor and noted in said final Certificate is due and payable. The Architect's final Certificate of Payment shall establish the date of Final Completion upon its execution by the Owner.

§ 9.10.1.5 "Final Completion" will be attained when the Contractor has accomplished the following:

.1 Complete all requirements listed in Section 9.8 for Substantial Completion.
.2 Complete all remaining punch list items and remaining Work, and obtain approval by the Architect and Owner that all Work is complete.
.3 Obtain permanent occupancy permits (if only a temporary occupancy permit was issued previously.)
.4 Submit any final Change Orders and a final Application for Payment.
.5 Submit record documents, any final property survey, and operation and maintenance manuals required by the Contract Documents.
.6 Deliver any required tools, spare parts, extra stock of material and similar physical items to the Owner as required by the Contract Documents.
.7 Complete final cleaning, including cleaning after punch list Work (in addition to the cleaning that was required to obtain Substantial Completion.)
.8 Complete instruction and training sessions (which are to begin prior to Substantial Completion) on all major building systems including HVAC, intercom, data communications, fire alarm, telephone, fire sprinkler, emergency power, security and clocks.
.9 Submit executed warranties.
.10 Make final changeover of locks and transmit new keys to the Owner, and advise the Owner of the changeover in security provisions.
.11 Discontinue, or change over and remove, temporary facilities and services from the Project site.
.12 Advise the Owner on coordination of shifting insurance coverages, including proof of extended coverages as required.

§ 9.10.2 ~~Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect (1) an affidavit that~~ **Final Acceptance and Payment**

§ 9.10.2.1 Final payment shall not become due until after the Owner has formally accepted the Project ("Final Acceptance") to achieve Final Acceptance, the Architect must have issued a final Certificate for Payment under Section 9.10.1.4, an occupancy permit must have been issued, Final Completion must have occurred, and the Contractor must have submitted to the Architect and the Owner the following:

.1 an affidavit that all payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered

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(less amounts withheld by Owner) have been paid or otherwise satisfied, ~~(2)~~ except for any Claims that are specifically identified on the affidavit (Affidavit of Payment of Debts and Claims, AIA form G706 or equivalent,)

.2 a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be canceled or allowed to expire until at least ~~30~~ thirty (30) days' prior written notice has been given to the Owner, ~~(3)~~

.3 a written statement that the Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents, ~~(4)~~

.4 consent of surety, if any, to final payment ~~and (5), if required by the Owner,~~ (AIA form G707 or equivalent,)

.5 other data establishing payment or satisfaction ~~of~~ of, or protection against, obligations, such as receipts, releases and waivers of liens, claims, security interests or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the ~~Owner.~~ Owner (Contractor's Affidavit of Release of Liens, AIA form G706A or equivalent.) If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien. If such lien remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' ~~fees.~~ fees,

.6 a letter from the Architect indicating that the Work is complete and recommending Final Acceptance pf the Project by the Owner,

.7 certification that the materials in the Work are "Lead-free" and "Asbestos free,"

.8 a certified statement that the Contractor has closed all necessary permits or otherwise met the requirements of all governing jurisdictions related to this Project, including but not limited to all city or county departments, health districts and utility districts, provided to Owner with a copy of all closed or signed-off permits,

.9 record documents, and

.10 all warranties, guarantees, training, manuals, operation instructions, certificates, spare parts, maintenance manuals and stock, specified excess material, as-built drawings, and other documents, training or items required by the Contract Documents or local governmental entities.

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

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

~~.1 liens, Claims, security interests or encumbrances arising out of the Contract and unsettled;~~

~~.2 failure of the Work to comply with the requirements of the Contract Documents; or~~

~~.3 terms of special warranties required by the Contract Documents.~~

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

§ 9.10.5.1 Final Payment by Owner: The making of Final Payment shall constitute a waiver of Claims by the Owner except those arising from:

.1 liens, statutory retainage, Claims, security interests, or encumbrances arising out of the Contract and unsettled;

.2 failure of the Work to comply with the requirements of the Contract Documents; or

.3 terms of special warranties required by the Contract Documents.

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§ 9.10.5.2 Final Payment to Contractor: Acceptance of Final Payment by the Contractor, a Subcontractor or material supplier shall constitute a waiver of Claims by that payee except those previously made in writing and identified by that payee as unsettled and attached to the Contractor's final Application for Payment.

§ 9.10.5.3 Change Orders: The execution of a Change Order shall constitute a waiver of Claims by the Contractor, arising out of the Work to be performed or deleted pursuant to the Change Order, except as specifically described in the Change Order. Reservations of rights will be deemed waived and are void unless the reserved rights are specifically described in detail to the satisfaction of the Owner and are initialed by the Owner. If the Contractor adds a reservation of rights that has not been initialed by the Owner to any Change Order, Construction Change Directive, Change Order Proposal, Application for Payment or any other document, all amounts therein shall be considered disputed and not due or payable unless and until costs are re-negotiated or the reservation is withdrawn or changed in a manner satisfactory to and in all cases initialed by the Owner. If the Owner makes payment for a Change Order or an Application for Payment that contains a reservation of rights not initialed by the Owner to indicate agreement with the reservation, and if the Contractor negotiates the check for such payment, then the reservation of rights shall be deemed waived, withdrawn and of no effect.

§ 9.10.6 If a Subcontractor of any tier refuses to provide a release or waiver required by the Owner, the Owner may (1) retain in the fund, account, or escrow funds in such amount as to defray the cost of foreclosing the liens of such Claims and to pay attorneys' fees, the total of which shall be no less than 150% of the claimed amount, or (2) accept a bond from the Contractor, satisfactory to the Owner, to indemnify the Owner against such lien. If any such lien remains unsatisfied after all payments from the retainage are made, the Contractor shall refund to the Owner all monies that the Owner may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.

§ 9.10.7 The Contractor shall maintain books, ledgers, records, documents, estimates, bids, correspondence, logs, schedules, emails, and other tangible and electronic data and other evidence relating or pertaining to the costs and/or performance of the Contract ("records") to such extent and in such detail as will properly reflect and fully support compliance with the requirements of the Contract Documents and with all costs, charges and other amounts of whatever nature. The Contractor shall preserve such records for a period of three (3) years following the date of Final Acceptance under the Contract and for such longer period as may be required by any other provision of the Contract. Within seven (7) days of the Owner's request, the Contractor agrees to make available, at the office of the Contractor during normal business hours, all records for inspection, audit and reproduction (including electronic reproduction) by the Owner or its representatives; failure to fully comply with this requirement shall constitute a material breach of contract.

§ 9.10.8 Subcontractors of any tier shall maintain books, ledgers, records, documents, estimates, bids, correspondence, logs, schedules, electronic data and other evidence relating or pertaining to the costs and/or performance of the Contract ("records") to such extent and in such detail as will properly reflect and fully support compliance with the requirements of the Contract Documents and with all costs, charges and other amounts of whatever nature. Each Subcontractor shall preserve such records for a period of three (3) years following the date of Final Acceptance under the Contract and for such longer period as may be required by any other provision of the Contract. Within seven (7) days of the Owner's request, the Subcontractor agrees to make available, at the office of the Subcontractor during normal business hours, all records for inspection, audit and reproduction (including electronic reproduction) by the Owner or its representatives; failure to fully comply with this requirement shall constitute a waiver of all claims by that Subcontractor.

§ 9.10.9 The Contractor agrees, on behalf of itself and Subcontractors of any tier, that any rights under Chapter 42.56 RCW will commence at Final Acceptance, and that the invocation of such rights at any time by the Contractor or a Subcontractor of any tier, or their respective representatives, shall initiate an equivalent right to disclosures from the Contractor and Subcontractor of any tier for the benefit of the Owner.

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

§ 10.1 SAFETY PRECAUTIONS AND PROGRAMS

~~The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the Contract.~~ **§ 10.1.1** The Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the Contract. The Contractor shall maintain the Work site and perform the Work in a manner that meets statutory and

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common-law requirements for the provisions of a safe place to work. The requirements shall apply continuously and not be limited to working hours. Any review by the Owner or the Architect of the Contractor's performance shall not be construed to include a review of the adequacy of the Contractor's safety measures in, on, or near the site of the Work. The Contractor shall be solely and completely responsible for conditions of the Project site, including safety of all persons and property, during performance of the Work.

§ 10.1.2 No action or inaction of the Owner or the Architect relating to safety or property protection or a violation thereof will: (1) relieve the Contractor of sole and complete responsibility for the violation and the correction thereof, or of sole liability for the consequences of said violation; (2) impose any obligation upon the Owner or Architect to inspect or review the Contractor's safety program or precautions or to enforce the Contractor's compliance with the requirements of this Article 10; (3) impose any continuing obligation upon the Owner or Architect to ensure the Contractor performs the Work safely or to provide such notice to the Contractor or any other person or entity; (4) affect the Contractor's sole and complete responsibility for performing the Work safely or the Contractor's responsibility for the safety and welfare of its employees; or (5) affect the Contractor's responsibility for the protection of property, staff and the general public.

§ 10.2 SAFETY OF PERSONS AND PROPERTY

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

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

§ 10.2.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities bearing on safety of persons or property or their protection from damage, injury or loss. The Contractor shall comply with all notices and comply with all requests from the Owner regarding the safety and protection of the Owner's staff. The Contractor shall comply with the safety regulations set forth in "Safety Standards for Construction" and "General Safety Standards" and any other requirements published by the Washington State Department of Labor and Industries. The Contractor shall comply with the Federal Occupational Safety and Health Act of 1970 (OSHA), including all revisions, amendments and regulations issued thereunder, and the provisions of the Washington Industrial Safety and Health Act of 1973 (WISHA), including all revisions, amendments and regulations issued thereunder by the Washington State Department of Labor and Industries. The WISHA regulations shall apply to all excavation, trenching and ditching operations. In case of conflict between any such requirements, the more stringent regulation or requirement shall apply.

§ 10.2.3 The Contractor shall erect and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying owners and users of adjacent sites and utilities. The Contractor shall maintain at the Project site office or other well-known place at the Work site, all materials (e.g. first aid kit) necessary for giving first aid to the injured, and shall establish, publish and make known to all employees, procedures for ensuring immediate removal to a hospital or a doctor's care, persons, including employees, who may have been injured on the site. Employees shall not be permitted to work on the site, before the Contractor has established, and made known, procedures for removal of injured persons to a hospital or a doctor's care. The Contractor and/or any Subcontractors shall ensure that at least one of such employees has a valid, effective first aid card.

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

§ 10.2.5 The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contract Documents) to property referred to in Sections 10.2.1.2 and 10.2.1.3 caused in

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whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 10.2.1.2 and 10.2.1.3, except damage or loss attributable to acts or omissions of the Owner or Architect or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 3.18.

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

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

§ 10.2.8 ~~INJURY OR DAMAGE TO PERSON OR PROPERTY~~At all times until the Owner's occupancy of the Work, or a designated portion of the Work, the Contractor shall protect from damage, weather, deterioration, theft, vandalism and malicious mischief and shall bear the risk of any uninsured loss (including deductibles or self-insured retention) or destruction of, or injury or damage to, all materials, equipment, tools, and other items incorporated or to be incorporated in the Work or designated portion, or consumed or used in the performance of the Work or designated portion, and all Work in process and completed Work or designated portion. The Contractor is responsible for any deductible amounts or self-insured retention related to any insurance coverage.

§ 10.2.9 Any notice given to the Contractor by the Owner or the Architect of a safety or property protection violation will not: (1) relieve the Contractor of sole and complete responsibility for the violation and the correction thereof, or for sole liability for the consequences of said violation; (2) impose any obligation upon the Owner or Architect to inspect or review the Contractor's safety program or precautions or to enforce the Contractor's compliance with the requirements of this Article 10; or (3) impose any continuing obligation upon the Owner or Architect to provide such notice to the Contractor or any other persons or entity.

§ 10.2.10 The Project site may be occupied by Owner employees, and others during construction of the Project. The safety of these site occupants is of paramount importance to the Owner. For that reason, the Contractor shall exercise control over all construction operations to ensure the safety of all site occupants and shall coordinate with the Owner and Architect as necessary to promote the Contractor's obligation for site safety. The Contractor shall also strictly follow all hours of work, joint occupancy, site security, and phasing requirements for the Project, including those set forth in the Contract Documents.

§ 10.2.11 INJURY OR DAMAGE TO PERSON OR PROPERTY

If ~~either party~~ Contractor suffers injury or damage to person or property because of an alleged act or omission of the ~~other party,~~ Owner, or of others for whose acts ~~such party is~~ the Owner may be legally responsible, written notice of such injury or damage, whether or not insured, shall be given to the ~~other party~~ Owner within a reasonable time not exceeding 21 days after discovery. The notice shall provide sufficient detail to enable the other party to investigate the matter. This Section does not apply to Claims, damages for additional costs or time, acceleration, or delay.

§ 10.3 HAZARDOUS MATERIALS

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

§ 10.3.2 Upon receipt of the Contractor's written notice, and with the Owner's agreement, the Owner shall obtain the services of a licensed laboratory to reasonably verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, ~~to cause it to be~~ verify that it has been rendered harmless. Unless otherwise required by the Contract Documents, the Owner shall furnish in writing to the Contractor and Architect the names and qualifications of persons or entities who are to perform tests

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verifying the presence or absence of such material or substance or who are to perform the task of removal or safe containment of such material or substance. The Contractor and the Architect will promptly reply to the Owner in writing stating whether or not either has reasonable objection to the persons or entities proposed by the Owner. If either the Contractor or Architect has an objection to a person or entity proposed by the Owner, the Owner shall propose another to whom the Contractor and the Architect have no reasonable ~~objection.~~ objection, but the Owner shall not be responsible for any delay resulting from the Contractor's objection to such person or entity. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time ~~shall~~ may be extended appropriately and the Contract Sum ~~shall~~ may be increased in the amount of the Contractor's reasonable additional costs of shut-down, delay and ~~start-up.~~start-up, which adjustments shall be accomplished as provided in Articles 7, 8 and 15.

§ 10.3.3 To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor, Subcontractors, Architect, Architect's consultants and agents and employees of any of them from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work in the affected area if in fact the material or substance presents the risk of bodily injury or death as described in Section 10.3.1 and has not been rendered harmless, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), except to the extent that such damage, loss or expense is due to the fault or negligence of the party seeking ~~indemnity.~~indemnity, or if removal of such material or substance was a part of the Contractor's Work.

§ 10.3.4 The Owner shall not be responsible under this Section 10.3 for materials or substances the Contractor brings to the site unless such materials or substances are required by the Contract Documents. The Owner shall be responsible for materials or substances required by the Contract Documents, except to the extent of the Contractor's ~~fault~~ fault, misuse, or negligence in the use and handling of such materials or substances. The Contractor shall store all hazardous materials safely, whether or not required by the Contract Documents. The Contractor shall not install hazardous materials, including without limitation asbestos or polychlorinated biphenyl (PCB), in the Work.

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

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

§ 10.4 EMERGENCIES

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

§ 10.5. PUBLIC SAFETY AND CONVENIENCE

§ 10.5.1 The Contractor shall conduct its Work so as to ensure the least possible obstruction to vehicular traffic and inconvenience to the general public and others in the vicinity of the Work and to ensure the protection of persons, property and natural resources. No road or street shall be closed to the public except with the permission of the Owner and the proper governmental authority. Fire hydrants on or adjacent to the Work shall be accessible to firefighting equipment at all times. Temporary provisions shall be made by the Contractor to ensure the use of sidewalks, fire lanes, private and public driveways and proper functioning of gutters, sewer inlets, drainage ditches and culverts, irrigation ditches and natural water courses, in any on the Work site.

ARTICLE 11 INSURANCE AND BONDS

§ 11.1 CONTRACTOR'S LIABILITY INSURANCE

§ 11.1.1 The Contractor shall purchase from and maintain in a company or companies lawfully authorized ~~to do business in the jurisdiction in which the Project is located such insurance as will protect the Contractor from claims set forth below which may arise out of or result from the Contractor's operations and completed operations under~~

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~~the Contract and for which the Contractor may be legally liable, whether such operations be by the Contractor or by a Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:~~

~~.1 Claims under workers' compensation, disability benefit and other similar employee benefit acts that are applicable to the Work to be performed;~~

~~.2 Claims for damages because of bodily injury, occupational sickness or disease, or death of the Contractor's employees;~~

~~.3 Claims for damages because of bodily injury, sickness or disease, or death of any person other than the Contractor's employees;~~and admitted to do business in the State of Washington possessing a Best's policyholder's rating of A- or better and a financial rating of no less than VIII, an occurrence-based Commercial General Liability Insurance Policy reasonably acceptable to the Owner using Insurance Services Office form CG 0001 (12-07) or equivalent. Such policy shall include coverage for bodily injury and property damage liability, personal injury liability, contractual liability, and liability of the Contractor arising out of work, or Work performed by Subcontractors. With respect to the coverage for contractual liability, this Agreement and the Contract Documents must meet the definition of an "insured contract." The Owner shall be included as an additional insured for both ongoing operations and completed operations using Insurance Services Office forms CG 2010 (07-04) and CG 2037 (07-04) or equivalents. The policy shall contain a per project aggregate endorsement and include a waiver of subrogation in favor of the Owner. The Contractor shall also maintain Employer's Liability (Washington Stop Gap) coverage and Business Automobile Liability coverage using Insurance Services Office form CA 0001 (03-10) or equivalent, including coverage for any owned, non-owned, and hired automobiles. This insurance will name the Owner and its employees, the Architect, the Architect's consultants and employees as additional insureds and will include a severability of interest (cross liability clause) for work performed under this Agreement. The Contractor's policy shall be designated primary coverage for both defense and indemnity, and any Owner's policies excess. Such limits of liability insurance shall have coverage levels not less than the following:

.1 Commercial General Liability

.a $1,000,000 each occurrence, $2,000,000 aggregate.

.2 Employer's Liability (Washington Stop Gap)

~~.4 Claims for damages insured by usual personal injury liability coverage;~~.a $1,000,000 each occurrence; $1,000,000 each employee; $1,000,000 policy aggregate.

~~.5 Claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom;~~.3 Business Automobile Liability

~~.6 Claims for damages because of bodily injury, death of a person or property damage arising out of ownership, maintenance or use of a motor vehicle;~~.a $1,000,000 each occurrence

~~.7 Claims for bodily injury or property damage arising out of completed operations; and~~.4 Excess or Umbrella Liability (providing coverage in excess of Commercial General Liability, Employer's Liability and Business Automobile Liability)

.a $5,000,000 each occurrence; $5,000,000 aggregate.

~~.8 Claims involving contractual liability insurance applicable to the Contractor's obligations under Section 3.18.~~

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

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~~expiration of the period for correction of Work or for such other period for maintenance of completed operations coverage as specified in the Contract Documents.~~payment. Completed operations coverage shall remain in force for three (3) years after Final Acceptance and shall name the Owner, the Architect, their consultants and employees, and any required governmental agencies as additional insureds. The insurance described above shall include coverage for underground, collapse and explosion exposures. In addition, the Contractor shall purchase and maintain insurance for claims under workers' compensation (industrial insurance), disability benefit and other similar employee benefit acts in the State statutory amount, and Stop Gap Liability Insurance (Employers Contingent Liability Insurance) with coverage of at least $1,000,000 each occurrence/each accident. All policies and certificates must be signed copies and shall contain a provision that written notice by certified mail must be provided to the Owner and Architect at least forty-five (45) days before the policies expire or are cancelled or any coverages afforded under the policies are reduced, limits decreased, or the additional insureds removed. The Contractor shall provide to the Owner and architect copies of any subsequently issued endorsements amending, modifying, altering or restricting coverage or limits.

§ 11.1.3

§ 11.1.3 ~~Certificates of insurance acceptable to the Owner shall be filed with the Owner prior to commencement of the Work and thereafter upon renewal or replacement of each required policy of insurance. These certificates and the insurance policies required by this Section 11.1 shall contain a provision that coverages afforded under the policies will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Owner. An additional certificate evidencing continuation of liability coverage, including coverage for completed operations, shall be submitted with the final Application for Payment as required by Section 9.10.2 and thereafter upon renewal or replacement of such coverage until the expiration of the time required by Section 11.1.2. Information concerning reduction of coverage on account of revised limits or claims paid under the General Aggregate, or both, shall be furnished by the Contractor with reasonable promptness.~~**PROOF OF INSURANCE**

§ 11.1.3.1 Before commencement of the Work, including presence on the site, and before any exposure to loss can occur, and, in any event, within ten (10) days after the Owner has issued a Notice to Proceed, the Contractor shall provide to the Owner and the Architect, Certificates of Insurance and copies of the Additional Insured endorsement(s), in duplicate, as evidence of all insurance required by the Contract Documents. No progress payment will be due until all such Certificates and policies are provided. All policies and certificates must be signed copies and coverages afforded under the policies cannot be materially altered (i.e., the coverages reduced, the limits decreased, or the additional insured removed,) allowed to expire, or cancelled without the Contractor first giving forty-five (45) days' prior written notice to the Owner. The Contractor shall provide to the Owner copies of any subsequently issued endorsements amending, modifying, altering, or restricting coverage of limits. Furthermore, such policies or certificates shall verify that the policy contains coverage for blanket contractual liability including both oral and written contracts and acknowledge the indemnification provisions and liability coverages called for by this Agreement. Upon written request, the Contractor will provide a copy of its policy to the Owner. Losses up to the deductible amount shall be the responsibility of the Contractor. Such insurance shall be maintained until the Project is accepted by the Owner. An additional certificate evidencing continuation of liability coverage, including coverage for completed operations, shall be submitted with the final Application for Payment as required by Section 11.1.2. Information concerning reduction of coverage on account of revised limits or claims paid under the General Aggregate, or both, shall be furnished by the Contractor with reasonable promptness.

§ 11.1.3.2 The Owner's specification or approval of the insurance in this Contract or of its coverage or amount shall not relieve or decrease the liability of the Contractor under the Contract Documents or otherwise. Coverages are the minimum to be provided and are not limitations of: liability under the Contract, indemnification, or applicable law provisions. The Contractor may, at its expense, purchase larger coverage amounts. Notwithstanding anything herein to the contrary, the Contractor shall provide all bonding, insurance, and permit documentation as required by governmental entities for all portions of the Project.

§ 11.1.4 The Contractor shall ensure and require that Subcontractors of any tier have insurance coverage to cover bodily injury and property damage on all operations and all vehicles owned or operated by Subcontractors of all tiers in the minimum amount of $1,000,000 per occurrence with a $2,000,000 aggregate limit. Also, the Subcontractors shall name the Contractor and the Owner and cause the commercial liability coverage required by the Contract Documents to include (1) the Owner, the Architect and the Architect's consultants as additional insureds for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's operations; and (2) the Owner as an additional insured for claims caused in whole or in part by the Contractor's negligent acts or

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omissions during the Contractor's completed ~~operations.~~operations, giving at least forty-five (45) days' notice of cancellation.

§ 11.1.5 The Contract Sum includes an amount to pay the premium for such insurance and to name the Owner, the Architect, their employees, and others listed in the Contract Documents as additional insureds on all insurance policies required by this Section 11.1, except workers' compensation and employer's liability. Coverage shall be maintained without interruption from the Date of Commencement of the Work until the later of the date of Final Acceptance or termination or any coverage required to be maintained after final payment. The Contractor's policy shall be primary. There shall be no self-insured retention without the prior written approval of the Owner. If the Owner is damaged by the failure of the Contractor to maintain any of the insurance in this Article 11, or to so notify the Owner, then the Contractor shall bear all costs attributable thereto. The Owner may withhold payment pending receipt of all certificates of insurance. Failure to withhold payment shall not constitute a waiver of any provision of the Contract.

§ 11.2 OWNER'S LIABILITY INSURANCE

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

§ 11.3 ~~PROPERTY INSURANCE~~NOT USED

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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~~convenience, replacement of damaged property shall be performed by the Contractor after notification of a Change in the Work in accordance with Article 7.~~

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

§ 11.4 PERFORMANCE BOND AND PAYMENT BOND

§ 11.4.1 The ~~Owner shall have the right to require the Contractor to furnish bonds covering~~ Contractor shall provide proof of bondability "Contractor's Bond" using the Owner's standard form for the faithful performance of the Contract and payment of obligations arising ~~thereunder as stipulated in bidding requirements or specifically required in the Contract Documents on the date of execution of the Contract.~~under the Contract Documents, each in the full amount of the Contract Sum plus sales tax. The Owner may decline to enter into the contract if the requested evidence of bondability is not received. Evidence of bondability shall include the percentage to be paid by the Contractor for increases in the Contract Sum.

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

§ 11.4.3 Subcontractor Bondability and Potential Subcontractors' Bonds. Within seven (7) days after the issuance of the notice of intent to award the Contract, any Subcontractors so required in the Bidding or Contract Documents or Special Conditions shall deliver evidence of their bondability to the Owner through the Contractor. The evidence shall include a letter from each such subcontractor's bonding company that contains the price of a payment and performance bond to be issued during the 30-day period after conditional notice to proceed. The bonding company must be acceptable to the Owner and admitted and licensed in the State of Washington. The bond(s) shall be in an amount equal to the full contract sum of the subcontract between the Subcontractor and the Contractor but shall not include sales tax. The bonds shall be conditioned that the Subcontractor shall faithfully perform all the provisions of its subcontract, payment of all obligations arising thereunder, and for one year's maintenance for correction of defective work. If the Owner elects to require a payment and performance bond from one or more of these Subcontractors, it will so notify the Contractor in writing within 14 days of receipt of the evidence of bondability from the respective Subcontractor, in which case the Contract Sum shall be increased by a Change Order in the amount specified in the letter, unless otherwise agreed by the parties. THE OWNER MAY DECLINE TO ENTER INTO THE CONTRACT OR MAY REQUIRE A CHANGE OF SUBCONTRACTOR AT NO INCREASE IN THE CONTRACT SUM OR CONTRACT TIME IF THIS EVIDENCE OF BONDABILITY IS NOT TIMELY RECEIVED. THE OWNER MAY WITHHOLD PAYMENT TO THE CONTRACTOR UNTIL SUCH SURETY BONDS ARE RECEIVED.

§ 11.4.4 If the Owner is damaged by the failure of the Contractor to maintain any of the bonds or insurance in this Article 11, or to so notify the Owner, then the Contractor shall bear all costs attributable thereto. The Owner may withhold payment pending receipt of all certificates of insurance and bonds. Failure to withhold payment shall not constitute a waiver.

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

§ 12.1 UNCOVERING OF WORK

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

§ 12.1.2 If a portion of the Work has been covered that the ~~Architect~~ Architect, Owner or governmental authority has not specifically requested to examine prior to its being covered, ~~the Architect~~ and for which the neither the Contract Documents nor governmental laws or regulations require inspection, the Architect, Owner or governmental

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authority may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, costs of uncovering and replacement shall, by appropriate Change Order, be at the Owner's expense. If such Work is not in accordance with the Contract Documents, such costs and the cost of correction shall be at the Contractor's expense without change to the Contract Time caused thereby, unless the condition was caused by the Owner or a separate contractor employed by the Owner and in which event the Owner or the separate contractor, respectively shall be responsible for payment of such costs.

§ 12.2 CORRECTION OF WORK

§ 12.2.1 BEFORE OR AFTER SUBSTANTIAL COMPLETION

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

§ 12.2.2 AFTER SUBSTANTIAL COMPLETION

§ 12.2.2.1 In addition to the Contractor's obligations under Section 3.5, if, within the later of one (1) year after the date of Substantial Completion of ~~the Work or designated portion thereof or~~ all the Work, or after the date for commencement of warranties established under ~~Section 9.9.1,~~ the Contract Documents, or by terms of an applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of written notice from the Owner ~~to do so~~ according to the requirements of this Section 12.2, with no change in the Contract Sum unless the Owner has previously given the Contractor a ~~written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. During the one-year period for correction of Work, if the Owner fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of warranty. If the Contractor fails to correct nonconforming Work within a reasonable time during that period after receipt of notice from the Owner or Architect, the Owner may correct it in accordance with Section 2.4.~~specific written acceptance of such condition. If the Contractor does not promptly, in accordance with the provisions of this Section 12.2.2 initiate work to correct the Work designated in the notice, the Owner may proceed to correct the Work, and the Owner may, without further notice, dispose of materials and equipment as it sees fit, and the Contractor will be liable for all associated costs. This correction period of one (1) year, shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual performance of the Work. This obligation shall survive acceptance of the Work under the Contract and termination of the Contract, is in addition to other warranties provided by contract or law, and does not establish a time limit for damages.

.1 If, in the Owner's opinion, the nonconforming Work either prevents the use of a portion of the facility and/or immediate response is required to prevent further damage or to restore security to prevent external entrance, and/or is a safety hazard (e.g., break in waterline, sprinkler system failure, heating system failure, inability to close or lock exterior door, etc.,) the Contractor shall initiate corrective Work on site the same day if the Contractor is notified prior to noon, or by noon the following day if notified after noon, and shall complete corrective action within 48 hours.

.2 If, in the Owner's opinion, the nonconforming Work has the potential of becoming a safety hazard, of affecting internal security, or of limiting the use of the facility (e.g., loss of heat in a single classroom, failure of one or more plumbing fixtures, loose carpet seam in corridor, interior door lock not working, etc.,) the Contractor shall initiate corrective Work on the site within two (2) days and shall complete corrective action within five (5) working days.

.3 If, in the Owner's opinion, the nonconforming Work does not have an impact on the use of the building, but must be fixed, (e.g., interior door closer broken, window cracked, loose wall covering seam, etc.,) the Contractor shall initiate corrective Work on site within fourteen (14) days and shall complete corrective action within twenty-eight (28) days.

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

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

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

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

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

§ 12.3 ACCEPTANCE OF NONCONFORMING WORK

If the Owner prefers to accept Work that is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Sum will be ~~reduced as appropriate and equitable.~~ reduced, in the Owner's sole discretion, by the greater of the (1) cost of correction; or (2) diminution of value of the Work that is not in accordance with the requirements of the Contract Documents. Such adjustment shall be effected whether or not final payment has been made.

ARTICLE 13 MISCELLANEOUS PROVISIONS

§ 13.1 GOVERNING LAW

The Contract shall be governed by the internal law of the place where the Project is ~~located except that, if the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 15.4.~~located, without regard to its choice-of-law provisions.

§ 13.2 SUCCESSORS AND ASSIGNS

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

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

§ 13.2.3 If a majority of the ownership or control of Contractor is acquired by a third party, and such acquisition reasonably imperils performance or creates a conflict of interest that the Owner, in its sole discretion, cannot reasonably reconcile, then the Owner may terminate this Contract at any time pursuant to Section 14.2, except that the Owner shall give the Contractor thirty (30) days written notice of termination and the opportunity for the Contractor to cure prior to termination.

§ 13.3 WRITTEN NOTICE

Written notice shall be deemed to have been duly served if delivered in person to the individual, to ~~a member of the firm or entity,~~ the designated representative as identified in the A133-2009 Agreement, or to an officer of the corporation for which it was intended; or if delivered at, or sent by fax (with hard copy mailed,) registered or certified mail or by courier service providing proof of delivery to, the last business address known to the party giving notice. The date of written notice shall be the earlier of the date of: (1) personal delivery; or (2) actual receipt by fax; or (3) three (3) calendar days after the date of postmark.

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§ 13.4 RIGHTS AND REMEDIES

§ 13.4.1 Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights and remedies otherwise imposed or available by law. The Contractor's sole remedy for Claims, disputes and other matters in question of the Contractor, direct or indirect, arising out of, or relating to, the Contract Documents or breach thereof, except Claims that have been waived under the terms of the Contract Documents, however, is the dispute resolution procedure of Article 15.

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

§ 13.4.3 If any portion of this Contract is held to be void or unenforceable, the remainder of the Contract shall be enforceable without such portion.

§ 13.5 TESTS AND INSPECTIONS

§ 13.5.1 Tests, inspections and approvals of portions of the Work shall be made at an appropriate time as required by the Contract Documents and by applicable laws, statutes, ordinances, codes, rules and regulations or lawful orders of public ~~authorities.~~ authorities having jurisdiction shall be made at an appropriate time. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections and approvals with an independent testing laboratory or entity acceptable ~~to~~ to, or provided by, the Owner, or with the appropriate public authority, and the Owner shall bear all related costs of ~~tests, inspections and approvals.~~ necessary tests, inspections and approvals, except that the Contractor shall be responsible for any costs of retesting and any extra costs caused by the Contractor. The Contractor shall give the Architect and Owner timely notice of when and where tests and inspections are to be made so that the Architect and Owner may be present for such procedures. The independent testing agency shall prepare the test reports, logs and certificates applicable to the specific inspections and tests and promptly and simultaneously deliver the specified number of copies of them to the designate parties. The Owner shall bear costs of (1) tests, inspections or approvals that do not become requirements until after bids are received or negotiations concluded, and (2) tests, inspections or approvals where building codes or applicable laws or regulations prohibit the Owner from delegating their cost to the Contractor.

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

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

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

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

§ 13.5.6 Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work. The Contractor shall provide the Owner and Architect at least forty-eight (48) hours' written notice prior to all tests and inspections.

§ 13.5.7 If the Owner is responsible under the Contract Documents, law or regulation, to pay only for an inspection of any inspector, consultant or Architect, the Owner shall be required to pay only for the first actual inspection. If the Contractor arranges for an inspection and an extra cost is incurred because the inspector is required to wait, to leave without inspecting, to perform a partial inspection, to return to complete or re-inspect, or otherwise to expend time other than for the primary inspection, the Contractor shall be responsible for all such costs to the extent caused

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by the Contractor. If the Contractor does not pay the charges for which it is responsible within thirty (30) days of billing, the Owner has the option to pay the charges directly, and back-charge the Contractor on the next progress payment for the amount paid plus a ten percent (10%) handling fee.

§ 13.5.8 No acceptance by the Owner of any Work shall be construed to result from any inspections, tests or failures to inspect or test by the Owner, the Owner's Representative, the Architect or any other person. No inspection, test, failure to inspect or test, or failure to discover any defect or nonconformity by the Owner, the Owner's Representative, the Architect, or any other person shall relieve the Contractor of its responsibility for meeting the requirements of the Contract Documents or impair the Owner's right to reject defective or non-conforming items or right to avail itself of any other remedy to which the Owner may be entitled, notwithstanding the Owner's knowledge of the defect or nonconformity, its substantiality, or the ease of its discovery. Entities performing inspections and/or testing do not have the authority to direct the Contractor's means, and methods and are not agents or representatives of the Owner or Architect. Inspections which meet the requirements of code shall not override the requirements of the Contract Documents, which may be more stringent.

§ 13.6 INTEREST

Payments due and unpaid under the Contract Documents shall bear interest ~~from the date payment is due at such rate as the parties may agree upon in writing or, in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.~~as specified by RCW 39.76, not to exceed the Bank of America prime rate plus 2%.

§ 13.7 TIME LIMITS ON CLAIMS

The Owner and Contractor shall commence all ~~claims~~ Claims and causes of action, whether in contract, tort, breach of warranty or otherwise, against the other arising out of or related to the Contract in accordance with the requirements of the final dispute resolution method selected in the ~~Agreement within the~~ Agreement, and within the shorter of the: (1) time period specified by applicable law, ~~but in any case not more than 10 years after the date of Substantial Completion of the Work.~~ or (2) time limits identified in this Agreement. The Owner and Contractor waive all ~~claims~~ Claims and causes of action not commenced in accordance with this Section 13.7.

§ 13.8 STATUTES AND OTHER REQUIREMENTS

The Contractor shall abide by the provisions of all applicable Washington statutes and regulations. Although the number of statutes are referenced in the Contract Documents, these references are not meant to be a complete list and should not be relied upon as such.

§ 13.8.1 Contractor Registration and Related Requirements: Pursuant to RCW 39.06, "Registration, Licensing of Contractors," the Contractor shall be registered and licensed as required by the laws of the State of Washington, including but not limited to RCW 18.27, "Registration of Contractors." The Contractor shall also have a current state unified business identifier number; have industrial insurance coverage for the Contractor's employees working in Washington as required in Title 51 RCW; have an employment security department number as required in Title 50 RCW; have a state excise tax registration number as required in Title 82 RCW or RCW 39.12.065 (3) (prevailing wage violations.)

§ 13.8.2 Law Against Discrimination: The Contractor shall comply with pertinent statutory provisions relating to public works of RCW 49.60, "Discrimination."

§ 13.8.3 Provisions for Aged and Handicapped Persons: Contractor shall comply with pertinent statutory provisions relating to public works of RCW 70.92, "Provisions in Buildings for Aged and Handicapped Persons," and the Americans with Disabilities Act.

§ 13.8.4 Safety Standards: The Contractor shall comply with pertinent provisions of RCW 49.17, "Washington Industrial Safety and Health Act," and Chapter 296-155 WAC, "Safety Standards for Construction Work."

§ 13.8.5 Unemployment Compensation: Pursuant to RCW 50.24, "Contributions by Employers," in general and RCW 50.24.130 in particular, the Contractor shall pay contributions for wages for personal services performed under this Contract or arrange for a bond acceptable to the Commissioner.

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§ 13.8.6 Drug Free Workplace: The Contractor and all Subcontractors of any tier shall fully comply with all applicable federal, state, and local laws and regulations regarding drug-free workplace, including the Drug-Free Workplace Act of 1988. Any person not fit for duty for any reason, including the use of alcohol, controlled substances, or drugs shall immediately be removed from the Work.

§ 13.8.7 Tobacco-Free Environment: Pursuant to RCW 28A.210.310, smoking or use of any kind of lighted pipe, cigar, cigarette or any other lighted smoking equipment, material or smokeless tobacco products is prohibited on all Owner's property.

§ 13.8.8 Asbestos Removal: To the extent this Project involves asbestos removal, the Contractor shall comply with Chapter 49.26 RCW, "Health and Safety—Asbestos," and any provisions of the Washington Administrative Code promulgated thereunder, and the applicable section of the Specifications should be viewed for possible insurance required for the applicable Subcontractor.

§ 13.8.9 Weapons Free Environment: The Contractor and its employees, agents, and Subcontractors of an tier shall not bring onto the Project site or onto any Owner property any firearm or any other type of weapon described in either RCW 9.41.280 (1) or RCW 9.41.250. Any person violating this Section shall immediately be removed from the Work, and such violation shall be grounds for a termination of this Agreement for cause at the Owner's discretion.

ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

§ 14.1 TERMINATION BY THE CONTRACTOR

§ 14.1.1 ~~The~~ Except as provide by RCW 60.28.080, the Contractor may terminate the Contract if the Work is stopped for a period of ~~30~~ sixty (60) consecutive days through no act or fault of the Contractor or a Subcontractor, Sub-subcontractor or their agents or employees or any other persons or entities performing portions of the Work under direct or indirect contract with the Contractor, for any of the following reasons:

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

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

§ 14.1.3 If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon seven (7) days' written notice to the Owner and ~~Architect,~~ Architect (during which time the Owner has the opportunity to cure,) terminate the Contract and recover from the Owner payment for Work ~~executed, including reasonable overhead and profit,~~ properly executed, and for proven loss with respect to materials, equipment, tools, and construction equipment and machinery, including reasonable overhead and profit on Work executed, and costs incurred by reason of such ~~termination, and damages.~~ termination and direct damages. The total recovery of the Contractor shall not exceed the unpaid balance of the Contract Sum.

§ 14.1.4 If the Work is stopped for a period of ~~60~~ sixty (60) consecutive days through no act or fault of the Contractor or a Subcontractor or their agents or employees or any other persons performing portions of the Work under contract with the Contractor because the Owner has repeatedly failed to fulfill the Owner's obligations under the Contract Documents with respect to matters important to the progress of the Work, the Contractor may, upon seven (7) additional days' written notice to the Owner and the Architect, (during which period the Owner shall have

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the right and opportunity to cure,) terminate the Contract and recover from the Owner as provided in Section 14.1.3. The total recovery of the Contractor shall not exceed the unpaid balance of the Contract Sum.

§ 14.2 TERMINATION BY THE OWNER FOR CAUSE

§ 14.2.1 The Owner ~~may terminate the Contract~~ may, upon seven (7) days' written notice to the Contractor, terminate, (without prejudice to any right or remedy of the Owner) the whole or any portion of the Work or the Contract for cause if the Contractor

.1 ~~repeatedly~~ refuses or fails to supply enough properly skilled workers or proper materials;

.2 fails to make prompt payment to Subcontractors for materials or labor in accordance with the respective agreements between the Contractor and the Subcontractors;

.3 ~~repeatedly disregards~~ fails to comply with applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public ~~authority; or~~ authority having jurisdiction;

.4 fails to prosecute the Work of any portion thereof with sufficient diligence to ensure the Substantial Completion of the Work within the Contract Time;

.5 is adjudged bankrupt, makes a general assignment for the benefit of its creditors, or if a receiver is appointed on account of its insolvency;

~~.4 otherwise is guilty of substantial breach of~~ .6 otherwise is guilty of material or substantial breach of, or default under, a provision of the Contract Documents.

§ 14.2.2 When any of the above reasons exist, the Owner, ~~upon certification by the Initial Decision Maker that sufficient cause exists to justify such action,~~ may without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven (7) days' written notice, terminate employment of the Contractor on all, or a portion, of the Work and may, subject to any prior rights of the surety:

.1 Exclude the Contractor from the site and take possession of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;

.2 Accept assignment of subcontracts pursuant to Section 5.4; ~~and~~

.3 Finish the Work by whatever reasonable method the Owner may deem expedient. Upon written request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the ~~Work.~~ Work; and

.4 Take or direct any or all of the actions in Section 14.5.1.

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

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

§ 14.2.5 If the Owner terminates a portion of the Work, the Contractor shall continue the performance of the remainder of the Work in accordance with the Contract Documents to the extent not terminated.

§ 14.2.6 If, after the Contractor has been terminated pursuant to the Section 14.2 or otherwise for cause, it is determined that none of the circumstances set forth in Section 14.2.1 exist, then such termination shall be considered a termination for convenience pursuant to Section 14.4

§ 14.3 SUSPENSION BY THE OWNER FOR CONVENIENCE

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

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

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.1 that performance is, was or would have been so suspended, delayed or interrupted by another cause for which the Contractor is responsible; or

.2 that an equitable adjustment is made or denied under another provision of the Contract.

§ 14.4 TERMINATION BY THE OWNER FOR CONVENIENCE

§ 14.4.1 The Owner may, at any time, terminate (without prejudice to any right or remedy of the Owner) the whole, or any portion of the Contract for the Owner's convenience and without cause.

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

.1 cease operations as directed by the Owner in the notice;

.2 take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and

.3 except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.

§ 14.4.3 In case of such termination for the Owner's convenience, the Contractor shall be entitled to receive payment ~~for Work executed, and costs incurred by reason of such termination, along with reasonable overhead and profit on the Work not executed.~~in accordance with the Contract Documents for Work properly executed, and costs necessarily incurred by reason of such termination (such as the cost of settling and paying Claims arising out of the termination of Work under subcontracts or orders,) along with a reasonable profit on the Work not executed, not to exceed the less of the Fee in Section 7.5.5 or the percentage profit in the Contractor's bid. The total sum to be paid to the Contractor under this Section 14.4 shall not exceed the Contract Sum as reduced by the amount of payments otherwise made, by the larger of (1) the actual value; or (2) the scheduled value of Work not Terminated, and as otherwise permitted by this Contract. The amounts payable to the Contractor shall exclude the fair value of property, which is destroyed, lost, stolen, or damaged so as to become undeliverable to the Owner or to a buyer pursuant to Sections 14.5.1.6 or 14.5.1.7.

§ 14.5 EFFECTS OF TERMINATION BY OWNER

§ 14.5.1 Unless the Owner directs otherwise, after receipt of a notice of termination from the Owner, pursuant to Section 14.2 or 14.4, the Contractor shall promptly:

.1 stop Work under the Contract on the date and as specified in the notice of termination;

.2 place no further orders or subcontracts for materials, equipment, services or facilities, except as may be necessary for completion of any portion of the Work that is not terminated;

.3 procure cancellation of all orders and subcontracts, upon terms acceptable to the Owner, to the extent that they relate to the performance of Work terminated;

.4 assign to the Owner all of the right, title and interest of the Contractor under all orders and subcontracts, as directed by the Owner, in which case the Owner shall have the right, in its discretion, to settle or pay any or all Claims arising out of the termination of such orders and subcontracts;

.5 with the Owner's approval, settle all outstanding liabilities and all Claims arising out of such termination of orders and subcontracts not assigned to the Owner;

.6 transfer title, and deliver to the entity or entities designated by the Owner, the fabricated or un-fabricated parts, Work in process, partially completed supplies and equipment, materials, parts, tools, dies, jigs and other fixtures, completed Work, supplies and other material produced as part of, or acquired in connection with the performance of, the Work terminated, and the completed or partially completed plans, drawings, information and other property related to the Work;

.7 use commercially reasonable efforts to sell any property of the types referred to in Section 14.5.1.6. The Contractor shall not be required to extend credit to any buyer, and may acquire any such property under the conditions prescribed by and at a price or prices approved by the Owner, and the proceeds of any such transfer or disposition may be applied in reduction of any payments to be made by the Owner to the Contractor;

.8 take such action as may be necessary or as directed by the Owner to preserve and protect the Work and property related to this Project in the possession of the Contractor in which the Owner has an interest; and

.9 continue performance only to the extent not terminated.

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§ 14.5.2 In arriving at any amount due the Contractor after termination, the following deductions shall be made:

.1 all unliquidated advance or other prior payments on account made to the contractor applicable to the terminated portion of the Contract;

.2 any Claim the Owner may have against the Contractor;

.3 an amount necessary to protect the Owner against outstanding or potential liens or Claims; and

.4 the agreed price for, or the proceeds of, sale of any materials, suppliers or other things acquired by the Contractor or sold, pursuant to the provisions of Section 14.5.1.7, and not otherwise recovered by, or credited to, the Owner.

§ 14.5.3 If (and only if) the termination pursuant to Section 14.4 is partial, the Contractor may file a Claim for an equitable adjustment of the price or prices specified in the Contract relating to the continued portion of the Contract. Any Claim by the Contractor for an equitable adjustment under this Section must be asserted within sixty (60) days from the effective date of the partial termination.

§ 14.5.4 The Contractor shall refund to the Owner any amounts paid by the Owner to the Contractor in excess of costs reimbursable under the Contract Documents.

§ 14.5.5 The Contractor shall, from the effective date of termination until the expiration of three (3) years after final settlement under this Contract, preserve and make available to the Owner, at all reasonable times at the office of the Contractor and without charge to the Owner, all books, records, documents, photographs and other evidence bearing on the costs and expenses of the Contractor under this Contract and relating to the terminated Work. The Owner may have costs reimbursable under this Article 14 audited and certified by independent certified public accountants selected by the Owner, who shall have full access to all the books and records of the Contractor.

§ 14.5.6 The damages and relief from termination by the Owner specifically provided in Article 14 shall be the Contractor's sole entitlement in the event of termination.

ARTICLE 15 CLAIMS AND DISPUTES

§ 15.1 CLAIMS

§ 15.1.1 DEFINITION

A Claim is a demand or assertion by one of the parties seeking, as a matter of right, adjustment or interpretation of the Contract terms, payment of money, extension of time, or other relief with respect to the terms of the ~~Contract.~~ Contract Documents. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the ~~Contract.~~ Contract Documents. The responsibility to substantiate Claims shall rest with the party making the Claim. Claims must be initiated in writing and include the information and substantiation required by the Contract Documents. Neither a Request for Information nor a Construction Change Directive, nor a Change Order, nor a reservation of rights, nor minutes of a meeting, nor a Daily Report, nor any log entry, nor an Owner's request for, or the Contractor's response to, a Change Order Proposal, nor a notice of a potential or future Claim shall constitute a Claim.

§ 15.1.2 ~~NOTICE OF CLAIMS~~

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

§ 15.1.3 CONTINUING CONTRACT PERFORMANCE

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

§ 15.1.4 CLAIMS FOR ADDITIONAL COST

If the Contractor wishes to make a Claim for an increase in the Contract Sum, written notice as provided herein shall be given before proceeding to execute the ~~Work.~~ Work, and a written notice and written Claim must be made in

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accordance with this Article 15, or it will be waived. If the Contractor believes additional cost is involved for reasons including but not limited to (1) a written interpretation by the Architect, (2) an order by the Owner to stop the Work where the Contractor was not at fault, (3) a written order for a minor change in the Work issued by the Architect, (4) failure of payment by the Owner, (5) termination of the Contract by the Owner, (6) Owner's suspension or (7) other reasonable grounds, a Claim shall be filed in accordance with this Article 15. The Contractor shall not be entitled to an increase in the Contract Sum or Contract Time arising out of an error or conflict in or among the Contract Documents where the Contractor failed to adequately review the Contract Documents or failed to report the error or conflict to the Owner and Architect in a timely manner consistent with the requirements of the Contract Documents. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

§ 15.1.5 CLAIMS FOR ADDITIONAL TIME

§ 15.1.5.1 If the Contractor wishes to make a Claim for an increase in the Contract Time, written notice as provided herein shall be ~~given.~~ given, and a written Claim must be made in accordance with Article 15, or it will be waived. The Contractor's Claim shall include an estimate of any cost and of probable effect of delay on progress of the Work. In the case of a continuing delay, only one Claim is necessary. Any adjustment in the Contract Time arising from a Change or Claim shall be limited to the change in the actual critical path of the Project, directly caused thereby. If the delay was not caused by the Owner, the Contractor, a Subcontractor of any tier, or the Architect, or anyone acting on behalf of any of them, the Contractor is entitled, only to an increase in the Contract Time in accordance with the Contract Documents, but not a change in the Contract Sum. If the delay was caused by the Contractor, a Subcontractor of any tier, or anyone acting on behalf of any of them, the Contractor is not entitled to an increase in the Contract Time or in the Contract Sum.

§ 15.1.5.2 If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated and had an adverse effect on the scheduled ~~construction.~~construction, and that the Work was on schedule (or not behind schedule through the fault of the Contractor) at the time the adverse weather conditions occurred. Neither the Contract Time, nor the Contract Sum will be adjusted for normal inclement weather. The Contractor shall be entitled to a change in the Contract Time only (but not a change in the Contract Sum) if the Contractor can substantiate to the reasonable satisfaction of the Owner and Architect that there was materially greater than normal inclement weather considering the full term of the Contract Time and using a ten (10) year average of accumulated record mean values from climate data compiled by the U.S. Department of Commerce National Oceanic and Atmospheric Administration for the locale closest to the Project, and that the alleged abnormal weather actually extended the critical path of the Work. The change in Contract Time shall be provisional until Substantial Completion has been achieved, at which time the change in Contract Time shall be calculated as the total net accumulated number of calendar days lost due to inclement weather from the commencement of the Work until Substantial Completion exceeds the total net accumulated number to be expected for the same period from the aforesaid data.

§ 15.1.6 CLAIMS FOR CONSEQUENTIAL DAMAGES

The Contractor and Owner waive Claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes without limitation:

.1 damages incurred by the Owner for rental expenses, ~~for losses of use,~~ income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and

.2 damages incurred by the Contractor for principal ~~office expenses including~~ and home office overhead and expenses including, without limitation, the compensation of personnel stationed there, for losses of financing, business and reputation, ~~and for loss of profit except anticipated profit arising directly from the Work.~~for losses on other projects, for loss of profit and for interest or financing costs.

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 14. Nothing contained in this Section 15.1.6 shall be deemed to preclude an award of liquidated damages, when applicable, in accordance with the requirements of the Contract ~~Documents.~~Documents; to limit or eliminate damages specified in the A102-2007 Agreement or liquidated damages when applicable in accordance with the requirements of the Contract Documents; or to preclude an obligation of the Contractor to indemnify the Owner for direct, indirect or consequential damages alleged by a third party.

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§ 15.1.7 FALSE CLAIMS

The Contractor shall not make any negligent or fraudulent misrepresentations, concealments, errors, omissions, or inducements to the Owner in the formation or performance of this Agreement. If the Contractor, or a Subcontractor of any tier, submits a false or frivolous Claim to the Owner, which for purposes of this Section 15.1.7 is defined as a Claim based in whole or in part upon a materially incorrect fact, statement, representation, assertion, or record, the Owner shall be entitled to collect from the Contractor by offset or otherwise (without prejudice to any right or remedy of the Owner) any and all costs and expenses, including investigation and consultant costs, incurred by the Owner in investigating, responding to, and defending such false or frivolous Claim.

§ 15.2 ~~INITIAL DECISION~~RESOLUTION OF CLAIMS AND DISPUTES

§ 15.2.1 ~~Claims, excluding those arising under Sections 10.3, 10.4, 11.3.9, and 11.3.10, shall be referred to the Initial Decision Maker for initial decision. The Architect will serve as the Initial Decision Maker, unless otherwise indicated in the Agreement. Except for those Claims excluded by this Section 15.2.1, an initial decision shall be required as a condition precedent to mediation of any Claim arising prior to the date final payment is due, unless 30 days have passed after the Claim has been referred to the Initial Decision Maker with no decision having been rendered. Unless the Initial Decision Maker and all affected parties agree, the Initial Decision Maker will not decide disputes between the Contractor and persons or entities other than the Owner.~~In an effort to reduce the incidence and costs to all parties of extended disputes, all Claims, direct or indirect, arising out of, or relating to, the Contract Documents or the breach thereof, except those waived under the terms of the Contract Documents, shall be decided exclusively by the following alternative dispute resolution procedure, unless the parties mutually agree in writing otherwise. To the extent that the Owner and Contractor agree to a partnering process to help resolve disputes, such processes shall be in addition to, and not in place of, the mandatory dispute resolution procedures in the Contract Documents.

§ 15.2.2 ~~The Initial Decision Maker will review Claims and within ten days of the receipt of a Claim take one or more of the following actions: (1) request additional supporting data from the claimant or a response with supporting data from the other party, (2) reject the Claim in whole or in part, (3) approve the Claim, (4) suggest a compromise, or (5) advise the parties that the Initial Decision Maker is unable to resolve the Claim if the Initial Decision Maker lacks sufficient information to evaluate the merits of the Claim or if the Initial Decision Maker concludes that, in the Initial Decision Maker's sole discretion, it would be inappropriate for the Initial Decision Maker to resolve the Claim.~~ Except for Claims requiring notice before proceeding with the affected Work as otherwise described in the Contract Documents, the Contractor shall submit a written notice of any Claim to the Owner and Architect within fourteen (14) days of the occurrence of the event giving rise to such Claim and shall submit a description of the Claim as provided herein within thirty (30) days of submitting the notice. Claims shall include a clear description of the event leading to, or causing, the Claim. Claims shall include a clear description of the Claim and any proposed change in the Contract Sum (showing all components and calculations) and/or Contract Time (showing cause and analysis of the resultant delay in the critical path and other information referenced in Section 8.3.2) and shall provide all data supporting the Claim, including without limitation a complete explanation as to why the relief sought is not within the scope of the Contract Documents. The Contractor may delay submitting data by an additional fourteen (14) days if it notifies the Owner in its Claim that the substantial data must be assembled. Failure to properly submit the notice or Claim shall constitute a waiver of the Claim. The Claim shall be deemed to include all changes, direct and indirect, in cost and in time to which the Contractor (and Subcontractor(s) of any tier) is entitled and may not contain reservations of rights without the Owner's written approval; any such unapproved reservations of rights shall be without effect. Any Claim of a Subcontractor of any tier may be brought only through, and after review by, the Contractor. For the purposes of calculating such time periods, an "event giving rise to a Claim," among other things, is not a Request for Information but rather is a response that the Contractor believes would change the Contract Sum and /or Contract Time. The fact that the Owner and the Contractor may consider, discuss or negotiate an untimely or waived Claim shall in no way be deemed to constitute a waiver of any notice or other provisions of the Contract Documents.

§ 15.2.3 ~~In evaluating Claims, the Initial Decision Maker may, but shall not be obligated to, consult with or seek information from either party or from persons with special knowledge or expertise who may assist the Initial Decision Maker in rendering a decision. The Initial Decision Maker may request the Owner to authorize retention of such persons at the Owner's expense.~~**Notice and Claims:** All notices and Claims shall be made in writing as required by the Contract. Any notice of a Claim of the Contractor against the Owner and any Claim of the Contractor, whether under the Contract or otherwise, must be made pursuant to and in strict accordance with the applicable provisions of the Contract. No act, omission, or knowledge, actual or constructive, of the Owner or Architect shall

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in any way be deemed to be a waiver of the requirement for timely written notice and a timely written Claim unless the Owner and the Contractor sign an explicit, unequivocal written waiver approved by the Owner's Board of Directors. The fact that the Owner and the Contractor may consider, discuss, or negotiate a Claim that has or may have been defective or untimely under the Contract shall not constitute a waiver of the provisions of the Contract Documents, unless the Owner and Contractor sign an explicit, unequivocal written waiver approved by the Owner's Board of Directors. The Contractor expressly acknowledges and agrees that the Contractor's failure to timely submit required notices and/or timely submit Claims has a substantial impact upon and prejudices the Owner, including but not limited to the inability to fully investigate or verify the Claim, mitigate damages, choose alternative options, adjust the budget, delete or modify the impacted Work, and/or monitor time, cost and quantities. For these and other reasons, the Contractor and Owner agree that the Owner shall be prejudiced by the Contractor's failure to timely submit notices and/or Claims, and the Owner shall not be required to prove or establish actual prejudice to enforce the notice or Claim provisions of the Contract Documents.

§ 15.2.4 ~~If the Initial Decision Maker requests a party to provide a response to a Claim or to furnish additional supporting data, such party shall respond, within ten days after receipt of such request, and shall either (1) provide a response on the requested supporting data, (2) advise the Initial Decision Maker when the response or supporting data will be furnished or (3) advise the Initial Decision Maker that no supporting data will be furnished. Upon receipt of the response or supporting data, if any, the Initial Decision Maker will either reject or approve the Claim in whole or in part.~~Upon receipt of a Claim against the Contractor, or at any time thereafter, the Architect or Owner may, but are not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Contractor's default, the Architect or the Owner may, but are not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

§ 15.2.5 ~~The Initial Decision Maker will render an initial decision approving or rejecting the Claim, or indicating that the Initial Decision Maker is unable to resolve the Claim. This initial decision shall (1) be in writing; (2) state the reasons therefor; and (3) notify the parties and the Architect, if the Architect is not serving as the Initial Decision Maker, of any change in the Contract Sum or Contract Time or both. The initial decision shall be final and binding on the parties but subject to mediation and, if the parties fail to resolve their dispute through mediation, to binding dispute resolution.~~If a Claim relates to, or is the subject of, a mechanic's lien, the party asserting such Claim may proceed in accordance with applicable law to comply with the lien notice or filing deadlines prior to the resolution of the Claim by the Architect, by mediation or by litigation.

§ 15.2.6 ~~Either party may file for mediation of an initial decision at any time, subject to the terms of Section 15.2.6.1.~~The Owner shall, within sixty (60) days after receipt from the Contractor of a properly noticed and fully documented Claim, accept or reject the Claim. If the Owner does not accept or reject the Claim within such sixty (60) day period, the Claim will be deemed denied.

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

§ 15.2.7 ~~In the event of a Claim against the Contractor, the Owner may, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Contractor's default, the Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.~~At any time following the Owner's receipt of the written Claim, the Owner may require that an officer of the Contractor, a principal of the Architect, and the Owner's Superintendent or designee (all with authority to settle) meet, confer, and attempt to resolve the Claim. If the Claim is not resolved during such meeting, the Contractor may bring no litigation against the Owner unless the Claim is first subject to non-binding mediation as described in this Article 15. This requirement cannot be waived except by an explicit written waiver signed by the Owner and the Contractor.

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

§ 15.3 MEDIATION

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

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to the initiation of binding dispute resolution. This requirement cannot be waived except by an explicit written waiver signed by the Owner and the Contractor.

§ 15.3.2 The parties shall endeavor to resolve their Claims by ~~mediation which, unless the parties mutually agree otherwise,~~ mediation. A request for mediation shall be filed in writing with the other party to the Contract, and the parties shall promptly attempt to mutually agree upon a mediator. If the parties have not reached agreement on a mediator within thirty (30) days of the request, either party may file the request with the American Arbitration Association or such other alternative dispute resolution service to which the parties mutually agree, with a copy to the other party, and the mediation shall be administered by the American Arbitration Association (or other agreed service) in accordance with its Construction Industry Mediation Procedures ~~in effect on the date of the Agreement.~~ currently in effect. A request for mediation shall be made in writing, and delivered to the other party to the ~~Contract, and filed with the person or entity administering the mediation. The request may be made concurrently with the filing of binding dispute resolution proceedings but, in such event, mediation~~ Contract. Mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending ~~mediation for a period of 60 days from the date of filing,~~ the completion of mediation, unless stayed for a longer period by agreement of the parties or court order. ~~If an arbitration is stayed pursuant to this Section 15.3.2, the parties may nonetheless proceed to the selection of the arbitrator(s) and agree upon a schedule for later proceedings.~~

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

§ 15.3.4 An officer of the Contractor and the Owner's Superintendent or designee must attend the mediation session with authority to settle the Claim. To the extent there are other parties in interest, such as the Architect or Subcontractors, their representatives, also with authority to settle the Claim, shall also attend the mediation session. Unless the Owner and the Contractor mutually agree in writing otherwise, all unresolved Claims shall be considered at a single mediation session that shall occur after Substantial Completion, but prior to Final Acceptance by the Owner.

§ 15.4 ~~ARBITRATION~~LITIGATION

§ 15.4.1 ~~If the parties have selected arbitration as the method for binding dispute resolution in the Agreement, any Claim subject to, but not resolved by, mediation shall be subject to arbitration which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules in effect on the date of the Agreement. A demand for arbitration shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the arbitration. The party filing a notice of demand for arbitration must assert in the demand all Claims then known to that party on which arbitration is permitted to be demanded.~~ **Litigation:** The Contractor may bring no litigation on Claims unless such Claims have been properly raised and considered in the procedures of this Article 15. The Contractor shall have the burden to demonstrate in any litigation that it has complied with all requirements of this Article 15. All unresolved Claims of the Contractor shall be waived and released unless the Contractor has complied with the time limits of the Contract Documents, and litigation is served and filed within the earlier of: (1) one hundred-twenty (120) days after the date of Substantial Completion approved by the Owner; or (2) sixty (60) days after Final Acceptance. This requirement cannot be waived except by an explicit written waiver signed by the Owner and the Contractor. The pendency of a mediation (the time period between receipt by the non-requesting party of a written mediation request and the date of mediation) shall toll thee deadlines until the earlier of: (1) the mediator providing written notice to the parties of impasse; or (2) thirty (30) days after the date of the mediation session. Neither the Contractor nor a Subcontractor of any tier, whether claiming under a bond or lien statute or otherwise, shall be entitled to attorneys' fees directly or indirectly from the Owner (but may recover attorney's fees from the bond or statutory retainage fund itself to the extent allowable under law.)

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

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arbitration involving the alleged fault, responsibility, or breach of contract of the Contractor or Subcontractor of any tier.

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

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

§ 15.4.4 ~~**CONSOLIDATION OR JOINDER**~~

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

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

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

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SECTION 011000 - SUMMARY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 WORK COVERED BY CONTRACT DOCUMENTS

A. Project Identification:

1. Project Name: **City of Fife – City Hall Phase 1 Envelope Replacement**
2. Project Owner: City of Fife
3. Project Location: 5411 23rd Street East, Fife, WA 98424

B. Architect Identification: The Contract Documents, dated October 21 were prepared by:

TCF Architecture PLLC
902 North 2nd Street
Tacoma, WA. 98403
Phone: 253-572-3993
Fax: 253-572-1445
General Email: architect@tcfarchitecture.com
Web Site: www.tcfarchitecture.com

C. The Work consists of providing all work and materials to complete all general, architectural, structural, electrical, and other work under a single contract for the construction of the Work as shown on the Drawings and described in the Project Manual for the Base Bid and Unit Pricing as set forth in these Contract Documents, as awarded.

1. The Work generally includes, but is not limited to the following:

a. Selective Interior Demolition: Demolition of existing interior construction, generally including wood stud framing, drywall, finishes, minor electrical, and other miscellaneous items as required to accommodate the new work. Removal of materials containing fungal growth.
b. Selective Exterior Demolition: Removal of stucco siding, sheathing, select wood framing, doors, louvers and windows (remove and replace), metal flashings, landscaping, electrical,
c. Exterior Envelope Systems: New stud framing
d. Interior Wall Finishes/Systems: Heavy and light gauge metal stud framing systems, engineered wood joist system construction.
e. Interior Finishes: Gypsum drywall, rubber floor base, finish carpentry, acoustic wall panels,
f. Floor Finishes/Systems: None

g. Ceiling Finishes/Systems: Remove and replace existing linear metal ceiling.
h. Signage: Cast aluminum letters
i. Perforated metal panels
j. Polycarbonate panels
k. Misc. Metal Fabrication: Signage support
l. Electrical Systems and Equipment: Power distribution for signage lighting and other miscellaneous electrical items, LED lighting.

1.3 COORDINATION OF CONTRACT DOCUMENTS, PLANS, CONTRACT SPECIFICATIONS AND ADDENDA:

A. The contract form, drawings, project manuals, addenda, and other supplemental documents are all essential parts of the contract and a requirement occurring in one is binding as though occurring in all. They are intended to be complementary and prescribe and provide for a complete project. Any work or material that has been omitted from the description of the work but is clearly implied shall be furnished by the Contractor as though it has been specifically stated.

B. The design team has prepared documents to show the design intent of the project. Generally, details, sections, specifications, schedules and drawings have been developed to indicate the scope of the Contract Work. Not all materials, conditions and occurrences may have been specifically detailed or addressed in the Contract Documents. In situations where a specific material, condition or occurrence has not been specifically detailed or identified, and which may be necessary for bidding purposes, the Contractor shall contact the Architect for resolution and/or direction during bidding. Where conflicts and/or omissions have not been brought to Architect's attention, it is understood that Contractor has reviewed the documents for similar materials, conditions and occurrences and figured the most costly method or methods to complete the Contract Work in his/her bid amount.

C. Inclusion of portions of the work under particular divisions of the specifications or sections of the drawings does not in every case conform to the categories of work customarily subcontracted to particular sub trades, nor is it the intent of the contract documents to so define portions of the work. In all cases, the General Contractor shall be responsible to inform bidders, subcontractors, crafts and trades, that work assigned to them is contained in sections other than the usual and to determine how the work shall be divided between trades. In every case, the Contractor shall be responsible to provide at their cost, all work shown and/or implied in the Contract Documents, and shall be responsible to determine which sub-bidders are responsible for the work of each specification section.

1.4 CONTRACT

A. Project will be constructed under a single, lump sum bid, general construction contract between the General Contractor and Owner.

1.5 TIME OF COMPLETION

A. The work of the Contract shall commence on the issue date of Owner's written Notice to Proceed Contract, and shall be substantially completed and reach final completion within the time frame indicated in the Letter or Invitation and the Instructions to Proposers. See Bid Form for Time of Completion.

1.6 WORK SEQUENCE

A. The Work will be sequenced and conducted in a manner that provides for the Owner's on-going operations throughout the duration of the Work. The Contractor shall provide a detailed schedule that is acceptable to, and approved by the Owner, demonstrating how the Owner's operations will be accommodated with minimal disruption throughout the duration of the Work.

B. Notice to Proceed: Work may begin on-site upon receipt of the Notice to Proceed, and upon receipt of all necessary permits from the City of Fife. Work on the project site prior to issuance of the Notice to Proceed is prohibited. The Contractor may proceed with submittals and ordering of materials after contract award and prior to the Notice to Proceed, as authorized by the Owner.

1.7 LIQUIDATED DAMAGES

A. See Contract

1.8 CONTRACTOR'S WORK & RESPONSIBILITIES - GENERAL

A. Contractor is required to fully coordinate all related requirements and work specified throughout the Project Manual to achieve a complete, fully operational Project.

B. Unless otherwise indicated, Contractor's work and responsibilities also include, but are not limited to, the following:

1. Providing and paying for labor, materials, equipment, tools, machines, facilities, and services necessary for proper execution and completion of work.
2. Paying required taxes.
3. Securing and paying for, the following items as necessary for proper execution and completion of work (as applicable at time or receipt of Bid):

    a) Permits and Fees: As provided for in this specification section.
    b) Licenses.
    c) Inspections, unless otherwise noted.

4. Giving required notices.
5. Enforcing strict discipline and good order among employees.
6. Using new materials, except as noted.
7. Maintaining required egress and other requirements in accordance with governing codes and ordinances throughout the work.

C. Site Security: As of date when work may commence on site, the Contractor will be responsible for security of those portions of the Work under supervision by the Contractor during the course of the work and for correcting all damage and losses that occur due to the Contractor's operations, the Contractor's lack of security, and losses due to vandalism or theft.

D. Summary of References: Work of the Contract can be summarized by references to the Contract, General Conditions, Supplemental Conditions, Specification Sections, Drawings, addenda and modifications to the Contract Documents issued subsequent to the initial printing of this Project Manual and including, but not necessarily limited to, printed material referenced by any of these. It is recognized that work of the Contract may be unavoidably affected or influenced by governing

regulations, natural phenomenon including weather conditions and other forces outside the Contract Documents.

1.9 USE OF PREMISES

A. General: Contractor shall have full use of those specific portions of the premises identified in the Contract Documents, and as subsequently agreed to between the Contractor and the Owner, for construction operations. Contractor's use of premises is limited only by Owner's right to perform work, to retain other contractors on portions of Project, and to use portions of the premises for its own continued operations.

B. Contractor shall control dust, noise, cleaning of premises, and other similar construction-related activities as required by the Specifications, and as required by the agencies having jurisdiction.

1.10 WORK UNDER OTHER CONTRACTS

A. Concurrent Separate Contracts: Owner may award separate contracts for performance of certain construction operations at the Project site. Such operations may be conducted simultaneously with work under this Contract. In the event of such separate contract work near or within the Work under this Contract, the Contractor shall cooperate fully with the Owner and the Owner’s separate contractors. However, the Contractor shall be able to expect that its own work under the Contract will not be unreasonably impacted by such separate contractors.

B. The Contractor shall cooperate fully with separate contractors so work on those contracts may be carried out smoothly, without interfering with or delaying work under this Contract. Provide all required access to these separate contractors, and cooperate with their schedules.

1.11 SPECIFICATION AND DRAWING CONVENTIONS

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

1. Imperative mood and streamlined language are generally used in the Specifications. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
2. Specification requirements are to be performed by Contractor unless specifically stated otherwise.

B. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.

C. Drawing Coordination: Requirements for materials and products identified on Drawings are described in detail in the Specifications. One or more of the following are used on Drawings to identify materials and products:

1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.

2. Abbreviations: Materials and products are identified by abbreviations scheduled on Drawings. Contact the Architect for clarification of any abbreviations used that are not scheduled.
3. Keynoting: Materials and products are identified by reference keynotes referencing Specification Section numbers found in this Project Manual.

1.14 WORK NOT INCLUDED IN CONTRACT

A. Work Not Included in Contract: NIC & FIO - The items of work noted on Drawings and/or described in the Project Manual as "NIC" (Not In Contract) or "FIO" (Furnished and Installed by Owner) will be performed under other contracts operating concurrently with the work of this contract, and are not included in this contract.

B. Contractor is responsible for scheduling the work, storing such equipment if requested, and coordinating related work in the Contract with installation of NIC and FIO equipment. Contractor shall provide all preparatory work necessary for proper installation including blocking and backing, and finish work including caulking, grouting, furring, and painting adjacent surfaces as required for NIC and FIO equipment.

1.15 MISCELLANEOUS PROVISIONS

A. Stored Products:

1. Assume full responsibility for the protection and safekeeping of products under this Contract, stored on and off the site.
2. Move any stored products, under Contractor's control, interfering with operations of the Owner or separate contractor.
3. Obtain and pay for the use of additional storage or work areas needed for operations.

B. Subcontractor Instructions: Notify subcontractors to become familiar with requirements of Division 00, Division 01 and the work of Sections related to their own work. Instruct them that these conditions and requirements apply to their work in each Section of the technical specifications.

C. Objections to Applications of Products: All Contractors and subcontractors submitting bids for this Project shall thoroughly familiarize themselves with specified projects and installation procedures and submit to the Architect any objections (in writing) no later than 7 days prior to Bid Date. Submittal of Bid constitutes acceptance of products and procedures specified.

D. Conflicts & Omissions in Contract Documents:

1. See General Conditions, Article 1.1.1.
2. Where conflicts and omissions have not been brought to Architect's attention, it is understood that Contractor has figured the most costly method or methods.

E. Mechanical/Electrical Requirements of General Work:

1. General: Except as otherwise indicated, comply with applicable requirements of Division 21-23 sections for mechanical provisions within units of general (Division 2-14) Work and

with applicable requirements of Division 26-28 sections for electrical provisions within units of general (Division 2-14) Work.

2. Service Connections: Refer to Division 21-23 and 26-28 sections for the characteristics of the respective mechanical and electrical services to be connected to units of general work. Provide units manufactured or fabricated for proper connection to and utilization of available services, as indicated. Except as otherwise indicated, final connection of mechanical service to general work is defined as being mechanical work, and final connection of electrical service to general and mechanical work is defined as being electrical work.
3. Electrical Requirements: Except as otherwise indicated, comply with applicable provisions of the National Electrical Code (NEC) and standards by National Electrical Manufacturer's Association (NEMA), for electrical components of General Work. Provide Underwriters Laboratories listed and labeled products where applicable.

F. Field Verification: It is the Contractor's responsibility to verify all field measurements, survey control, staking and field conditions. No allowance will be made for any items incorrectly fabricated or installed due to failure to perform such verification prior to commencing the work.

1.16 PERMITS AND FEES

A. General:

1. The Owner will provide all required permits for the Work.
2. The Contractor shall coordinate and schedule all work with permitting agencies and utility companies necessary for completion of the work.

1.17 UTILITIES

A. Existing Utilities

1. Utilities of record may be shown on the Drawings insofar as possible to do so. These however, are shown for convenience only and neither the Owner nor Architect assumes responsibility for improper locations or failure to show utility locations on the Drawings.
2. Exercise reasonable care to prevent damage to existing utilities. At Contractor's expense, immediately repair, restore or relocate utilities damaged during construction. Contractor shall not leave site until repairs have been accomplished.

B. Coordination of Utility Service Requirements: Coordinate all utility service requirements with serving utility companies including, but not limited to, power, telephone, cable TV, and water. Observe specification standards, written details, and sketches showing equipment locations and dimensions as indicated by the utility company. Coordinate scheduling of utility company work with all other trades.

C. Utility Costs

1. Contractor may use existing electrical power on site without cost.

D. Contractor is responsible to locate and protect all existing utilities. See Division 01 Sections "Temporary Facilities and Controls", and other applicable Sections for more information.

E. Utility Shut-Downs: Utility shut downs may not occur after the date of Substantial Completion.

F. Contractor shall provide all layout, site preparation, trenching, backfilling, patching and restoration work required for utility work at no additional cost to the Owner.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 10 00

SECTION 012200 - UNIT PRICES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes administrative and procedural requirements for Unit Prices.

B. Related Requirements:

1. Section 012600 "Contract Modification Procedures" for procedures for submitting and handling Change Orders.
2. Section 014000 "Quality Requirements" for general testing and inspecting requirements.

1.3 DEFINITIONS

A. Unit price is a price per unit of measurement for materials, equipment, or services, or a portion of the Work, added to or deducted from the Contract Sum by appropriate modification, if the scope of Work or estimated quantities of Work required by the Contract Documents are increased or decreased.

1.4 PROCEDURES

A. Unit prices include all necessary material, plus cost for delivery, installation, insurance, overhead, and profit.

B. Measurement and Payment: See individual Specification Sections for work that requires establishment of Unit Prices. Methods of measurement and payment for Unit Prices are specified in those Sections.

C. Owner reserves the right to reject Contractor's measurement of work-in-place that involves use of established Unit Prices and to have this work measured, at Owner's expense, by an independent surveyor acceptable to Contractor.

D. List of Unit Prices: A schedule of unit prices is included in Part 3. Specification Sections referenced in the schedule contain requirements for materials described under each Unit Price.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF UNIT PRICES

A. Unit Price 1: Removal and replacement of exterior OSB sheathing with new plywood sheathing

1. Description: Remove existing damaged OSB exterior wall sheathing beyond Base Bid portion and replace with exterior plywood sheathing as indicated on Structural Drawings.
2. Unit of Measurement: Per each additional 100 square feet of area beyond Base Bid.
3. Base Bid Quantity Allowance: All bids shall contain a minimum of 1,500 SF of stud wall area to be removed and replaced under the Base Bid.

B. Unit Price No. 2: Exterior Stud Wall Repair

1. Description: Provide additional exterior stud wall repair, beyond Base Bid quantity, consisting of “sistering” studs per Structural detail 3/S2.01.
2. Unit of Measurement: Per group of 5 studs.
3. Base Bid Quantity Allowance: All bids shall contain a minimum of fifty (50) studs to be repaired under the Base Bid.

C. Unit Price No. 3: Foundation Sill Plate Removal and Replacement

1. Description: Provide additional sill plate removal and replacement per Structural Detail 4/S2.01.
2. Unit of Measurement: Per each segment of ten (10) lineal feet of sill plate.
3. Base Bid Quantity Allowance: All bids shall contain a minimum of 80 lineal feet of sill plate removal and replacement under the Base Bid.

D. Unit Price No. 4: Structural Hold-down Removal and Replacement

1. Description: Provide additional removal and replacement of structural hold-downs per Structural Detail 5/S2.01.
2. Unit of Measurement: Per group of two (2) hold-downs
3. Base Bid Quantity Allowance: All bids shall contain a minimum of 8 hold-downs to be removed and replaced under the Base Bid.

E. Unit Price No. 5: Roof Truss Repair

1. Description: Provide additional roof truss repair per Structural Detail 7/S2.01.
2. Unit of Measurement: Per each additional truss.
3. Base Bid Quantity Allowance: All bids shall include a minimum of 2 trusses to be repaired under the Base Bid.

END OF SECTION 01 22 00

SECTION 012500 - SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes administrative and procedural requirements for substitutions.

B. Related Requirements:

1. Division 00 Section "Instructions to Bidders" for substitution requirements during the bidding process.
2. Division 01 Section "Product Requirements" for requirements for submitting comparable product submittals for products by listed manufacturers.
3. Divisions 02 through 26 Sections for specific requirements and limitations for substitutions.

1.3 DEFINITIONS

A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.

1. Substitutions for Cause: Changes proposed by Contractor that are required due to changed Project conditions, such as unavailability of product through no fault of the Contractor, regulatory changes, or unavailability of required warranty terms.
2. Substitutions for Convenience: Changes proposed by Contractor or Owner that are not required in order to meet other Project requirements but may offer advantage to Contractor or Owner.

B. Definitions in this Article do not change or modify the meaning of other terms used in the Contract Documents.

C. Pre-Bid Substitutions: Changes in products, materials, equipment, and methods of construction required by the Contract Documents proposed by a Bidder, and accepted by the Architect during the Bidding Period, as allowed by the Instructions to Bidders.

D. Post-Bid Substitutions: Changes in products, materials, equipment, and methods of construction required by the Contract Documents proposed by the Contractor after award of the Contract are considered to be requests for post-bid substitutions. The following are not considered to be post-bid requests for substitutions:

1. Substitutions requested during the bidding period, and accepted by Addendum prior to award of the Contract, are included in the Contract Documents and are not subject to requirements specified in this Section for substitutions.
2. Revisions to the Contract Documents requested by the Owner or Architect.
3. Specified options of products and construction methods included in the Contract Documents.
4. The Contractor's determination of and compliance with governing regulations and orders issued by governing authorities.

1.4 ACTION SUBMITTALS

A. Substitution Requests: The Architect will consider requests for substitution if received during the bidding period as prescribed in Division 00 Section “Instructions to Bidders”, and after commencement of the Work only when the Condition” stated in paragraph 2.1 of this section are met. Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.

1. Substitution Request Form: Complete the form included at the end of Division 00 Section “Instructions to Bidders”, and submit with other required data.
2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:

   a. Statement indicating why specified product or fabrication or installation cannot be provided, if applicable.
   b. Coordination information, including a list of changes or revisions needed to other parts of the Work and to construction performed by Owner and separate contractors that will be necessary to accommodate proposed substitution.
   c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Include annotated copy of applicable Specification Section. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.
   d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
   e. Samples, where applicable or requested.
   f. Certificates and qualification data, where applicable or requested.
   g. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners.
   h. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
   i. Research reports evidencing compliance with building code in effect for Project, from ICC-ES, and as required by the agency having jurisdiction.
   j. Detailed comparison of Contractor's construction schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.

k. Cost information, including a proposal of change, if any, in the Contract Sum.
l. Contractor's certification letter that proposed substitution complies with requirements in the Contract Documents except as indicated in substitution request, is compatible with related materials, and is appropriate for applications indicated.
m. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.

3. Architect's Action:

a. Bid Phase: Substitution requests approved during the Bidding period will be listed in an addendum. Substitution requests that are not approved will not be listed in an addendum. The Architect may, at their discretion, send the entity submitting the substitution notice of their action on the substitution. The entity submitting the substitution is responsible to confirm its status before bidding. General Contractor bidders are also responsible to confirm that all sub-bids accepted are for specified products or substitutions properly submitted and approved by addendum.
b. Construction Phase: If necessary, Architect will request additional information or documentation for evaluation within 15 days of receipt of a request for substitution. Architect will notify Contractor of acceptance or rejection of proposed substitution within 15 days of receipt of request, or 15 days of receipt of additional information or documentation, whichever is later.
c. Forms of Acceptance, Bid Phase: Listing as approved in an addendum.
d. Forms of Acceptance, Construction Phase: Change Order, Construction Change Directive, or Architect's Supplemental Instructions for minor changes in the Work, or other written approval by the Architect. Acceptance of a submittal or shop drawing containing a substitution will not be considered as an approved substitution unless specifically noted as such, and unless substitution has previously been properly submitted and approved.
e. Use product specified if Architect does not issue a decision on use of a proposed substitution within time allocated.

1.5 QUALITY ASSURANCE

A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. Engage a qualified testing agency to perform compatibility tests recommended by manufacturers.

1.6 PROCEDURES

A. Coordination: Revise or adjust affected work as necessary to integrate work of the approved substitutions.

PART 2 - PRODUCTS

2.1 SUBSTITUTIONS

A. Substitutions for Cause: Submit requests for substitution immediately on discovery of need for change, but not later than 21 days prior to time required for preparation and review of related submittals.

1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements. In making a Request for Substitution, the Contractor represents:

a. Specified product or method of construction cannot be provided for one of the following reasons:

1) The product or method of construction is unavailable through no fault of the Contractor or their subcontractor or supplier of any tier.
2) The product or method of construction cannot be provided within the Contract Time, through no fault of the Contractor or their subcontractor or supplier of any tier.
3) The product or method of construction cannot receive necessary approval(s) by a governing authority, and the proposed substitution can be approved.
4) The product or method of construction cannot be provided in a manner that is compatible with other materials or systems and where the Contractor certifies in writing that the substitution will overcome the incompatibility.
5) The product or method of construction cannot be coordinated with other materials or systems and where the Contractor certifies in writing that the substitution can be coordinated.

b. Requested substitution does not require extensive revisions to the Contract Documents.
c. Requested substitution is consistent with the Contract Documents and will produce indicated results.
d. Substitution request is fully documented and properly submitted.
e. Requested substitution will not adversely affect Contractor's construction schedule.
f. Requested substitution has received necessary approvals of authorities having jurisdiction.
g. Requested substitution is compatible with other portions of the Work.
h. Requested substitution has been coordinated with other portions of the Work.
i. Requested substitution provides specified warranty.
j. Requested substitution achieves the desired aesthetic effect. The Architect will be the sole and final judge of acceptability.
k. Contractor waives all claims for additional costs and time related to substitution, which subsequently become apparent.
l. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

B. Substitutions for Convenience: Architect will consider requests for substitution if received within 60 days after the Notice to Proceed. Requests received after that time may be considered or rejected at discretion of Architect.

1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements. In making a Request for Substitution, the Contractor represents:

a. Requested substitution offers Owner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume. Owner's additional responsibilities include compensation to Architect and the Architect's consultants of any tier for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.
b. The Contractor will reimburse the Architect and the Architect's consultants of any tier for all time and expenses related to evaluation of the proposed substitution, at the Architect's then current hourly rates, plus expenses. The costs of such evaluation will be paid by the Owner and deducted from the Contract through a Change Order.
c. Requested substitution does not require extensive revisions to the Contract Documents.
d. Requested substitution is consistent with the Contract Documents and will produce indicated results.
e. Substitution request is fully documented and properly submitted.
f. Requested substitution will not adversely affect Contractor's construction schedule.
g. Requested substitution has received necessary approvals of authorities having jurisdiction.
h. Requested substitution is compatible with other portions of the Work.
i. Requested substitution has been coordinated with other portions of the Work.
j. Requested substitution provides specified warranty.
k. Requested substitution achieves the desired aesthetic effect. The Architect will be the sole and final judge of acceptability.
l. Contractor waives all claims for additional costs and time related to substitution, which subsequently become apparent.
m. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

D. The Contractor's submittal and the Architect's acceptance of Shop Drawings, Product Data, or Samples for construction activities not complying with the Contract Documents do not constitute an acceptable or valid request for substitution, nor do they constitute approval.

E. In making Request for Substitution, the entity submitting the request, and the Contractor by accepting the sub-bid (of any level), represent:

1. He/she has personally investigated proposed product and, in his/her opinion, it is equal or superior in all respects to that specified. Substantiate whenever requested by Architect.
2. He/she will coordinate installation of accepted substitution into work and guarantees to complete it in all respects. He/she has outlined any changes required in accordance with form.

3. He/she will provide the same guarantee for substitution as for specified product.
4. He/she waves all claims for additional costs or time related to substitution which consequently became apparent.
5. Cost data is complete and includes all related costs and time under his/her contract, but excludes:

    a. Cost under separate contracts. (Show impact on attachment.)
    b. Design Consultant's redesign, unless designated. Costs incurred for any substitutions made by the Contractor which requires additional work or changes in the Contract Documents in order to accommodate such substitutions shall be paid for by the Contractor.

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 25 00

SUBSTITUTION REQUEST FORM

TO:

_____

PROJECT: **City of Fife – City Hall Phase 1 – Exterior Envelope Replacement**

We hereby submit for consideration, the following product instead of specified item for above project:

Section: _____ **Specified Item:** _____

Proposed Substitution: _____

Attach complete technical data, including laboratory tests and samples, as applicable.

Detailed comparison of the significant qualities (size, weight, durability, performance and similar characteristics, and including visual effect where applicable) for the proposed substitution in comparison with the original requirements.

List completely, installation changes and changes to Drawings and Specifications required by proposal.

Fill in Blanks Below:

A. Does substitution require change in Drawing dimensions? _____

_____

B. Will Undersigned pay for resulting building design changes including engineering and detailing costs?

_____

C. What effect does substitution have on other trades? _____

_____

D. Differences between proposed substitution and specified item? _____

_____

E. Manufacturer's guarantees and warranties of proposed and specified items are:

_____ Same _____ Different (Explain on attachment)

F. Name and address of 3 similar projects on which product was used, and date of installation: _____

_____

_____

G. Contract completion date is: _____ Same _____ Different (Explain on attachment)

Undersigned attests that the function and quality of the proposed items is equivalent or superior to the specified item and waives its rights to additional payment and time arising in any way from the substitution, including without limitation costs or time that may subsequently be necessitated by failure of the substitution to perform adequately, and for the required work to make corrections thereof.

Submitted by:

_____
Signature

_____
Firm

_____
Address

_____

Date _____

E-mail _____

Telephone & Fax _____

For use by Architect:

_____ Accepted _____ Accepted as Noted

_____ Not Accepted _____ Received Too Late

By _____

Date _____

Remarks _____

_____

_____

End of Form

SECTION 012600 - CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

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

B. Related Requirements:

1. Division 00 Section "General Conditions" for additional requirements that shall take precedence over the requirements contained in this section.
2. Section 013100 “Project Management and Coordination” for administrative procedures for handling Requests for Information (RFI).

1.3 MINOR CHANGES IN THE WORK

A. Architect’s Supplemental Instructions: Architect will issue Architect’s Supplemental Instructions (ASI) authorizing minor changes in the Work, not known to involve adjustment to the Contract Sum or the Contract Time, on form included in Project Manual.

1.4 PROPOSAL REQUESTS

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

1. Work Change Proposal Requests issued by Architect are not instructions either to stop work in progress or to execute the proposed change.
2. Within time specified in Proposal Request or 14 days, when not otherwise specified, after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.

   a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
   b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
   c. Include costs of labor and supervision directly attributable to the change.

d. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float (if allowed by General Conditions) before requesting an extension of the Contract Time.
e. Quotation Form: Use forms acceptable to Owner and Architect.

3. Also see the requirements of the General Conditions, which shall take precedence over requirements contained in this section.

B. Contractor-Initiated Proposals: If latent or changed conditions require modifications to the Contract, Contractor may initiate a claim by submitting a sequentially numbered request for a change to Architect.

1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
4. Include costs of labor and supervision directly attributable to the change.
5. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float (if allowed by General Conditions) before requesting an extension of the Contract Time.
6. Comply with requirements in Division 01 Section "Substitution Procedures" if the proposed change requires substitution of one product or system for product or system specified.
7. Also see the requirements of the General Conditions, which shall take precedence over requirements contained in this section.
8. Change Proposal Form: Use form acceptable to the Owner and Architect.

1.5 ADMINISTRATIVE CHANGE ORDERS

A. Refer to Revised General Conditions.

1.6 CHANGE ORDER PROCEDURES

A. Upon the Owner's approval of a Contractor’s Cost Change Proposal, the Architect will issue a Change Order for signatures of the Owner and the Contractor. Alternatively, upon written agreement by the Owner on the Contractor Cost Change Proposal (CCP), the Contractor shall proceed with the work and a Change Order will be written at a later date. This Change Order may incorporate more than one approved CCP item. This process is to be used to expedite approval without the need to complete a Change Order to authorize the Contractor to proceed.

B. Preparation of Change Orders:

1. Architect will prepare Change Orders.

2. Change Order Form: Architect's form.
3. Change Order describes Work changes, additions, and deletions, with attachments of revised Contract Documents to define changed details.
4. Change Order provides accounting of any Contract Sum and Contract Time adjustment.

C. Lump Sum/Fixed Price Change Order:

1. Content of Change Orders will be based on, either:

a. Proposal Request and Contractor's responsive Contractor Change Proposal as mutually agreed between Owner and Contractor.
b. Contractor's Change Proposal, as recommended by Architect.

2. Proper signatures (dated) authorize you to proceed with changes.
3. Sign and date Change Order if you agree with terms.

D. Correlation with Contractor's Submittals:

1. Contractor to periodically revise Schedule of Values and Request for Payment forms to record each change as a separate item of Work. Record adjusted Contract Sum.
2. Contractor to periodically revise Construction Schedule reflecting each change in Contract Time.

a. Revise sub-schedules to show changes for other items of work affected by changes.

3. Upon completion of work under Change Order, enter pertinent changes in Record Documents.

E. Distribution:

1. Architect sends three (3) copies to Contractor for signature.
2. Contractor signs all copies (if content if acceptable), and returns all copies to Architect.
3. Architect signs and forwards to Owner for approval.
4. Change Orders: Upon authorization, Owner to transmit two (2) signed copies to Architect.

a. Architect retains one copy for his/her files.
b. Architect transmits one copy to Contractor.

1.7 CONSTRUCTION CHANGE DIRECTIVE

A. Construction Change Directive: Architect may issue a Construction Change Directive on form included in Project Manual. Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.

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

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

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

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

CONTRACT MODIFICATION ATTACHMENTS FOLLOWING: TCF Architecture Sample Forms.

Architect's Supplemental Instructions (ASI)
Proposal Request (PR)
Change Order (CO)
Construction Change Directive (CCD)

END OF SECTION 01 26 00

ARCHITECT'S SUPPLEMENTAL INSTRUCTION

TCF Architecture

PROJECT:	City of Fife – City Hall Phase 1 Envelope Replacement	ASI NO.:	
OWNER:	City of Fife 5411 23rd Street E Fife, WA 98424	DATE OF ISSUANCE:	
TO CONTRACTOR:		ARCHITECT:	TCF Architecture PLLC 902 N. 2nd Street Tacoma, WA 98403
CONTRACT FOR:	General Construction	ARCHITECT'S PROJECT NO.:	
CONTRACT DATED:	September 23,2016		

The Work shall be carried out in accordance with the following supplemental instructions issued in accordance with the Contract Documents without change in Contract Sum or Contract Time. Proceeding with the Work in Accordance with these instruction indicates your acknowledgment that there will be no change in the Contract Sum or Contract Time, unless noted otherwise below.

Description:

Attachments:

REQUESTED BY: _____, TCF Architecture, PLLC

RESPONSE: ____ We have reviewed this Supplemental Instruction and accept it as a revision to the Contract with no change to the Contract Sum or Contract Time.

____ We have reviewed this Supplemental Instruction and have determined that the revision described herein will change the Contract Sum and/or Contract Time. We have attached substantiating information and explanation to this response.

Note: If the above response is not completed and returned to the Architect within 14 calendar days, the Contractor will be deemed to have accepted the Supplemental Instruction without change to the contract time or sum.

BY: _____, (CONTRACTOR NAME), Date: _____

PROPOSAL REQUEST

TCF Architecture

PROJECT: City of Fife – Phase 1 Envelope Replacement

PROPOSAL REQUEST NO.:

DATE OF ISSUANCE:

OWNER: City of Fife
5411 23rd Street E
Fife, WA 98424

CONTRACT DATE:

ARCHITECT'S PROJECT NO.:

TO CONTRACTOR:

ARCHITECT: TCF Architecture PLLC
902 North 2nd Street
Tacoma, WA 98403

Please submit an itemized proposal for changes in the Contract Sum and Contract Time for proposed modifications to the Contract Documents described herein. Submit proposal within seven (7) days, or notify the Architect in writing of the date on which you anticipate submitting your proposal.
THIS IS NOT A CHANGE ORDER, A CONSTRUCTION CHANGE DIRECTIVE OR A DIRECTION TO PROCEED WITH THE WORK DESCRIBED IN THE PROPOSED MODIFICATIONS.

Description:

Attachments:

Comments:

Method of Payment: Base the proposal on the following method of payment, and indicate such on the proposal:

___ Lump Sum
___ Labor and Materials with a Not-To-Exceed maximum price
___ Unit Price (include and estimate of quantities)
___ Other: _____

REQUESTED BY TCF Architecture, PLLC

_____
(name)

CHANGE ORDER

TCF Architecture

PROJECT NAME:	**City of Fife - City Hall Phase 1** **EXTERIOR ENVELOPE REPLACEMENT**	CHANGE ORDER NO.:	
		C.O. DATE:	
TO CONTRACTOR:	**to be determined**	CONTRACT DATE:	
THE OWNER:	**City of Fife**	ARCHITECT'S PROJECT NO.:	2012-008
THE ARCHITECT:	**TCF Architecture PLLC**		

The Contract is changed as follows:

ITEM	DESCRIPTION	ADD OR DEDUCT	AMOUNT
(Insert PR #, CCD #, etc)	(Insert description)	(Insert ADD or DEDUCT)	(Insert amount)
TOTAL AMOUNT FOR THIS CHANGE ORDER		**ADD**	**$0.00**

SUMMARY	
The original Contract Sum was	$0.00
Net change by previously authorized Change Orders	$0.00
The Contract Sum prior to this Change Order was	$0.00
The Contract Sum will be **(insert increased or decreased)** by this change order	$0.00
The new Contract Sum including this Change Order will be	$0.00

The Contract Time will be **(Insert unchanged, increased or decreased and the number of days)**
The date of Substantial Completion as of the date of this Change Order therefore is **(Insert date).**

ARCHITECT	**OWNER**	**CONTRACTOR**
TCF Architecture PLLC 902 N 2nd Street Tacoma, WA 98403	City of Fife 5411 23rd Street East Fife WA 98424	to be determined
By: _____ (insert typewritten name) Date: _____	By: _____ (insert typewritten name) Date: _____	By: _____ (insert typewritten name) Date: _____

CONSTRUCTION CHANGE DIRECTIVE

TCF Architecture

PROJECT: City of Fife – Phase 1 Envelope Replacement

DIRECTIVE NO.:

DATE OF ISSUANCE:

TO CONTRACTOR:

CONTRACT DATED:

ARCHITECT'S PROJECT NO.:

You are hereby directed to make the following change(s) to this Contract:

Description:

Attachments:

PROPOSED ADJUSTMENTS

1. The proposed basis of adjustment to the Contract Sum or Guaranteed Maximum Price is:
   __ Lump Sum increase / decrease of _____. ___ Fixed ___ Estimated
   __ Unit Price of _____.
   __ Labor and Materials, with a maximum not-to-exceed price of _____.
   (provide a full detailed breakdown on labor and materials used at completion of CCD work)
   __ as provided in Subparagraph 7.3.6 of the General Conditions
2. The Contract Time is proposed to be _____ by _____ days.
   (insert unchanged, increased or decreased and the number of days)

When signed by the Owner and Architect, and received by the Contractor, this document becomes effective IMMEDIATELY as a Construction Change Directive (C.C.D.), and the Contractor shall proceed with the change(s) described above.

Signature by the Contractor indicates the Contractor's agreement with the proposed adjustments in Contract Sum and Contract Time set forth in this Construction Change Directive.

ARCHITECT
TCF Architecture PLLC
902 North Second Street
Tacoma, WA 98403

By: _____

Date: _____

OWNER
City of Fife

By: _____

Date: _____

CONTRACTOR
(insert name and address)

By: _____

Date: _____

SECTION 012900 - PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

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

B. Related Requirements:

1. Division 01 Section "Contract Modification Procedures" for administrative procedures for handling changes to the Contract.
2. Division 01 Section "Construction Progress Documentation" for administrative requirements governing the preparation and submittal of the Contractor's construction schedule.

1.3 DEFINITIONS

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

1.4 SCHEDULE OF VALUES

A. Coordination: Coordinate preparation of the schedule of values with preparation of Contractor's construction schedule.

1. Coordinate line items in the schedule of values with other required administrative forms and schedules, including the following:

   a. Application for Payment forms with continuation sheets.
   b. Submittal schedule.
   c. Items required to be indicated as separate activities in Contractor's construction schedule.

2. Submit the Schedule of Values to Construction Manager at earliest possible date, but no later than 21 days before the date scheduled for submittal of initial Applications for Payment, unless indicated otherwise in the General Conditions.

3. Sub-schedules for Separate Elements of Work: Where the Contractor's construction schedule defines separate elements of the Work, provide sub-schedules showing values coordinated with each element.

B. Format and Content: Generally use Project Manual table of contents as a guide to establish line items for the schedule of values, but provide at least the level of detail required by this Section.

1. Identification: Include the following Project identification on the schedule of values:

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

2. Arrange schedule of values consistent with format of the requirements contained herein.
3. Arrange the schedule of values in tabular form with separate columns to indicate the following for each item listed:

a. Related Specification Section or Division.
b. Description of the Work.
c. Name of subcontractor.
d. Name of manufacturer or fabricator.
e. Name of supplier.
f. Change Orders (numbers) that affect value.
g. Dollar value of the following, as a percentage of the Contract Sum to nearest one-hundredth percent, adjusted to total 100 percent.

1) Labor.
2) Materials.
3) Equipment.

4. Provide separate line items for “Mobilization” and “Punchlist” as provided for in the General Conditions, including the specific line item percentages required therein.
5. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports, but no less that the level of detail required herein. Coordinate with Project Manual table of contents. Provide multiple line items for principal subcontract amounts in excess of five percent of the Contract Sum.

a. Include separate line items under Contractor and principal subcontracts for sustainability documentation and other Project closeout requirements in an amount totaling five percent of the Contract Sum and subcontract amount.

6. Round amounts to nearest whole dollar; total shall equal the Contract Sum.

7. Provide a separate line item in the schedule of values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.

    a. Differentiate between items stored on-site and items stored off-site. If required, include evidence of insurance.

8. Provide separate line items in the schedule of values for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
9. Each item in the schedule of values and Applications for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each item.

    a. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the schedule of values or distributed as general overhead expense, at Contractor's option, unless indicated otherwise herein.

10. Schedule Updating: Update and resubmit the schedule of values before the next Applications for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.

1.5 APPLICATIONS FOR PAYMENT

A. Each Application for Payment following the initial Application for Payment shall be consistent with previous applications and payments as certified by Construction Manager and paid for by Owner.

    1. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.

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

    1. Submit draft copy of Application for Payment seven days prior to due date for review by Architect, unless provided otherwise in the General Conditions.

C. Application for Payment Forms: Unless otherwise agreed upon between the Owner and the Contractor, use AIA Document G702 and AIA Document G703 as form for Applications for Payment. Include the following on the application:

> The undersigned Contractor certifies that to the best of the Contractor’s knowledge, information and belief the Work covered by this Application for Payment has been completed in accordance with the Contract Documents, that all amounts have been paid by the contractor to employees, subcontractors, suppliers, etc. for Work for which previous Certificates for Payment were issued and payments were issued and payments received form the Owner, and that current payments shown herein is now due.
>
> _____
> (Contracting Firm)
> By_____ _____

(SIGN IN INK) Date

CONSTRUCTION MANAGER'S CERTIFICATE FOR PAYMENT

In accordance with the Contract Documents, based on-site observations and the data comprising this application, the Construction Manager certifies to the Owner that to the best of the Architect's knowledge, information and belief the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED.

_____
(Construction Manager)
By_____ _____
(SIGN IN INK) Date

This Certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the Contractor named herein. Issuance, payment and acceptance of payment are without prejudice to any rights of the Owner or Contractor under this Contract.

D. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Construction Manager will return incomplete applications without action.

1. Entries shall match data on the schedule of values and Contractor's construction schedule. Use updated schedules if revisions were made.
2. Include amounts for work completed following previous Application for Payment, whether or not payment has been received. Include only amounts for work completed at time of Application for Payment.
3. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.
4. Indicate separate amounts for work being carried out under Owner-requested project acceleration.

E. Stored Materials: Include in Application for Payment amounts applied for materials or equipment purchased or fabricated and stored, but not yet installed. Differentiate between items stored on-site and items stored off-site.

1. Provide certificate of insurance, evidence of transfer of title to Owner, and consent of surety to payment, for stored materials.
2. Provide supporting documentation that verifies amount requested, such as paid invoices. Match amount requested with amounts indicated on documentation; do not include overhead and profit on stored materials.
3. Provide summary documentation for stored materials indicating the following:

    a. Value of materials previously stored and remaining stored as of date of previous Applications for Payment.
    b. Value of previously stored materials put in place after date of previous Application for Payment and on or before date of current Application for Payment.
    c. Value of materials stored since date of previous Application for Payment and remaining stored as of date of current Application for Payment.

F. Transmittal: Submit four signed and notarized original copies of each Application for Payment to Construction Manager by a method ensuring receipt within 24 hours. One copy shall include waivers of lien and similar attachments if required.

1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.

G. Waivers of Mechanic's Lien: Provide if required by the General Conditions.

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

1. List of subcontractors.
2. Schedule of values.
3. Contractor's construction schedule (preliminary if not final).
4. Products list (preliminary if not final).
5. Submittal schedule (preliminary if not final).
6. Certificates of insurance and insurance policies.
7. Performance and payment bonds, if required.

I. Applications each Month During Construction: Submit itemized application, in number of copies as specified herein, each with Contractor's notarized affidavit and signed receipts from Principal Subcontractors and Suppliers as specified below. Also include updated construction schedule with each application, when required herein.

J. Other Requirements: See the General Conditions.

K. Construction Schedule Update: If changes have occurred in the project schedule, submit with applications for payment a revised updated project CPM schedule.

L. Schedule of Values Updating: Update and resubmit the schedule of values before the next Application for Payment when Change Orders or Construction Change Directives result in a change in the contract Sum.

M. Current Record Documents: Prior to acting on processing each monthly request for payment, Contractor is required to present for review to Owner and Consultants, a current set of Record Documents indicating any revisions and locating all hidden work with horizontal and vertical dimensions. Failure to keep record documents current to Architects/Owners satisfaction shall be considered grounds for withholding progress payment and/or final payment to the Contractor.

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

1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
2. This application shall reflect Certificate(s) of Substantial Completion issued previously for Owner occupancy of designated portions of the Work.

O. Final Payment Application: After completing Project closeout requirements, submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:

1. Evidence of completion of Project closeout requirements.
2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
3. Updated final statement, accounting for final changes to the Contract Sum.
4. AIA Document G706, "Contractor's Affidavit of Payment of Debts and Claims."
5. AIA Document G706A, "Contractor's Affidavit of Release of Liens."
6. AIA Document G707, "Consent of Surety to Final Payment."
7. Evidence that claims have been settled.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

SCHEDULE OF VALUES LISTING

The following listing shall be used by the Contractor as a minimum breakdown for Schedule of Values required for this Project, with the exception of listed items not included in this Project:

<u>GENERAL</u>
- Contractor Overhead
- Mobilization
- Bonds/Insurance (Actual Amounts)
- General Submittals (All except Mech. & Elect.)
- General Punch List & Closeout
- Temporary Facilities
- Supervision

<u>EXISTING CONDITIONS</u>
- Selective Structure Demolition
- Fungal Abatement

<u>BUILDING</u>
- Metal Fabrications Materials
- Metal Fabrications Labor
- Rough Carpentry Materials
- Rough Carpentry Labor
- Sheathing Materials
- Sheathing Labor
- Exterior Finish Carpentry Materials
- Exterior Finish Carpentry Labor
- Interior Finish Carpentry Materials
- Interior Finish Carpentry Labor
- Sound Absorbing Wall Units Material
- Sound Absorbing Wall Units Labor
- Thermal Insulation Material

Thermal Insulation Labor
Weather Barriers Material
Weather Barriers Labor
Siding Materials
Siding Labor
Metal Wall Panels Material
Metal Wall Panels Labor
Sheet Metal Flashing & Trim Materials
Sheet Metal Flashing & Trim Labor
Joint Sealants Materials
Joint Sealants Labor
Plastic Glazing Materials
Plastic Glazing Labor
Gypsum Board Materials
Gypsum Board Labor
Resilient Base & Accessories Materials
Resilient Base & Accessories Labor
Painting Materials
Painting Labor
Signage Materials
Signage Labor

ELECTRICAL

Lighting Systems Material
Lighting Systems Labor
Power Systems Material
Power Systems Labor

END OF SECTION 012900

SECTION 013100 - PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

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

1. General coordination procedures.
2. Coordination drawings.
3. Requests for Information (RFIs).
4. Project meetings.

B. Related Requirements:

1. Division 01 Section "Construction Progress Documentation" for preparing and submitting Contractor's construction schedule.
2. Division 01 Section "Execution" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.
3. Division 01 Section "Closeout Procedures" for coordinating closeout of the Contract.

1.3 DEFINITIONS

A. RFI: Request from Owner, Construction Manager, Architect, or Contractor seeking information required by or clarifications of the Contract Documents.

1.4 INFORMATIONAL SUBMITTALS

A. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Include the following information in tabular form:

1. Name, address, and telephone number of entity performing subcontract or supplying products.
2. Number and title of related Specification Section(s) covered by subcontract.
3. Drawing number and detail references, as appropriate, covered by subcontract.

B. Key Personnel Names: Within 15 days of starting construction operations, or as required by the General Conditions, whichever is less, submit a list of key personnel assignments, including

superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including home, office, and cellular telephone numbers and e-mail addresses. Provide names, addresses, and telephone numbers of individuals assigned as alternates in the absence of individuals assigned to Project.

1. Post copies of list in project meeting room, in temporary field office, and by each temporary telephone. Keep list current at all times.

1.5 GENERAL COORDINATION PROCEDURES

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

1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
2. Coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair.
3. Make adequate provisions to accommodate items scheduled for later installation.

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

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

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

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

D. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials. Coordinate use of temporary utilities to minimize waste.

1. Salvage materials and equipment involved in performance of, but not actually incorporated into, the Work. See other Sections for disposition of salvaged materials that are designated as Owner's property.

1.6 COORDINATION DRAWINGS

A. Coordination Drawings, General: Prepare coordination drawings according to requirements in individual Sections, and additionally where installation is not completely shown on Shop Drawings, where limited space availability necessitates coordination, or if coordination is required to facilitate integration of products and materials fabricated or installed by more than one entity.

1.7 REQUESTS FOR INFORMATION (RFIs)

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

1. Architect will return RFIs submitted to Architect by other entities controlled by Contractor with no response.
2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.

B. RFI Process: During the construction phase, the Contractor shall use a Request for Information to make inquiries for clarification of the Contract Documents. The Contractor shall make every reasonable effort to carefully review the contract documents and search for answers prior to sending an RFI to the Architect. When RFI's are transmitted, they shall be sent to the Architect in a timely fashion allowing a reasonable time frame for review and response by the design team.

1. The Architect will judge whether they or their consultants would most appropriately answer the question.
2. The Contractor is encouraged to forward proposed solutions to any issues identified along with the RFI to help expedite an answer and/or resolution.
3. The Architect will return completed form to the Contractor in a timely fashion, and/or post to the project web site, and the Contractor shall forward on to and notify appropriate subcontractors and suppliers. Such response to RFI's by the Architect and/or their consultants shall not constitute approval of a change in contract time or the contract sum. Changes in contract time or cost shall be handled via a Change Order or Construction Change Directive.
4. If the Contractor believes the issue identified in the RFI will result in a change to the Contract Time or Sum, he shall so indicate on the RFI form. Such indication shall not automatically entitle the Contractor to an increase in the Contract Time or Contract Sum.
5. If the Contractor believes a change to the Contract Time or Contract Sum is necessary as a result of the issue identified in the RFI, he shall submit full substantiating documentation to the Architect within the time frames indicated in the General Conditions for a claim. Without such documentation in the required time frames, there will be no consideration of a change to the Contract Time or the Contract Sum.

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

1. Project name.
2. Project number.
3. Date.

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

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

D. RFI Forms: Form bound in Project Manual. Architect will provide an electronic version of this form.

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

E. Form of Transmittal: To help expedite the process, to help eliminate the use of paper products, and to help improve the clarity of information, the Contractor shall use electronic mail to transmit RFI's whenever feasible (in lieu of a fax machine), which may require the use of scanned documents, digital photographs, etc. This shall be a requirement of the Contract Documents unless a particular RFI becomes technically infeasible to handle by this method

F. Architect's Action: The RFI will generally be answered within ten (10) working days (as defined by the General Conditions). If the Architect determines that the RFI is incomplete, unclear, or requires further information to answer, this time frame will increase to provide the full ten days indicated upon receipt of all required information. The Architect and his Consultants will endeavor to respond appropriately to time critical questions. The Contractor shall only mark the RFI Time Critical (or urgent) in rare instances and only when absolutely necessary. Indication of a "Requested Return Date" with a time frame shorter than the above time frames will not be grounds for a contract time extension or delay claim. The Architect will endeavor to meet the requested date provided the Contractor does not routinely request quicker responses. The Contractor shall endeavor to plan the project work such that RFI's do not commonly become time critical. The time frame will begin upon receipt in the Architect's office on a normal working day (excluding the Architect's holiday days) between the hours of 8:00 AM and 5:00 PM, and will end upon the Architect's transmission back to the Contractor on a normal working day for the Architect. No adjustments to the Contract Time will be considered for RFI's answered within the above time frame. RFIs received by Architect after 1:00 p.m. will be considered as received the following working day.

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

    a. Requests for approval of submittals.
    b. Substitution as approved by Architect.
    c. Requests for approval of Contractor's means and methods.

d. Requests for coordination information already indicated in the Contract Documents.
e. Requests for adjustments in the Contract Time or the Contract Sum.
f. Requests for interpretation of Architect's actions on submittals.
g. Incomplete RFIs or inaccurately prepared RFIs.

2. Architect's action may include a request for additional information, in which case Architect's time for response will date from time of receipt of additional information.
3. Architect's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Division 01 Section "Contract Modification Procedures."

a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Architect and Construction Manager in writing within 10 days of receipt of the RFI response, or within the time frames indicated in the General Conditions, whichever time period is shorter.

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

1. Project name.
2. Name and address of Contractor.
3. Name and address of Architect and Construction Manager.
4. RFI number including RFIs that were returned without action or withdrawn.
5. RFI description.
6. Date the RFI was submitted.
7. Date Architect's response was received.

H. On receipt of Architect's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect within seven days if Contractor disagrees with response, or as provided by the General Conditions, whichever time period is shorter.

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

I. RFI Numbering: RFI’s shall be consecutively numbered, beginning at “1”. The number shall be followed by a capital letter designating the primary discipline associated with the question. If a follow-up question arises, the follow-up RFI shall use the same number as the original RFI, but shall contain a sub-letter(s), beginning with a lower case “a”. As an example, if the third RFI were mechanical in nature, it would be numbered 3M, and a clarification to RFI 3M would be RFI 3Ma.

J. Subcontractor RFI’s:

1. General Requirements: Subcontractors shall also use an RFI form to request information or clarifications. The RFI form format is up to the General Contractor and Subcontractor to determine, but is shall contain substantially the same information that the attached RFI form contains. The Owner and Architect reserve the right to reject the subcontractor RFI format should it not contain substantially the same information as the attached RFI form.

2. General Contractor's Review: The General Contractor shall review and respond to all Subcontractor's RFIs. When the General Contractor has reviewed the RFI, and cannot find an answer in the Contract Documents, the General Contractor shall create their own RFI with the appropriate number, attach the subcontractor RFI, and forward it to the Architect. Should the Architect find the RFI to be "Unnecessary" as defined herein, review charges will be applied.

K. RFI Documentation: RFI forms shall be fully completed, shall contain accurate references to drawings and specifications, shall include any necessary supporting data to make clear the question or concern, and shall contain the Contractor's proposed solution where feasible to recommend one.

1.8 PROJECT MEETINGS

A. General: The Contractor shall schedule and conduct meetings and conferences at Project site unless otherwise indicated.

1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Architect of scheduled meeting dates and times.
2. Agenda: Coordinate the agenda with the Architect and Construction Manager. Distribute the agenda to all invited attendees.
3. Minutes: Entity responsible for conducting meeting will record and promptly distribute significant discussions and agreements achieved. The meeting minutes will be distributed to the Contractor, Owner, Construction Manager, and the Architect's Consultants.

B. Preconstruction Conference: The Contractor shall schedule and conduct a preconstruction conference before starting construction, at a time convenient to Owner and Architect, but no later than 10 working days after execution of the Agreement.

1. Conference will be conducted to review responsibilities and personnel assignments.
2. Attendees: Authorized representatives of Owner, Owner's Commissioning Authority, Construction Manager, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. Participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
3. Agenda: Discuss items of significance that could affect progress, including the following:

   a. Tentative construction schedule.
   b. Phasing.
   c. Critical work sequencing and long-lead items.
   d. Designation of key personnel and their duties.
   e. Lines of communications.
   f. Procedures for processing field decisions and Change Orders.
   g. Procedures for RFIs.
   h. Procedures for testing and inspecting.
   i. Procedures for processing Applications for Payment.
   j. Distribution of the Contract Documents.

k. Submittal procedures.
l. Preparation of record documents.
m. Use of the premises.
n. Work restrictions.
o. Working hours.
p. Owner's occupancy requirements.
q. Responsibility for temporary facilities and controls.
r. Procedures for moisture and mold control.
s. Procedures for disruptions and shutdowns.
t. Construction waste management and recycling.
u. Parking availability.
v. Office, work, and storage areas.
w. Equipment deliveries and priorities.
x. First aid.
y. Security.
z. Progress cleaning.

4. Minutes: Entity responsible for conducting meeting will record and distribute meeting minutes.

C. Preinstallation Conferences: The Contractor shall schedule and conduct a preinstallation conference at Project site before each construction activity that requires coordination with other construction.

1. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise Architect and Owner of scheduled meeting dates.
2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:

a. Contract Documents.
b. Options.
c. Related RFIs.
d. Related Change Orders.
e. Purchases.
f. Deliveries.
g. Submittals.
h. Disruption of Owner’s activities.
i. Review of mockups.
j. Possible conflicts.
k. Compatibility requirements.
l. Time schedules.
m. Weather limitations.
n. Manufacturer's written instructions.
o. Warranty requirements.
p. Compatibility of materials.
q. Acceptability of substrates.
r. Temporary facilities and controls.
s. Space and access limitations.
t. Regulations of authorities having jurisdiction.

u. Testing and inspecting requirements.
v. Installation procedures.
w. Coordination with other work.
x. Required performance results.
y. Protection of adjacent work.
z. Protection of construction and personnel.

3. Record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.
4. Reporting: Distribute minutes of the meeting to each party present and to other parties requiring information.
5. Unless otherwise agreed with the Owner, do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.

D. Project Closeout Conference: Schedule and conduct a project closeout conference, at a time convenient to Owner and Architect, but no later than 30 days prior to the scheduled date of Substantial Completion.

1. Conduct the conference to review requirements and responsibilities related to Project closeout.
2. Attendees: Authorized representatives of Owner, Owner's Commissioning Authority, Construction Manager, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the meeting. Participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
3. Agenda: Discuss items of significance that could affect or delay Project closeout, including the following:

a. Preparation of record documents.
b. Procedures required prior to inspection for Substantial Completion and for final inspection for acceptance.
c. Submittal of written warranties.
d. Requirements for completing sustainable design documentation.
e. Requirements for preparing operations and maintenance data.
f. Requirements for delivery of material samples, attic stock, and spare parts.
g. Requirements for demonstration and training.
h. Preparation of Contractor's punch list.
i. Procedures for processing Applications for Payment at Substantial Completion and for final payment.
j. Submittal procedures.
k. Owner's partial occupancy requirements.
l. Installation of Owner's furniture, fixtures, and equipment.
m. Responsibility for removing temporary facilities and controls.

4. Minutes: Entity conducting meeting will record and distribute meeting minutes.

E. Progress Meetings: Contractor shall conduct progress meetings at weekly intervals, or as otherwise agreed with the Owner and Architect.

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

    a. Contractor's Construction Schedule: Review both the short term and long term schedules. Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's construction schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.

        1) Review schedule for next period.

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

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

4. Minutes: Entity responsible for conducting the meeting will record and distribute the meeting minutes to each party present and to parties requiring information.

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

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

3.1 GENERAL COORDINATION PROVISIONS

A. General:

1. The Contractor is responsible for the coordination of the work of all trades and shall check specifications, addenda, and drawings covering all trades as the work progresses. He/she shall promptly report to the Architect what he/she considers omissions, conflicts or points requiring clarification.
2. Contractor shall prepare and distribute to each entity performing work at project site, a written memorandum of instructions on required coordination activities, including required notices, reports and attendance at meetings.
3. All Contractors, (Prime Contractor and Subcontractors), shall diligently comply with the following requirements:

    a. Cooperate in planning and layout of the work well in advance of operations.
    b. Inform other contractors of requirements at proper time to prevent delay or revisions.
    c. Be informed on the requirements of other contractors and check own work for conflicts with the work of other contracts.
    d. Ensure delivery of materials and performance of work on coordinated schedule with other contracts.
    e. The Contractor shall be represented on the job site by his/her superintendent at all times when there is construction going on, including the work of his/her subcontractors, as well as his/her own.

B. Coordination of Reports/Activities: Coordinate both the procedural timing and the listing (naming and sequencing) of reports/activities required by provisions of this Section and other sections, to afford consistency and logical coordination between submitted reports or lists. Maintain coordination and correlation between separate reports by updating at month day or shorter time intervals. Make appropriate distribution of each report and updated report to entities involved in the work including Architect and Owner. In particular, provide close coordination of progress schedule, schedule of values listing of subcontracts, schedule of submittals, progress reports, and payment requests (see Division 01 Sections “Payment Procedures” and “Construction Progress Documentation”.).

C. Coordination Drawings: Where work by separate entities requires off-site fabrication of products and materials which must accurately interface and closely intermesh to produce required results, prepare coordination drawings to indicate how the work shown by separate shop drawings will be interfaced, intermeshed and sequenced for installation. Comply with submittal requirements of Division 01 Section “Submittal Procedures.”

D. Inspection of Conditions: Require the Installer of each major component to inspect both the substrate and conditions under which Work is to be performed. Do not proceed until unsatisfactory conditions have been corrected in an acceptable manner.

E. Coordinate temporary enclosures with required inspections and tests to minimize the necessity of uncovering completed construction for that purpose.

3.2 OTHER COORDINATION

A. General:

1. Contractor shall give the Owner forty-eight (48) hours advance written notice of his/her intention to work overtime, nights, Sundays or holidays, or anytime outside the usual working hours. In no case shall the Contractor do any such work without first notifying the Owner to permit arrangements for proper inspection.
2. Contractor shall reimburse the additional cost to the Owner for inspection work on Sundays, recognized holidays, or hours beyond the normal work hours as list in Division 01 Section "Summary." Such reimbursement shall include all additional costs to the Owner.

ATTACHMENTS FOLLOWING: TCF Architecture Sample Forms.

Request for Information

END OF SECTION 013100

REQUEST FOR INFORMATION

TCF Architecture

PROJECT NAME: City of Fife – City Hall Phase 1 Envelope Replacement

Architect's Project #

FROM:

(Contractor firm name)
(Address)
(City/State/Zip)
(Phone number)
(Fax number)
(Email address)

TO:

Mr./Ms. _____
TCF Architecture PLLC
902 North 2nd Street
Tacoma, WA. 98403
Phone: 253-572-3993
Fax: 253-572-1445
Email:

RFI # _____

Submission Date: _____

Requested Return Date: _____

Cost Impact (yes/no) _____

Schedule Impact (yes/no) _____

DOCUMENTS REFERENCE:

Drawing and/or Detail Sheet Number(s): _____

Specification Section, Article & Paragraph: _____

RFI SUBJECT: _____

QUESTION:

QUESTION BY: _____ FIRM NAME: _____

RESPONSE:

ANSWER BY: _____ FIRM NAME: _____

Answer Date: _____

SECTION 013200 - CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:

1. Startup construction schedule.
2. Contractor's construction schedule.
3. Construction schedule updating reports.
4. Daily construction reports.
5. Material location reports.
6. Site condition reports.
7. Special reports.

B. Related Requirements:

1. Division 01 Section "Submittal Procedures" for submitting schedules and reports.
2. Division 01 Section "Quality Requirements" for submitting a schedule of tests and inspections.

1.3 DEFINITIONS

A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction project. Activities included in a construction schedule consume time and resources.

1. Critical Activity: An activity on the critical path that must start and finish on the planned early start and finish times.
2. Predecessor Activity: An activity that precedes another activity in the network.
3. Successor Activity: An activity that follows another activity in the network.

B. CPM: Critical path method, which is a method of planning and scheduling a construction project where activities are arranged based on activity relationships. Network calculations determine when activities can be performed and the critical path of Project.

C. Critical Path: The longest connected chain of interdependent activities through the network schedule that establishes the minimum overall Project duration and contains no float.

D. Event: The starting or ending point of an activity.

E. Float: The measure of leeway in starting and completing an activity.

1. Float time ownership shall be as defined in the General Conditions.
2. Free float is the amount of time an activity can be delayed without adversely affecting the early start of the successor activity.
3. Total float is the measure of leeway in starting or completing an activity without adversely affecting the planned Project completion date.

F. Resource Loading: The allocation of manpower and equipment necessary for the completion of an activity as scheduled.

1.4 INFORMATIONAL SUBMITTALS

A. Format for Submittals: For submittals required under this Section, submit required submittals in the following format:

1. PDF electronic file.

B. Contractor's Construction Schedule: Initial schedule, of size required to display entire schedule for entire construction period.

C. Construction Schedule Updating Reports: Submit with Applications for Payment.

D. Daily Construction Reports: Submit at weekly intervals.

E. Material Location Reports: Submit at intervals as agreed to with Owner.

F. Site Condition Reports: Submit at time of discovery of differing conditions.

G. Special Reports: Submit at time of unusual event.

1.5 QUALITY ASSURANCE

A. Prescheduling Conference: Contractor shall conduct a conference at Project site to comply with requirements in Division 01 Section "Project Management and Coordination."

1.6 COORDINATION

A. Coordinate preparation and processing of schedules and reports with performance of construction activities and with scheduling and reporting of separate contractors.

B. Coordinate Contractor's construction schedule with the schedule of values, list of subcontracts, submittal schedule, progress reports, payment requests, and other required schedules and reports.

1. Secure time commitments for performing critical elements of the Work from entities involved.
2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.

PART 2 - PRODUCTS

2.1 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

A. General: Comply with the requirements of the General Conditions, article 3.10, and the requirements of the Special or Supplemental Conditions, if any.

B. Time Frame: Extend schedule from date established for Notice to Proceed, to date of Substantial Completion and final completion.

1. Contract completion date shall not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.

C. Activities: Treat each work area as a separate numbered activity for each main element of the Work. Comply with the following:

1. Activity Duration: Define activities so no activity is longer than twenty (20) days, unless specifically allowed by Architect.
2. Procurement Activities: Include procurement process activities for long lead items and major items, requiring a cycle of more than 60 days, as separate activities in schedule. Procurement cycle activities include, but are not limited to, submittals, approvals, purchasing, fabrication, and delivery.
3. Submittal Review Time: Include review and resubmittal times indicated in Division 01 Section "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's construction schedule with submittal schedule.
4. Startup and Testing Time: Include no fewer than fifteen (15) days for startup and testing.
5. Substantial Completion: Indicate completion in advance of date established for Substantial Completion, and allow time for Architect's and Owner's administrative procedures necessary for certification of Substantial Completion.
6. Punch List and Final Completion: Include not more than thirty (30) days for completion of punch list items and final completion.

D. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule, and show how the sequence of the Work is affected.

1. Phasing: Arrange list of activities on schedule by phase.
2. Work under More Than One Contract: Include a separate activity for each contract.
3. Work by Owner: Include a separate activity for each portion of the Work performed by Owner.
4. Products Ordered in Advance: Include a separate activity for each product. Include delivery date indicated in Division 01 Section "Summary." Delivery dates indicated stipulate the earliest possible delivery date.
5. Owner-Furnished Products: Include a separate activity for each product. Include delivery date indicated in Division 01 Section "Summary." Delivery dates indicated stipulate the earliest possible delivery date.
6. Work Restrictions: Show the effect of the following items, if applicable, on the schedule:

    a. Coordination with existing construction, if any.
    b. Uninterruptible services.
    c. Partial occupancy before Substantial Completion.

d. Use of premises restrictions.
e. Provisions for future construction.
f. Seasonal variations.
g. Environmental control.

7. Work Stages: Indicate important stages of construction for each major portion of the Work, including, but not limited to, the following:

a. Subcontract awards.
b. Submittals.
c. Purchases.
d. Mockups.
e. Fabrication.
f. Sample testing.
g. Deliveries.
h. Installation.
i. Tests and inspections.
j. Adjusting.
k. Startup and placement into final use and operation.

8. Construction Areas: Identify each major area of construction for each major portion of the Work. Indicate where each construction activity within a major area must be sequenced or integrated with other construction activities to provide for the following:

a. Structural completion.
b. Temporary enclosure and space conditioning.
c. Permanent space enclosure.
d. Completion of mechanical installation.
e. Completion of electrical installation.
f. Substantial Completion.

E. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, Substantial Completion, and final completion, plus other major milestones if indicated.

1. Temporary enclosure and space conditioning.

F. Cost Correlation: Superimpose a cost correlation timeline, indicating planned and actual costs. On the line, show planned and actual dollar volume of the Work performed as of planned and actual dates used for preparation of payment requests.

1. See Division 01 Section "Payment Procedures" for cost reporting and payment procedures.

G. Upcoming Work Summary: Prepare summary report indicating activities scheduled to occur or commence prior to submittal of next schedule update. Summarize the following issues:

1. Unresolved issues.
2. Unanswered Requests for Information.
3. Rejected or unreturned submittals.
4. Notations on returned submittals.

5. Pending modifications affecting the Work and Contract Time.

H. Recovery Schedule: When periodic update indicates the Work is fourteen (14) or more calendar days behind the current approved schedule, submit a separate recovery schedule indicating means by which Contractor intends to regain compliance with the schedule. Indicate changes to working hours, working days, crew sizes, and equipment required to achieve compliance, and date by which recovery will be accomplished.

I. Computer Scheduling Software: Prepare schedules using current version of a program that has been developed specifically to manage construction schedules.

2.2 STARTUP CONSTRUCTION SCHEDULE

A. Bar-Chart Schedule: Submit startup, horizontal, bar-chart-type construction schedule within seven (7) calendar days following the date established for the Notice of Contract Award.

B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line. Outline significant construction activities for first forty-five (45) calendar days of construction. Include skeleton diagram for the remainder of the Work and a cash requirement prediction based on indicated activities.

2.3 CONTRACTOR'S CONSTRUCTION SCHEDULE (CPM SCHEDULE)

A. CPM Schedule Preparation: Prepare a list of all activities required to complete the Work. Using the startup network diagram, prepare a skeleton network to identify probable critical paths.

1. Activities: Indicate the estimated time duration, sequence requirements, and relationship of each activity in relation to other activities. Include estimated time frames for the following activities:

   a. Preparation and processing of submittals.
   b. Mobilization and demobilization.
   c. Purchase of materials.
   d. Delivery.
   e. Fabrication.
   f. Utility interruptions.
   g. Installation.
   h. Work by Owner that may affect or be affected by Contractor's activities.
   i. Testing and commissioning.
   j. Punch list and final completion.
   k. Activities occurring following final completion.

2. Critical Path Activities: Identify critical path activities, including those for interim completion dates. Scheduled start and completion dates shall be consistent with Contract milestone dates.

B. Contract Modifications: For each proposed contract modification and concurrent with its submission, prepare a time-impact analysis using a network fragment to demonstrate the effect of the proposed change on the overall project schedule.

C. Initial Issue of Schedule: Prepare initial network diagram from a sorted activity list indicating straight "early start-total float." Identify critical activities. Prepare tabulated reports showing the following:

1. Contractor or subcontractor and the Work or activity.
2. Description of activity.
3. Main events of activity.
4. Immediate preceding and succeeding activities.
5. Early and late start dates.
6. Early and late finish dates.
7. Activity duration in workdays.
8. Total float or slack time.
9. Average size of workforce.
10. Dollar value of activity (coordinated with the schedule of values).

2.4 REPORTS

A. Daily Construction Reports: Prepare a daily construction report recording the following information concerning events at Project site:

1. List of subcontractors at Project site.
2. List of separate contractors at Project site.
3. Approximate count of personnel at Project site.
4. Equipment at Project site.
5. Material deliveries.
6. High and low temperatures and general weather conditions, including presence of rain or snow.
7. Accidents.
8. Meetings and significant decisions.
9. Unusual events (see special reports).
10. Stoppages, delays, shortages, and losses.
11. Meter readings and similar recordings.
12. Emergency procedures.
13. Orders and requests of authorities having jurisdiction.
14. Change Orders received and implemented.
15. Construction Change Directives received and implemented.
16. Services connected and disconnected.
17. Equipment or system tests and startups.
18. Partial completions and occupancies.
19. Substantial Completions authorized.

B. Material Location Reports: At weekly intervals, prepare and submit a comprehensive list of materials delivered to and stored at Project site. List shall be cumulative, showing materials previously reported plus items recently delivered. Include with list a statement of progress on and delivery dates for materials or items of equipment fabricated or stored away from Project site. Indicate the following categories for stored materials:

1. Material stored prior to previous report and remaining in storage.
2. Material stored prior to previous report and since removed from storage and installed.
3. Material stored following previous report and remaining in storage.

C. Site Condition Reports: Immediately on discovery of a difference between site conditions and the Contract Documents, prepare and submit a detailed report. Submit with a Request for Information. Include a detailed description of the differing conditions, together with recommendations for changing the Contract Documents.

2.5 SPECIAL REPORTS

A. General: Submit special reports directly to Architect and Owner within one day of an occurrence. Distribute copies of report to parties affected by the occurrence.

B. Reporting Unusual Events: When an event of an unusual and significant nature occurs at Project site, whether or not related directly to the Work, prepare and submit a special report. List chain of events, persons participating, response by Contractor's personnel, evaluation of results or effects, and similar pertinent information. Advise Owner in advance when these events are known or predictable.

PART 3 - EXECUTION

3.1 CONTRACTOR'S CONSTRUCTION SCHEDULE

A. Contractor's Construction Schedule Updating: At monthly intervals, update schedule to reflect actual construction progress and activities. Issue schedule one week before each regularly scheduled progress meeting.

1. Revise schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.
2. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
3. As the Work progresses, indicate final completion percentage for each activity.

B. Distribution: Distribute copies of approved schedule to Architect**,** Construction Manager, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.

1. Post copies in Project meeting rooms and temporary field offices.
2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

END OF SECTION 013200

SECTION 013300 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes requirements for the submittal schedule and administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.

B. Related Requirements:

1. Division 01 Section "Payment Procedures" for submitting Applications for Payment and the schedule of values.
2. Division 01 Section "Construction Progress Documentation" for submitting schedules and reports, including Contractor's construction schedule.
3. Division 01 Section "Operation and Maintenance Data" for submitting operation and maintenance manuals.
4. Division 01 Section "Project Record Documents" for submitting record Drawings, record Specifications, and record Product Data.

1.3 DEFINITIONS

A. Action Submittals: Written and graphic information and physical samples that require Architect's responsive action. Action submittals are those submittals indicated in individual Specification Sections as "action submittals."

B. Informational Submittals: Written and graphic information and physical samples that do not require Architect's responsive action. Submittals may be rejected for not complying with requirements. Informational submittals are those submittals indicated in individual Specification Sections as "informational submittals."

C. File Transfer Protocol (FTP): Communications protocol that enables transfer of files to and from another computer over a network and that serves as the basis for standard Internet protocols. An FTP site is a portion of a network located outside of network firewalls within which internal and external users are able to access files.

D. Portable Document Format (PDF): An open standard file format licensed by Adobe Systems used for representing documents in a device-independent and display resolution-independent fixed-layout document format.

1.4 ACTION SUBMITTALS

A. Submittal Schedule: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or revisions to submittals noted by Architect and additional time for handling and reviewing submittals required by those corrections.

1.5 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

A. Architect's Digital Data Files: Electronic digital data files of portions of the Contract Drawings may be provided by Architect for Contractor's use in preparing submittals, as provided herein.

B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.

1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
2. Submit all submittal items required for each Specification Section concurrently unless partial submittals for portions of the Work are indicated on approved submittal schedule.
3. Submit action submittals and informational submittals required by the same Specification Section as separate packages under separate transmittals.
4. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.

    a. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
    b. An example of related submittals are submittals requiring color selections. The Architect may not approve any submittals requiring color selections until all submittals requiring color selections, along with the required samples, are provided so that the Architect can make comprehensive and coordinated selections, even when a Color Schedule is provided on the drawings.

C. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal at their office during normal working hours Monday through Friday (excluding holidays). No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals, or as a result of incomplete or rejected submittals.

1. Initial Review: Allow ten (10) work days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
2. Interrelated Submittals: Where one submittal cannot be fully reviewed without receipt of another submittal, the time frame for review will not begin until as such interrelated submittals are received.
3. Direct Transmittal to Consultant: Where the Contract Documents indicate that submittals may be transmitted directly to Architect's consultants, provide duplicate copy of transmittal and submittal directly to Architect. Submittal will be returned to Architect

before being returned to Contractor. The Contractor shall confirm in advance those submittals that they propose to handle in this manner.

4. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
5. Multiple Submittals from Contractor: Where the Contractor submits multiple submittals at the same time, they shall prioritize the return of the submittals, and allow additional time for review as is reasonable depending on the number of submittals already in process and in the new batch of submittals.
6. Incomplete, Inadequate and Rejected Submittals: If a submittal is in any way incomplete or inadequate and the Architect requests additional information, requires a resubmittal, or rejects the submittal, the above stated time frames for review will start over once the complete and adequate submittal is received at the Architects office.
7. Resubmittal Review: Allow same time frames as above for processing each resubmittal.

D. Paper Submittals: Place a permanent label or title block on each submittal item for identification.

1. Indicate name of firm or entity that prepared each submittal on label or title block.
2. Provide a space approximately 6 by 8 inches (150 by 200 mm) on label or beside title block to record Contractor's review and approval markings and action taken by Architect.
3. Include the following information for processing and recording action taken:

a. Project name.
b. Date.
c. Name of Architect.
d. Name of Construction Manager.
e. Name of Contractor.
f. Name of subcontractor.
g. Name of supplier.
h. Name of manufacturer.
i. Submittal number or other unique identifier, including revision identifier.

1) Submittal number shall use Specification Section number followed by a decimal point and then a sequential number (e.g., 061000.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., 061000.01.A).

j. Number and title of appropriate Specification Section.
k. Drawing number and detail references, as appropriate.
l. Location(s) where product is to be installed, as appropriate.
m. Other necessary identification.

4. Additional Paper Copies: Unless additional copies are required for final submittal, and unless Architect observes noncompliance with provisions in the Contract Documents, initial submittal may serve as final submittal.

5. Transmittal for Paper Submittals: Assemble each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form. Architect will return without review submittals received from sources other than Contractor.

a. Transmittal Form for Paper Submittals: Provide locations on form for the following information:

1) Project name.
2) Date.
3) Destination (To:).
4) Source (From:).
5) Name and address of Architect.
6) Name of Construction Manager.
7) Name of Contractor.
8) Name of firm or entity that prepared submittal.
9) Names of subcontractor, manufacturer, and supplier.
10) Category and type of submittal.
11) Submittal purpose and description.
12) Specification Section number and title.
13) Specification paragraph number or drawing designation and generic name for each of multiple items.
14) Drawing number and detail references, as appropriate.
15) Indication of full or partial submittal.
16) Transmittal number, numbered consecutively.
17) Submittal and transmittal distribution record.
18) Remarks.
19) Signature of transmitter.

E. Electronic Submittals: Should the Contractor choose to use an electronic submittal process and limit the number of paper copies, the design team supports and encourages this approach. The requirements above for the number of copies shall be modified to one full sized paper copy and one PDF electronic copy. The paper copy will be retained by the Architect and all returned submittals will be electronic copies. If the submittals are too large to send electronically, the quantity required shall be as noted hereinabove for non-electronic submittals. For electronic submittals, the time for review shall not commence until both the electronic copy and the hardcopy arrive in the Architect's office on a standard work day that the office is open. Identify and incorporate information in each electronic submittal file as follows:

1. Assemble complete submittal package into a single indexed file incorporating submittal requirements of a single Specification Section and transmittal form with links enabling navigation to each item.
2. Name file with submittal number or other unique identifier, including revision identifier.

   a. File name shall use project identifier and Specification Section number followed by a decimal point and then a sequential number (e.g., LNHS-061000.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., LNHS-061000.01.A).

3. Provide means for insertion to permanently record Contractor's review and approval markings and action taken by Architect.
4. Transmittal Form for Electronic Submittals: Use electronic form acceptable to Owner and Architect, containing the same information as paper copy transmittals.

F. Options: Identify options requiring selection by Architect.

G. Deviations and Additional Information: On an attached separate sheet, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by Architect on previous submittals, and deviations from requirements in the Contract Documents, including minor variations and limitations. Include same identification information as related submittal.

H. Resubmittals: Provide resubmittals in same form and number of copies as initial submittal.

1. Note date and content of previous submittal.
2. Note date and content of revision in label or title block and clearly indicate extent of revision.
3. Resubmit submittals until they are marked with approval notation from Architect's action stamp.

I. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.

J. Use for Construction: Retain complete copies of submittals on Project site. Use only final action submittals that are marked with approval notation from Architect's action stamp.

K. Record Submittals: Retain one full copy of all submittals for submission to the Owner at the end of the project as a part of required closeout documentation. Do not use this set for construction purposes. Retain in like new condition.

PART 2 - PRODUCTS

2.1 SUBMITTAL PROCEDURES

A. General Submittal Procedure Requirements: Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.

1. Action Submittals: Submit the number of paper copies that the Contractor wishes to receive back, plus four copies to be retained by the Architect (Owner, Construction Manager and the Architect’s consultants) of each submittal unless otherwise indicated. Architect will return all but four copies.
2. Informational Submittals: Submit four paper copies of each submittal unless otherwise indicated. Architect will not return copies.
3. Certificates and Certifications Submittals: Provide a statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.

a. Provide a digital signature with digital certificate on electronically submitted certificates and certifications where indicated.
b. Provide a notarized statement on original paper copy certificates and certifications where indicated.

B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.

1. If information must be specially prepared for submittal because standard published data are not suitable for use, submit as Shop Drawings, not as Product Data.
2. Mark each copy of each submittal to show which products and options are applicable.
3. Include the following information, as applicable:

a. Manufacturer's catalog cuts.
b. Manufacturer's product specifications.
c. Standard color charts.
d. Statement of compliance with specified referenced standards.
e. Testing by recognized testing agency.
f. Application of testing agency labels and seals.
g. Notation of coordination requirements.
h. Availability and delivery time information.

4. For equipment, include the following in addition to the above, as applicable:

a. Wiring diagrams showing factory-installed wiring.
b. Printed performance curves.
c. Operational range diagrams.
d. Clearances required to other construction, if not indicated on accompanying Shop Drawings.

5. Submit Product Data before or concurrent with Samples.
6. Submit Product Data in the following format:

a. PDF electronic file, plus number of paper copies required herein for Action Submittals.
b. Same number of paper copies as required herein for Action Submittals. Architect will return copies as noted herein for Action Submittals.

C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data, unless submittal based on Architect's digital data drawing files is otherwise permitted.

1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:

a. Identification of products.
b. Schedules.
c. Compliance with specified standards.
d. Notation of coordination requirements.
e. Notation of dimensions established by field measurement.
f. Relationship and attachment to adjoining construction clearly indicated.
g. Seal and signature of professional engineer if specified.

2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches (215 by 280 mm), but no larger than original sheet size used for the Contract Drawings.

3. Submit Shop Drawings in the following format:

   a. PDF electronic file, plus number of paper copies required herein for Action Submittals.
   b. Same number of paper copies as required herein for Action Submittals. Architect will return copies as noted herein for Action Submittals.

D. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.

1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
2. Identification: Attach label on unexposed side of Samples that includes the following:

   a. Generic description of Sample.
   b. Product name and name of manufacturer.
   c. Sample source.
   d. Number and title of applicable Specification Section.
   e. Specification paragraph number and generic name of each item.

3. For projects where electronic submittals are required or are allowed, provide corresponding electronic submittal of Sample transmittal, digital image file illustrating Sample characteristics, and identification information for record.
4. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.

   a. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
   b. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor if returned by the Architect.

5. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.

   a. Number of Samples: Submit two (unless more are required by individual specification sections) full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect will return submittal with options selected.

6. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.

a. Number of Samples: Submit four (unless more are required by individual specification sections) sets of Samples. Architect will retain two Sample sets; remainder will be returned. Mark up and retain one returned Sample set as a project record sample. If the Contractor requires additional sets to be returned for their use, or that of their subcontractors or suppliers, provide additional sets above the number stated herein.

1) Submit a single Sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.
2) If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least three sets of paired units that show approximate limits of variations.

E. Product Schedule: As required in individual Specification Sections, prepare a written summary indicating types of products required for the Work and their intended location. Include the following information in tabular form:

1. Type of product. Include unique identifier for each product indicated in the Contract Documents or assigned by Contractor if none is indicated.
2. Manufacturer and product name, and model number if applicable.
3. Number and name of room or space.
4. Location within room or space.
5. Submit product schedule in the following format:

a. PDF electronic file, plus number of paper copies required herein for Action Submittals.
b. Same number of paper copies of as required herein for Action Submittals. Architect will return copies as noted herein for Action Submittals.

F. Coordination Drawing Submittals: Comply with requirements specified in Division 01 Section "Project Management and Coordination."

G. Contractor's Construction Schedule: Comply with requirements specified in Division 01 Section "Construction Progress Documentation", and the General Conditions.

H. Application for Payment and Schedule of Values: Comply with requirements specified in Division 01 Section "Payment Procedures", and the General Conditions.

I. Test and Inspection Reports and Schedule of Tests and Inspections Submittals: Comply with requirements specified in Division 01 Section "Quality Requirements", and the General Conditions.

J. Closeout Submittals and Maintenance Material Submittals: Comply with requirements specified in Division 01 Section "Closeout Procedures", and the General Conditions.

K. Maintenance Data: Comply with requirements specified in Division 01 Section "Operation and Maintenance Data", and the General Conditions.

L. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of architects and owners, and other information specified.

M. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification and Procedure Qualification Record on AWS forms. Include names of firms and personnel certified.

N. Installer Certificates: Submit written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.

O. Manufacturer Certificates: Submit written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.

P. Product Certificates: Submit written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.

Q. Material Certificates: Submit written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.

R. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.

S. Product Test Reports: Submit written reports indicating that current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.

T. Research Reports: Submit written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project. Include the following information:

1. Name of evaluation organization.
2. Date of evaluation.
3. Time period when report is in effect.
4. Product and manufacturers' names.
5. Description of product.
6. Test procedures and results.
7. Limitations of use.

U. Preconstruction Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.

V. Compatibility Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed

before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.

W. Field Test Reports: Submit written reports indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.

X. Design Data: Prepare and submit written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.

2.2 DELEGATED-DESIGN SERVICES

A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.

1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.

B. Delegated-Design Services Certification: In addition to Shop Drawings, Product Data, and other required submittals, submit electronic and paper copies as required herein for Action Submittals of certificate, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.

1. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

A. Action and Informational Submittals: Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect. Do not submit incomplete, inaccurate, or non-complying submittals.

B. Project Closeout and Maintenance Material Submittals: See requirements in Division 01 Section "Closeout Procedures", and the General Conditions.

C. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

3.2 ARCHITECT'S ACTION

A. Action Submittals: Architect will review each submittal, make marks to indicate corrections or revisions required, and return it. Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action, as indicated in this article.

B. Action Stamp - Architect's Response: The Architect will stamp each submittal with a uniform, action stamp, or cover sheet with action stamp. The Architect will mark the stamp appropriately to indicate the action taken, as follows:

1. "No Exceptions Taken": If this box is marked, the work covered by the submittal may proceed provided it complies with the requirements of the Contract Documents; acceptance of the work will depend upon compliance with requirements.
2. "Note Markings/Comments": If this box is marked, the work covered by the submittal may proceed provided it complies with both the Architect's/Engineer's notations or corrections to the submittal and with the requirements of the Contract Documents; acceptance of the work will depend on that compliance with requirements.
3. "Comments Attached": If this box is marked, the review comments have been attached to the submittal and should be processed as if they had been written on the submittal itself. The work covered by the submittal may proceed provided it complies with both the Architect's/Engineer's notations or corrections to the submittal and with the requirements of the Contract Documents; acceptance of the work will depend on ~~that~~ compliance with requirements.
4. "Rejected": If this box is marked, do not proceed with the work covered by the submittal, including purchasing, fabrication, delivery, or other activity. Revise the submittal or prepare a new submittal in accordance with the Architect's/Engineer's notations and resubmit without delay.

C. Action Stamp - "Response Required of Contractor": The action stamp will also contain one or more of the following actions required by the Contractor.

1. "Distribute": If this box is marked, distribute the submittal pursuant to the requirements contained in this Section.
2. "Confirm and Verify": If this box is marked, do not proceed with the work covered by submittal including purchasing, fabrication, delivery, or other activity until the information referenced by the Architect's/Engineer's notations has been confirmed and/or verified by the Contractor and the Architect has been notified of the Contractor's findings.
3. "Provide Corrected Copy": If this box is marked, the work covered by submittal may proceed once the Architect receives a revised submittal and provided the work complies with both the Architect's/Engineer's notations or corrections and the requirements of the Contract Documents.
4. "Revise and Resubmit": If this box is marked, do not proceed with the work covered by submittal, including purchasing, fabrication, delivery, or other activity. Revise the submittal in accordance with the Architect's/Engineer's notations and resubmit without delay. Repeat if necessary.

D. Informational Submittals: Architect will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.

E. Partial submittals prepared for a portion of the Work will be reviewed when use of partial submittals has received prior approval from Architect.

F. Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for resubmittal without review.

G. Submittals not required by the Contract Documents may be returned by the Architect without action.

3.3 SUBMITTALS LIST

A. General:

1. The listing of submittals hereinafter is set forth generally as a check list for the Contractor's convenience and are general in nature.
2. The Contractor shall add to this list any omissions of any submittals specified in other Sections but not listed hereinafter.
3. Contractor shall prepare a full listing of all submittals, including those required in all technical sections, in accordance with this Section.

B. Submittals, within fourteen (14) calendar Days After Notice to Proceed:

1. Schedule of Values.
2. Preliminary Construction Schedule.
3. Contractor's Personnel List.
4. Submittal Schedule.
5. Emergency telephone list for key personnel of Contractor and principal subcontractors.
6. Background Check: Proof that all individuals that provide labor or are on site for this project have been checked as/if required by the Contract Documents.

C. Submittals, Within (21) Days After Notice to Proceed:

1. Construction "Baseline" schedule in prescribed form.
2. All submittals, shop drawings and product data.

D. Submittals, Prior to Substantial Completion:

1. Notification to Architect that work of the Project is substantially complete, including a listing of items of work to be completed or corrected, together with a Certificate of Occupancy or occupancy permit issued by the Local Building Department for the entire Project.
2. Refer also to other Sections for additional submittal items required as a prerequisite to Substantial Completion.

END OF SECTION 01 33 00

LETTER OF TRANSMITTAL

TCF Architecture

To:

Attention:

Issue Date:

Project Name: City of Fife City Hall Phase 1 Exterior Envelope Replacement

Project Number: 2012-008

Delivery of CADD Files

In accepting and utilizing any drawings or other data on any form of electronic media generated and provided by TCF Architecture, PLLC (Architect), the User agrees that all such drawings and data are instruments of service of the Architect and remain its property. Architect shall be deemed the author of the drawings and data, and shall retain all common law, statutory law and other rights, including copyrights.

The User further agrees not to use these drawings and data, in whole or in part, for any purpose or project other than the project which is the subject of this Agreement. The User expressly waives all claims of any nature whatsoever against the Architect resulting in any way from any changes and from any reuse of the drawings or data for any other project or purpose without prior written consent of the Architect.

In addition, the User agrees to indemnify and hold the Architect harmless from any and all damage, liability, cost, or loss including reasonable attorneys' fees and costs of defense that the Architect may suffer as a result of any claims, demands, costs, or judgments arising from any changes made by anyone other than the Architect or any reuse of the drawings or data on any project or for any other purpose without prior written consent of the Architect.

Under no circumstances shall transfer of the drawings and other instruments of service on electronic media for use by the User be deemed a sale by the Architect, and the Architect makes no warranties, either express or implied, of merchantability or of fitness for any particular purpose.

Receipt of CADD Files for the referenced project is acknowledged and the above provisions are accepted.

Signature of User _____

Print Name _____

Organization _____

Address _____

Date _____

SECTION 014000 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes administrative and procedural requirements for quality assurance and quality control.

B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.

1. Specific quality-assurance and -control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
2. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and -control procedures that facilitate compliance with the Contract Document requirements.
3. Requirements for Contractor to provide quality-assurance and -control services required by Architect, Owner, Commissioning Authority, Construction Manager, or authorities having jurisdiction are not limited by provisions of this Section.

C. Related Requirements:

1. Divisions 02 through 26 Sections for specific test and inspection requirements not listed herein.

1.3 DEFINITIONS

A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.

B. Quality-Control Services: 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. Services do not include contract enforcement activities performed by Architect or Construction Manager.

C. Mockups: Where required, provide full-size physical assemblies that are constructed on-site. Mockups are constructed to verify selections made under Sample submittals; to demonstrate aesthetic effects and, where indicated, qualities of materials and execution; to review

coordination, testing, or operation; to show interface between dissimilar materials; and to demonstrate compliance with specified installation tolerances. Mockups are not Samples. Unless otherwise indicated, approved mockups establish the standard by which the Work will be judged.

1. Integrated Exterior Mockups: Mockups of the exterior envelope erected separately from the building but on Project site, consisting of multiple products, assemblies, and subassemblies.

D. Preconstruction Testing: Tests and inspections performed specifically for Project before products and materials are incorporated into the Work, to verify performance or compliance with specified criteria.

E. Product Testing: Tests and inspections that are performed by an NRTL, an NVLAP, or a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with specified requirements.

F. Source Quality-Control Testing: Tests and inspections that are performed at the source, e.g., plant, mill, factory, or shop.

G. Field Quality-Control Testing: Tests and inspections that are performed on-site for installation of the Work and for completed Work.

H. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.

I. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.

1. Use of trade-specific terminology in referring to a trade or entity does not require that certain construction activities be performed by accredited or unionized individuals, or that requirements specified apply exclusively to specific trade(s).

J. Experienced: When used with an entity or individual, "experienced" means having successfully completed a minimum of five previous projects similar in nature, size, and extent to this Project, except where individual specification sections have specific requires, in which case, the individual specification section requirements shall govern; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

1.4 CONFLICTING REQUIREMENTS

A. Referenced Standards: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer conflicting requirements that are different, but apparently equal, to Architect for a decision before proceeding.

B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the

minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.

1.5 INFORMATIONAL SUBMITTALS

A. Contractor's Quality-Control Plan: For quality-assurance and quality-control activities and responsibilities.

B. Qualification Data: For Contractor's quality-control personnel.

C. Testing Agency Qualifications: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.

D. Schedule of Tests and Inspections: Prepare in tabular form and include the following:

1. Specification Section number and title.
2. Entity responsible for performing tests and inspections.
3. Description of test and inspection.
4. Identification of applicable standards.
5. Identification of test and inspection methods.
6. Number of tests and inspections required.
7. Time schedule or time span for tests and inspections.
8. Requirements for obtaining samples.
9. Unique characteristics of each quality-control service.

1.6 CONTRACTOR'S QUALITY-CONTROL PLAN

A. Quality-Control Plan, General: Submit quality-control plan within 10 days of Notice to Proceed, and not less than five days prior to preconstruction conference. Submit in format acceptable to Architect. Identify personnel, procedures, controls, instructions, tests, records, and forms to be used to carry out Contractor's quality-assurance and quality-control responsibilities. Coordinate with Contractor's construction schedule.

B. Quality-Control Personnel Qualifications: Engage qualified full-time personnel trained and experienced in managing and executing quality-assurance and quality-control procedures similar in nature and extent to those required for Project.

1. Project quality-control manager may also serve as Project Superintendent.

C. Submittal Procedure: Describe procedures for ensuring compliance with requirements through review and management of submittal process. Indicate qualifications of personnel responsible for submittal review.

D. Continuous Inspection of Workmanship: Describe process for continuous inspection during construction to identify and correct deficiencies in workmanship in addition to testing and inspection specified. Indicate types of corrective actions to be required to bring work into

compliance with standards of workmanship established by Contract requirements and approved mockups.

E. Monitoring and Documentation: Maintain testing and inspection reports including log of approved and rejected results. Include work Architect has indicated as nonconforming or defective. Indicate corrective actions taken to bring nonconforming work into compliance with requirements. Comply with requirements of authorities having jurisdiction.

1.7 REPORTS AND DOCUMENTS

A. Test and Inspection Reports: Prepare and submit certified written reports specified in other Sections. Include the following:

1. Date of issue.
2. Project title and number.
3. Name, address, and telephone number of testing agency.
4. Dates and locations of samples and tests or inspections.
5. Names of individuals making tests and inspections.
6. Description of the Work and test and inspection method.
7. Identification of product and Specification Section.
8. Complete test or inspection data.
9. Test and inspection results and an interpretation of test results.
10. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
12. Name and signature of laboratory inspector.
13. Recommendations on retesting and reinspecting.

B. Manufacturer's Technical Representative's Field Reports: Prepare written information documenting manufacturer's technical representative's tests and inspections specified in other Sections. Include the following:

1. Name, address, and telephone number of technical representative making report.
2. Statement on condition of substrates and their acceptability for installation of product.
3. Statement that products at Project site comply with requirements.
4. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
5. Results of operational and other tests and a statement of whether observed performance complies with requirements.
6. Statement whether conditions, products, and installation will affect warranty.
7. Other required items indicated in individual Specification Sections.

C. Factory-Authorized Service Representative's Reports: Prepare written information documenting manufacturer's factory-authorized service representative's tests and inspections specified in other Sections. Include the following:

1. Name, address, and telephone number of factory-authorized service representative making report.
2. Statement that equipment complies with requirements.

3. Results of operational and other tests and a statement of whether observed performance complies with requirements.
4. Statement whether conditions, products, and installation will affect warranty.
5. Other required items indicated in individual Specification Sections.

1.8 QUALITY ASSURANCE

A. General: Qualifications paragraphs in this article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.

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

C. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

D. 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 a record of successful in-service performance.

E. Testing Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspecting indicated, as documented according to ASTM E 329; and with additional qualifications specified in individual Sections; and, where required by authorities having jurisdiction, that is acceptable to authorities.

1. NRTL: A nationally recognized testing laboratory according to 29 CFR 1910.7.
2. NVLAP: A testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program.

F. Manufacturer's Technical Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to observe and inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.

G. Factory-Authorized Service Representative Qualifications: An 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.

H. Preconstruction Testing: Where testing agency is indicated to perform preconstruction testing for compliance with specified requirements for performance and test methods, comply with the following:

1. Contractor responsibilities include the following:

a. Provide test specimens representative of proposed products and construction.
b. Submit specimens in a timely manner with sufficient time for testing and analyzing results to prevent delaying the Work.

c. Provide sizes and configurations of test assemblies, mockups, and laboratory mockups to adequately demonstrate capability of products to comply with performance requirements.
d. Build site-assembled test assemblies and mockups using installers who will perform same tasks for Project.
e. Build laboratory mockups at testing facility using personnel, products, and methods of construction indicated for the completed Work.
f. When testing is complete, remove test specimens, assemblies, and mockups; do not reuse products on Project.

2. Testing Agency Responsibilities: Submit a certified written report of each test, inspection, and similar quality-assurance service to Architect and Owner with copy to Contractor. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from the Contract Documents.

I. Mockups: Before installing portions of the Work requiring mockups, build mockups for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work:

1. Build mockups in location and of size indicated or, if not indicated, as directed by Architect.
2. Notify Architect and Owner seven days in advance of dates and times when mockups will be constructed.
3. Employ supervisory personnel who will oversee mockup construction. Employ workers that will be employed during the construction at Project.
4. Demonstrate the proposed range of aesthetic effects and workmanship.
5. Obtain Architect's approval of mockups before starting work, fabrication, or construction.

a. Allow seven (7) days for initial review and each re-review of each mockup.

6. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
7. Demolish and remove mockups when directed unless otherwise indicated.

J. Integrated Exterior Mockups: Construct integrated exterior mockup according to approved Shop Drawings. Coordinate installation of exterior envelope materials and products for which mockups are required in individual Specification Sections, along with supporting materials.

1.9 QUALITY CONTROL

A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.

1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspecting they are engaged to perform.
2. Costs for retesting and re-inspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor, and the Contract Sum will be adjusted by Change Order.

B. Contractor Responsibilities: Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Perform additional quality-control activities required to verify that the Work complies with requirements, whether specified or not.

1. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control services required of Contractor by authorities having jurisdiction, whether specified or not.

2. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.

a. Contractor shall not employ same entity engaged by Owner, unless agreed to in writing by Owner.

3. Notify testing agencies at least 48 hours in advance of time when Work that requires testing or inspecting will be performed.
4. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
5. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
6. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.

C. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Division 01 Section "Submittal Procedures."

D. Manufacturer's Technical Services: Where indicated, engage a manufacturer's technical representative to observe and inspect the Work. Manufacturer's technical representative's services include participation in preinstallation conferences, examination of substrates and conditions, verification of materials, observation of Installer activities, inspection of completed portions of the Work, and submittal of written reports.

E. Retesting/Re-inspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and re-inspecting, for construction that replaced Work that failed to comply with the Contract Documents.

F. Testing Agency Responsibilities: Cooperate with Architect, Owner, and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.

1. Notify Architect, Owner, and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
2. Determine the location from which test samples will be taken and in which in-situ tests are conducted.
3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.

5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
6. Do not perform any duties of Contractor.

G. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:

1. Access to the Work.
2. Incidental labor and facilities necessary to facilitate tests and inspections.
3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
4. Facilities for storage and field curing of test samples.
5. Delivery of samples to testing agencies.
6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
7. Security and protection for samples and for testing and inspecting equipment at Project site.

H. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.

1. Schedule times for tests, inspections, obtaining samples, and similar activities.

I. Schedule of Tests and Inspections: Prepare a schedule of tests, inspections, and similar quality-control services required by the Contract Documents as a component of Contractor's quality-control plan. Coordinate and submit concurrently with Contractor's construction schedule. Update as the Work progresses.

1. Distribution: Distribute schedule to Owner, Architect, testing agencies, and each party involved in performance of portions of the Work where tests and inspections are required.

1.10 SPECIAL TESTS AND INSPECTIONS

A. Special Tests and Inspections: At the Owner’s Discretion, Owner may engage a qualified testing agency and/or special inspector to conduct special tests and inspections required by authorities having jurisdiction as the responsibility of Owner.

1. Verifying that manufacturer maintains detailed fabrication and quality-control procedures and reviews the completeness and adequacy of those procedures to perform the Work.
2. Notifying Architect, Owner, and Contractor promptly of irregularities and deficiencies observed in the Work during performance of its services.
3. Submitting a certified written report of each test, inspection, and similar quality-control service to Architect and through Owner, with copy to Contractor and to authorities having jurisdiction.
4. Submitting a final report of special tests and inspections at Substantial Completion, which includes a list of unresolved deficiencies.

5. Interpreting tests and inspections and stating in each report whether tested and inspected work complies with or deviates from the Contract Documents.
6. Retesting and reinspecting corrected work.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF REQUIRED ACTIVITIES

A. General: As applicable to the Project, comply with the provisions and requirements of this section.

B. Structural Steel Framing & Fabrications:

1. General: Tests will be performed as required by International Building Code, Section 306, as adopted by the jurisdiction having authority and these specifications.
2. Shop Bolted Connections: Inspect in accordance with AISC specifications.
3. Shop Welding: Inspect and test during fabrication of structural steel assemblies, as follows:

a. Verify use of “Washington Association of Building Officials” (WABO) certified welders, and conduct inspections and tests as required. Record types and locations of defects found in work. Record work required and performed to correct deficiencies.
b. Perform visual inspection of all welds including fillet welds.
c. Perform tests of complete penetration welds as required by technical specifications as follows. Inspection procedures listed are to be used at Testing Laboratory’s option.

1) Radiographic Inspection: ASTM E94 and ASTM E142; minimum quality level “2-2T”.
2) Ultrasonic Inspection: ASTM E164.

C. Roofing & Waterproof Membranes:

1. Inspect approved substrates for application of water proofing and roofing materials, inspect all joints and flashings.
2. Furnish continuous (full time) inspection during application or waterproofing and roofing materials, including roofing related sheet metal flashings and counterflashings.

D. Miscellaneous:

1. General: Provide other special inspections required by International Building Code as adopted by the agency having jurisdiction for structural or other work, or requested by Owner.
2. Additional testing Services: Additional testing, if any, which may be performed by the Owner’s independent testing agency, are specified elsewhere in Contract Documents.

3.2 SPECIAL INSPECTIONS AT THE OWNER'S OPTION

A. The Owner reserves the right to invoke testing procedures at any time and as often as the Owner deems necessary. The Owner may engage qualified independent testing and inspecting agencies to perform inspections on any products, materials or systems.

3.3 TEST AND INSPECTION LOG

A. Test and Inspection Log: Prepare a record of tests and inspections. Include the following:

1. Date test or inspection was conducted.
2. Description of the Work tested or inspected.
3. Date test or inspection results were transmitted to Architect.
4. Identification of testing agency or special inspector conducting test or inspection.

B. Maintain log at Project site. Post changes and revisions as they occur. Provide access to test and inspection log for Architect and Owner's reference during normal working hours.

3.4 REPAIR AND PROTECTION

A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.

1. Provide materials and comply with installation requirements specified in other Specification Sections or matching existing substrates and finishes. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible. Comply with the Contract Document requirements for cutting and patching in Division 01 Section "Execution."

B. Protect construction exposed by or for quality-control service activities.

C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 014000

SECTION 014200 - REFERENCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 DEFINITIONS

A. General: Basic Contract definitions are included in the Conditions of the Contract.

B. "Approved": When used to convey Architect's action on Contractor's submittals, applications, and requests, "approved" is limited to Architect's duties and responsibilities as stated in the Conditions of the Contract. Where the terms “or approved” or “as approved” or “for approval” are used, the Architect is the sole judge of the quality and suitability of the proposed substitutions. In no case will “approval” by Architect be interpreted as a release of Contractor from responsibilities to fulfill requirements of the contract documents. Whenever a material, article or piece of equipment is identified on the Drawings or in the Project Manual by reference to manufacturer’s or vendor’s names, trade names, catalog numbers, or the like, and followed by the wording “or approved”, “or approved substitute” or “equivalent, as approved”, it is so identified for the purpose of establishing a standard, and any material, article, or piece of equipment of other manufacturers or vendors which will perform adequately the duties imposed by the general design will be considered equally acceptable provided the material, article, or piece of equipment so proposed is, in the opinion of the Architect, of equivalent substance, appearance or function and has been approved by the Architect in writing **prior to submittal of Proposal** in conformance with the provision of the Instruction to Bidders and applicable Division 01 Sections. It shall not be purchased or installed by the Contractor without Architect’s and Owner’s prior written approval.

C. “Architect”: Shall mean “TCF Architecture, PLLC,” 902 N 2nd Street, Tacoma, WA 98403. 253-572-3993.

D. “Coordinate”: The term “coordinate” means satisfactorily combine the work of all trades for a complete and operating installation.

E. "Directed": A command or instruction by Architect. Other terms including "requested," "authorized," "selected," "required," and "permitted" have the same meaning as "directed."

F. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."

G. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.

H. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.

I. "Install": Operations at Project site including unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.

J. "Provide": Furnish and install, complete and ready for the intended use.

K. "Project Site": Space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.

L. “Remove and Replace”: Removal of portions of the Work as indicated or otherwise described and implied on the Drawings, followed by the installation of new materials as indicated or otherwise described and implied on the Drawings.

1.3 INDUSTRY STANDARDS

A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.

B. Publication Dates: Comply with standards in effect as of date of the Contract Documents unless otherwise indicated.

C. Copies of Standards: Each entity engaged in construction on Project should be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.

1. Where copies of standards are needed to perform a required construction activity, obtain copies directly from publication source.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 014200

SECTION 014500 - SAFETY PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. This Section includes requirements for safety procedures.

B. Related Sections: The following Sections contain requirements that relate to this Section.

1. Division 0 Section **"**General Conditions of the Contract for Construction"**.**

1.3 PRELIMINARY WORK

A. Prior to the start of and during the course of the Work (above and below ground) the Contractor shall make a thorough survey of the entire worksite to determine all potential hazards and notify the Owner in writing of any such hazards prior to the commencement of work, or within 5 working days, which ever comes first. Workmen shall be made aware of those hazards and shall be instructed in procedures and the use of equipment for their protection. The Contractor shall verify the location and condition ("live" or "dead") of all utilities on and near the worksite and take precautions to protect his employees, the general public, and the property.

1.4 IMMINENT DANGER

A. The Contractor shall be wholly responsible for any accidents, (including death) occurring at any time during the progress of the Work and until the final acceptance of the Work by the Owner, which may happen to any of his workmen or those of any Subcontractor employed on the project, or for any damage or injuries (including death) which his work and operations may cause to the Work being constructed, or to existing buildings, or to any tenants and occupants of the property, or of the adjoining properties, or to the public, or to any public or private property.

1.5 SAFETY

A. The Contractor shall ensure that all employees, visitors, subcontractor's employees, and suppliers' employees, while on the work site, comply with the requirements of WISHA, these requirements, and the safety precautions contained in other Specifications Sections. The Contractor shall promptly and fully comply with, execute and, without separate charge thereof to the Owner, shall enforce compliance with the provisions of the Washington Industrial Safety and Health Act of 1973, with particular attention paid, but not limited to, Chapter 296-155, WAC Safety Standards for Construction Work; with particular attention paid but not limited to Chapter 296-24 WAC General Safety and Health Standards; with particular attention paid but not limited to Chapters 296-27, 196-350 and 296-360 WAC regarding Administrative Safety and Health Act Chapter 49-17 RCW, and any addenda thereto.

B. The Contractor shall immediately advise the Owner of inspections conducted by WISHA at the work site, and shall transmit copies of citations and violations to the Owner and Architect.

1.6 SAFETY RESPONSIBILITIES

A. Contractor shall be responsible:

1. To ensure compliance with these requirements, WISHA requirements, and other safety requirements.
2. For authorizing immediate action to correct substandard safety conditions.
3. To review and act to ensure compliance with safety procedures with his supervisors, subcontractors, and suppliers.
4. To make thorough daily safety inspections of the work site and immediately act to eliminate unsafe acts and unsafe conditions.
5. To investigate worksite accidents and recommend immediate corrective action.
6. To assist in the preparation of accident investigation and reporting procedures.
7. For the control, availability, and use of safety equipment, including employee personal protective equipment.

1.7 HEALTH AND SAFETY PLAN:

A. Contractor shall generate and submit a health and safety plan for the project, including all aspects of project demolition, abatement, soil remediation, and new construction.

B. Architect will not comment on or approve the health and safety plan. Submission is for their reference only. All health and safety procedures are solely the Contractor's responsibility.

1.8 REQUEST FOR VARIANCES

A. Requests for variances to deviate from WISHA requirements must follow the current established procedures by that Agency.

1.9 FAILURE TO COMPLY

A. If the project is shut down due to the Contractor's failure to comply with the requirements of WISHA or other applicable safety requirements, no part of the time loss due to any such suspension of operations or stop orders shall be made the subject of a claim for extension of time or for increased cost or damage by the Contractor.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01 45 00

SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes requirements for temporary utilities, support facilities, security, protection facilities and temporary containment enclosure.

B. Related Requirements:

1. Division 01 Section "Summary" for work restrictions and limitations on utility interruptions.

1.3 USE CHARGES

A. General: Installation and removal of and use charges for temporary facilities shall be included in the Contract Sum unless otherwise indicated. Allow other entities to use temporary services and facilities without cost, including, but not limited to, Owner's construction forces, Architect, Construction Manager, testing agencies, and authorities having jurisdiction.

B. Water Service: Contractor may use Owner’s water supply at no additional cost to the Contractor. Contractor shall coordinate water usage with owner.

C. Electric Power Service: Contractor may use Owner’s on-site electrical power at no additional cost to the Owner. Contractor shall coordinate electrical usage with the Owner.

1.4 INFORMATIONAL SUBMITTALS

A. Site Plan: Show temporary facilities, temporary containment enclosure, utility hookups, staging areas, and parking areas for construction personnel.

B. Temporary Containment Enclosure: Provide product data for each type of containment material.

C. Fire-Safety Program: Show compliance with requirements of NFPA 241 and authorities having jurisdiction. Indicate Contractor personnel responsible for management of fire-prevention program.

D. Moisture-Protection Plan: Describe procedures and controls for protecting materials, wall components, cavities and construction processes from water absorption and damage.

1. Describe delivery, handling, and storage provisions for materials subject to water absorption or water damage. Include supplier or manufacturers shipping, handling and storage instructions.
2. Indicate procedures for discarding water-damaged materials, protocols for mitigating water intrusion into completed Work, and replacing water-damaged Work.

1.5 QUALITY ASSURANCE

A. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service.

B. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits. Post temporary containment enclosure contact and emergency information.

1.6 PROJECT CONDITIONS

A. Temporary Use of Permanent Facilities: Engage Installer of each permanent service to assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before Owner's acceptance, regardless of previously assigned responsibilities.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Portable Chain-Link Fencing: As required and recommended by Contractor for intended use.

1. See Drawings for area designated for Contractor’s use.

2.2 FIELD OFFICE

A. Field Offices, General: Contractor shall provide its own job site office accommodations.

1. Job Trailer: If a job trailer is provided, obtain any required permits from the City, and locate the trailer within the area provided to the Contractor for use. Obtain Owner’s approval for final placement location.

2. Contractor’s office accommodations are located inside the building. Contractor shall be responsible for coordinating its office and staging space with the Work.

2.3 EQUIPMENT

A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.

B. HVAC Equipment: Provide vented, self-contained, liquid-propane-gas or fuel-oil heaters with individual space thermostatic control. Contractor shall not use the existing building HVAC system without first receiving approval of the Owner.

1. Use of gasoline-burning space heaters, open-flame heaters, or salamander-type heating units is prohibited.
2. Heating Units: Listed and labeled for type of fuel being consumed, by a qualified testing agency acceptable to authorities having jurisdiction, and marked for intended location and application.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work.

B. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.2 TEMPORARY UTILITY INSTALLATION

A. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking water for use of construction personnel. Comply with requirements of authorities having jurisdiction for type, number, location, operation, and maintenance of fixtures and facilities. Contractor shall NOT use the existing building toilet facilities.

B. Heating: Provide temporary heating required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of low temperatures or high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed.

C. Ventilation and Humidity Control: Provide temporary ventilation required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed. Coordinate ventilation requirements to produce ambient condition required and minimize energy consumption.

1. Provide dehumidification systems when required to reduce substrate moisture levels to level required to allow installation or application of finishes.

D. Electric Power: Provide electric power and distribution system of sufficient size, capacity, and power characteristics required for construction operations.

E. Lighting: Provide temporary lighting as needed for work operations with local switching that provides adequate illumination for construction operations, observations, inspections, and traffic conditions.

1. Install and operate temporary lighting that fulfills security and protection requirements without operating entire system.

F. Telephone / Communication Service: Provide temporary telephone service in common-use facilities for use by all construction personnel. Install one telephone line(s) for each field office.

1. At each telephone, post a list of important telephone numbers.

a. Police and fire departments.
b. Ambulance service.
c. Contractor's home office.
d. Contractor's emergency after-hours telephone number.
e. Architect's office.
f. Engineers' offices.
g. Owner's office.
h. Principal subcontractors' field and home offices.

2. Provide superintendent with cellular telephone or portable two-way radio for use when away from field office.

G. Internet Service: Coordinate with Owner for use of Owner's local Wi-Fi system.

3.3 SUPPORT FACILITIES INSTALLATION

A. Site Access Points: Contractor shall manage and maintain all access points to the site to provide a safe and clean point of entry for all passenger vehicles at all times to allow Owner access. At no time shall mud, gravel or other deleterious material be allowed to be tracked onto the adjacent road surface.

B. Traffic Controls: Comply with requirements of authorities having jurisdiction.

1. Protect existing site improvements to remain including curbs, pavement, and utilities.
2. Maintain access for fire-fighting equipment and access to fire hydrants.

C. Parking: Provide temporary parking areas for construction personnel, Owner and other project-related vehicles.

D. Dewatering Facilities and Drains: Ensure all rain water is conveyed away from the Work.

E. Project Signs: Provide Project signs as indicated. Unauthorized signs are not permitted.

1. Temporary Signs:

a. Provide temporary, directional signs for construction personnel and visitors.
b. Obtain approval from Owner for installation of all other temporary signage.

F. Waste Disposal Facilities: Provide dumpsters for waste and recycles. Coordinate location with Owner.

G. Lifts and Hoists: Provide facilities necessary for hoisting materials and personnel.

1. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.

2. Restore all grounds damaged by use of lifts and other equipment.

3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

A. Protection of Existing Facilities: Protect existing vegetation, equipment, structures, utilities, and other improvements at Project site and on adjacent properties, except those indicated to be removed or altered. Repair damage to existing facilities.

B. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction as required to comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.

1. Comply with work restrictions specified in Division 01 Section "Summary."

C. Temporary Erosion and Sedimentation Control: N/A

D. Stormwater Control: Ensure storm water does not collect around the area of the Work as a result of the Contractor’s operations.

E. Pest Control: Engage pest-control service to recommend practices to minimize attraction and harboring of rodents, roaches, and other pests and to perform extermination and control procedures at regular intervals so Project will be free of pests and their residues at Substantial Completion. Perform control operations lawfully, using environmentally safe materials.

F. Work Area Enclosure Fence: Before construction operations begin, furnish and install enclosure fencing in a manner that will prevent people from easily entering work area except by access gates.

1. Exit Pathways: Ensure all building exits are unobstructed throughout construction.
2. Extent of Fence: As required to enclose entire work area or portion determined sufficient to accommodate construction operations. See Drawings for maximum area provided to the Contractor.
3. Maintain security by limiting number of keys and restricting distribution to authorized personnel. Furnish one set of keys to Owner and one to the Construction Manager and one to the Architect.

G. Security Enclosure and Lockup: Install temporary enclosure around partially completed areas of construction. Provide lockable entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security. Lock entrances at end of each work day.

H. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.

I. Temporary Egress: Maintain temporary egress from existing occupied facilities as indicated and as required by authorities having jurisdiction.

J. Temporary Containment Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities. Provide temporary weathertight enclosure for building exterior.

1. Tenting: Provide temporary containment enclosure as follows: Working platforms and containment materials shall be designed to support workers, inspectors and equipment during surface preparation phase. Containment structure shall attached to structure by bolting clamping or similar means. Details: The Contractor shall provide drawings showing the containment system indicating method of supporting the work platforms and containment materials to each other and the building. Containment Safety: The Contractor is responsible for the safety of the working platforms and containment. After the work platform and containment materials are erected additional measures may be required to ensure worker safety according to OSHA regulations. The Contractor shall institute such measure at no additional cost to Owner.

K. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241; manage fire-prevention program.

1. Prohibit smoking in construction areas.
2. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition according to requirements of authorities having jurisdiction.
3. Develop and supervise an overall fire-prevention and -protection program for personnel at Project site. Review needs with local fire department and establish procedures to be followed. Instruct personnel in methods and procedures. Post warnings and information.
4. Provide temporary standpipes and hoses for fire protection. Hang hoses with a warning sign stating that hoses are for fire-protection purposes only and are not to be removed. Match hose size with outlet size and equip with suitable nozzles.

3.5 MOISTURE AND MOLD CONTROL

A. Contractor's Moisture-Protection Plan: Avoid trapping water in finished work. Document visible signs of mold that may appear during construction.

B. Exposed Construction Phase: Before installation of weather barriers and temporary containment enclosure, when materials are subject to wetting and exposure and to airborne mold spores, protect as follows:

1. Protect porous materials from water damage.
2. Protect stored and installed material from flowing or standing water.
3. Keep porous and organic materials from coming into prolonged contact with concrete.
4. Remove standing water from decks.
5. Keep deck openings covered or dammed.

C. Partially Enclosed Construction Phase: After installation of weather barriers but before full enclosure and conditioning of buildings, when installed materials are still subject to infiltration of moisture and ambient mold spores, protect as follows:

1. Do not load or install drywall or other porous materials or components, or items with high organic content, into partially enclosed building.
2. Keep interior spaces reasonably clean and protected from water damage.
3. Periodically collect and remove waste containing cellulose or other organic matter.
4. Discard or replace water-damaged material.
5. Do not install material that is wet.
6. Discard, replace, or clean stored or installed material that begins to grow mold.
7. Perform work in a sequence that allows any wet materials adequate time to dry before enclosing the material in drywall or other interior finishes.

D. Controlled Construction Phase of Construction: After completing and sealing of the building enclosure but prior to the full operation of permanent HVAC systems, maintain as follows:

1. Control moisture and humidity inside building by maintaining effective dry-in conditions.
2. Use permanent HVAC system to control humidity.
3. Comply with manufacturer's written instructions for temperature, relative humidity, and exposure to water limits.

a. Hygroscopic materials that may support mold growth, including wood and gypsum-based products, that become wet during the course of construction and remain wet for 48 hours are considered defective.
b. Measure moisture content of materials that have been exposed to moisture during construction operations or after installation. Record readings beginning at time of exposure and continuing daily for 48 hours. Identify materials containing moisture levels higher than allowed. Report findings in writing to Architect.
c. Remove materials that can not be completely restored to their manufactured moisture level within 48 hours.

3.6 OPERATION, TERMINATION, AND REMOVAL

A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.

B. Maintenance: Maintain facilities in good operating condition until removal.

1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.

C. Temporary Facility Changeover: Do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.

D. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.

1. Materials and facilities that constitute temporary facilities are property of Contractor. Owner reserves right to take possession of Project identification signs.

2. Remove temporary roads and paved areas not intended for or acceptable for integration into permanent construction. Where area is intended for landscape development, remove soil and aggregate fill that do not comply with requirements for fill or subsoil. Remove materials contaminated with road oil, asphalt and other petrochemical compounds, and other substances that might impair growth of plant materials or lawns. Repair or replace street paving, curbs, and sidewalks at temporary entrances, as required by authorities having jurisdiction.
3. At Substantial Completion, repair, renovate, and clean permanent facilities used during construction period. Comply with final cleaning requirements specified in Division 01 Section "Closeout Procedures."

END OF SECTION 01 50 00

SECTION 016000 - PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; and comparable products.

B. Related Requirements:

1. Division 00 Section "Instructions to Proposers" for substitutions during proposal period.
2. Division 01 Section "References" for applicable industry standards for products specified.

1.3 DEFINITIONS

A. Products: Items obtained for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.

1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature that is current as of date of the Contract Documents.
2. New Products: Items that have not previously been incorporated into another project or facility. Products salvaged or recycled from other projects are not considered new products.
3. Comparable Product: Product that is demonstrated and approved through submittal process to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.

B. Basis-of-Design Product Specification: A specification in which a specific manufacturer's product is named and accompanied by the words "basis-of-design product," including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of additional manufacturers named in the specification.

1.4 ACTION SUBMITTALS

A. Comparable Product Requests: Submit request for consideration of each comparable product. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.

1. Include data to indicate compliance with the requirements specified in "Comparable Products" Article, in Part 2 of this section.
2. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within one week of receipt of a comparable product request. Architect will notify Contractor of approval or rejection of proposed comparable product request within 21 days of receipt of request, or 14 days of receipt of additional information or documentation, whichever is later.

    a. Form of Approval: As specified in Division 01 Section "Submittal Procedures."
    b. Use product specified if Architect does not issue a decision on use of a comparable product request within time allocated.

B. Basis-of-Design Product Specification Submittal: Comply with requirements in Division 01 Section "Submittal Procedures." Show compliance with requirements.

1.5 QUALITY ASSURANCE

A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, select product compatible with products previously selected, even if previously selected products were also options.

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft and vandalism. Comply with manufacturer's written instructions.

B. Delivery and Handling:

1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
2. 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.
3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
4. Inspect products on delivery to determine compliance with the Contract Documents and to determine that products are undamaged and properly protected.

C. Storage:

1. Store products to allow for inspection and measurement of quantity or counting of units.
2. Store materials in a manner that will not endanger Project structure.
3. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
4. Protect foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
5. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
6. Protect stored products from damage and liquids from freezing.

1.7 PRODUCT WARRANTIES

A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.

1. Manufacturer's Warranty: Written warranty furnished by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.
2. Special Warranty: Written warranty required by the Contract Documents to provide specific rights for Owner.

B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution.

1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
2. Specified Form: When specified forms are included with the Specifications, prepare a written document using indicated form properly executed.
3. See Divisions 02 through 26 Sections for specific content requirements and particular requirements for submitting special warranties.

C. Submittal Time: Comply with requirements in Division 01 Sections "Closeout Procedures" and “Warranties.”

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION PROCEDURES

A. General Product Requirements: Provide products that comply with the Contract Documents, are undamaged and, unless otherwise indicated, are new at time of installation.

1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.

2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
3. Owner reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
4. Where products are accompanied by the term "as selected," Architect will make selection.
5. Descriptive, performance, and reference standard requirements in the Specifications establish salient characteristics of products.
6. Products shall be ASBESTOS, FORMALDEHYDE AND LEAD FREE.
7. Or Equal and Or Approved: For products specified by name and accompanied by the term "or equal," or "or approved equal," or "or approved," or “or approved substitute” comply with requirements in Division 00 Section “Instructions to Proposers.”
8. Product: Where Specifications name a single manufacturer and product, provide the named product that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
9. Manufacturer/Source: Where Specifications name a single manufacturer or source, provide a product by the named manufacturer or source that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
10. Products:

    a. Restricted List: Where Specifications include a list of names of both manufacturers and products, provide one of the products listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered unless indicated with the words “or approved substitute” or similar words, following the process as described herein for substitutions.
    b. Non-restricted List: Where Specifications include a list of names of both available manufacturers and products, provide one of the products listed, or an unnamed product, that complies with requirements. Comply with requirements in "Comparable Products" Article for consideration of an unnamed product.

11. Manufacturers:

    a. Restricted List: Where Specifications include a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered unless indicated with the words “or approved substitute” or similar words, following the process as described herein for substitutions. .
    b. Non-restricted List: Where Specifications include a list of available manufacturers, provide a product by one of the manufacturers listed, or a product by an unnamed manufacturer, that complies with requirements. Comply with requirements in "Comparable Products" Article for consideration of an unnamed manufacturer's product.

12. Basis-of-Design Product: Where Specifications name a product, or refer to a product indicated on Drawings, and include a list of manufacturers, provide the specified or indicated product or a comparable product by one of the other named manufacturers, or an approved substitute where so indicated following the substitution request process required by the Contract Documents. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named.

Comply with requirements in "Comparable Products" Article for consideration of an unnamed product by one of the other named manufacturers.

B. Visual Matching Specification: Where Specifications require "match Architect's sample", provide a product that complies with requirements and matches Architect's sample. Architect's decision will be final on whether a proposed product matches.

1. If no product available within specified category matches and complies with other specified requirements, comply with requirements in Division 01 Section "Substitution Procedures" for proposal of product.

C. Visual Selection Specification: Where Specifications include the phrase "as selected by Architect from manufacturer's full range" or similar phrase, select a product that complies with requirements. Architect will select color, gloss, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.

2.2 COMPARABLE PRODUCTS

A. Conditions for Consideration: Architect will consider Contractor's request for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, Architect may return requests without action, except to record noncompliance with these requirements:

1. Evidence that the proposed product does not require revisions to the Contract Documents that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.
2. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
3. Evidence that proposed product provides specified warranty.
4. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners, if requested.
5. Samples, if requested.
6. “Comparable Products” will only be considered where “Comparable Products” are specially noted as an acceptable option, and through the substitution request process where so indicated as an option.

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 60 00

SECTION 017300 - EXECUTION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

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

1. Construction layout.
2. Field engineering and surveying.
3. Installation of the Work.
4. Cutting and patching.
5. Coordination of Owner-installed products.
6. Progress cleaning.
7. Starting and adjusting.
8. Protection of installed construction.
9. Correction of the Work.

B. Related Requirements:

1. Division 01 Section "Summary" for limits on use of Project site.
2. Division 01 Section "Submittal Procedures" for submitting surveys.
3. Division 01 Section "Closeout Procedures" for submitting final Project Record Documents, recording of Owner-accepted deviations from indicated lines and levels, and final cleaning.

1.3 DEFINITIONS

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

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

1.4 INFORMATIONAL SUBMITTALS

A. Certificates: Submit certificate signed by land surveyor certifying that location and elevation of improvements comply with requirements.

B. Cutting and Patching Plan: Submit plan describing procedures at least 10 days prior to the time cutting and patching will be performed. Include the following information:

1. Extent: Describe reason for and extent of each occurrence of cutting and patching.
2. Changes to In-Place Construction: Describe anticipated results. Include changes to structural elements and operating components as well as changes in building appearance and other significant visual elements.
3. Products: List products to be used for patching and firms or entities that will perform patching work.
4. Dates: Indicate when cutting and patching will be performed.
5. Utilities and Mechanical and Electrical Systems: List services and systems that cutting and patching procedures will disturb or affect. List services and systems that will be relocated and those that will be temporarily out of service. Indicate length of time permanent services and systems will be disrupted.

1.5 QUALITY ASSURANCE

A. Cutting and Patching: Comply with requirements for and limitations on cutting and patching of construction elements.

1. Structural Elements: When cutting and patching structural elements, notify Architect of locations and details of cutting and await directions from Architect before proceeding. Shore, brace, and support structural elements during cutting and patching. Do not cut and patch structural elements in a manner that could change their load-carrying capacity or increase deflection

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

   a. Primary operational systems and equipment.
   b. Fire separation assemblies.
   c. Air or smoke barriers.
   d. Fire-suppression systems.
   e. Mechanical systems piping and ducts.
   f. Control systems.
   g. Communication systems.
   h. Fire-detection and -alarm systems.
   i. Electrical wiring systems.
   j. Operating systems of special construction.

3. Other Construction Elements: Do not cut and patch other construction elements or components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety. Other construction elements include but are not limited to the following:

   a. Water, moisture, or vapor barriers.
   b. Membranes and flashings.

c. Equipment supports.
d. Piping, ductwork, vessels, and equipment.
e. Noise- and vibration-control elements and systems.

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

B. Cutting and Patching Conference: Before proceeding, meet at Project site with parties involved in cutting and patching, including mechanical and electrical trades. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

C. Manufacturer's Installation Instructions: Obtain and maintain on-site manufacturer's written recommendations and instructions for installation of products and equipment.

PART 2 - PRODUCTS

2.1 MATERIALS

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

1. For projects requiring compliance with sustainable design and construction practices and procedures, use products for patching that comply with requirements in Division 01 sustainable design requirements Section.

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

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

PART 3 - EXECUTION

3.1 EXAMINATION

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

1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping; underground electrical services, and other utilities.

2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.

B. Examination and Acceptance of Conditions: Before proceeding with each component of the Work, examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.

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

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

1. Description of the Work.
2. List of detrimental conditions, including substrates.
3. List of unacceptable installation tolerances.
4. Recommended corrections.

D. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.2 PREPARATION

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

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

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

D. Review of Contract Documents and Field Conditions: Immediately upon discovery of the need for clarification of the Contract Documents caused by differing field conditions outside the control of Contractor, submit a request for information to Architect according to requirements in Division 01 Section "Project Management and Coordination."

3.3 CONSTRUCTION LAYOUT

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

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

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

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

3.4 FIELD ENGINEERING

A. Reference Points: Locate existing permanent benchmarks, control points, and similar reference points before beginning the Work. Preserve and protect permanent benchmarks and control points during construction operations.

1. Do not change or relocate existing benchmarks or control points without prior written approval of Architect. Report lost or destroyed permanent benchmarks or control points promptly. Report the need to relocate permanent benchmarks or control points to Architect before proceeding.
2. Replace lost or destroyed permanent benchmarks and control points promptly. Base replacements on the original survey control points.

B. Benchmarks: Establish and maintain a minimum of two permanent benchmarks on Project site at all times, referenced to data established by survey control points. Comply with authorities having jurisdiction for type and size of benchmark.

1. Record benchmark locations, with horizontal and vertical data, on Project Record Documents.
2. Where the actual location or elevation of layout points cannot be marked, provide temporary reference points sufficient to locate the Work.
3. Remove temporary reference points when no longer needed. Restore marked construction to its original condition.

3.5 INSTALLATION

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

1. Make vertical work plumb and make horizontal work level.

2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
3. Conceal pipes, ducts, and wiring in finished areas unless otherwise indicated.
4. Maintain minimum headroom clearance of 96 inches (2440 mm) in occupied spaces and 90 inches (2300 mm) in unoccupied spaces, unless noted otherwise.

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

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

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

E. Sequence the Work and allow adequate clearances to accommodate movement of construction items on site and placement in permanent locations.

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

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

H. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place, accurately located and aligned with other portions of the Work. Where size and type of attachments are not indicated, verify size and type required for load conditions.

1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect. Except as otherwise indicated, mount individual units of work at industry recognized standard mounting heights, for applications indicated. See Standard Mounting Heights indicated in drawings. Refer questionable mounting height choices to Architect for final decision. See the Drawings for Typical Mounting Heights, and Interior Elevations for specific mounting heights, plus other drawings and detail sections.
2. Allow for building movement, including thermal expansion and contraction.
3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.

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

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

3.6 CUTTING AND PATCHING

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

1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.
2. Cut existing construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.
3. Contractor shall provide cutting and patching for all chases and openings as required for installation of the work of all trades by performing the work with his/her own forces, or by having his/her subcontractors perform this work.
4. Do not cut-and-patch structural work in a manner resulting in reduction of load-carrying capacity or load/deflection ratio; submit proposed cutting and patching to Architect for structural approval before proceeding.
5. Do not cut-and-patch operational elements and safety-related components in a manner resulting in reduction of capacities to perform in manner intended or resulting in decreased operational life, increased maintenance, or decreased safety.
6. Do not cut-and-patch work which is exposed on exterior or exposed in occupied spaces of building, in a manner resulting in reduction of visual qualities or resulting in substantial evidence of cut-and-patch work, both as judged solely by Architect.
7. Remove and replace work judged by Architect to be cut-and-patched in a visually unsatisfactory manner.

B. Temporary Support: Provide temporary support of work to be cut.

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

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

1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots neatly to minimum size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
3. Concrete and Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
4. Excavating and Backfilling: Comply with requirements in applicable Division 31 Sections where required by cutting and patching operations.
5. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
6. Proceed with patching after construction operations requiring cutting are complete.

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

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

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

3. Ceilings: Patch, repair, or rehang in-place ceilings as necessary to provide an even-plane surface of uniform appearance.
4. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition, ensures thermal and moisture integrity of building enclosure, and provides a visually satisfactory appearance as determined be the architect.

F. Cleaning: Clean areas and spaces where cutting and patching are performed. Remove paint, mortar, oils, putty, and similar materials from adjacent finished surfaces.

3.7 OWNER-INSTALLED PRODUCTS

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

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

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

3.8 PROGRESS CLEANING

A. General: Clean Project site and work areas daily, including common areas. Enforce requirements strictly. Dispose of materials lawfully.

1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
2. Do not hold waste materials more than seven days during normal weather or three days if the temperature is expected to rise above 80 deg F (27 deg C).

3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.

    a. Use containers intended for holding waste materials of type to be stored.

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

C. Access Points: Keep access points free from mud, gravel, or other deleterious materials that may be tracked onto the adjacent road. The access shall be suitable for passenger vehicles at all times.

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

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

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

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

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

H. Waste Disposal: Do not bury or burn waste materials on-site. Do not wash waste materials down sewers or into waterways.

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

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

K. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period. Where applicable, such exposures include, but are not limited to, the following:

1. Excessive static or dynamic loading.
2. Excessive internal or external pressures.
3. Excessively high or low temperatures.
4. Thermal shock.
5. Excessively high or low humidity.
6. Air contamination or pollution.
7. Water or ice.

8. Solvents.
9. Chemicals.
10. Light.
11. Radiation.
12. Puncture.
13. Abrasion.
14. Heavy traffic.
15. Soiling, staining, and corrosion.
16. Bacteria.
17. Mold.
18. Rodent and insect infestation.
19. Combustion.
20. Electrical current.
21. High-speed operation.
22. Improper lubrication.
23. Unusual wear or other misuse.
24. Contact between incompatible materials.
25. Destructive testing.
26. Misalignment.
27. Excessive weathering.
28. Unprotected storage.
29. Improper shipping or handling.
30. Theft.
31. Vandalism.

3.9 STARTING AND ADJUSTING

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

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

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

D. Manufacturer's Field Service: Comply with qualification requirements in Division 01 Section "Quality Requirements."

3.10 PROTECTION OF INSTALLED CONSTRUCTION

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

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

END OF SECTION 017300

SECTION 017700 - CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

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

1. Substantial Completion procedures.
2. Final completion procedures.
3. Warranties.
4. Final cleaning.
5. Repair of the Work.

B. Related Requirements:

1. Division 01 Section "Execution" for progress cleaning of Project site.
2. Division 01 Section "Operation and Maintenance Data" for operation and maintenance manual requirements.
3. Division 01 Section "Project Record Documents" for submitting record Drawings, record Specifications, and record Product Data.
4. Division 01 Section “Warranties” for Project and product warranty requirements.
5. Divisions 02 through 26 Sections for specific closeout and special cleaning requirements for the Work in those Sections.

1.3 ACTION SUBMITTALS

A. Product Data: For cleaning agents.

B. Contractor's List of Incomplete Items (Contractors Punchlist): Initial submittal at Substantial Completion.

C. Certified List of Incomplete Items: Final submittal as a prerequisite to Final Completion, certifying all Work is now fully complete.

1.4 CLOSEOUT SUBMITTALS

A. Certificates of Release: From authorities having jurisdiction.

B. Certificate of Insurance: For continuing coverage.

C. Field Report: For pest control inspection.

1.5 MAINTENANCE MATERIAL SUBMITTALS

A. Schedule of Maintenance Material Items: For maintenance material submittal items specified in other Sections.

B. Proof of Delivery: Provide proof of delivery to Architect of all maintenance materials to Owner. Deliver to Owner in designated locations, inspect with Owner, and get Owner's signature on all items transmitted.

1.6 SUBSTANTIAL COMPLETION PROCEDURES

A. Contractor's List of Incomplete Items: The Contractor shall thoroughly review all aspects of the project, and prepare and submit a detailed list of items to be completed and corrected (Contractor's punch list), indicating the value of each item on the list and reasons why the Work is incomplete. Architect will not begin their review of the project at Substantial Completion until the Contractors List is provided.

B. Submittals Prior to Substantial Completion: Complete the following a minimum of 10 working days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request. Also see the requirements of the General Conditions.

1. Certificates of Release: Obtain and submit releases from authorities having jurisdiction permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
2. Submit closeout submittals specified in other Division 01 Sections, including project record documents, operation and maintenance manuals, final completion construction photographic documentation (when required by other Sections), damage or settlement surveys, property surveys, and similar final record information.
3. Submit closeout submittals specified in individual Divisions 02 through 44 Sections, including specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
4. Submit maintenance material submittals specified in individual Divisions 02 through 44 Sections, including tools, spare parts, extra materials, and similar items, and deliver to location designated by Construction Manager. Label with manufacturer's name and model number where applicable.

    a. Schedule of Maintenance Material Items: Prepare and submit a schedule of maintenance material submittal items, including name and quantity of each item and name and number of related Specification Section. Obtain Owner or Construction Manager's signature for receipt of submittals.

5. Submit test/adjust/balance records.
6. Submit sustainable design submittals required in Division 01 sustainable design requirements Section and in individual Division 02 through 284 Sections.
7. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.

C. Procedures Prior to Substantial Completion: Complete the following a minimum of 10 working days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request. Also see the requirements of the General Conditions.

1. Advise Owner of pending insurance changeover requirements.
2. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
3. Complete startup and testing of systems and equipment.
4. Perform preventive maintenance on equipment used prior to Substantial Completion.
5. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems.
6. Advise Owner of changeover in heat and other utilities.
7. Participate with Owner in conducting inspection and walkthrough with local emergency responders.
8. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
9. Complete final cleaning requirements, including touchup painting.
10. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.

D. Substantial Completion Review: Upon completion of above, “Procedures Prior to Substantial Completion,” and submission of satisfactory proof thereof, submit a written request for the Architect’s review to determine Substantial Completion a minimum of ten (10) working days prior to date the work will be completed and ready for the Architect’s review and related tests. The Contractor should expect that the Architect’s (and their consultants) review will take approximately ten (10) working days. On receipt of request, Architect will either proceed with review or notify Contractor of unfulfilled requirements. If the review results in a determination that the project has reached Substantial Completion, the Architect will prepare the Certificate of Substantial Completion or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.

1. Re-Review: Request re-review when the Work identified in previous review as incomplete is completed or corrected.
2. Results of completed review will form the basis of requirements for final completion.

1.7 FINAL COMPLETION PROCEDURES

A. Submittals Prior to Final Completion: Before requesting final inspection for determining final completion, complete the following:

1. Submit a final Application for Payment according to Division 01 Section "Payment Procedures."

2. Certified List of Incomplete Items: Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. Certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
3. Certificate of Insurance: Submit evidence of final, continuing insurance coverage complying with insurance requirements.
4. Submit pest-control final inspection report.

B. Final Completion Review: Upon the successful completion of above, “Procedures Prior to Substantial Completion”, “Submittals Prior to Substantial Completion”, “Substantial Completion Review”, and submission of satisfactory proof thereof, submit a written request for the Architect’s review to determine Final Completion a minimum of ten (10) working days prior to date the work will be completed and ready for the Architect’s review and related tests. The Contractor should expect that the Architect’s (and their consultants) review will take approximately ten (10) working days. On receipt of request, Architect will either proceed with review or notify Contractor of unfulfilled requirements. If the review results in a determination that the project has reached Final Completion, the Architect will prepare the final Certificate for Payment or will notify Contractor of items identified by Architect, that must be completed or corrected before certificate will be issued.

1. Re-Review: Request re-review when the Work identified in previous review as incomplete is completed or corrected.

1.8 LIST OF INCOMPLETE ITEMS (CONTRACTOR’S PUNCH LIST)

A. Organization of List: Include name and identification (room name and room number from the Contract Drawings) of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.

1. Organize list of spaces in sequential order following the room numbers on the Contract Drawings.
2. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.
3. Include the following information at the top of each page:

    a. Project name.
    b. Date.
    c. Name of Architect and Construction Manager.
    d. Name of Contractor.
    e. Page number.
    f. Name(s) of Contractor’s personnel completing the list.

4. Submit list of incomplete items in the following format:

    a. MS Excel electronic file. Architect will return annotated file.

1.9 SUBMITTAL OF PROJECT WARRANTIES

A. Time of Submittal: Submit written warranties on request of Architect for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated, or when delay in submittal of warranties might limit Owner's rights under warranty.

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

C. Organize warranty documents as specified in Division 01 Section “Warranties.”

1. Bind warranties and bonds in heavy-duty, three-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch (215-by-280-mm) paper.
2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.
4. Warranty Electronic File: Scan warranties and bonds and assemble complete warranty and bond submittal package into a single indexed electronic PDF file with links enabling navigation to each item. Provide bookmarked table of contents at beginning of document.
5. Separate warranties by Building identification

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

PART 2 - PRODUCTS

2.1 MATERIALS

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

PART 3 - EXECUTION

3.1 FINAL CLEANING

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

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

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

a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
b. Sweep paved areas broom clean, and wash with water. Remove petrochemical spills, stains, and other foreign deposits.
c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
d. Remove tools, construction equipment, machinery, and surplus material from Project site.
e. Remove snow and ice to provide safe access to building.
f. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
g. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
h. Sweep concrete floors broom clean in unoccupied spaces, and mop.
i. Vacuum carpet and similar soft surfaces, removing debris and excess nap; clean according to manufacturer's recommendations if visible soil or stains remain.
j. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Polish mirrors and glass, taking care not to scratch surfaces.
k. Remove labels that are not permanent.
l. Wipe surfaces of mechanical and electrical equipment, elevator equipment, and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
m. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
n. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
o. Clean ducts, blowers, and coils if units were operated during construction or that display contamination with particulate matter on inspection.

1) Clean HVAC system in compliance with NADCA Standard 1992-01. Provide written report on completion of cleaning.

p. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency.
q. Leave Project clean and ready for occupancy.
r. Complete specific cleaning procedures in addition to those listed above as required by individual specification sections in Divisions 2 through 28.

C. Pest Control: Comply with pest control requirements in Division 01 Section "Temporary Facilities and Controls." Prepare written report.

D. Construction Waste Disposal: Dispose legally of all waste materials.

3.2 REPAIR OF THE WORK

A. Complete repair and restoration operations before requesting inspection for determination of Substantial Completion.

B. Repair or remove and replace defective construction. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment. Where damaged or worn items cannot be repaired or restored, provide replacements. Remove and replace operating components that cannot be repaired. Restore damaged construction and permanent facilities used during construction to specified condition.

1. Remove and replace chipped, scratched, and broken glass, reflective surfaces, and other damaged transparent materials.
2. Touch up and otherwise repair and restore marred or exposed finishes and surfaces. Replace finishes and surfaces that that already show evidence of repair or restoration.

    a. Do not paint over "UL" and other required labels and identification, including mechanical and electrical nameplates. Remove paint applied to required labels and identification.

3. Replace parts subject to operating conditions during construction that may impede operation or reduce longevity.

END OF SECTION 01 77 00

SECTION 017800 - WARRANTIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. This Section includes administrative and procedural requirements for warranties required by the Contract Documents, including manufacturer’s standard warranties on products and special warranties.

1. Refer to the General Conditions for terms of the Contractor's period for correction of the Work.

B. Related Sections: The following Sections contain requirements that relate to this Section:

1. Division 1 Section "Submittal Procedures" specifies procedures for submitting warranties.
2. Division 1 Section "Contract Closeout" specifies contract closeout procedures.
3. Division 1 Section “Operation & Maintenance Data”.
4. Divisions 03 through 26 Sections for specific requirements for warranties on products and installations specified to be warranted.
5. Certifications and other commitments and agreements for continuing services to Owner are specified elsewhere in the Contract Documents.

C. Disclaimers and Limitations: Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor of the warranty on the Work that incorporates the products. Manufacturer's disclaimers and limitations on product warranties do not relieve suppliers, manufacturers, and subcontractors required to countersign special warranties with the Contractor.

1.3 DEFINITIONS

A. Standard product warranties are preprinted written warranties published by individual manufacturers for particular products and are specifically endorsed by the manufacturer to the Owner.

B. Special warranties are written warranties required by or incorporated in the Contract Documents, either to extend time limits provided by standard warranties or to provide greater rights for the Owner.

1.4 WARRANTY REQUIREMENTS

A. Related Damages and Losses: When correcting failed or damaged warranted construction, remove and replace construction that has been damaged as a result of such failure or must be removed and replaced to provide access for correction of warranted construction.

B. Reinstatement of Warranty: When Work covered by a warranty has failed and been corrected by replacement or rebuilding, reinstate the warranty by written endorsement. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for depreciation.

C. Replacement Cost: Upon determination that Work covered by a warranty has failed, replace or rebuild the Work to an acceptable condition complying with requirements of the Contract Documents. The Contractor is responsible for the cost of replacing or rebuilding defective Work regardless of whether the Owner has benefited from use of the Work through a portion of its anticipated useful service life.

D. Owner's Recourse: Expressed warranties made to the Owner are in addition to implied warranties and shall not limit the duties, obligations, rights, and remedies otherwise available under the law. Expressed warranty periods shall not be interpreted as limitations on the time in which the Owner can enforce such other duties, obligations, rights, or remedies.

E. Rejection of Warranties: The Owner reserves the right to reject warranties and to limit selection to products with warranties not in conflict with requirements of the Contract Documents.

F. Where the Contract Documents require a special warranty, or similar commitment on the Work or part of the Work, the Owner reserves the right to refuse to accept the Work, until the Contractor presents evidence that entities required to countersign such commitments are willing to do so.

1.5 SUBMITTALS

A. Submit written warranties to the Architect prior to the date certified for Substantial Completion in O&M Manuals, see Division 1 Section “Operation and Maintenance Data”. If the Architect's Certificate of Substantial Completion designates a commencement date for warranties other than the date of Substantial Completion for the Work, or a designated portion of the Work, submit written warranties upon request of the Architect.

1. When a designated portion of the Work is completed and occupied or used by the Owner, by separate agreement with the Contractor during the construction period, submit properly executed warranties to the Architect within 15 days of completion of that designated portion of the Work.

B. When the Contract Documents require the Contractor, or the Contractor and a subcontractor, supplier or manufacturer to execute a special warranty, prepare a written document that contains appropriate terms and identification, ready for execution by the required parties. Submit a draft to the Owner, through the Architect, for approval prior to final execution.

C. Where forms for special warranties are included at the end of this Section, prepare a written document utilizing the appropriate form, ready for execution by the Contractor, or by the Contractor, subcontractor, supplier, or manufacturer. Submit a draft to the Owner, through the Architect, for approval prior to final execution. Refer to Divisions 2 through 10 Sections for specific content requirements and particular requirements for submitting special warranties.

D. Form of Submittal: At Final Completion compile 3 copies of each required warranty properly executed by the Contractor, or by the Contractor, subcontractor, supplier, or manufacturer. Organize the warranty documents within the O&M Manual sub-sections. See Division 1 Section "Operation and Maintenance Data".

E. Bind warranties and bonds in the O&M Manual as described in Division 1 Section "Operation and Maintenance Data".

F. Format/Warranties

1. In addition to guarantees required by "General Conditions of the Contract", furnish written guarantees warranting certain portions of work for longer periods wherever specified.
2. Address all guarantees to Owner.
3. Submit through Architect, on Contractor's letterhead before final payment and acceptance of work by Owner.
4. Where more than one subcontractor is involved, submit guarantee for each.

a. Form of Guarantee for Specified Installations: I (we), (insert name of Contractor) certify (insert name of trade or portion of work being guaranteed) installed by (insert name of appropriate subcontractor) on (insert name of job) is performed in strict accordance with Contract Documents. Further, I (we) guarantee this work to be free of defects in materials and workmanship, for (fill in specific required guarantee period) years from (date of Substantial Completion or Final Acceptance of work, as specified), and will repair, or replace, without delay, any defects in materials and workmanship discovered within guaranty period.

Sincerely,
(Name of Contractor/responsible principal/address/telephone number) (Signed by Owner, Partner, or other person authorized to commit firm).

PART 2 - PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Used)

END OF SECTION 01 78 00

SECTION 017823 - OPERATION AND MAINTENANCE DATA

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes administrative and procedural requirements for preparing operation and maintenance manuals, including the following:

1. Operation and maintenance documentation directory.
2. Emergency manuals.
3. Operation manuals for systems, subsystems, and equipment.
4. Product maintenance manuals.
5. Systems and equipment maintenance manuals.

B. Related Requirements:

1. Division 01 Section "Submittal Procedures" for submitting copies of submittals for operation and maintenance manuals.
2. Division 01 Section “Closeout Procedures” for verification and compilation of data into operation and maintenance manuals.
3. Divisions 03 through 26 Sections for specific operation and maintenance manual requirements for the Work in those Sections.

1.3 DEFINITIONS

A. System: An organized collection of parts, equipment, or subsystems united by regular interaction.

B. Subsystem: A portion of a system with characteristics similar to a system.

1.4 CLOSEOUT SUBMITTALS

A. Manual Content: Operations and maintenance manual content is specified in individual Specification Sections to be reviewed at the time of Section submittals. Submit reviewed manual content formatted and organized as required by this Section.

1. Architect, the Architect’s Consultants and Commissioning Authority will comment on whether content of operations and maintenance submittals are acceptable.
2. Where applicable, clarify and update reviewed manual content to correspond to revisions and field conditions.

B. Format: Submit operations and maintenance manuals in the following format:

1. PDF electronic file. Assemble each manual into a composite electronically indexed file. Submit on digital media acceptable to Architect.

   a. Name each indexed document file in composite electronic index with applicable item name. Include a complete electronically linked operation and maintenance directory.
   b. Enable inserted reviewer comments on draft submittals.

2. Hard Copies. Provide three (3) paper hard copies. Include a complete operation and maintenance directory. Enclose title pages and directories in clear plastic sleeves. Architect will return copies for correction until such time as they are fully completed.

C. Initial Manual Submittal: Submit three (3) draft copies of each manual at least 30 days before commencing demonstration and training, and not less than 14 days before requesting Substantial Completion review. Architect, Architect's consultants, Owner, Construction Manager and Commissioning Authority will comment on whether general scope and content of manual are acceptable. Make corrections to manual and resubmit for re-review. Repeat process until such time as manuals are fully complete and acceptable to the Architect. Make corrections to electronic copy as well, and submit in plastic sleeve on a CD(s) in the front of the O&M Manual.

D. Final Manual Submittal: One complete with the above review process, submit each manual in final form at least 14 days prior to requesting review for Final Completion.

PART 2 - PRODUCTS

2.1 OPERATION AND MAINTENANCE DOCUMENTATION DIRECTORY

A. Directory: Prepare a single, comprehensive directory of emergency, operation, and maintenance data and materials, listing items and their location to facilitate ready access to desired information. Include a section in the directory for each of the following:

1. List of documents.
2. List of systems.
3. Table of contents.

B. List of Systems and Subsystems: List systems alphabetically. Include references to operation and maintenance manuals that contain information about each system.

C. List of Equipment: List equipment for each system, organized alphabetically by system. For pieces of equipment not part of system, list alphabetically in separate list.

D. Tables of Contents: Include a table of contents for each emergency, operation, and maintenance manual.

E. Identification: In the documentation directory and in each operation and maintenance manual, identify each system, subsystem, and piece of equipment with same designation used in the

Contract Documents. If no designation exists, assign a designation according to ASHRAE Guideline 4, "Preparation of Operating and Maintenance Documentation for Building Systems."

2.2 REQUIREMENTS FOR EMERGENCY, OPERATION, AND MAINTENANCE DATA

A. Organization: Unless otherwise indicated, organize each manual into a separate section for each system and subsystem, and a separate section for each piece of equipment not part of a system. Each manual shall contain the following materials, in the order listed:

1. Title page.
2. Table of contents.
3. Manual contents.

B. Title Page: Include the following information:

1. Subject matter included in manual.
2. Name and address of Project.
3. Name and address of Owner.
4. Date of submittal.
5. Name and contact information for Contractor.
6. Name and contact information for Construction Manager.
7. Name and contact information for Architect.
8. Name and contact information for Commissioning Authority.
9. Names and contact information for major consultants to the Architect that designed the systems contained in the manuals.
10. Cross-reference to related systems in other operation and maintenance manuals.

C. Table of Contents: List each product included in manual, identified by product name, indexed to the content of the volume, and cross-referenced to Specification Section number in Project Manual.

1. If operation or maintenance documentation requires more than one volume to accommodate data, include comprehensive table of contents for all volumes in each volume of the set.

D. Manual Contents: Organize into sets of manageable size. Arrange contents alphabetically by system, subsystem, and equipment. If possible, assemble instructions for subsystems, equipment, and components of one system into a single binder.

E. Manuals, Electronic Files: Submit manuals in the form of a multiple file composite electronic PDF file for each manual type required.

1. Electronic Files: Use electronic files prepared by manufacturer where available. Where scanning of paper documents is required, configure scanned file for minimum readable file size.
2. File Names and Bookmarks: Enable bookmarking of individual documents based on file names. Name document files to correspond to system, subsystem, and equipment names used in manual directory and table of contents. Group documents for each system and subsystem into individual composite bookmarked files, then create composite manual, so

that resulting bookmarks reflect the system, subsystem, and equipment names in a readily navigated file tree. Configure electronic manual to display bookmark panel on opening file.

F. Manuals, Paper Copy: Submit manuals in the form of hard copy, bound and labeled volumes.

1. Binders: Heavy-duty, three-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, sized to hold 8-1/2-by-11-inch (215-by-280-mm) paper; with clear plastic sleeve on spine to hold label describing contents and with pockets inside covers to hold folded oversize sheets.

   a. If two or more binders are necessary to accommodate data of a system, organize data in each binder into groupings by subsystem and related components. Cross-reference other binders if necessary to provide essential information for proper operation or maintenance of equipment or system.
   b. Identify each binder on front and spine, with printed title "OPERATION AND MAINTENANCE MANUAL," Project title or name, and subject matter of contents, and indicate Specification Section number on bottom of spine. Indicate volume number for multiple-volume sets.

2. Dividers: Heavy-paper dividers with plastic-covered tabs for each section of the manual. Mark each tab to indicate contents. Include typed list of products and major components of equipment included in the section on each divider, cross-referenced to Specification Section number and title of Project Manual.
3. Protective Plastic Sleeves: Transparent plastic sleeves designed to enclose diagnostic software storage media for computerized electronic equipment.
4. Supplementary Text: Prepared on 8-1/2-by-11-inch (215-by-280-mm) white bond paper.
5. Drawings: Attach reinforced, punched binder tabs on drawings and bind with text.

   a. If oversize drawings are necessary, fold drawings to same size as text pages and use as foldouts.
   b. If drawings are too large to be used as foldouts, fold and place drawings in labeled envelopes and bind envelopes in rear of manual. At appropriate locations in manual, insert typewritten pages indicating drawing titles, descriptions of contents, and drawing locations.

2.3 EMERGENCY DATA

A. Content: Organize manual into a separate section for each of the following:

1. Type of emergency.
2. Emergency instructions.
3. Emergency procedures.

B. Type of Emergency: Where applicable for each type of emergency indicated below, include instructions and procedures for each system, subsystem, piece of equipment, and component:

1. Fire.
2. Flood.
3. Gas leak.

4. Water leak.
5. Power failure.
6. Water outage.
7. System, subsystem, or equipment failure.
8. Chemical release or spill.

C. Emergency Instructions: Describe and explain warnings, trouble indications, error messages, and similar codes and signals. Include responsibilities of Owner's operating personnel for notification of Installer, supplier, and manufacturer to maintain warranties.

2.4 OPERATION DATA :

A. In addition to requirements in this Section, include operation data required in individual Specification Sections and the following information:

1. System, subsystem, and equipment descriptions. Use designations for systems and equipment indicated on Contract Documents.
2. Performance and design criteria if Contractor has delegated design responsibility.
3. Operating standards.
4. Operating procedures.
5. Operating logs.
6. Wiring diagrams.
7. Control diagrams.
8. Piped system diagrams.
9. Precautions against improper use.
10. License requirements including inspection and renewal dates.
11. Copy of warranties.

B. Descriptions: Include the following:

1. Product name and model number. Use designations for products indicated on Contract Documents.
2. Manufacturer's name.
3. Equipment identification with serial number of each component.
4. Equipment function.
5. Operating characteristics.
6. Limiting conditions.
7. Performance curves.
8. Engineering data and tests.
9. Complete nomenclature and number of replacement parts.

C. Operating Procedures: Include the following, as applicable:

1. Startup procedures.
2. Equipment or system break-in procedures.
3. Routine and normal operating instructions.
4. Regulation and control procedures.
5. Instructions on stopping.
6. Normal shutdown instructions.
7. Seasonal and weekend operating instructions.

8. Required sequences for electric or electronic systems.
9. Special operating instructions and procedures.

D. Systems and Equipment Controls: Describe the sequence of operation, and diagram controls as installed.

2.5 PRODUCT MAINTENANCE DATA

A. Content: Organize manual into a separate section for each product, material, and finish. Include source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds, as described below.

B. Source Information: List each product included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual and drawing or schedule designation or identifier where applicable.

C. Product Information: Include the following, as applicable:

1. Product name and model number.
2. Manufacturer's name.
3. Color, pattern, and texture.
4. Material and chemical composition.
5. Reordering information for specially manufactured products.

D. Maintenance Procedures: Include manufacturer's written recommendations and the following:

1. Inspection procedures.
2. Types of cleaning agents to be used and methods of cleaning.
3. List of cleaning agents and methods of cleaning detrimental to product.
4. Schedule for routine cleaning and maintenance.
5. Repair instructions.

E. Repair Materials and Sources: Include lists of materials and local sources of materials and related services.

F. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.

1. Include procedures to follow and required notifications for warranty claims.

2.6 SYSTEMS AND EQUIPMENT MAINTENANCE DATA

A. Content: For each system, subsystem, and piece of equipment not part of a system, include source information, manufacturers' maintenance documentation, maintenance procedures, maintenance and service schedules, spare parts list and source information, maintenance service contracts, and warranty and bond information, as described below.

B. Source Information: List each system, subsystem, and piece of equipment included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual and drawing or schedule designation or identifier where applicable.

C. Manufacturers' Maintenance Documentation: Manufacturers' maintenance documentation including the following information for each component part or piece of equipment:

1. Standard maintenance instructions and bulletins.
2. Drawings, diagrams, and instructions required for maintenance, including disassembly and component removal, replacement, and assembly.
3. Identification and nomenclature of parts and components.
4. List of items recommended to be stocked as spare parts.

D. Maintenance Procedures: Include the following information and items that detail essential maintenance procedures:

1. Test and inspection instructions.
2. Troubleshooting guide.
3. Precautions against improper maintenance.
4. Disassembly; component removal, repair, and replacement; and reassembly instructions.
5. Aligning, adjusting, and checking instructions.
6. Demonstration and training video recording, if available.

E. Maintenance and Service Schedules: Include service and lubrication requirements, list of required lubricants for equipment, and separate schedules for preventive and routine maintenance and service with standard time allotment.

1. Scheduled Maintenance and Service: Tabulate actions for daily, weekly, monthly, quarterly, semiannual, and annual frequencies.
2. Maintenance and Service Record: Include manufacturers' forms for recording maintenance.

F. Spare Parts List and Source Information: Include lists of replacement and repair parts, with parts identified and cross-referenced to manufacturers' maintenance documentation and local sources of maintenance materials and related services.

G. Maintenance Service Contracts: Include copies of maintenance agreements with name and telephone number of service agent.

H. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.

1. Include procedures to follow and required notifications for warranty claims.

PART 3 - EXECUTION

3.1 MANUAL PREPARATION

A. Consolidated Manuals: Assemble a complete set of manuals for the entire project, containing all of the requirements below. Include each category of data for each product or system under a single main tab for that product or system, followed by sub-tabs for each category.

B. Organization: Unless otherwise indicated, organize manuals by individual building, and tab each building volume into sections following the specifications Table of Contents with subsections for each system and subsystem, and a separate subsection for each piece of equipment not part of a system. Further, subdivide for each of data required herein. General Contractor to assemble all information into one or multiple volumes of binders with uniform appearance, consistent format and tabbing, with each volume embossed with project title and contents. Separately bound manuals from specialty subcontractors must be disassembled and bound into the General Contractor's manuals with formatting and tabbing as noted herein. Each manual shall contain the following materials, in the order listed:

1. Title page.
2. Table of contents.
3. Manual contents.

Provide the sections and sub-sections in the following format, which generally follows the CSI Specification Divisions:

Section 1 - General Information: Generally including sub-sections for:

A. Title Page
B. Table of Contents
C. General Information
D. Emergency Data
E. Contractor's Project Warranty(s)
F. Contractor's Closeout Paperwork: AIA forms, etc.
G. Construction Photographs (if required of Contractor)
H. Permits: All original building and other permits, plus the Certificate of Occupancy.
I. Other Submittals/Data: If not associated with Sections 2 through 26.

For Sections 2 through 26, provide Sections following the Specifications Table of Contents, with each Section divided into subsections as follows:

A. Warranty(s).
B. Manufacturers Data.
C. Product Maintenance Data
D. Operation and Maintenance Data.
E. Submittals and Shop Drawings.
F. Drawings (if any)
F. Other information.

C. Emergency Data: Assemble a complete set of emergency information indicating procedures for use by emergency personnel and by Owner's operating personnel for types of emergencies indicated.

D. Product Maintenance Data: Assemble a complete set of maintenance data indicating care and maintenance of each product, material, and finish incorporated into the Work.

E. Operation and Maintenance Data: Assemble a complete set of operation and maintenance data indicating operation and maintenance of each system, subsystem, and piece of equipment not part of a system.

1. Engage a factory-authorized service representative to assemble and prepare information for each system, subsystem, and piece of equipment not part of a system.
2. Prepare a separate manual for each system and subsystem, in the form of an instructional manual for use by Owner's operating personnel.

F. Manufacturers' Data: Where manuals contain manufacturers' standard printed data, include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data include more than one item in a tabular format, identify each item using appropriate references from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.

1. Prepare supplementary text if manufacturers' standard printed data are not available and where the information is necessary for proper operation and maintenance of equipment or systems.

G. Drawings: Prepare drawings supplementing manufacturers' printed data to illustrate the relationship of component parts of equipment and systems and to illustrate control sequence and flow diagrams. Coordinate these drawings with information contained in record Drawings to ensure correct illustration of completed installation.

1. Do not use original project record documents as part of operation and maintenance manuals.
2. Comply with requirements of newly prepared record Drawings in Division 01 Section "Project Record Documents."

H. Comply with Division 01 Section "Closeout Procedures" for schedule for submitting operation and maintenance documentation.

END OF SECTION 01 78 23

SECTION 017839 - PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes administrative and procedural requirements for project record documents, including the following:

1. Record Drawings.
2. Record Specifications.
3. Record Product Data and Submittals.
4. Miscellaneous record submittals.

B. Related Requirements:

1. Division 01 Section "Execution" for final property survey.
2. Division 01 Section "Closeout Procedures" for general closeout procedures.
3. Division 01 Section "Operation and Maintenance Data" for operation and maintenance manual requirements.
4. Divisions 03 through 26 Sections for specific requirements for project record documents of the Work in those Sections.

1.3 CLOSEOUT SUBMITTALS

A. Record Drawings: Comply with the following:

1. Number of Copies: Submit copies of record Drawings as follows:

a. Initial Submittal:

1) Submit PDF electronic files of scanned marked-up record prints and one paper-copy of marked-up record prints.
2) Architect and the Architect’s consultants will review and will indicate whether general scope of changes, additional information recorded, and quality of drafting are acceptable.
3) Submit revised copies incorporating additional information and/or revisions required by the Architect and his consultants. Submit PDF electronic files of scanned revised marked-up record prints and one paper-copy of revised marked-up record prints.

4) Architect and the Architect's consultants will review again and will indicate whether general scope of changes, additional information recorded, and quality of drafting are acceptable.
5) Repeat review and revision process until documents are acceptable to the Architect.

b. Final Submittal: Once the Initial Submittal process described above is completed, and documents are acceptable to the Architect, complete the following:

1) Submit PDF electronic files of scanned record prints and three set(s) of prints.
2) Print each drawing, whether or not changes and additional information were recorded.

B. Record Specifications: Submit one paper copy and one annotated PDF electronic files of Project's Specifications, including addenda and contract modifications. Follow review process outlined above for Record Drawings.

C. Record Product Data and Submittals: Submit copy of each submittal (product data, shop drawings, and submittals) as a part of the Operation and Maintenance Manuals.

D. Miscellaneous Record Submittals: See other Specification Sections for miscellaneous record-keeping requirements and submittals in connection with various construction activities. Submit copies and follow the process as described herein for Record Drawings.

PART 2 - PRODUCTS

2.1 RECORD DRAWINGS

A. Record Prints: Maintain one set of marked-up paper copies of the Contract Drawings and Shop Drawings, incorporating new and revised drawings as modifications are issued.

1. Preparation: Mark record prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to provide information for preparation of corresponding marked-up record prints.

a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
b. Accurately record information in an acceptable drawing technique.
c. Record data as soon as possible after obtaining it, but no later than weekly. Drawings will be review weekly, and payment to Contractor may be withheld if record documents are not kept current.
d. Record and check the markup immediately, but no later than before enclosing concealed installations.
e. Cross-reference record prints to corresponding archive photographic documentation.

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

a. Dimensional changes to Drawings.
b. Revisions to details shown on Drawings.
c. Depths of foundations below first floor.
d. Revisions to electrical circuitry.
e. Changes made by Architect’s Supplemental Instructions.
f. Changes made by Addenda.
g. Changes made by Change Order or Construction Change Directive.
h. Changes made following Architect's written orders.
i. Details not on the original Contract Drawings.
j. Field records for variable and concealed conditions.
k. Record information on the Work that is shown only schematically.

3. Mark the Contract Drawings and Shop Drawings completely and accurately. Use personnel proficient at recording graphic information in production of marked-up record prints.
4. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
5. Mark important additional information that was either shown schematically or omitted from original Drawings.
6. Note Addendum numbers, Architect’s Supplemental Instructions numbers, Construction Change Directive numbers, alternate bid numbers, Change Order numbers, and similar identification, where applicable.

B. Newly Prepared Record Drawings: Prepare new Drawings instead of preparing record Drawings where Architect determines that neither the original Contract Drawings nor Shop Drawings are suitable to show actual installation.

1. New Drawings may be required when a Change Order is issued as a result of accepting an alternate, substitution, or other modification.
2. Consult Architect for proper scale and scope of detailing and notations required to record the actual physical installation and its relation to other construction. Integrate newly prepared record Drawings into record Drawing sets; comply with procedures for formatting, organizing, copying, binding, and submitting.
3. Prepare New Record Drawings using same software as used by Architect to prepare original Contract Drawings.

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

1. Record Prints: Organize record prints and newly prepared record Drawings into manageable sets. Bind each set with durable paper cover sheets. Include identification on cover sheets.
2. Identification: As follows:

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

2.2 RECORD SPECIFICATIONS

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

1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
2. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
3. Record the name of manufacturer, supplier, Installer, and other information necessary to provide a record of selections made.
4. For each principal product, indicate whether record Product Data has been submitted in operation and maintenance manuals instead of submitted as record Product Data.
5. Note related Change Orders, record Product Data, and record Drawings where applicable.

B. Format: Submit record Specifications as paper copy and scanned PDF electronic file(s) of marked-up paper copy of Specifications.

2.3 RECORD PRODUCT DATA

A. Preparation: Mark Product Data (product data, shop drawings, and submittals) to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.

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

B. Format: Submit record Product Data as paper copy and scanned PDF electronic file(s) of marked-up paper copy of Product Data, as a part of the O&M Manuals.

2.4 MISCELLANEOUS RECORD SUBMITTALS

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

B. Format: Submit miscellaneous record submittals as paper copy and scanned PDF electronic file(s) of marked-up paper copy of Product Data, as a part of the O&M Manuals.

PART 3 - EXECUTION

3.1 RECORDING AND MAINTENANCE

A. Recording: Maintain one copy of each submittal during the construction period for project record document purposes. Post changes and revisions to project record documents as they occur; do not wait until end of Project.

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

END OF SECTION 01 78 39

SECTION 024119 - SELECTIVE STRUCTURE DEMOLITION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Demolition and removal of selected portions of building or structure.
2. Demolition and removal of selected site elements.
3. Salvage of existing items to be reused or recycled.

B. Related Requirements:

1. Division 01 Section "Summary" for restrictions on the use of the premises, tenant-occupancy requirements, and phasing requirements.
2. Division 01 Section “Safety Procedures” for coordination with hazardous material work.
3. Electrical Specification.

1.3 DEFINITIONS

A. Remove: Detach items from existing construction and legally dispose of them off-site unless indicated to be removed and salvaged or removed and reinstalled.

B. Remove and Salvage: Carefully detach from existing construction, in a manner to prevent damage, and deliver to Owner.

C. Remove and Reinstall: Detach items from existing construction, store in secure, safe condition to prevent damage, prepare for reuse, and reinstall where indicated.

D. Existing to Remain: Existing items of construction that are not to be permanently removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

1.4 MATERIALS OWNERSHIP

A. Unless otherwise indicated, demolition waste becomes the property of Contractor.

1.5 PREINSTALLATION MEETINGS

A. Predemolition Conference: Conduct conference at Project site.

1. Inspect and discuss condition of construction to be selectively demolished.
2. Review structural load limitations of existing structure if determined to be necessary.
3. Review and finalize selective demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.
4. Review requirements of work performed by other trades that rely on substrates exposed by selective demolition operations.
5. Review areas where existing construction is to remain and requires protection.
6. Review Owner’s requirements for existing operations and the safety of others on the property.

1.6 INFORMATIONAL SUBMITTALS

A. Qualification Data: For refrigerant recovery technician.

B. Proposed Protection Measures: Submit report, including drawings, that indicates the measures proposed for protecting individuals and property, for environmental protection, for dust control, and for noise control. Indicate proposed locations and construction of barriers.

C. Schedule of Selective Demolition Activities - Indicate the following:

1. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity. Ensure the tenant's on-site operations are uninterrupted.
2. Interruption of utility services. Indicate how long utility services will be interrupted.
3. Coordination for shutoff, capping, and continuation of utility services.
4. Use of building entrances.

D. Inventory: Submit a list of items to be removed and salvaged and deliver to Owner prior to start of demolition.

E. Predemolition Photographs or Video: Submit before Work begins.

1.7 CLOSEOUT SUBMITTALS

A. Inventory: Submit a list of items that have been removed and salvaged.

1.8 FIELD CONDITIONS

A. Tenant will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition to substantially minimize disruptions.

B. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.

C. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.

D. Hazardous Materials: The area within this project contains varying levels of fungal growth due to long term moisture intrusion.

1. See "Limited Hazardous Material Investigation Survey" as prepared by PBS Engineering and Environmental, Inc. (Sept 26, 2016)
2. See "Summary Report of Fungal/Moisture Assessment" as prepared by PBS Engineering and Environmental, Inc. dated May 9, 2016
3. See Section 028533 Fungal Abatement Activities for specific requirements for removal and handling of materials containing fungal growth.

E. Storage or sale of removed items or materials on-site is not permitted.

F. Utility Service: Maintain existing utilities and protect them against damage during selective demolition operations.

1. Maintain fire-protection facilities in service during selective demolition operations.

PART 2 - PRODUCTS

2.1 PEFORMANCE REQUIREMENTS

A. Regulatory Requirements: Comply with governing EPA notification regulations and other agencies having jurisdiction requirements before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.

B. Standards: Comply with ANSI/ASSE A10.6 and NFPA 241.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that utilities have been disconnected and capped before starting selective demolition operations if required by work**.**

B. Review record documents of existing construction provided by Owner or Architect. Owner and Architect do not guarantee that existing conditions are same as those indicated in record documents.

C. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.

D. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report including photo documentation to Architect.

E. Survey of Existing Conditions: Record existing conditions by use of measured drawings, preconstruction photographs, or preconstruction videotapes.

1. Inventory and record the condition of items to be removed and salvaged. Provide photographs or video of conditions that might be misconstrued as damage caused by salvage operations.
2. Before selective demolition or removal of existing building elements that will be reproduced or duplicated in final Work, take photographs and make permanent record of measurements, materials, and construction details required to make exact reproduction.

3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect against damage.

B. Existing Services/Systems to Be Removed, Relocated, or Abandoned: Locate, identify, disconnect, and seal or cap off indicated utility services and mechanical/electrical systems serving areas to be selectively demolished.

1. Owner will arrange to shut off indicated services/systems when requested by Contractor within 72 hours, if necessary.
2. Arrange to shut off indicated utilities with utility companies.
3. If services/systems are required to be removed, relocated, or abandoned, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.
4. If required by the work, disconnect, demolish, and remove fire-suppression systems, plumbing, and HVAC systems, equipment, and components indicated to be removed. Coordinate with mechanical and electrical drawings and specifications.

a. Piping to Be Removed: Remove portion of piping indicated to be removed and cap or plug remaining piping with same or compatible piping material.
b. Piping to Be Abandoned in Place: Drain piping and cap or plug piping with same or compatible piping material.
c. Equipment to Be Removed: Disconnect and cap services and remove equipment.
d. Equipment to Be Removed and Reinstalled: Disconnect and cap services and remove, clean, and store equipment; when appropriate, reinstall, reconnect, and make equipment operational.
e. Equipment to Be Removed and Salvaged: Disconnect and cap services and remove equipment and deliver to Owner.
f. Ducts to Be Removed: Remove portion of ducts indicated to be removed and plug remaining ducts with same or compatible ductwork material.
g. Ducts to Be Abandoned in Place: Cap or plug ducts with same or compatible ductwork material.

3.3 PREPARATION

A. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.

1. Comply with requirements for access and protection specified in Division 01 Section "Temporary Facilities and Controls."

B. Temporary Facilities: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.

1. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.
2. Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.
3. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.
4. Cover and protect furniture, furnishings, and equipment that have not been removed.
5. Comply with requirements for temporary enclosures, dust control, heating, and cooling specified in Division 01 Section "Temporary Facilities and Controls."

C. Temporary Shoring: 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.

1. Strengthen or add new supports when required during progress of selective demolition.

3.4 SELECTIVE DEMOLITION, GENERAL

A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:

1. Proceed with selective demolition systematically, from higher to lower level. Complete selective demolition operations above each floor or tier before disturbing supporting members on the next lower level.
2. 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.
3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
4. Do not use cutting torches when mechanical means can reasonably achieve required results. 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.
5. Maintain adequate ventilation when using cutting torches.
6. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
7. Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.

8. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
9. Dispose of demolished items and materials promptly and legally.

B. Removed and Salvaged Items:

1. Clean salvaged items.
2. Pack or crate items after cleaning. Identify contents of containers.
3. Store items in a secure area until installed.
4. Transport items to Contractor's storage area designated by Owner.
5. 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.
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.
5. Comply with governing codes and agency requirements.

D. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Owner, 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.

3.5 SELECTIVE DEMOLITION PROCEDURES FOR SPECIFIC MATERIALS

A. Resilient Floor Coverings: Remove floor coverings and adhesive according to recommendations in RFCI's "Recommended Work Practices for the Removal of Resilient Floor Coverings. Do not use methods requiring solvent-based adhesive strippers.

3.6 DISPOSAL OF DEMOLISHED MATERIALS

A. General: Except for items or materials indicated to be recycled, reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, remove demolished materials from Project site and legally dispose of them in an EPA-approved landfill.

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.
4. Comply with requirements specified in Division 01 Section "Construction Waste Management and Disposal."

B. Burning: Do not burn demolished materials.

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

3.7 CLEANING

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

3.8 SELECTIVE DEMOLITION SCHEDULE

A. Existing Items and Construction to Be Removed: As indicated on Drawings

B. Existing Items to Be Removed and Salvaged: Unless otherwise indicated on Drawings or elsewhere in the specifications, all items removed belong to the Contractor.

1. No items anticipated

C. Existing Items to Be Removed and Reinstalled: As indicated on Drawings

D. Existing Items to Remain: As indicated on Drawings

END OF SECTION 02 41 19

SECTION 028533 - FUNGAL ABATEMENT ACTIVITIES

PART 1 - GENERAL

1.1 SCOPE

A. Refer to the Contract Documents for detailed demolition scope of work information. Fungal abatement activities shall be required for all interior and exterior wall demolition activities shown in the Contract Documents. The scope of demolition is generally shown in D 2.00 and D 2.01 drawings. The Contractor shall presume that all areas included in the demolition work scope have been water damaged/fungal impacted and are include within the scope of this fungal cleaning and abatement work. The intent of this work is to clean fungal impacted building materials that are to remain and remove/abate building materials that are designated for demolition, in accordance with these specifications.

B. This section covers the cleaning and removal of fungal contamination and fungal-impacted building materials. The Work Scope includes applying a post demolition/abatement anti-fungal treatment to all exposed wood framing (100% coverage) in accordance with the manufacturer's instructions. The treatment shall be Boracare manufactured by the Nisus Corporation.

C. Contractor shall provide all specialty labor, materials, equipment, services and insurance required to complete fungal cleaning and remediation procedures as indicated in these Contract Documents.

D. The abatement contractor shall either:

- Be a state-licensed asbestos abatement contractor having certified asbestos supervisors and workers with training and experience in large fungal remediation projects.
- Or the contractor shall provide written proof that all fungal cleaning and abatement personnel have hands-on and classroom mold abatement training and a minimum of 5 years experience performing similar fungal abatement and cleaning activities.

E. The Contractor shall be aware that the building will be occupied for the entire duration of the project. The Contractor shall provide the necessary engineering controls and structures to prevent all potential health impacts to occupants and passersby, and provide safe ingress and egress to and from the building for all non-construction related occupants, as defined in other specification sections.

1.2 RELATED WORK

A. The Owner has retained an Environmental Consultant to perform the following:

1. Collect and analyze air and/or surface wipe samples during and after fungal cleaning and remediation activities, as appropriate, to determine relative levels of fungal contaminants.
2. Observe work by the Contractor and subcontractors.
3. Monitor the Contractor's compliance with regulatory and specification requirements.
4. Help identify fungal contaminated or water damaged building material to be removed.
5. Perform visual inspections and clearance testing, if applicable.

B. All other Division 00, 01 and 02 requirements and contract drawing sheets are related and shall be coordinated with this work

1.3 DEFINITIONS

A. Aggressive Sampling: A method of air sampling that assures that any residual dust remains airborne during the sampling time. At the discretion of the Owner's Environmental Consultant, surfaces inside the work area will be agitated by the liberal use of a leaf blower and box fans. Fans will be placed so as to keep all suspended residual dust airborne, and will be run throughout the sampling period.

B. Air Lock: A system for permitting ingress or egress without permitting air movement between a contaminated area and an uncontaminated area, typically consisting of two curtained doorways installed at least 3 feet apart.

C. Air Monitoring: The process of measuring the airborne concentrations of a specific contaminant in a stated period of time.

D. Amended Water: Water containing a surfactant additive. The additive shall be compatible with the cleaning solution. Ammonia or similar nitrogen based additives that have the potential to react with bleach (and to potentially form hazardous Chloramine compounds) are prohibited and shall not be mixed or used onsite.

E. Authorized Visitor: The Owner or designated representative, or a representative of any regulatory or other agency having jurisdiction over the project, and having required training, medical, fit test training, etc.

F. Certified Industrial Hygienist: A person certified by the American Board of Industrial Hygiene or an industrial hygienist in training, or an individual with equivalent education or experience.

G. Clean Room: An uncontaminated area or room, which is part of the worker decontamination enclosure system, with provisions for storage of workers' street clothes and clean protective equipment.

H. Container: Any portable device, in which material is stored, transported, treated, disposed of, or otherwise handled.

I. Containment: An enclosed work area that isolates the remediation work area and associated remediation activities from the HVAC system and surrounding interior areas of the building. A process used to protect workers, occupants and the environment by controlling exposures to fungal, fungal-contaminated surfaces, dust and debris created during fungal remediation tasks.

1. Limited Containment: A negative pressure containment consisting of a single layer of 6-mil, fire retardant polyethylene sheeting that shall be used for mold remediation work areas involving quantities between 10 and 100 square feet of mold contamination, as defined by the EPA's *Mold Remediation in Schools and Commercial Buildings.*
2. Full Containment: A negative pressure enclosure consisting of two layers of 6-mil, fire retardant polyethylene sheeting that shall be used for mold remediation work areas involving quantities greater than 100 square feet of mold contamination, as defined by the EPA's *Mold Remediation in Schools and Commercial Buildings.*

J. Critical Barrier: Barrier constructed from minimum two layers of 6-mil plastic or as approved by the Environmental Consultant

K. Curtained Doorway: A device to allow ingress or egress from one room to another while permitting minimal air movement between the rooms, typically constructed by placing three overlapping sheets of plastic over an existing or temporarily framed doorway, securing each along the top of the doorway in a pleated fashion and securing one vertical side of each sheet on alternating sides of consecutive sheets. Two curtained doorways spaced a minimum of 3 feet apart form an air lock.

L. Damp Wipe: The process of eliminating dust and invisible fungal related materials from building surfaces and objects by wiping with a cloth and water or water and detergent. It is important to dry these surfaces quickly and thoroughly to discourage further mold growth.

M. Damp Wipe/HEPA Vacuuming: After a sufficient period of evaporation and drying, the cleaning solution residue shall be HEPA vacuumed. Each surface where moist cleaning is specified shall receive a minimum of two consecutive damp wiping/HEPA vacuuming treatments, working from top to bottom on vertical surfaces, and proceeding in the direction of the negative-air machine on horizontal surfaces such as ceilings and floors.

N. Decontamination Chamber: An airlock chamber that is connected to the work area and is large enough to hold a waste container and allow a person to put on and remove personal protective equipment.

O. Dehumidifiers: Equipment designed to lower the relative humidity in the work area air.

P. Disinfectant: Shall be EPA-registered and approved for indoor use in hospitals and/or schools.

Q. Disposal: Procedures necessary to transport and deposit the fungal-contaminated waste in an approved waste disposal site in compliance with EPA and other applicable regulations.

R. Encapsulant: Encapsulants shall be EPA-registered and of the penetrating variety. Encapsulants shall provide a suitable substrate bonding agent for application of new material where appropriate.

S. Enclosure: Procedures necessary to completely seal selected fungal-contaminated building components or areas utilizing impermeable airtight barriers.

T. Engineering Controls: Measures implemented at the work site to contain, control and/or otherwise reduce exposure to fungal, fungal-contaminated dust and debris.

U. Environmental Consultant: Owner's consultant, PBS Engineering + Environmental, Seattle, Washington, Phone: 206.233.9639.

V. Equipment Room: A contaminated area or room, which is part of the worker decontamination enclosure system, with provisions for disposal of contaminated clothing and disinfecting or disposal of equipment and tools.

W. Fixed Object: Fixtures which are attached to the building or are too heavy or bulky to remove from the work area.

X. Fungal Remediation: Scrubbing or other process, treatment with disinfectant (where approved), HEPA vacuuming and damp wiping of surfaces to decontaminate surfaces potentially contaminated with fungal particulate.

Y. HEPA or High Efficiency Particulate Aerosol Filter: A filter capable of filtering out particles of 0.3 microns or greater from a body of air at 99.97 percent efficiency and greater. Vacuum shall be designed and intended for use with and cleanup of hazardous materials.

Z. HEPA Vacuum Equipment: High Efficiency Particulate Air (absolute) filtered vacuuming equipment with a filter system capable of collecting and retaining microbe particles. Filters of 99.97 percent efficiency for retaining microbe particles of 0.3 microns in diameter or larger shall be installed for filtering discharge air. Designed for use with and clean-up of hazardous materials.

AA. Independent Testing Laboratory: A qualified analytical laboratory financially independent from and hired by the Owner or Contractor. The laboratory must be recognized as proficient in the analysis of fungal spores.

BB. Isolated Area: An area where airborne particulate and dusts may be generated and where only trained personnel with appropriate personal protective equipment are allowed. An example would be a totally contained area of the facility where fungal remediation activities are performed.

CC. Isolation Barrier: Procedures and materials necessary to completely seal and isolate selected fungal-contaminated areas of the building utilizing impermeable airtight barriers. These procedures will completely contain and control fungal contaminants and construction dust and debris.

DD. Mold: Used interchangeably with fungal/fungi and having similar meanings.

EE. Movable Object: Furnishings which are not attached to the building structure and can be removed from the work area.

FF. Negative Pressure Enclosure (NPE): The NPE shall completely isolate all work areas from non-work scope areas. The NPE shall generate airflow patterns throughout that will produce sufficient velocities to overcome the contaminant laden air plus extraneous air currents. The NPE fan system shall exchange a minimum of 4 completed air changes per hour of the total air volume of the contained area. The air velocities through any and all openings in the containment must be great enough to prevent the escape of any contaminants and the air exhaust volumes must be sufficient enough to carry away all air or gas introduced into or created within the enclosure.

GG. Owner: Representatives designated by the Owner, or designated employees of the Owner.

HH. Pressure Differential Fan System: An air-purifying fan system located within or outside the isolated work area, which draws air out of the work area through a HEPA filter, thus keeping the static air pressure in the work area lower than in adjacent areas, and preventing escape of contaminated air from work area to adjacent areas.

II. Public Area: Any area outside the isolated work area. When work area isolation measures are removed, the work area becomes a public area.

JJ. Surfactant: A chemical wetting agent added to water to improve penetration, thus reducing the quantity of water required for a given operation or area. See Amended Water.

KK. Transporter: Any person engaged in the off-site transportation construction debris.

LL. Wash Water: Tap water containing no additives.

MM. Worksite Entry Logbook: A logbook kept in the clean room which must be signed by everyone entering or leaving the work area. All pages of the logbook must be the same as the sample page bound into these Specifications

1.4 DOCUMENTS INCORPORATED BY REFERENCE

A. Work performed under this specification section shall be governed by this specification and all applicable regulations and guidelines, including, but not limited to those listed below. The most recent version of each document shall govern fungal remediation procedures and handling of fungal-contaminated waste materials. Where conflicts among requirements or with these Specifications exist, the most stringent requirements shall apply.

1. Environmental Protection Agency - Mold Remediation in Schools and Commercial Buildings.
2. New York City Department of Health and Mental Hygiene – Guidelines on Assessment and Remediation of Fungi in Indoor Environments.
3. WISHA Standards

   a. Washington Administrative Code (WAC) Chapter 296-62 Part E - Respiratory Protection.
   b. WAC Chapter 296-800-11045 – Protect Employees From Biological Agents.
   c. WAC Chapter 296-155-180 - Hazard Communication.

4. National Institute for Occupational Safety and Health (NIOSH), 30 CFR, Part II, Respirators.
5. American National Standards Institute (ANSI) NY; ANSI Standard Z 88.2-1980 "American National Standards Practice for Respiratory Protection," latest edition.
6. International Building Code (I.B.C.), latest edition, regulations as applicable.

1.5 SUBMITTALS AND NOTICES

A. Contractors shall submit to the Owner the following information 15 days prior to beginning work on the project.

1. WORKER TRAINING PROGRAM. Submit written proof indicating that all employees impacting fungal-contaminated surfaces have mold abatement training and at least 5 years hands-on experience in mold remediation and cleaning projects of equal or greater magnitude.
2. RESPIRATOR PROGRAM. Submit written proof indicating respirator program is in compliance with all parts of WAC 296-62. Proof may be in the form of a letter from the Owner of the company.
3. MEDICAL PROGRAM. If respirators shall be worn, submit written proof that a medical exam program is in place and workers have been tested for respiratory conditions that may inhibit their ability to perform this work and potential sensitivity to fungi.

4. EMERGENCY PLANS. Submit a written emergency control and cleanup plan to be followed by the Contractor in the event of an accidental breach in containment, power failure, chemical release, or fire.
5. WORK PLAN. Submit a written work plan satisfactory to the Owner describing the schedule and methods for fungal cleaning and abatement procedures, hygiene practices, plans for installation of containment systems, worker training and protection measures, engineering controls, dust control and collection techniques, disinfection protocols, etc. The work plan shall include emergency contact telephone numbers. The Contractor shall update the work plan as necessary while work progresses. The work plan shall include, as appropriate, a diagram showing the enclosure, containment barriers, HEPA filtration unit locations (if applicable), decontamination unit locations, air flow, and staging areas. Any revisions to the plan shall be pre-approved prior to that work taking place.
6. PRODUCT INFORMATION AND SAFETY DATA SHEETS. Submit complete product information for chemical agents and for any materials, products and procedures for which the Contractor requests approval for use on this job. The Contractor shall identify any concerns with possible chemical reactions with new materials and latent affects on indoor air quality after chemical usage. All chemical fungal treatments shall be EPA Registered and Food Grade.
7. CONTRACTOR'S LICENSE. Submit proof that the Contractor is currently, and for the duration of the project, licensed in the state of Washington to perform this type of work.
8. FUNGAL ABATEMENT SUPERVISOR. Submit the name and resume of experience of the assigned on-site abatement supervisor. The abatement supervisor shall have a minimum 5 years supervisory level fungal remediation experience. The Owner and the Environmental Consultant reserve the right to reject the supervisor from the work at any time during the project for any reason. The Contractor shall then assign another on-site supervisor for Owner and Environmental Consultant approval as described above at no additional cost to the Owner.
9. INSURANCE CERTIFICATE. Submit a copy of the certificate of liability and pollution insurance.
10. EMERGENCY PHONE NUMBER. Submit a phone number at which the Contractor or on-site supervisor can be reached on a twenty-four hour 7 day a week basis during the course of the fungal cleaning and abatement work.

B. Contractor shall not begin work until submittals are complete, reviewed and accepted by the Owner and the Environmental Consultant. Allow a ten (10) day review period.

1.6 BUILDING PROTECTION

A. Building Security and Protection

1. All fungal remediation shall be performed in a regulated and contained area. All perimeter wall abatement and cleaning shall be performed outside of an airtight barrier that is constructed by the contractor to isolate all interior finishes and systems of the building from fungal abatement and cleaning activities at the perimeter wall.
2. The Contractor shall post adequate warning signs at all potential entrances to work areas as required by EPA and the Washington DOSH warning other trades and personnel of the potential hazards in the isolated regulated work area.
3. Contractor shall protect all existing fixed equipment, building finishes that are to remain, and existing systems and functions from damage during the remediation process. Extra precautions are to be taken to protect existing mechanical and electrical systems that are to remain. Any

damage to existing building finishes/systems, services, and/or equipment shall be remedied by the Contractor at no additional cost to the Owner.

4. Contractor shall clean external surfaces of contaminated containers and equipment within the building, by wet wiping and HEPA vacuuming to remove all visible dust and debris.
5. Contractor shall maintain access and use of existing fire lanes, electrical and mechanical systems, and public ingress and egress as defined by the specifications.
6. All barrier breaches in regulated fungal abatement and cleaning work areas shall be immediately remedied by the contractor at no additional cost to the owner. Remedies shall include, but not be limited to, removing all occupants from the impacted area of the building, repairing the breach, and appropriately cleaning all surfaces in the area of the breach to the satisfaction of the Owners Environmental Consultant. This will include assessment and testing by, and at the discretion of, the owners' consultant.

1.7 PERSONNEL PROTECTION

A. Training

1. Prior to commencement of remediation activities, Contractor shall ensure all workers have been adequately trained in the possible health effects of fungal exposure, the proper use of personal protective equipment including respiratory protection, gloves, disposable body-covering suits, and decontamination procedures which minimize worker exposures and the prevention of cross-contamination to uncontaminated or decontaminated areas.
2. The Contractor shall provide and post at hand wash locations, in the clean room(s) and\or the equipment room(s), the decontamination and work procedures to be followed by all workers as outlined in the Contractor's written work plan.
3. Workers shall not eat, drink, chew gum or apply cosmetics except in the established clean room. Smoking or using other tobacco products on the property is prohibited.

B. Personal Protective Equipment for Mold Remediation

1. Work clothes shall consist of disposable full-body coveralls and head and foot covers (Tyvek® or approved), and work boots. Gloves shall be worn as appropriate.
2. At a minimum, half-face mask, negative pressure respirator with disposable HEPA-filter cartridges (magenta/purple color code). For large isolated work areas or areas with heavy contamination, full-face mask, powered air purifying respirator with disposable HEPA filter cartridges (magenta/purple color code) is recommended.
3. Goggles/Eye Protection shall be worn by all personnel performing remediation activities.

C. Worker Decontamination Enclosure System

1. The contractor shall construct a personnel decontamination facility for every entry to and exit from the remediation work area. The decontamination facility shall consist of at least one chamber or airlock large enough to hold a clean waste container, wash face and hands and allow a person to put on and remove personal protective equipment.
2. The Contractor shall not begin mold remediation work unless this system (or other approved) is functional, in good repair and has been found acceptable for specification compliance by the Environmental Consultant.

D. Access to Isolated Work Area by Others

1. Except for emergency personnel, The Contractor shall limit access to the work area to authorized visitors.
2. The Contractor shall provide unrestricted access to all Owners Representatives and provide the appropriate personal protective equipment for those representatives needing entrance to the regulated work areas, including but not limited to full body disposable coveralls and new/unused respiratory protective equipment for those trained to use such equipment.
3. All authorized visitors shall be subject to the personal protection provisions as specified above, and shall sign in and out on the Worksite Entry Logbook.

1.8 SAFETY

A. With regard to the work of this contract, safety (in the construction areas) of the Contractor's employees, the Owner's employees, and the public is the sole responsibility of the Contractor.

1.9 LIABILITY

A. The Contractor is an independent contractor and not an employee of the Owner or of the Environmental Consultant. The Owner and Environmental Consultant shall have no liability to the Contractor or any third persons for Contractor's failure to faithfully perform and follow the provisions of these Specifications and the requirements of the governing agencies. Notwithstanding the failure of the Owner or the Environmental Consultant to discover a violation by the Contractor of any of the provisions of these Specifications, or to require the Contractor to fully perform and follow any of them, such failure shall not constitute a waiver of any of the requirements of these Specifications, which shall remain fully binding upon the Contractor.

1.10 MONITORING, TESTING AND CLEARANCE CRITERIA

A. The Owner reserves the right to monitor Contractor's performance via visual inspections, air and surface sampling before, during, and after demolition and fungal remediation activities. See section 1.11 Quality Assurance for further details.

B. Owner's Post Abatement Visual Clearance Criteria:

1. After contractor has completed fungal remediation activities, the owner and/or owner's consultant will perform a visual assessment of all remediation work areas in order to determine if the work has been performed as per specification. The work area shall be left dry and visibly free from all suspect mold, dust, and debris. If it is determined by the owner or the Environmental Consultant that the work area is not satisfactory, the Contractor shall re-clean the work area until it has been determined to be visibly free of all dust and debris, at no additional cost to the Owner.

C. Owner's Post-Remediation Clearance Air Sampling

1. Post-remediation air sampling may be performed for all remediation work areas as appropriate. At the completion of fungal remediation activities, the contractor shall apply an approved fungal

treatment on all surfaces within the remediation work area. Post-remediation air samples will be collected from the work area in order to compare airborne concentrations of fungi inside the work area with respect to ambient concentrations of airborne fungi outside the building/work area. If it is determined that elevated fungal concentrations are present in the work area, the Contractor, shall re-clean (i.e. wet wipe and HEPA vacuum, encapsulate) the work area, wait 24 hours for air filtration of the work area, then request additional air testing, at no additional cost to the Owner. The contractor will be responsible for all additional testing activities conducted by the Owners Consultant. These costs will be deducted from the contract sum.

2. Post-remediation air sample results will be available no sooner than 48 hours from the time of sample collection. Contractor shall ensure that the isolated work area and all associated containment systems remain intact and containment integrity be maintained until satisfactory clearance results are obtained and the Owner's Environmental Consultant authorizes containment tear down.

1.11 QUALITY ASSURANCE

A. Qualifications for Performance of Work

1. Contractor shall have a record of successful experience in fungal abatement related work similar in scope and magnitude to this Project.
2. Contractor shall maintain on site, a full-time Certified Asbestos Abatement Supervisor with fungal abatement experience, approved by the Owner per pre-job submittals.
3. Contractor shall provide one experienced Supervisor/Foreman for every 10 abatement workers, or portion thereof, utilized on the Project.

B. On-Site Observation

1. Pre-Removal: Environmental Consultant shall perform observations regarding: demarcation of regulated area and installation of critical barriers. Contractor shall request pre-removal observations a minimum of 48 hours prior to desired removal commencing. No abatement work shall be performed prior to pre-removal observation of the regulated area by the Environmental Consultant.
2. Observation: Environmental Consultant shall perform observations regarding: integrity of isolation barriers, decontamination facilities, worker protection, Contractor's air monitoring program, performance of abatement operations, and general conformance to the Specifications.
3. Post Removal: Environmental Consultant shall perform visual inspections after the removal of contaminated materials and cleaning of work area(s) is complete.
4. Following abatement and cleaning of work area(s), the abatement superintendent shall inspect the work area(s), complete and sign the "Post-Abatement Visual Inspection" form, and notify the Environmental Consultant that the scheduled post-abatement inspection may commence.
5. Should additional cleaning of the work area be required to meet the specification standards, the Environmental Consultant shall indicate deficiencies on the "Post-Abatement Visual Inspection" form and notify the Contractor of such deficiencies.
6. The Contractor shall not proceed until post-removal visual inspection by the Environmental Consultant has determined work area(s) acceptable/satisfactory.
7. Stop Work: Environmental Consultant shall notify the Contractor in writing to stop abatement work if the Owner determines that work practices are in violation of regulations, these Specifications or that work is endangering workers or occupants of the building. The Contractor

shall continue work when conditions and actions are corrected and when written authorization is received from the Environmental Consultant.

8. Schedule of Inspections: The Contractor shall schedule pre-removal and post-removal visual inspections with the Environmental Consultant a minimum of forty-eight (48) hours in advance of the desired inspection occurring.
9. Any delay in the completion of the Work caused by a lack of proper scheduling of inspections shall not be sufficient cause for any extension of time or extension of the project completion date.
10. Compensation for time spent by the Environmental Consultant on the Project resulting from pre-arranged meetings at which the Work has not progressed to the designated level of completion shall be the responsibility of the Abatement Contractor and will be deducted from future payments due the Abatement Contractor, by the Owner.

C. Periodic samples of outside work area air and surfaces may be collected and analyzed by the Owner's Environmental Consultant throughout the building. Additionally, the work areas will be monitored for indications of fungal growth and fungal related materials.

D. If, at any time during the work, outside work area air or surface samples taken by the Owner's Environmental Consultant indicates excessive concentrations or fungi in excess of background or outside area samples, the Environmental Consultant will notify the Contractor's Supervisor and the Contractor shall immediately notify his employees.

E. Immediately upon being notified of potential contaminant migration or outside area samples, the Contractor shall perform the following steps in the order presented:

1. Identify source of contaminants.
2. Immediately correct any containment breaches, pressure differential changes, or other potential causes. The Environmental Consultant will determine the affected area and affected adjacent areas considered to be contaminated and will determine the actions to be taken. If is determined that the elevated fungal concentrations were caused by the Contractor, corrective actions identified by the Owners Environmental Consultant will be undertaken by the Contractor at no additional cost to the Owner. This includes, at a minimum, the following:

    a. The contractor shall set up a pressure differential fan system in the affected area to thoroughly scrub all air in the space,
    b. The contractor shall clean all surfaces within the affected area and affected adjacent areas with wet wiping and HEPA vacuuming.
    c. The Owners Environmental Consultant will conduct a visual assessment to ensure the area is free of all visible dust and debris. Additionally, the Owners Environmental Consultant will resample air and surfaces until concentrations are determined to be satisfactory.
    d. The contractor shall secure and repair containment barriers, repair or add equipment.
    e. The contractor shall modify work procedures, and make other changes determined to be the possible cause of elevated fungal concentrations.

3. Carefully resume work under close supervision and monitoring.
4. The Contractor shall be responsible for costs of any labor and materials for re-testing, cleanup, repair, down time loss, etc. that is a result of the Contractor's negligence, poor maintenance of containment areas or improper procedures.

1.12 DELIVERY

A. Contractor shall deliver all materials to the work site in the original packages, containers or bundles bearing the name of the manufacturer and the brand name.

1.13 STORAGE

A. Contractor shall store all materials subject to damage off the ground, away from wet or damp surfaces and under cover sufficient to prevent damage, contamination or fire.

1.14 PROTECTION

A. Damaged or deteriorating materials shall not be used and shall be removed from the premises by the Contractor. Materials that become fungal contaminated shall be disposed of by the Contractor in accordance with all applicable regulations.

1.15 SUBCONTRACTORS

A. Any Subcontractors employed by the General Contractor shall be bound to all the work and safety standards specified elsewhere in this Specification. Subcontractor's personnel shall be fully trained and supervised by the Contractor during performance of this work.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Plastic Sheeting: Plastic (polyethylene) sheeting shall be sized in lengths and widths to minimize the frequency of joints. The minimum thickness shall be 6-mil.

B. Plastic Bags: Plastic bags shall be 6-mil polyethylene. Warning labels shall be affixed to disposal bags/containers identifying the contents of the container.

C. Tape: Tape shall be capable of sealing joints of adjacent sheets of plastic and for attachment of plastic sheet to finished or unfinished surfaces of dissimilar materials and capable of adhering under dry and wet conditions, including use of amended water.

D. Post Abatement Fungal Treatment: The contractor shall apply a post demolition/abatement anti-fungal treatment. The treatment shall be Boracare manufactured by the Nisus Corporation. The Boracare shall be tinted green so it can easily be distinguished from all surrounding building materials.

E. Disinfectants: Use of disinfectants shall require review by the Owner and Environmental Consultant and at a minimum shall be EPA Registered and Food Grade.

F. Cleaning Solution: The cleaning solution shall be plain water with soap or detergent solution or other pre-approved solution.

G. Encapsulant: Encapsulant shall be of the penetrating variety. Encapsulant shall provide a suitable substrate bonding agent for application of new material where appropriate.

1. Penetrating Encapsulant: Foster 32-60 Asbestos Removal Encapsulant or equivalent (submit to the Owner for approval).

2.2 TOOLS AND EQUIPMENT

A. Air-purifying Equipment: Air-purifying equipment shall consist of HEPA filtration systems that are intended for use in hazardous materials environments. No air movement system or air equipment shall discharge dust and particulates outside the work area. Each unit shall be capable of a minimum of 2000 CFM under load and shall have at least two stages of pre-filtration ahead of the HEPA final filter. Each unit shall be equipped with an elapsed time indicator (hour meter), static pressure gauge with low flow alarm, and shall be overload protected. At the Contractor's option, each unit shall be equipped with heat and smoke sensors, which will visually and audibly warn workers and will shut the fan unit down within 30 seconds.

B. Vacuum Equipment: All vacuum equipment utilized in the work area shall be HEPA equipment, and suitable for wet/dry usage and designed for use with and clean-up of hazardous materials.

C. Scaffolding: Rolling scaffolding, as required to accomplish the specified work, shall meet all applicable safety regulations. All special scaffolding shall have drawings and calculations stamped and signed by a civil or structural engineer registered in the State of Washington.

D. Transportation Equipment: Transportation equipment, as required, shall be suitable for loading, temporary storage, transit, and unloading of contaminated waste without exposure to persons or property.

E. Electrical: Electrical tools, equipment and lighting shall meet all applicable codes and regulations. Ground fault protection as required by WAC shall be in effect at all times. Contractor shall take all additional precautions and measures necessary to insure a safe working environment during all operations involving the use of water, solvents and other liquid products.

F. Other Tools and Equipment: Provide other suitable tools for the removal, enclosure, encapsulation, patching, and disposal activities including, but not limited to, hand-held scrapers, wire brushes, cleaning clothes, sponges, mops, buckets, spud bars, crow bars and a selection of various nozzle attachments for HEPA vacuum equipment.

PART 3 - EXECUTION

3.1 GENERAL

A. All fungal remediation shall be conducted in accordance with the most recent version of the Environmental Protection Agency *Mold Remediation in Schools and Commercial Buildings* and New York City Department of Health and Mental Hygiene *Guidelines on Assessment and Remediation of*

Fungi in Indoor Environments and these contract specifications. The contractor and all sub-trades shall be fully aware of the work scope prior to the start of work.

B. The contractor shall construct an interior airtight isolation barrier/containment wall to separate all perimeter wall demolition activities from the interior of the building. These barriers shall be constructed using woven, fire resistant, poly sheeting with a minimum 6 mil thickness in all work areas where fungal cleaning and abatement is anticipated. The temporary isolation barrier wall/containment wall shall be airtight. The containment wall shall be suitably constructed to maintain its integrity throughout all demolition activities and fungal cleaning and remediation activities. The intent of this barrier wall is to prevent all remediation and construction dust and debris from entering non-work scope areas within the building. The barrier shall be checked frequently for integrity and breaches and repaired as appropriate.

C. The contractor shall properly remove and dispose of the fungal contaminated and water damaged building materials identified in the Contract Documents. If demolition of building materials creates a safety hazard or security concern that will remain after the contractor has left the site, the contractor shall take the necessary steps to eliminate such potential safety hazard and security concerns prior to the end of that work-shift.

D. The contractor shall properly clean all items that are to remain in the isolated work scope area, to remove all suspect visible fungal contamination. All surfaces of each item shall be cleaned. This includes moving items, as necessary, to clean behind, beneath and around each item. Properly clean all containment systems and barriers of all visible dust and debris prior to removal of such systems. There shall be no visible emissions of construction dust or debris from the regulated work area at any time during the work.

E. All porous surfaces shall be thoroughly HEPA-vacuumed twice. All non-porous surfaces shall be HEPA-vacuumed and then wet-wiped with a soap or detergent solution and then HEPA-vacuumed again after it has dried. Residual odors and chemicals that have the potential to impact human health shall be minimized to the greatest extent possible. When cleaning is complete, the contractor shall ensure that all items are thoroughly dry prior to rebuild. If field personnel determine that an item is significantly contaminated and it cannot be appropriately cleaned, the item will be removed and discarded as necessary. The Work Scope includes applying a post demolition/abatement anti-fungal treatment to all exposed wood framing (100% coverage) in accordance with the manufacturer's instructions. The treatment shall be Boracare manufactured by the Nisus Corporation. The Boracare shall be tinted green so it can easily be distinguished from all surrounding materials. Onsite review of the Boracare application by the Environmental Consultant is required prior to installation of any new insulation, gypsum, vapor barriers, stucco, sheathing, etc. The contractor is responsible for thorough cleanup/repair of any residual green tinted Boracare solution on any building finishes.

F. The Contractor shall take all necessary precautions to protect the building, its occupants and its contents from damage and theft. Only authorized personnel are allowed to enter the regulated work areas.

G. The contractor shall notify the Environmental Consultant to identify and quantify all fungal contaminated or water damaged building material suspected to be in excess of the base bid demolition work scope. The Contractor shall not remove fungal contaminated or water damaged building material in excess of that identified by the demolition work scope unless directed by the Owners Representative or the Environmental Consultant in writing.

H. Personnel trained and experienced with biological hazard remediation shall conduct all work performed at this facility. A knowledgeable foreman/supervisor shall direct all work on this project and be present on-site at all times. The general contractor is responsible and shall have overall supervisory authority for all abatement related activities inside and outside the containment areas, even though the general contractor may not have specific fungal abatement/cleaning expertise. The general contractor shall have the appropriate training and personal protective equipment (PPE) to enter the containment area and evaluate the abatement contractors' compliance with the contract documents.

3.2 WASTE DISPOSAL

A. General: The Contractor shall assume that all general demolition waste, including fungal contamination, is classified as solid waste.

B. The Contractor shall pay for and make all waste handling arrangements including transportation and disposal at an approved solid waste landfill. No waste shall be disposed of in Owner containers. Copies of all documentation shall be submitted to the Owner.

C. The Contractor shall determine appropriate current waste handling, transportation, and disposal requirements for the work site and for the intended waste disposal landfill. The Contractor must comply with all applicable regulations including all U.S. and Washington Department of Transportation requirements.

D. Waste generated during the cleaning/abatement procedures shall be placed in plastic bags (6- mil minimum thickness) or other leak-proof container. All waste containers shall be closed with an airtight seal prior to leaving the containment/abatement work area. The exterior of the waste containers shall be cleaned prior to removal from work area and then transported directly from the work area to an awaiting leak-tight storage container. No unsealed or unsecured waste containers shall be stored on site. There shall be no visible emissions during transport of the waste containers, from the work area or from the site.

E. Contractor shall remove waste containers from site as soon as feasible.

3.3 CLOSEOUT DOCUMENTATION

A. The contractor shall provide a written closeout package to include an original bid document, work plan, daily work logs describing all daily fungal cleaning and abatement activities in detail, proof of appropriate disposal, work scope changes/ approvals, and a scaled drawing identifying locations and extent of all building materials removed.

END OF SECTION 028533

SECTION 055000 - METAL FABRICATIONS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Steel framing and supports for Signage
2. Perforated Metal Panels for Signage

B. Related Sections:

1. Division 09 Sections “Painting”

1.3 PERFORMANCE REQUIREMENTS

A. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes acting on exterior metal fabrications by preventing buckling, opening of joints, overstressing of components, failure of connections, and other detrimental effects.

1. Temperature Change: 120 deg F (67 deg C), ambient; 180 deg F (100 deg C), material surfaces.

1.4 ACTION SUBMITTALS

A. Product Data: Primer product data and Safety Data Sheet for primer.

B. Shop Drawings: Shall be submitted for approval prior to fabrication. Show fabrication and installation details for metal fabrications.

1. Include plans, elevations, sections, and details of all metal fabrications and their connections. Show anchorage and accessory items. Indicate surface preparation method prior to primer.

1.5 QUALITY ASSURANCE

A. Welding Qualifications: Qualify procedures and personnel according to AWS D1.1/D1.1M, "Structural Welding Code - Steel."

B. Welding Qualifications: Qualify procedures and personnel according to the following:

1. AWS D1.1/D1.1M, "Structural Welding Code - Steel."
2. AWS D1.2/D1.2M, "Structural Welding Code - Aluminum."
3. AWS D1.6, "Structural Welding Code - Stainless Steel."

1.6 PROJECT CONDITIONS

A. Field Measurements: Verify actual locations of walls and other construction contiguous with metal fabrications by field measurements before fabrication.

1.7 COORDINATION

A. Coordinate selection of shop primers with topcoats to be applied over them. Comply with paint and coating manufacturers' written recommendations to certify that shop primers and topcoats are compatible with one another.

B. Coordinate installation of anchorages and steel weld plates and angles for casting into concrete. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.

PART 2 - PRODUCTS

2.1 METALS, GENERAL

A. Metal Surfaces, General: Provide materials with smooth, flat surfaces unless otherwise indicated. For metal fabrications exposed to view in the completed Work, provide materials without seam marks, roller marks, rolled trade names, or blemishes.

2.2 FERROUS METALS

A. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M.

B. Stainless-Steel Sheet, Strip, and Plate: ASTM A 240/A 240M or ASTM A 666, [Type 304.

C. Stainless-Steel Bars and Shapes: ASTM A 276, Type 304.

D. Steel Tubing: ASTM A 500, cold-formed steel tubing.

E. Steel Pipe: ASTM A 53/A 53M, standard weight (Schedule 40) unless otherwise indicated.

F. Cast Iron: Either gray iron, ASTM A 48/A 48M, or malleable iron, ASTM A 47/A 47M, unless otherwise indicated.

G. Prime steel in accordance with Manufacturer’s printed instructions.

2.3 NONFERROUS METALS

A. Aluminum Plate and Sheet: ASTM B 209 (ASTM B 209M), Alloy 6061-T6.

B. Aluminum Extrusions: ASTM B 221 (ASTM B 221M), Alloy 6063-T6.

C. Aluminum-Alloy Rolled Tread Plate: ASTM B 632/B 632M, Alloy 6061-T6.

D. Aluminum Castings: ASTM B 26/B 26M, Alloy 443.0-F.

2.4 FASTENERS

A. General: Unless otherwise indicated, provide Type 304 stainless-steel fasteners for exterior use and zinc-plated fasteners with coating complying with ASTM B 633 or ASTM F 1941 (ASTM F 1941M), Class Fe/Zn 5, at exterior walls. Select fasteners for type, grade, and class required.

1. Provide stainless-steel fasteners for fastening aluminum.
2. Provide stainless-steel fasteners for fastening stainless steel.
3. Provide stainless-steel fasteners for fastening nickel silver.
4. Provide bronze fasteners for fastening bronze.

B. Steel Bolts and Nuts: Regular hexagon-head bolts, ASTM A 307, Grade A (ASTM F 568M, Property Class 4.6); with hex nuts, ASTM A 563 (ASTM A 563M); and, where indicated, flat washers.

C. Stainless-Steel Bolts and Nuts: Regular hexagon-head annealed stainless-steel bolts, ASTM F 593 (ASTM F 738M); with hex nuts, ASTM F 594 (ASTM F 836M); and, where indicated, flat washers; Alloy Group 1 (A1).

1. Dome head fasteners where indicated.

D. Anchor Bolts: ASTM F 1554, Grade 36, of dimensions indicated; with nuts, ASTM A 563; and, where indicated, flat washers.

1. Hot-dip galvanize or provide mechanically deposited, zinc coating where item being fastened is indicated to be galvanized.

E. Eyebolts: ASTM A 489.

F. Machine Screws: ASME B18.6.3 (ASME B18.6.7M).

G. Wood Screws: Flat head, ASME B18.6.1.

H. Plain Washers: Round, ASME B18.22.1 (ASME B18.22M).

I. Lock Washers: Helical, spring type, ASME B18.21.1 (ASME B18.21.2M).

J. Anchors, General: Anchors capable of sustaining, without failure, a load equal to six times the load imposed when installed in unit masonry and four times the load imposed when installed in

concrete, as determined by testing according to ASTM E 488, conducted by a qualified independent testing agency.

K. Post-Installed Anchors:

1. Material for Interior Locations: Carbon-steel components zinc plated to comply with ASTM B 633 or ASTM F 1941 (ASTM F 1941M), Class Fe/Zn 5, unless otherwise indicated.
2. Material for Exterior Locations and Where Stainless Steel is Indicated: Alloy Group 1 (A1) stainless-steel bolts, ASTM F 593 (ASTM F 738M), and nuts, ASTM F 594 (ASTM F 836M).

2.5 MISCELLANEOUS MATERIALS

A. Welding Rods and Bare Electrodes: Select according to AWS specifications for metal alloy welded.

B. Nonshrink, Metallic Grout: Factory-packaged, ferrous-aggregate grout complying with ASTM C 1107, specifically recommended by manufacturer for heavy-duty loading applications.

C. Nonshrink, Nonmetallic Grout: Factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C 1107. Provide grout specifically recommended by manufacturer for interior and exterior applications.

D. Concrete: Comply with requirements in Division 03 Section "Cast-in-Place Concrete" for normal-weight, air-entrained, concrete with a minimum 28-day compressive strength of 3000 psi (20 MPa).

2.6 PERFORATED METAL PANELS

A. General: Provide perforated metal panels as specified in this Section:

B. Manufacturer: Provide products as manufactured by McNichols, or approved substitution during bidding per Section 012500.

C. Products: Provide perforated stainless steel panels:

1. Perforations: 1 inch round on 1-1/4 inch staggered on center, 48.0000”x120.000” with 58% open area.
2. Material Gauge: 11ga (44)

2.7 PRIMER

A. General: The following primers shall be used, unless specifically noted otherwise for the specific items listed in this Section.

1. Primer – Exposed Interior Steel: Tnemec Series 394 PerimePrime, 2.5 to 3.5 mils DFT, or performance equivalent.

2. Primer – All Exterior Steel (Non-Galvanized): Tnemec Series 394 PerimePrime 2.5 to 3.5 mils DFT, or performance equivalent.
3. Primer - Interior Concealed Steel, except as noted herein: Fabricator's standard lead – and chromate-free, non-asphaltic, rust inhibiting primer equivalent to Rodda Barrier III.

B. Epoxy Mastic: Low temperature cure, rust inhibitive, high build, Epoxy mastic.

2.8 FABRICATION, GENERAL

A. Shop Assembly: Preassemble items in the shop to greatest extent possible. Disassemble units only as necessary for shipping and handling limitations. Use connections that maintain structural value of joined pieces. Clearly mark units for reassembly and coordinated installation.

B. Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges to a radius of approximately 1/32 inch (1 mm) unless otherwise indicated. Remove sharp or rough areas on exposed surfaces.

C. Form bent-metal corners to smallest radius possible without causing grain separation or otherwise impairing work.

D. Form exposed work with accurate angles and surfaces and straight edges.

E. Weld corners and seams continuously to comply with the following:

1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
2. Obtain fusion without undercut or overlap.
3. Remove welding flux immediately.
4. At exposed connections, finish exposed welds and surfaces smooth and blended so no roughness shows after finishing and contour of welded surface matches that of adjacent surface.

F. Form exposed connections with hairline joints, flush and smooth, using concealed fasteners or welds where possible. Where exposed fasteners are required, use Phillips flat-head (countersunk) fasteners unless otherwise indicated. Locate joints where least conspicuous.

G. Fabricate seams and other connections that will be exposed to weather in a manner to exclude water. Provide weep holes where water may accumulate.

H. Cut, reinforce, drill, and tap metal fabrications as indicated to receive finish hardware, screws, and similar items.

I. Provide for anchorage of type indicated; coordinate with supporting structure. Space anchoring devices to secure metal fabrications rigidly in place and to support indicated loads.

1. Where units are indicated to be cast into concrete or built into masonry, equip with integrally welded steel strap anchors, 1/8 by 1-1/2 inches (3.2 by 38 mm), with a minimum 6-inch (150-mm) embedment and 2-inch (50-mm) hook, not less than 8 inches

(200 mm) from ends and corners of units and 24 inches (600 mm) o.c., unless otherwise indicated.

2.9 MISCELLANEOUS FRAMING AND SUPPORTS

A. General: Provide steel framing and supports not specified in other Sections as needed to complete the Work.

B. Fabricate units from steel shapes, plates, and bars of welded construction unless otherwise indicated. Fabricate to sizes, shapes, and profiles indicated and as necessary to receive adjacent construction.

1. Fabricate units from slotted channel framing where indicated.
2. Furnish inserts for units installed after concrete is placed.

C. Fabricate supports for operable partitions from continuous steel beams of sizes indicated, and if not indicated, as recommended by partition manufacturer with attached bearing plates, anchors, and braces. Drill or punch bottom flanges of beams to receive partition track hanger rods; locate holes where indicated on operable partition Shop Drawings.

D. Galvanize miscellaneous framing and supports where indicated.

E. Mio/Zinc Prime miscellaneous framing and supports if not indicated to be galvanized.

2.10 STEEL WELD PLATES AND ANGLES

A. Provide steel weld plates and angles not specified in other Sections, for items supported from concrete construction as needed to complete the Work. Provide each unit with no fewer than two integrally welded steel strap anchors for embedding in concrete.

2.11 FINISHES, GENERAL

A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

B. Finish metal fabrications after assembly.

C. Finish exposed surfaces to remove tool and die marks and stretch lines, and to blend into surrounding surface.

2.12 STEEL AND IRON FINISHES

A. Galvanizing: Hot-dip galvanize items as indicated to comply with ASTM A 153/A 153M for steel and iron hardware and with ASTM A 123/A 123M for other steel and iron products.

1. Do not quench or apply post galvanizing treatments that might interfere with paint adhesion.

B. Shop prime iron and steel items not indicated to be galvanized unless they are to be embedded in concrete, sprayed-on fireproofing, or masonry, or unless otherwise indicated.

C. Preparation for Shop Priming: Prepare exterior and unconditioned space steel surfaces to comply with SSPC-SP 6/NACE No. 3, "Commercial Blast Cleaning." Interior concealed conditioned space steel surfaces to comply with SSPC SP-3 “Power Tool Cleaning”.

D. Shop Priming: Apply shop primer to comply with SSPC-PA 1, "Paint Application Specification No. 1: Shop, Field, and Maintenance Painting of Steel," and these specifications for shop painting.

1. Stripe paint corners, crevices, bolts, welds, and ease sharp edges.

2.13 ALUMINUM FINISHES

A. Finish designations prefixed by AA comply with the system established by the Aluminum Association for designating aluminum finishes.

B. As-Fabricated Finish: AA-M10 (Mechanical Finish: as fabricated, unspecified), unless indicated otherwise on the drawings.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Cutting, Fitting, and Placement: Perform cutting, drilling, and fitting required for installing metal fabrications. Set metal fabrications accurately in location, alignment, and elevation; with edges and surfaces level, plumb, true, and free of rack; and measured from established lines and levels.

B. Fit exposed connections accurately together to form hairline joints. Weld connections that are not to be left as exposed joints but cannot be shop welded because of shipping size limitations. Do not weld, cut, or abrade surfaces of exterior units that have been hot-dip galvanized after fabrication and are for bolted or screwed field connections.

C. Field Welding: Comply with the following requirements:

1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
2. Obtain fusion without undercut or overlap.
3. Remove welding flux immediately.
4. At exposed connections, finish exposed welds and surfaces smooth and blended so no roughness shows after finishing and contour of welded surface matches that of adjacent surface.

D. Fastening to In-Place Construction: Provide anchorage devices and fasteners where metal fabrications are required to be fastened to in-place construction. Provide threaded fasteners for

use with concrete and masonry inserts, toggle bolts, through bolts, lag screws, wood screws, and other connectors.

E. Provide temporary bracing or anchors in formwork for items that are to be built into concrete, masonry, or similar construction.

F. Corrosion Protection: Coat concealed surfaces of aluminum that will come into contact with grout, concrete, masonry, wood, or dissimilar metals with the following:

1. Cast Aluminum: Heavy coat of Epoxy Mastic.
2. Extruded Aluminum: Two coats of clear lacquer.

3.2 INSTALLING MISCELLANEOUS FRAMING AND SUPPORTS

A. General: Install framing and supports to comply with requirements of items being supported, including manufacturers' written instructions and requirements indicated on Shop Drawings.

3.3 ADJUSTING AND CLEANING

A. Touchup Primer: Immediately after erection, clean field welds, bolted connections, and abraded areas in accordance with SSPC SP-3 Power Tool Cleaning. Prime uncoated and abraded areas with the same material as used for shop priming to comply with SSPC-PA 1 for touching up shop-primed surfaces.

1. Apply by brush or spray to provide a minimum 2.0-mil (0.05-mm) dry film thickness.

END OF SECTION 05 50 00

SECTION 061000 - ROUGH CARPENTRY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Wood blocking, cants, and nailers.
2. Wood stud framing.

B. Related Requirements:
1. Division 06 Section “Sheathing”
2. Division 06 Section “Exterior Finish Carpentry.”
3. Structural General Notes.
4. See Structural Drawings for wood truss repair requirements.

1.3 DEFINITIONS

A. Exposed Framing: Framing not concealed by other construction.

B. Dimension Lumber: Lumber of 2 inches nominal (38 mm actual) or greater but less than 5 inches nominal (114 mm actual) in least dimension.

C. Timber: Lumber of 5 inches nominal (114 mm actual) or greater in least dimension.

D. Lumber grading agencies, and the abbreviations used to reference them, include the following:

1. NLGA: National Lumber Grades Authority.
2. WCLIB: West Coast Lumber Inspection Bureau.
3. WWPA: Western Wood Products Association.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.

1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Indicate type of preservative used and net amount of preservative retained.

2. For products receiving a waterborne treatment, include statement that moisture content of treated materials was reduced to levels specified before shipment to Project site.
3. Include copies of warranties from chemical treatment manufacturers for each type of treatment.

B. Qualification Data: For firms and persons specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.

1.5 INFORMATIONAL SUBMITTALS

A. Material Certificates: For dimension lumber specified to comply with minimum allowable unit stresses. Indicate species and grade selected for each use and design values approved by the ALSC Board of Review.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Stack lumber flat with spacers beneath and between each bundle to provide air circulation. Protect lumber from weather by covering with waterproof sheeting, securely anchored. Provide for air circulation around stacks and under coverings.

PART 2 - PRODUCTS

2.1 WOOD PRODUCTS, GENERAL

A. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, provide lumber that complies with the applicable rules of any rules-writing agency certified by the ALSC Board of Review. Provide lumber graded by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.

1. Factory mark each piece of lumber with grade stamp of grading agency.
2. Where nominal sizes are indicated, provide actual sizes required by DOC PS 20 for moisture content specified. Where actual sizes are indicated, they are minimum dressed sizes for dry lumber.
3. Provide dressed lumber, S4S, unless otherwise indicated.

B. Maximum Moisture Content of Lumber: 19 percent for 2-inch nominal (38-mm actual) thickness or less, no limit for more than 2-inch nominal (38-mm actual) thickness unless otherwise indicated.

2.2 WOOD-PRESERVATIVE-TREATED LUMBER

A. Preservative Treatment by Pressure Process: AWPA U1; Use Category UC2 for interior construction not in contact with the ground, Use Category UC3b for exterior construction not in contact with the ground, and Use Category UC4a for items in contact with the ground.

1. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium. Do not use inorganic boron (SBX) for sill plates.
2. For exposed items indicated to receive a stained or natural finish, use chemical formulations that do not require incising, contain colorants, bleed through, or otherwise adversely affect finishes.

B. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent. Do not use material that is warped or that does not comply with requirements for untreated material.

C. Mark lumber with treatment quality mark of an inspection agency approved by the ALSC Board of Review.

D. Application: Treat items indicated on Drawings, and the following:

1. Wood cants, nailers, curbs, equipment support bases, blocking, stripping, and similar members in connection with roofing, flashing, vapor barriers, and waterproofing.
2. Wood sills, sleepers, blocking, furring, stripping, and similar concealed members in contact with masonry or concrete.
3. Wood framing and furring attached directly to the interior of below-grade exterior masonry or concrete walls.
4. Wood framing members that are less than 18 inches (460 mm) above the ground in crawlspaces or unexcavated areas.
5. Wood floor plates that are installed over concrete slabs-on-grade.

2.3 DIMENSION LUMBER FRAMING

A. Non-Load-Bearing Interior Partitions: Construction or No. 2 grade, unless indicated otherwise on the Structural Drawings.

1. Application: Interior partitions not indicated as load-bearing.
2. Species:

a. Douglas fir-larch; WCLIB or WWPA.
b. Hem-fir; WCLIB or WWPA.

B. Load-Bearing Partitions: Construction or No. 2 grade, unless indicated otherwise on the Structural Drawings.

1. Application: Exterior walls and interior load-bearing partitions.
2. Species:

a. Douglas fir-larch; WCLIB or WWPA.
b. Hem-fir; WCLIB or WWPA.

C. Ceiling Joists: Construction or No. 2 grade, unless indicated otherwise on the Structural Drawings.

1. Species:

a. Douglas fir-larch; WCLIB or WWPA.
b. Hem-fir; WCLIB or WWPA.

D. Joists, Rafters, and Other Framing Not Listed Above: Construction or No. 2 grade, unless indicated otherwise on the Structural Drawings.

1. Species:

a. Douglas fir-larch; WCLIB or WWPA.
b. Hem-fir; WCLIB or WWPA.

E. Exposed Framing: Provide material hand-selected for uniformity of appearance and freedom from characteristics, on exposed surfaces and edges, that would impair finish appearance, including decay, honeycomb, knot-holes, shake, splits, torn grain, and wane.

1. Application: Exposed exterior framing at roof overhangs.
2. Species and Grade: As indicated above for Joists and Rafters, unless indicated otherwise on the Structural Drawings.

2.4 MISCELLANEOUS LUMBER

A. General: Provide miscellaneous lumber indicated and lumber for support or attachment of other construction:

B. For items of dimension lumber size, provide Construction or No. 2 grade lumber and any of the following species:

a. Hem-fir; WCLIB, or WWPA.
b. Douglas fir-larch; WCLIB or WWPA.

C. For concealed boards, provide lumber with 19 percent maximum moisture content and any of the following species and grades:

a. Hem-fir; WCLIB, or WWPA.
b. Douglas fir-larch; WCLIB or WWPA.

D. For blocking not used for attachment of other construction, Utility, Stud, or No. 3 grade lumber of any species may be used provided that it is cut and selected to eliminate defects that will interfere with its attachment and purpose.

E. For blocking and nailers used for attachment of other construction, select and cut lumber to eliminate knots and other defects that will interfere with attachment of other work.

F. For furring strips for installing plywood or hardboard paneling, select boards with no knots capable of producing bent-over nails and damage to paneling.

2.5 FASTENERS

A. General: Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture.

1. Where rough carpentry is exposed to weather, in ground contact, pressure-preservative treated, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M or of Type 304 stainless steel.

B. Nails, Brads, and Staples: ASTM F 1667.

C. Power-Driven Fasteners: NES NER-272.

D. Wood Screws: ASME B18.6.1.

E. Lag Bolts: ASME B18.2.1 (ASME B18.2.3.8M).

F. Bolts: Steel bolts complying with ASTM A 307, Grade A (ASTM F 568M, Property Class 4.6); with ASTM A 563 (ASTM A 563M) hex nuts and, where indicated, flat washers.

G. Expansion Anchors: Anchor bolt and sleeve assembly of material indicated below with capability to sustain, without failure, a load equal to six times the load imposed when installed in unit masonry assemblies and equal to four times the load imposed when installed in concrete as determined by testing per ASTM E 488 conducted by a qualified independent testing and inspecting agency.

1. Material: Carbon-steel components, zinc plated to comply with ASTM B 633, Class Fe/Zn 5.
2. Material: Stainless steel with bolts and nuts complying with ASTM F 593 and ASTM F 594, Alloy Group 1 or 2 (ASTM F 738M and ASTM F 836M, Grade A1 or A4).

2.6 METAL FRAMING ANCHORS

A. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:

1. Phoenix Metal Products, Inc.
2. Simpson Strong-Tie Co., Inc.
3. USP Structural Connectors.

B. Allowable Design Loads: Provide products with allowable design loads, as published by manufacturer, that meets or exceeds those indicated. Manufacturer's published values shall be determined from empirical data or by rational engineering analysis and demonstrated by comprehensive testing performed by a qualified independent testing agency.

C. Galvanized-Steel Sheet: Hot-dip, zinc-coated steel sheet complying with ASTM A 653/A 653M, G60 (Z180) coating designation.

1. Use for interior locations unless otherwise indicated.

2.7 MISCELLANEOUS MATERIALS

A. Sill-Sealer Gaskets: Glass-fiber-resilient insulation, fabricated in strip form, for use as a sill sealer; 1-inch (25-mm) nominal thickness, compressible to 1/32 inch (0.8 mm); selected from manufacturer's standard widths to suit width of sill members indicated.

B. Adhesives for Gluing to Concrete or Masonry: Formulation complying with ASTM D 3498 that is approved for use indicated by adhesive manufacturer.

1. Adhesives shall have a VOC content of 70 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

C. Water-Repellent Preservative: NWWDA-tested and -accepted formulation containing 3-iodo-2-propynyl butyl carbamate, combined with an insecticide containing chloropyrifos as its active ingredient.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Set rough carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit rough carpentry to other construction; scribe and cope as needed for accurate fit. Locate furring, nailers, blocking, and similar supports to comply with requirements for attaching other construction.

B. Framing Standard: Comply with AF&PA's WCD 1, "Details for Conventional Wood Frame Construction," unless otherwise indicated.

C. Framing with Engineered Wood Products: Install engineered wood products to comply with manufacturer's written instructions.

D. Install plywood backing panels by fastening to studs; coordinate locations with utilities requiring backing panels. Install fire-retardant treated plywood backing panels with classification marking of testing agency exposed to view.

E. Metal Framing Anchors: Install metal framing anchors to comply with manufacturer's written instructions. Install fasteners through each fastener hole.

F. Install sill sealer gasket to form continuous seal between sill plates and foundation walls.

G. Do not splice structural members between supports unless otherwise indicated.

H. Provide blocking and framing as indicated and as required to support facing materials, fixtures, specialty items, and trim.

1. Provide metal clips for fastening gypsum board or lath at corners and intersections where framing or blocking does not provide a surface for fastening edges of panels. Space clips not more than 16 inches (406 mm) o.c.

I. Provide fire blocking in furred spaces, stud spaces, and other concealed cavities as indicated and as follows:

1. Fire block furred spaces of walls, at each floor level, at ceiling, and at not more than 96 inches (2438 mm) o.c. with solid wood blocking or noncombustible materials accurately fitted to close furred spaces.
2. Fire block concealed spaces of wood-framed walls and partitions at each floor level, at ceiling line of top story, and at not more than 96 inches (2438 mm) o.c. Where fire blocking is not inherent in framing system used, provide closely fitted solid wood blocks of same width as framing members and 2-inch nominal- (38-mm actual-) thickness.
3. Fire block concealed spaces between floor sleepers with same material as sleepers to limit concealed spaces to not more than 100 sq. ft. (9.3 sq. m) and to solidly fill space below partitions.

J. Sort and select lumber so that natural characteristics will not interfere with installation or with fastening other materials to lumber. Do not use materials with defects that interfere with function of member or pieces that are too small to use with minimum number of joints or optimum joint arrangement.

K. Comply with AWPA M4 for applying field treatment to cut surfaces of preservative-treated lumber.

1. Use inorganic boron for items that are continuously protected from liquid water.
2. Use copper naphthenate for items not continuously protected from liquid water.

L. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following:

1. NES NER-272 for power-driven fasteners.
2. Table 2304.9.1, "Fastening Schedule," in ICC's International Building Code.

M. Use steel common nails unless otherwise indicated. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting wood. Drive nails snug but do not countersink nail heads unless otherwise indicated.

3.2 WOOD BLOCKING INSTALLATION

A. Attach items to substrates to support applied loading. Recess bolts and nuts flush with surfaces unless otherwise indicated.

B. Where wood-preservative-treated lumber is installed adjacent to metal decking, install continuous flexible flashing separator between wood and metal decking.

3.3 REPAIRS AND PROTECTION

A. Protect wood that has been treated with inorganic boron (SBX) from weather. If, despite protection, inorganic boron-treated wood becomes wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.

B. Protect rough carpentry from weather. If, despite protection, rough carpentry becomes sufficiently wet that moisture content exceeds that specified, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.

C. Repair damaged galvanized coatings on exposed surfaces with galvanized repair paint according to ASTM A 780 and manufacturer's written instructions.

D. Protective Coating: Clean and prepare exposed surfaces of metal connector plates. Brush apply primer, when part of coating system, and one coat of protective coating.

1. Apply materials to provide minimum dry film thickness recommended by coating system manufacturer.

3.4 WALL AND PARTITION FRAMING INSTALLATION

A. General: Provide single bottom plate and double top plates using members of 2-inch nominal (38-mm actual) thickness whose widths equal that of studs, unless indicated otherwise on structural or architectural drawings. Fasten plates to supporting construction unless otherwise indicated.

1. Provide continuous horizontal blocking at midheight of partitions more than 96 inches (2438 mm) high, using members of 2-inch nominal (38-mm actual) thickness and of same width as wall or partitions.
2. Frame walls with stud size and spacing as indicated on the architectural and structural drawings. If a conflict exists between the architectural and structural drawings, assume the wall will be framed with the larger member and closer spacing for bidding purposes, and send the Architect an RFI requesting clarification.

B. Construct corners and intersections with three or more studs, unless indicated otherwise on the Structural Drawings.

C. Frame openings with multiple studs and headers. Provide nailed header members of thickness equal to width of studs. Support headers on jamb studs.

1. For walls, provide double-jamb studs for openings 60 inches (1500 mm) and less in width, and triple-jamb studs for wider openings, unless indicated otherwise.
2. For non-load-bearing partitions, provide double-jamb studs and headers not less than 4-inch nominal (89-mm actual) depth for openings 48 inches (1200 mm) and less in width, 6-inch nominal (140-mm actual) depth for openings 48 to 72 inches (1200 to 1800 mm) in width, 8-inch nominal (184-mm actual) depth for openings 72 to 120 inches (1800 to 3000 mm) in width, and not less than 10-inch nominal (235-mm actual) depth for openings 10 to 12 feet (3 to 3.6 m) in width.
3. For load-bearing walls, provide jamb studs and headers as indicated on structural drawings.

D. Provide bracing as indicated on the Structural Drawings.

3.5 FIELD QUALITY CONTROL

A. Testing Agency: Owner will engage a qualified independent testing and inspecting agency to inspect drag struts, hold-downs, roof diaphragms, and shear walls

B. Connections: Verify proper nailing, bolting and anchorage of wood components that are part of drag struts, and holdowns.

C. Roof diaphragms and shear walls: Verify proper nailing.

END OF SECTION 06 10 00

SECTION 061600 - SHEATHING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Wall sheathing.

B. Related Requirements:

1. Division 06 Section "Rough Carpentry" for plywood backing panels.
2. Division 06 Section “Exterior Finish Carpentry” for exterior wood siding and trim.
3. Division 07 Section "Weather Barriers" for water-resistive barrier applied over wall sheathing.

1.3 QUALITY ASSURANCE

A. Source Limitations: Obtain waterproof underlayment from single source from single manufacturer.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Stack panels flat with spacers beneath and between each bundle to provide air circulation. Protect sheathing from weather by covering with waterproof sheeting, securely anchored. Provide for air circulation around stacks and under coverings.

1.5 PROJECT CONDITIONS

A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit waterproof underlayment work to be performed according to manufacturer's written instructions and warranty requirements.

PART 2 - PRODUCTS

2.1 WOOD PANEL PRODUCTS

A. Plywood: See Structural General Notes.

B. Oriented Strand Board: Not allowed.

C. Thickness: As needed to comply with requirements specified, but not less than thickness indicated.

D. Factory mark panels to indicate compliance with applicable standard.

2.2 WALL SHEATHING

A. Plywood Wall Sheathing: See Structural General Notes.

B. Oriented-Strand-Board Wall Sheathing: Not allowed.

2.3 FASTENERS

A. General: Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture.

1. Provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M, unless indicated otherwise on the structural drawings.

B. Nails, Brads, and Staples: ASTM F 1667.

C. Power-Driven Fasteners: NES NER-272.

D. Wood Screws: ASME B18.6.1.

2.4 MISCELLANEOUS MATERIALS

A. Adhesives for Field Gluing Panels to Framing: Formulation complying with APA AFG-01 or ASTM D 3498 that is approved for use with type of construction panel indicated by manufacturers of both adhesives and panels.

1. Adhesives shall have a VOC content of 50 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Do not use materials with defects that impair quality of sheathing or pieces that are too small to use with minimum number of joints or optimum joint arrangement. Arrange joints so that pieces do not span between fewer than three support members.

B. Cut panels at penetrations, edges, and other obstructions of work; fit tightly against abutting construction unless otherwise indicated.

C. Securely attach to substrate by fastening as indicated, complying with the following:

1. NES NER-272 for power-driven fasteners.
2. Table 2304.9.1, "Fastening Schedule," in ICC's "International Building Code."

D. Use common wire nails unless otherwise indicated. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections. Install fasteners without splitting wood.

E. Coordinate wall sheathing installation with flashing and joint-sealant installation so these materials are installed in sequence and manner that prevent exterior moisture from passing through completed assembly.

F. Do not bridge building expansion joints; cut and space edges of panels to match spacing of structural support elements.

G. Coordinate sheathing installation with installation of materials installed over sheathing so sheathing is not exposed to precipitation or left exposed at end of the workday when rain is forecast.

3.2 WOOD STRUCTURAL PANEL INSTALLATION

A. General: Comply with applicable recommendations in APA Form No. E30, "Engineered Wood Construction Guide," for types of structural-use panels and applications indicated.

B. Fastening Methods: Fasten panels as indicated below:

1. Wall Sheathing:

a. Nail to wood framing.
b. Space panels 1/8 inch (3 mm) apart at edges and ends.
c. See Structural General Notes

END OF SECTION 06 16 00

SECTION 062013 - EXTERIOR FINISH CARPENTRY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Lumber for exterior tongue & groove wood siding.
2. Lumber for miscellaneous trim and nailers
3. Furring strips and accessories

B. Related Requirements:

1. Division 06 Section "Rough Carpentry" for furring, blocking, plywood sheathing and other carpentry work not exposed to view.
2. Division 07 Section "Weather Barriers" for waterproof underlayment to be installed under wood furring and wood siding specified under this section.
3. Division 09 Section “Painting” for preparation and finishing with stains and transparent finishes.

1.3 SUBMITTALS

A. Certification: Provide letter certifying source of reclaimed lumber.

B. Fabrication Samples

1.4 QUALITY ASSURANCE

A. Installer Qualifications: Installer shall be regularly engaged in installation of the systems specified, thoroughly familiar with materials and techniques, employing skilled workmen, and shall have not less than 5 years experience in installation of finish carpentry systems of a similar nature.

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

1. Build mockup of rain-screen system. Mockup shall use all of the specified materials and finishes, and shall demonstrate all joint systems specified or detailed. Include all corner transitions.
2. Mockup shall be at least 4 foot by 4 foot.

3. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

C. Pre-installation Conference: Conduct conference at Project site. Include samples of finished wood assemblies.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Stack lumber with spacers to provide sufficient air circulation. Protect materials from weather by covering with waterproof sheeting, securely anchored. Provide for air circulation around stacks and under coverings.

1.6 FIELD CONDITIONS

A. Weather Limitations: Proceed with installation only when existing and forecast weather conditions permit work to be performed and at least one coat of specified finish can be applied without exposure to rain, snow, or dampness.

B. Do not install finish carpentry materials that are wet, moisture damaged, or mold damaged. Wood moisture content: maximum 15% when using electronic moisture meter.

1. Indications that materials are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
2. Indications that materials are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

PART 2 - PRODUCTS

2.1 LUMBER

A. Wood Siding: Western Red Cedar, (Also noted on Drawings as “Cedar Siding”).

1. Style: Tongue and groove (T&G)
2. Thickness: ¾ Unless noted otherwise on Drawings
3. Widths: As indicated on Drawings

B. Dimensional Material / Trim / Nailers: Western Red Cedar

1. Style: Field Cut for each condition as indicated on Drawings
2. Finished sizes rough milled to for all applications as indicated on Drawings.

2.2 INSECT SCREENS

A. General: Fabricate insect screens to integrate with the wood siding system indicated on the drawings.

B. Aluminum Wire Fabric: 18-by-16 (1.1-by-1.3-mm) mesh of 0.011-inch- (0.28-mm-) diameter, coated aluminum wire.

1. Wire-Fabric Finish: As selected by the Architect from the manufacturer's full range of available colors.

2.3 MISCELLANEOUS MATERIALS

A. Fasteners for Exterior Finish Carpentry: Provide nails or screws, in sufficient length to penetrate not less than 1-1/2 inches (38 mm) into wood substrate.

1. For exterior siding, provide stainless-steel mechanical fasteners blind nailed as indicated on the drawings.

B. Flashing: Comply with requirements in Division 07 Section "Sheet Metal Flashing and Trim" for flashing materials installed in exterior finish carpentry.

C. Furring Strips: For use with wood siding.

1. 3/4" x 3/4" pressure-treated wood furring strips as indicated on Drawings.
2. Option: Cementitious fiberboard strips. Prime fiberboard surfaces.
3. Manufacturer / Product: "STURDI-BATTEN" as manufactured by Cor-a-Vent. (1-800-837-8368).

2.4 FABRICATION

A. Back out or kerf backs of standing and running trim wider than 5 inches (125 mm), except members with ends exposed in finished work.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance.

B. Examine finish carpentry materials before installation. Reject materials that are wet, moisture damaged, and mold damaged.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Clean substrates of projections and substances detrimental to application.

B. Wood Siding: Before proceeding with installation, confirm that waterproof underlayment has been fully installed, and has been inspected by the Owner's envelope inspector, and all required repairs have been made.

3.3 INSTALLATION, GENERAL

A. Do not use materials that are unsound, warped, improperly treated or finished, inadequately seasoned, or too small to fabricate with proper jointing arrangements.

1. Do not use units with defective surfaces, sizes, or patterns.

B. Install exterior finish carpentry level, plumb, true, and aligned with adjacent materials. Use concealed shims where necessary for alignment.

1. Scribe and cut exterior finish carpentry to fit adjoining work. Refinish and seal cuts as recommended by manufacturer.
2. Install to tolerance of 1/8 inch in 96 inches (3 mm in 2438 mm) for level and plumb. Install adjoining exterior finish carpentry with 1/32-inch (0.8-mm) maximum offset for flush installation and 1/16-inch (1.5-mm) maximum offset for reveal installation.
3. Coordinate exterior finish carpentry with materials and systems in or adjacent to it. Provide cutouts for mechanical and electrical items that penetrate exterior finish carpentry. Seal cutout prior to installation of mechanical item.

C. Fit exterior joints to exclude water. Cope at returns and miter at corners to produce tight-fitting joints with full-surface contact throughout length of joint. Plane backs of casings to provide uniform thickness across joints, where necessary for alignment.

D. Where face fastening is unavoidable, countersink fasteners, fill surface flush, and sand unless otherwise indicated.

3.4 WOOD SIDING INSTALLATION

A. Furring Strips: Mechanically fasten furring strips vertically as indicated on the drawings, and horizontally where shown, over the waterproof underlayment. Fasten through waterproof underlayment into studs or solid backing. Run furring continuously from top of wall to bottom of wall, as indicated on the drawings.

B. Insect Screen: Stretch in place to provide smooth, continuous barrier to prevent insects from entering the rain screen void. Mechanically fasten at each furring strip as indicated on the Drawings. Do not allow fasteners to penetrate more than the thickness of the furring strips. Coordinate with installation of drainage mat and waterproof underlayment specified in Division 7 Section "Weather Barriers".

C. Tongue and Groove Wood Siding: Mechanically fasten, blind nailed, at each wood board directionally as indicated on the Drawings.

1. Butt joints only over furring strips, fastening top and bottom on each side and staggering joints in subsequent courses, unless indicated otherwise on the drawings.
2. Install in random lengths, minimizing joints.

3.5 ADJUSTING

A. Replace exterior finish carpentry that is damaged or does not comply with requirements. Exterior finish carpentry may be repaired or refinished if work complies with requirements and shows no evidence of repair or refinishing. Adjust joinery for uniform appearance.

3.6 CLEANING

A. Clean exterior finish carpentry on exposed and semi-exposed surfaces. Touch up factory-applied finishes to restore damaged or soiled areas.

3.7 PROTECTION

A. Protect installed products from damage from weather and other causes during construction.

B. Remove and replace finish carpentry materials that are wet, moisture damaged, and mold damaged.

1. Indications that materials are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
2. Indications that materials are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

END OF SECTION 06 20 13

SECTION 062023 - INTERIOR FINISH CARPENTRY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Interior MDF trim.
2. Interior wood trim

B. Related Requirements:

1. Section 061000 "Rough Carpentry" for furring, blocking, and other carpentry work not exposed to view.
2. Section 092900 “Gypsum Board” for trim pieces used with MDO wainscot.
3. Section 099113 “Painting” for preparation and finishing.

1.3 DEFINITIONS

A. MDF: Medium-density fiberboard.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of process and factory-fabricated product. Indicate component materials, dimensions, profiles, textures, and colors.

B. Source Limitations: Obtain products from one source or producer.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Stack lumber, plywood, and other panels flat with spacers between each bundle to provide air circulation. Protect materials from weather by covering with waterproof sheeting, securely anchored. Provide for air circulation around stacks and under coverings.

B. Deliver interior finish carpentry materials only when environmental conditions meet requirements specified for installation areas. If interior finish carpentry materials must be stored in other than installation areas, store only where environmental conditions meet requirements specified for installation areas.

1.6 FIELD CONDITIONS

A. Environmental Limitations: Do not deliver or install interior finish carpentry materials until building is enclosed and weatherproof, wet work in space is completed and nominally dry, and HVAC system is operating and maintaining temperature and relative humidity at occupancy levels during the remainder of the construction period.

B. Do not install finish carpentry materials that are wet, moisture damaged, or mold damaged.

1. Indications that materials are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
2. Indications that materials are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

A. Hardboard: AHA A135.4.

B. MDF: ANSI A208.2, Grade 130, made with binder containing no urea-formaldehyde resin.

2.2 INTERIOR TRIM

A. Hardwood Lumber Trim for Transparent Finish (Stain or Clear Finish):

1. Species and Grade: Plain sliced Select White Maple, A Finish; NHLA. Use for all interior trim unless indicated otherwise on Drawings, and where noted as “hardwood.”
2. Maximum Moisture Content: 15 percent with at least 85 percent of shipment at 12 percent or less.
3. Finger Jointing: Not allowed.
4. Face Surface: Surfaced (smooth), unless indicated otherwise on Drawings.

2.3 BASE

A. Base for Opaque Finish:

1. Material: Primed MDF
2. Maximum Moisture Content: 15 percent with at least 85 percent of shipment at 12 percent or less.
3. Thickness: 3/4 inch, unless indicated otherwise on Drawings.

2.4 MISCELLANEOUS MATERIALS

A. Fasteners for Interior Finish Carpentry: Nails, screws, and other anchoring devices of type, size, material, and finish required for application indicated to provide secure attachment, concealed where possible.

B. Glue: Aliphatic-resin, polyurethane, or resorcinol wood glue recommended by manufacturer for general carpentry use.

1. Wood glue shall meet SCAQMD Rule 1168 requirements for interior adhesives.

C. Multipurpose Construction Adhesive: Formulation complying with ASTM D 3498 that is recommended for indicated use by adhesive manufacturer.

1. Adhesive shall meet SCAQMD Rule 1168 requirements for interior adhesives.

2.5 FABRICATION

A. Back out or kerf backs of the following members except those with ends exposed in finished work:

B. Ease edges of lumber less than 1 inch (25 mm) in nominal thickness to 1/16-inch (1.5-mm) radius and edges of lumber 1 inch (25 mm) or more in nominal thickness to 1/8-inch (3-mm) radius.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance.

B. Examine finish carpentry materials before installation. Reject materials that are wet, moisture damaged, and mold damaged.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Clean substrates of projections and substances detrimental to application.

B. Before installing interior finish carpentry, condition materials to average prevailing humidity in installation areas for a minimum of 24 hours.

3.3 INSTALLATION, GENERAL

A. Do not use materials that are unsound, warped, improperly treated or finished, inadequately seasoned, too small to fabricate with proper jointing arrangements, or with defective surfaces, sizes, or patterns.

B. Install interior finish carpentry level, plumb, true, and aligned with adjacent materials. Use concealed shims where necessary for alignment.

1. Scribe and cut interior finish carpentry to fit adjoining work. Refinish and seal cuts as recommended by manufacturer.
2. Where face fastening is unavoidable, countersink fasteners, fill surface flush, and sand unless otherwise indicated.
3. Install to tolerance of 1/8 inch in 96 inches (3 mm in 2438 mm) for level and plumb. Install adjoining interior finish carpentry with 1/32-inch (0.8-mm) maximum offset for flush installation and 1/16-inch (1.5-mm) maximum offset for reveal installation.
4. Coordinate interior finish carpentry with materials and systems in or adjacent to it. Provide cutouts for mechanical and electrical items that penetrate interior finish carpentry.

3.4 STANDING AND RUNNING TRIM INSTALLATION

A. Install with minimum number of joints practical, using full-length pieces from maximum lengths of lumber available. Do not use pieces less than 24 inches (610 mm) long, except where necessary. Stagger joints in adjacent and related standing and running trim. Cope at returns, miter at outside corners, and cope at inside corners to produce tight-fitting joints with full-surface contact throughout length of joint. Use scarf joints for end-to-end joints. Plane backs of casings to provide uniform thickness across joints where necessary for alignment.

1. Match color and grain pattern of trim for transparent finish (stain or clear finish) across joints.
2. Install trim after gypsum-board joint finishing operations are completed.
3. Install without splitting; drill pilot holes before fastening where necessary to prevent splitting. Fasten to prevent movement or warping. Countersink fastener heads on exposed carpentry work and fill holes.

3.5 ADJUSTING

A. Replace interior finish carpentry that is damaged or does not comply with requirements. Interior finish carpentry may be repaired or refinished if work complies with requirements and shows no evidence of repair or refinishing. Adjust joinery for uniform appearance.

3.6 CLEANING

A. Clean interior finish carpentry on exposed and semi-exposed surfaces. Restore damaged or soiled areas and touch up factory-applied finishes, if any.

3.7 PROTECTION

A. Protect installed products from damage from weather and other causes during construction.

B. Remove and replace finish carpentry materials that are wet, moisture damaged, and mold damaged.

1. Indications that materials are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
2. Indications that materials are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

END OF SECTION 06 20 23

SECTION 098433 - SOUND-ABSORBING WALL UNITS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes shop-fabricated, fabric-wrapped panel units tested for acoustical performance, including:

1. Sound-absorbing wall panels to replace existing acoustic panels in Council Chambers

B. Related Sections:

1. Division 02 Section “Selective Demolition” for removal of existing acoustic panels

1.3 DEFINITIONS

A. NRC: Noise Reduction Coefficient.

B. SAA: Sound Absorption Average.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of fabric facing, panel edge, core material, and mounting indicated.

1.5 CLOSEOUT SUBMITTALS

A. Maintenance Data: For sound-absorbing wall units to include in maintenance manuals. Include fabric manufacturers' written cleaning and stain-removal recommendations.

1.6 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials from same production run that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Fabric: For each fabric, color, and pattern installed, provide length equal to 10 percent of amount installed, but no fewer than 10 yards (9 m).
2. Mounting Devices: Full-size units equal to 5 percent of amount installed, but no fewer than 5 devices, including unopened adhesives.

1.7 QUALITY ASSURANCE

A. Source Limitations: Obtain sound-absorbing wall units from single source from single manufacturer.

B. Fire-Test-Response Characteristics: Provide sound-absorbing wall units meeting the following as determined by testing identical products by UL or another testing and inspecting agency acceptable to authorities having jurisdiction:

1. Surface-Burning Characteristics: As determined by testing per ASTM E 84.

a. Flame-Spread Index: 25 or less.
b. Smoke-Developed Index: 450 or less.

1.8 DELIVERY, STORAGE, AND HANDLING

A. Comply with fabric and sound-absorbing wall unit manufacturers' written instructions for minimum and maximum temperature and humidity requirements for shipment, storage, and handling.

B. Deliver materials and units in unopened bundles and store in a temperature-controlled dry place with adequate air circulation.

1.9 PROJECT CONDITIONS

A. Environmental Limitations: Do not install sound-absorbing wall units until spaces are enclosed and weathertight, wet work in spaces is complete and dry, work at and above ceilings is complete, and ambient temperature and humidity conditions are maintained at the levels indicated for Project when occupied for its intended use.

B. Air-Quality Limitations: Protect sound-absorbing wall units from exposure to airborne odors, such as tobacco smoke, and install units under conditions free from odor contamination of ambient air.

C. Field Measurements: Verify locations of sound-absorbing wall units and actual dimensions of openings and penetrations by field measurements before fabrication.

1.10 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of sound-absorbing wall units that fail in materials or workmanship within specified warranty period.

1. Failures include, but are not limited to the following:

a. Acoustical performance.
b. Fabric sagging, distorting, or releasing from panel edge.
c. Warping of core.

2. Warranty Period: Two years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 SOUND-ABSORBING WALL UNITS

A. Basis-of-Design Product: Subject to compliance with requirements, provide F-Sorb (www.f-sorb.com); Acoustical Panel System, or an equal and comparable product by one of the following:

1. Or approved substitute during the bid process per Specification Sections 002113 and 012500.

B. Sound-Absorbing Panel (AKA "Acoustic Wall Panels"): Manufacturer's standard panel construction consisting of 70 percent post-consumer polyester-fiber which is 100 percent recyclable, hypoallergenic, dust and formaldehyde free, and causes no skin irritation or respiratory problems and contains no VOC's, binders or chemicals.

1. Rating: Class A Fire Rated per ASTM E-84
2. NRC Surface Mounted Type A Mounting per ASTM C423. 1 inch thick, with NRC of 0.75.
3. Density: 6.0 pound.
4. Panel Thickness: 1 inch.
5. Panel Size: As indicated on the drawings.
6. Sustainability: Greenguard compliant.

C. Facing Material – Fabric Wrapped Panels: Where indicated on Drawings, provide panels with fabric wrap.

1. Fabric shall be Guilford of Maine; Anchorage 2335, or similar product to match existing acoustic panel fabric.
2. Recycled Content: 35 percent post-consumer recycled polyester, 65 percent pre-consumer recycled polyester.
3. Width: 66 inches.
4. Weight: 15 oz./lin. yd.
5. Color: Match existing, or similar color as approved by Owner.

D. Mounting: Mechanically fastened to substrate with concealed fasteners.

2.2 FABRICATION

A. General: Use manufacturer's standard construction except as otherwise indicated; with facing material applied to face, edges, and back border of dimensionally stable core; and with rigid edges to reinforce panel perimeter against warpage and damage.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine fabric, fabricated units, substrates, areas, and conditions, for compliance with requirements, installation tolerances, and other conditions affecting performance of sound-absorbing wall units.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Install sound-absorbing wall units in locations indicated with vertical surfaces and edges plumb, top edges level and in alignment with other units, faces flush, and scribed to fit adjoining work accurately at borders and at penetrations.

B. Comply with sound-absorbing wall unit manufacturer's written instructions for installation of units using type of mounting devices indicated. Mount units securely to supporting substrate.

C. Align and level fabric pattern and grain among adjacent units.

3.3 INSTALLATION TOLERANCES

A. Variation from Plumb and Level: Plus or minus 1/16 inch (1.6 mm).

3.4 CLEANING

A. Clip loose threads; remove pills and extraneous materials.

B. Clean panels on completion of installation to remove dust and other foreign materials according to manufacturer's written instructions.

END OF SECTION 09 84 33

SECTION 072100 - THERMAL INSULATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Spray Foam Insulation
2. Glass-fiber blanket insulation.
3. Vapor retarders.
4. Insulation retainer systems.

B. Related Sections:

1. Division 6 Section “Rough Carpentry”

1.3 ACTION SUBMITTALS

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

1.4 INFORMATIONAL SUBMITTALS

A. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for each product.

B. Research/Evaluation Reports: For foam-plastic insulation, from ICC-ES.

1.5 QUALITY ASSURANCE

A. Surface-Burning Characteristics: As determined by testing identical products according to ASTM E 84 by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

B. Source Limitation: Obtain each type of building insulation through one source from a single manufacturer.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Protect insulation materials from physical damage and from deterioration due to moisture, soiling, and other sources. Store inside and in a dry location. Comply with manufacturer's written instructions for handling, storing, and protecting during installation.

PART 2 - PRODUCTS

2.1 GLASS-FIBER BLANKET INSULATION

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

1. CertainTeed Corporation.
2. Guardian Building Products, Inc.
3. Johns Manville.
4. Knauf Insulation.
5. Owens Corning.

B. Unfaced, Glass-Fiber Blanket Insulation: ASTM C 665, Type I; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively, per ASTM E 84; passing ASTM E 136 for combustion characteristics.

1. Mineral-Fiber Type: Provide as specified in this paragraph, except provide from slag or rock wool where required by code.
2. Stud cavity size: For 3 ½ and 4 inch stud walls, provide R-13 as indicated below. For 6 inch and larger stud walls, provide R-19 as indicated below.

2.2 SPRAY-FOAM INSULATION

A. Type: Injection foam, closed-cell, polyurethane insulation, with non-Chlorofluorocarbon (Non-CFC) blowing agent.

B. Manufacturers: FOAM-TECH “SUPERGREEN FOAM”, a division of Building Envelope Solutions, Inc, 802-333-4333, or approved substitution per instructions to Proposers and Division 01 “Product Requirements.”

1. No added urea-formaldehyde.

C. Thermal Performance:

1. R-Value: Minimum R-6 per inch.

2.3 VAPOR RETARDERS

A. Reinforced-Polyethylene Vapor Retarders: Two outer layers of polyethylene film laminated to an inner reinforcing layer consisting of either nylon cord or polyester scrim and weighing not

less than 25 lb/1000 sq. ft. (12 kg/100 sq. m), with maximum permeance rating of 0.0507 perm (2.9 ng/Pa x s x sq. m).

1. Products: Subject to compliance with requirements, provide one of the following:

   a. Raven Industries Inc.; DURA-SKRIM 6WW.
   b. Reef Industries, Inc.; Griffolyn T-65.

2. Locations for Use: For general use at all locations requiring a vapor retarder (barrier), except where other types of vapor retarders are specified herein or where another type is required to meet code.

B. Fire-Retardant, Reinforced-Polyethylene Vapor Retarders: Two outer layers of polyethylene film laminated to an inner reinforcing layer consisting of either nonwoven grid of nylon cord or polyester scrim and weighing not less than 22 lb/1000 sq. ft. (10 kg/100 sq. m), with maximum permeance rating of 0.1317 perm (7.56 ng/Pa x s x sq. m) and with flame-spread and smoke-developed indexes of not more than 5 and 60, respectively, per ASTM E 84.

1. Products: Subject to compliance with requirements, provide one of the following:

   a. Raven Industries Inc.; DURA-SKRIM 2FR.
   b. Reef Industries, Inc.; Griffolyn T-55 FR.
   c. Or approved substitution per instructions to Bidders and Division 01 “Substitution Procedures.”
   d. Locations for Use: For use where required by code, and at all areas where insulation and vapor retarder are not fully concealed in building construction, including those areas exposed to an attic.

C. Vapor-Retarder Tape: Pressure-sensitive tape of type recommended by vapor-retarder manufacturer for sealing joints and penetrations in vapor retarder.

D. Vapor-Retarder Fasteners: Pancake-head, self-tapping steel drill screws; with fender washers.

E. Single-Component Nonsag Urethane Sealant: ASTM C 920, Type I, Grade NS, Class 25, Use NT related to exposure, and Use O related to vapor-barrier-related substrates.

F. Adhesive for Vapor Retarders: Product recommended by vapor-retarder manufacturer and has demonstrated capability to bond vapor retarders securely to substrates indicated.

G. Fasteners and Other Insulation Retainage Systems: Provide as indicated on the drawings, or as otherwise required to provide a complete and proper insulation system, and as recommended by the insulation manufacturer for the application of each insulation type.

2.4 INSULATION RETAINAGE SYSTEM

A. General: Provide insulation fasteners as specified herein, and as required to fully and properly complete the insulation installation specified, and illustrated on the drawings whether specified herein or not. Install in compliance with the manufacturer’s recommendations.

B. Insulation Furring:

1. Metal Furring or Clips: For application to concrete and masonry wall, furnish similar and equal to U.S. Gypsum Corp. "Z-Furring Channels" of 20 Gauge hot-dipped galvanized steel, together with appropriate "C's", "L's", "J's", and other roll formed shapes as required for floor and ceiling runners and at insulation perimeters and around openings, installed horizontally and spaced at 16" o.c. and at ends of insulation. Attach with power-driven fasteners spaced near ends and not over 16 inches on center between.
2. Locations for Use: As indicated on the Drawings.

PART 3 - EXECUTION

3.1 PREPARATION

A. Clean substrates of substances that are harmful to insulation or vapor retarders, including removing projections capable of puncturing vapor retarders, or that interfere with insulation attachment.

3.2 INSTALLATION, GENERAL

A. Comply with insulation manufacturer's written instructions applicable to products and applications indicated.

B. Comply with Washington State Non-Residential Energy Code for Building Envelope Sealing.

C. Install insulation that is undamaged, dry, and unsoiled and that has not been left exposed to ice, rain, or snow at any time.

D. Extend insulation to envelop entire area to be insulated. Cut and fit tightly around obstructions and fill voids with insulation. Remove projections that interfere with placement.

E. Provide sizes to fit applications indicated and selected from manufacturer's standard thicknesses, widths, and lengths. Apply single layer of insulation units to produce thickness indicated unless multiple layers are otherwise shown or required to make up total thickness.

3.3 INSTALLATION OF BELOW-GRADE INSULATION

A. On vertical surfaces, set insulation units using manufacturer's recommended adhesive according to manufacturer's written instructions.

1. If not otherwise indicated, extend insulation a minimum of 18 inches below exterior grade line, or to depth of local frost depth, whatever is greater, unless detailed otherwise.

B. On horizontal surfaces, loosely lay insulation units according to manufacturer's written instructions. Stagger end joints and tightly abut insulation units.

1. If not otherwise indicated, extend insulation a minimum of 24 inches (610 mm) in from exterior walls.

3.4 INSTALLATION OF INSULATION FOR FRAMED CONSTRUCTION

A. Apply insulation units to substrates by method indicated, complying with manufacturer's written instructions. If no specific method is indicated, bond units to substrate with adhesive or use mechanical anchorage to provide permanent placement and support of units.

B. Glass-Fiber or Mineral-Wool Blanket Insulation: Install in cavities formed by framing members according to the following requirements:

1. Use insulation widths and lengths that fill the cavities formed by framing members. If more than one length is required to fill the cavities, provide lengths that will produce a snug fit between ends.
2. Place insulation in cavities formed by framing members to produce a friction fit between edges of insulation and adjoining framing members.
3. Maintain 3-inch (76-mm) clearance of insulation around recessed lighting fixtures not rated for or protected from contact with insulation.
4. For metal-framed wall cavities where cavity heights exceed 96 inches (2438 mm), support unfaced blankets mechanically and support faced blankets by taping flanges of insulation to flanges of metal studs.

C. Miscellaneous Voids: Install insulation in miscellaneous voids and cavity spaces where required to prevent gaps in insulation using the following materials:

1. Loose-Fill Insulation: Compact to approximately 40 percent of normal maximum volume equaling a density of approximately 2.5 lb/cu. ft. (40 kg/cu. m).
2. Spray Polyurethane Insulation: Apply according to manufacturer's written instructions.
3. Fill all voids in exterior envelope framing with mineral-fiber insulation or spray foam insulation (which meets requirements of agency having jurisdiction), including stud wall headers, jamb stud cavities, and like spaces.

3.5 INSTALLATION OF SPRAY-FOAM INSULATION

A. Install spray-foam insulation complying with manufacturer's written instructions. Install at all locations shown on drawings and all location in exterior envelope where primary envelope insulation system does not fill all voids and gaps, including but not limited to jambs and heads at wall openings, exterior side of wide flange beams, etc. Install in lieu of other types of insulation materials if the construction schedule does not allow for the prevention of water or moisture damage of the originally specified insulation material.

3.6 INSTALLATION OF VAPOR RETARDERS

A. Vapor barrier shall be applied to the warm side of all mineral-fiber insulation at the exterior building envelope. Extend vapor retarders to extremities of areas to protect from vapor transmission. Secure vapor retarders in place with adhesives or other anchorage system as indicated. Extend vapor retarders to cover miscellaneous voids in insulated substrates, including those filled with loose-fiber insulation and spray foam insulation.

B. Seal vertical joints in vapor retarders over framing by lapping no fewer than two studs.

1. Before installing vapor retarders, apply urethane sealant to flanges of metal framing including runner tracks, metal studs, and framing around door and window openings. Seal overlapping joints in vapor retarders with vapor-retarder tape according to vapor-retarder manufacturer's written instructions. Seal butt joints with vapor-retarder tape. Locate all joints over framing members or other solid substrates.
2. Firmly attach vapor retarders to metal framing and solid substrates with vapor-retarder fasteners as recommended by vapor-retarder manufacturer.

C. Seal joints caused by pipes, conduits, electrical boxes, and similar items penetrating vapor retarders with vapor-retarder tape to create an airtight seal between penetrating objects and vapor retarders.

D. Repair tears or punctures in vapor retarders immediately before concealment by other work. Cover with vapor-retarder tape or another layer of vapor retarders.

3.7 PROTECTION

A. Protect installed insulation and vapor retarders from damage due to harmful weather exposures, physical abuse, and other causes. Provide temporary coverings or enclosures where insulation is subject to abuse and cannot be concealed and protected by permanent construction immediately after installation.

END OF SECTION 07 21 00

SECTION 072500 - WEATHER BARRIERS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Water Resistant Barrier “WRB”
2. Rain Screen and other Accessories

B. Related Requirements:

1. Division 06 Section "Sheathing" for sheathing joint and penetration treatment.
2. Division 06 Section “Exterior Finish Carpentry” for coordination with siding system including underlayment.
3. Division 07 Section “Siding” for coordination with siding system.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Submit manufacturer’s literature for each type of element in the weather resistive barrier system, accessory components, self-adhered membranes materials, related sealants, rain-screen furring systems, sealing tapes and fastening systems.
2. For flexible flashing and waterproof underlayment products.

B. Provide proof of compatibility between flexible flashing products and sealants and between building wrap and other products.

C. Samples:

1. Building Wrap: Three 8-1/2 x 11 inch samples of sheet, samples of tapes, wall opening specialties, and fasteners.
2. Flexible Flashing and Waterproof Underlayment: Three 8-1/2 x 11 inch samples of each sheet, of each type of underlayment and flashing specified.

D. Installation Instructions: Provide manufacturer’s printed installation instruction for each product specified in this Section.

1.4 INFORMATIONAL SUBMITTALS

A. Evaluation Reports: For water-resistive and weather-resistive barrier and flexible flashing, from ICC-ES.

1.5 WRRANTY

A. Warrant material to be free of defects and replace any found to be defective at no cost to the Owner.

B. Special Warrantee:

1. Weather barrier manufacturer's warranty for weather barrier for a period of ten (10) years from date of purchase.
2. Pre-installation meetings and jobsite observations by weather barrier manufacturer for warranty is required prior to assembly installation.

1.6 QUALITY ASSURANCE

Mockups: Build mockups to demonstrate compliance with specified standards and requirements, and to demonstrate compliance with air barrier requirements. Build mockup of wall assembly including each wall component specified in this section to illustrate specified installation procedures, requirements, and quality of workmanship. Mock-ups shall remain available for review throughout construction period.

A. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination."

B. Source Limitations: Obtain all materials for each product type from one source or producer.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials in manufacturer’s original, unopened containers or package wrapping with labels intact and legible.

B. Store materials protected against damage from weather, direct sunlight, surface contamination, corrosion, construction traffic, or other causes. Stack sheathing flat on leveled supports off the ground, under cover, and fully protected from weather.

C. Store rolls of building wrap and waterproof underlayment under cover, on a clean, level surface, either flat or upright.

PART 2 - PRODUCTS

2.1 WEATHER-RESISTIVE BARRIER / AIR BARRIER

A. Weather-Resistant Barrier (“WRB”): Primary self-adhered air barrier sheet membrane.

B. Basis of Design: Subject to compliance with requirements, provide DuPont™ Tyvek® CommercialWrap® D with product related components or comparable product by one of the following:

1. Wrapshield SA; with related liquid applied membranes and Butyl Self Adhered Membranes, as manufactured by VaproShield, Inc.
2. WeatherSmart Commercial; with related Butyl Self Adhered Membranes, as manufactured by Fortifiber Building Systems Group.
3. Hardie Wrap Weather Barrier; with related Butyl Self Adhered Membranes, as manufactured by James Hardie Corporation.
4. Or approved substitution per Sections 002113 and 01 25 00

C. Performance Characteristics

1. Air Penetration: 0.001 cfm/ft^2 at 75 Pa when tested in accordance with ASTME2178. Type 1 when tested in accordance with ASTM E 1677. ≤0.04 cfm/ft @ 75 Pa when tested in accordance with ASTM E2357.
2. Water Vapor Transmission: 30 perms, when tested in accordance with ASTM E 96, Method B.
3. Water Penetration Resistance: 235 cm when tested in accordance with AATCC Test Method 127.
4. Basis Weight: 2.4 oz/yd^2, when tested in accordance with TAPPI Test Method T-410.
5. Air Infiltration Resistance: Air infiltration at >750 seconds, when tested in accordance with TAPPI Test Method T-460.
6. Tensile Strength: 33/41 lbs/in., when tested in accordance with ASTM D 822, Method A.
7. Surface Burning Characteristics: Class A, when tested in accordance with ASTM E 84. Flame Spread: 15, Smoke Developed: 25.

D. Basis of Design Tape, Fasteners and Sealants:

1. 3” DuPont™ Tyvek® Tape, as distributed by DuPont
2. Fasteners:

a. Wood Frame Construction: DuPont Tyvek Wrap Caps consisting of #4 nails with large 1” plastic cap fasteners or 1” minimum plastic cap staple with leg length sufficient to achieve minimum penetration of 5/8” into wood.

3. Sealants: Provide sealants as indicated in 07 92 00

2.2 SELF ADHERED MEMBRANES (SAM)

A. Locations: Including but not limited to: Window wrap details; flashings and floor line applications; beneath and over sheet metal copings; parapet cap flashings; where fasteners are penetrating membrane; corners; over and around any penetration through weather resistive barrier; and other locations shown on the project details and described herein.

B. Basis of Design Products:

1. DuPont™ FlexWrap™ NF: Flexible membrane materials for window and door sill flashings at back dams, all other openings and penetrations.

2. DuPont™ StraightFlash™: Straight membrane materials for flashing windows and doors and sealing penetrations.
3. DuPont™ StraightFlash™ VF: Dual-sided flashing membrane materials for brick mold and non-flanged windows and doors.
4. DuPont™ Thru-Wall Surface Adhered Membrane with Integrated Drip Edge: Thru-Wall flashing membrane materials for flashing at changes in direction or elevation (shelf angles, foundations, etc.) and at transitions between different assembly materials.
5. Primers: Primer is required prior to setting Self Adhered Membranes. Following are acceptable products for submittal:

    a. 3M High Strength 90
    b. Denso Butyl Spray

6. Sealants: Dow Corning 758
7. Or approved substitution per Sections 002113 and 012500.

2.3 RAIN-SCREEN FURRING

A. Provide rain-screen furring and fasteners in exterior wall assemblies as indicated on drawings and herein. Final product selection and locations shall be determined after review and approval of mock-ups by Owner, Architect and Building Enclosure Consultant. Corrosion resistant fasteners shall be approved by Building Enclosure consultant. Capacity of fasteners and furring strips shall be confirmed by structural engineer prior to installation. Following is a list of relevant materials:

1. Pressure Treated Plywood Furring Strips: 3/4” thick by 3” wide pressure treated furring strips in depths as approved by Building enclosure consultant. Provide fasteners for ACQ compatibility.
2. At Hardie Reveal 7/16” thick panels provide a Butyl SAM or EPDM spacer over the furring strip prior to setting the panels.

2.4 MISCELLANEOUS MATERIALS

A. Primer for Flexible Flashing: Product recommended by manufacturer of flexible flashing, fluid applied weather barrier and waterproof underlayment for substrate.

B. Nails and Staples: ASTM F 1667.

C. Mechanical Fasteners: Stainless steel or galvanized steel of the type and size recommended by the building wrap manufacturer for attachment of building wrap to metal stud framing or backing.

PART 3 - EXECUTION

3.1 PREPARATION

A. Coordinate as required with the other trades to assure proper and adequate provision in the work of those trades for interface with the work of this section.

3.2 WEATHER RESISTIVE BARRIER (WRB)

A. Install weather barrier over exterior face of exterior wall substrate in accordance with manufacturer recommendations.

B. Install weather barrier in a horizontal manner starting at the lower portion of the wall surface with subsequent layers installed in a shingling manner to overlap lower layers. Maintain weather barrier plumb and level.

C. Weather Barrier Attachment:

1. Attach weather barrier to studs through exterior sheathing. Secure using weather barrier manufacturer recommend fasteners, space 6 -18 inches vertically on center along stud line, and 24 inch on center, maximum horizontally.

D. Weather Barrier Overlap:

1. Overlap barrier at corners of building by a minimum of 12 inches.
2. Overlap barrier vertical seams by a minimum of 6 inches.

E. Overlap horizontal seams by a minimum of 4” and arrange with upper sheets lapping over the lower sheet to shed water.

F. Sill Plate Interface: Extend lower edge of weather barrier over sill plate interface 3-6 inches. Secure to foundation with elastomeric sealant as recommended by weather barrier manufacturer.

G. Ensure barrier is plum and level with foundation, and unroll extending barrier over window and door openings.

H. Apply 4 inch by 7 inch piece of DuPont ™, StraightFlash™, or weather barrier manufacturer approved alternate to weather barrier membrane prior to the installation cladding anchors.

I. Refer to details for rough opening preparation.

J. Install materials in accordance with manufacturer’s written guidelines and recommendations.

K. Tape and seal all joints to provide a continuous air/moisture barrier.

L. Follow the specific requirements for lapping and integration with flashings described in the details.

M. Ensure that lapping rules have been followed at penetration and at intersections with membrane and sheet metal flashings.

N. Fully form all inside corners to prevent tenting.

O. Tape or provide sealant at all overlaps to provide continuous barrier.

P. WRB terminations:

1. Unless shown or approved otherwise, termination of WRB at roof membranes requires a 4-inch wide self-adhesive membrane transition strip.

2. The transition strip is applied to the roof membrane (after granule suppression) and lapped 2 inches onto the substrate.
3. At lower terminations, WRB is lapped onto the self-adhered membrane and taped or caulked.

3.3 SELF-ADHERED MEMBRANE

A. Apply self-adhesive flashing as indicated on the details.

B. Install self-adhering flexible flashing according to waterproofing manufacturer's written instructions, including the use of primer and recommended accessories, methods and details for a complete waterproof system.

C. Apply primer to substrate. Apply at required rate and allow drying time.

D. Apply and firmly self-adhere sheet membrane with hand roller over area to receive waterproofing with no fish mouths, air pockets and/or blisters.

E. Accurately align sheets and maintain uniform minimum lap widths, end laps and stagger laps per manufacturer's recommendations to ensure watertight installation.

F. Apply sealant to all exposed leading edges of self-adhered membrane.

G. Re-prime surfaces where membrane is not attached on same day as primer.

3.4 REPAIR

A. In membrane flashing not meeting requirements, repair tears, voids and lapped seams as required by manufacturer's written instructions.

B. Slit and flatten fish mouths, air pockets and blisters. Cut out and replace such areas and replace and/or cover with tooled mastic sealant – as recommended by Building Enclosure Consultant.

C. Where required, patch with membrane extending 6 inches beyond repaired areas in all directions.

3.5 FIELD QUALITY CONTROL

A. Notify manufacturer's designated representative to obtain periodic observations of weather barrier assembly installation.

3.6 PROTECTION

A. Protect waterproofing from damage and wear during application and remainder of construction

END OF SECTION 07 25 00

SECTION 074213 - METAL WALL PANELS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. This Section includes factory-formed and field-assembled, concealed-fastener, standing seam wall panels. All metal siding shown on drawings shall be as specified in this Section.

B. Related Sections include the following:

1. Division 7 Section Weather Barriers for weather-proofing behind metal panels
2. Division 7 Section "Sheet Metal Flashing and Trim" for flashings and other sheet metal work not part of metal wall panel assemblies.
3. Division 7 Section "Joint Sealants" for field-applied sealants not otherwise specified in this Section.

1.3 DEFINITION

A. Metal Wall Panel Assembly: Metal wall panels, attachment system components, miscellaneous metal framing, thermal insulation, and accessories necessary for a complete weathertight system.

1.4 PERFORMANCE REQUIREMENTS

A. General: Provide metal wall panel assemblies that comply with performance requirements specified as determined by testing manufacturers' standard assemblies similar to those indicated for this Project, by a qualified testing and inspecting agency.

B. Air Infiltration: Panel (without insulation) to meet the following standard when tested in accordance with ASTM E-1680-95:

1. With side-lap sealant <0.02 cfm/lineal foot of panel seam at 1.57 psf positive pressure, and 0.06 cfm/lineal foot of panel seam at 1.57 psf negative pressure.

C. Water Penetration: Panel to meet the following standard when tested in accordance with ASTM E-1646-95:

1. With side-lap sealant, no leakage at 6.24 psf.

D. Structural Performance: Provide metal wall panel assemblies capable of withstanding the effects of gravity loads and the following loads and stresses within limits and under conditions indicated, based on testing according to ASTM E 330:

1. Wind Loads: Determine loads based on the following minimum design wind pressures:

a. Uniform pressure as indicated on Drawings.

E. Seismic Performance: Provide metal wall panel assemblies capable of withstanding the effects of earthquake motions determined according to ASCE 7, "Minimum Design Loads for Buildings and Other Structures": Section 9, "Earthquake Loads.".

F. Thermal Movements: Provide metal wall panel assemblies that allow for thermal movements resulting from the following maximum change (range) in ambient and surface temperatures by preventing buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Base engineering calculation on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.

1. Temperature Change (Range): 120 deg F (67 deg C), ambient; 180 deg F (100 deg C), material surfaces.

1.5 SUBMITTALS

A. General: Coordinate submittals for metal roofing, metal soffits, metal siding, and metal flashing.

B. Product Data: Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each type of metal wall panel and accessory.

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

1. Accessories: Include details of flashing and trim items, at a scale of not less than 1-1/2 inches per 12 inches.
2. For installed products indicated to comply with design loads, include structural analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

D. Coordination Drawings: Exterior elevations drawn to scale and coordinating penetrations and wall-mounted items. Show the following:

1. Wall panels and attachments.
2. Stud framing and backing.
3. Wall-mounted items including doors, windows, louvers, lighting fixtures. And all other wall mounted items.

E. Samples for Initial Selection: For each type of metal wall panel indicated with factory-applied color finishes.

1. Include similar Samples of trim and accessories involving color selection.
2. Include manufacturer's color charts consisting of strips of cured sealants showing the full range of colors available for each sealant exposed to view.

F. Samples for Verification: For each type of exposed finish required, prepared on Samples of size indicated below.

1. Metal Wall Panels: 12 inches (300 mm) long by actual panel width. Include fasteners, closures, and other metal wall panel accessories.
2. Accessories: 12-inch- (300-mm-) long Samples for each type of accessory.
3. Exposed Gaskets: 12 inches (300 mm) long.
4. Exposed Sealants: For each type and color of joint sealant required. Install joint sealants in 1/2-inch- (13-mm-) wide joints formed between two 6-inch- (150-mm-) long strips of material matching the appearance of metal wall panels adjacent to joint sealants.

G. Qualification Data: For Installer and professional engineer.

H. Compatibility and Adhesion Test Reports: From sealant manufacturer indicating the following:

1. Materials forming joint substrates and joint sealant backings have been tested for compatibility and adhesion with joint sealants.
2. Interpretation of test results and written recommendations for primers and substrate preparation needed for adhesion.

I. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for the following:

1. Metal Wall Panels: Include reports for air infiltration, water penetration, thermal performance, and structural performance.

J. Maintenance Data: For metal wall panels to include in maintenance manuals.

1.6 QUALITY ASSURANCE

A. Installer Qualifications: Same as required for Division 7 Section “Metal Roof Panels”.

B. Source Limitations: Obtain each type of metal wall panel through one source from a single manufacturer. Manufacturer shall be the same as specified in Division 7 Section “Metal Roof Panels”.

C. Product Options: Drawings indicate size, profiles, and dimensional requirements of metal wall panels and are based on the specific system indicated. Refer to Division 1 Section "Product Requirements."

1. Do not modify intended aesthetic effects, as judged solely by Architect, except with Architect's approval. If modifications are proposed, submit comprehensive explanatory data to Architect for review.

D. Mockups: Build mockups to verify selections made under sample Submittals and to demonstrate aesthetic effects and qualities of materials and execution.

1. Building mockup of typical corner wall panel for each type of wall panel**,** approximately 48 inches (1200 mm) square by full thickness, including insulation, supports, attachments, and accessories.
2. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless such deviations are specifically approved by Architect in writing.
3. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

E. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination." Review methods and procedures related to metal wall panel assemblies including, but not limited to, the following:

1. Meet with Owner, Architect, Owner's insurer if applicable, testing and inspecting agency representative, metal wall panel Installer, metal wall panel manufacturer's representative, structural-support Installer, and installers whose work interfaces with or affects metal wall panels including installers of doors, windows, and louvers.
2. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
3. Review methods and procedures related to metal wall panel installation, including manufacturer's written instructions.
4. Examine support conditions for compliance with requirements, including alignment between and attachment to structural members.
5. Review flashings, special siding details, wall penetrations, openings, and condition of other construction that will affect metal wall panels.
6. Review temporary protection requirements for metal wall panel assembly during and after installation.
7. Review wall panel observation and repair procedures after metal wall panel installation.
8. Document proceedings, including corrective measures and actions required, and furnish copy of record to each participant.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Deliver components, sheets, metal wall panels, and other manufactured items so as not to be damaged or deformed. Package metal wall panels for protection during transportation and handling.

B. Unload, store, and erect metal wall panels in a manner to prevent bending, warping, twisting, and surface damage.

C. Stack metal wall panels horizontally on platforms or pallets, covered with suitable weathertight and ventilated covering. Store metal wall panels to ensure dryness, with positive slope for drainage of water. Do not store metal wall panels in contact with other materials that might cause staining, denting, or other surface damage.

D. Protect strippable protective covering on metal wall panels from exposure to sunlight and high humidity, except to extent necessary for period of metal wall panel installation.

1.8 PROJECT CONDITIONS

A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit assembly of metal wall panels to be performed according to manufacturers' written instructions and warranty requirements.

B. Field Measurements: Verify locations of structural members and wall opening dimensions by field measurements before metal wall panel fabrication and indicate measurements on Shop Drawings.

1. Established Dimensions: Where field measurements cannot be made without delaying the Work, either establish framing and opening dimensions and proceed with fabricating metal wall panels without field measurements, or allow for field trimming of panels. Coordinate wall construction to ensure that actual building dimensions, locations of structural members, and openings correspond to established dimensions.

1.9 COORDINATION

A. Coordinate metal wall panel assemblies with rain drainage work, flashing, trim, and construction of studs, soffits, and other adjoining work to provide a leakproof, secure, and noncorrosive installation.

1.10 WARRANTY

A. Special Installer's Warranty: Siding Installer's warranty, on warranty form at end of this Section, signed by Siding Installer, in which Siding Installer agrees to repair or replace components of custom-fabricated sheet metal siding that fail in materials or workmanship within specified warranty period.

1. Failures include, but are not limited to, the following:

a. Structural failures.
b. Loose parts.
c. Wrinkling or buckling.
d. Failure to remain weathertight, including uncontrolled water leakage.
e. Galvanic action between sheet metal siding and dissimilar materials.

2. Warranty Period: Five (5) years from date of Substantial Completion.

B. Special Warranty on Panel Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace metal roof panels that show evidence of deterioration of factory-applied finishes within specified warranty period.

1. Fluoropolymer Finish: Deterioration includes, but is not limited to, the following:

a. Color fading more than 5 Hunter units when tested according to ASTM D 2244.
b. Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.
c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.

2. Finish Warranty Period: Twenty (20) years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PANEL MATERIALS

A. Metallic-Coated Steel Sheet Prepainted with Coil Coating: Steel sheet metallic coated by the hot-dip process and prepainted by the coil-coating process to comply with ASTM A 755/A 755M.

1. Aluminum-Zinc Alloy-Coated Steel Sheet: ASTM A 792/A 792M, Class AZ50 coating designation, Grade 40 (Class AZM150 coating designation, Grade 275); structural quality.
2. Surface: Smooth, flat finish.
3. Exposed Finishes: Apply the following coil coating, as specified or indicated on Drawings.

    a. High-Performance Organic Finish: Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.

        1) Fluoropolymer Two-Coat System: Manufacturer's standard two-coat, thermocured system consisting of specially formulated 0.2 MIL inhibitive primer and 0.8 MIL fluoropolymer color topcoat for a total of 1.0 MIL containing not less than 70 percent polyvinylidene fluoride resin by weight; complying with physical properties and coating performance requirements of ASTM, except as modified below:

            a) Humidity Resistance: 1500 hours.
            b) Salt-Spray Resistance: 2000 hours.

4. Concealed Finish: Apply pretreatment and manufacturer's standard white or light-colored acrylic or polyester backer finish, consisting of prime coat and wash coat with a minimum total dry film thickness of 0.5 mil (0.013 mm).

B. Panel Sealants: Use manufacturer’s standard product.

1. Sealant Tape: Pressure-sensitive, 100 percent solids, gray polyisobutylene compound sealant tape with release-paper backing. Provide permanently elastic, nonsag, nontoxic, nonstaining tape 1/2 inch (13 mm) wide and 1/8 inch (3 mm) thick.
2. Joint Sealant: ASTM C 920; elastomeric polyurethane, polysulfide, or silicone sealant; of type, grade, class, and use classifications required to seal joints in metal wall panels and remain weathertight; and as recommended in writing by metal wall panel manufacturer.
3. Butyl-Rubber-Based, Solvent-Release Sealant: ASTM C 1311.

2.2 SUBSTRATE BOARDS

A. Provided under Division 6 Section “Sheathing”.

2.3 UNDERLAYMENT MATERIALS

A. Provided under Division 7 Section “Weather Barriers”.

2.4 MISCELLANEOUS MATERIALS

A. Fasteners: Self-tapping screws, bolts, nuts, self-locking rivets and bolts, end-welded studs, and other suitable fasteners designed to withstand design loads. Provide exposed fasteners with heads matching color of metal wall panels by means of plastic caps or factory-applied coating.

1. Fasteners for Wall Panels: Self-drilling or self-tapping 410 stainless or zinc-alloy steel hex washer head, with EPDM or PVC washer under heads of fasteners bearing on weather side of metal wall panels.
2. Fasteners for Flashing and Trim: Blind fasteners or self-drilling stainless steel screws with hex washer head.
3. Blind Fasteners: Stainless-steel rivets.

B. Bituminous Coating: Cold-applied asphalt mastic, SSPC-Paint 12, compounded for 15-mil (0.4-mm) dry film thickness per coat. Provide inert-type noncorrosive compound free of asbestos fibers, sulfur components, and other deleterious impurities.

2.5 STANDING SEAM, CONCEALED-FASTENER METAL WALL PANELS

A. Batten-Seam-Profile, Concealed-Fastener Metal Roof Panels: Formed with raised, batten-seam-shaped major rib at panel edge and flat pan between major rib and panel edge.

1. Basis of Design Product: AEP Span, “Design Span”, or a comparable product from a substitute manufacturer provided they can meet the requirements of these specifications including the special warranty. All substitution requests will be considered per Sections 012500. To be considered for approval, the manufacturer must have a panel that is equivalent in every respect, including, but not limited to, design, appearance, color availability, structural performance, weathertightness, warranty availability, and all other aspects of this specification section.

2. Material: Aluminum-zinc alloy-coated steel sheet, 22 gauge panel thickness.

   a. Exterior Finish: Fluoropolymer.
   b. Color: See Color Schedule on drawings.

3. Clips: Floating to accommodate thermal movement.

   a. Material: zinc-coated (galvanized) steel sheet, thickness as recommended by the panel manufacturer.

4. Panel Coverage: 12 inches.
5. Panel Height: 1-7/8 inches.
6. Uplift Rating: UL 90.
7. Locations of Use: Exterior wall areas indicated on drawings to receive “standing seam” metal wall panels.

2.6 ACCESSORIES

A. Wall Panel Accessories: Provide components required for a complete metal wall panel assembly including trim, copings, fasciae, mullions, sills, corner units, clips, flashings, sealants, gaskets, fillers, closure strips, and similar items. Match material and finish of metal wall panels, unless otherwise indicated.

1. Closures: Provide closures at eaves and rakes, fabricated of same metal as metal wall panels.

B. Flashing and Trim: Formed from same gauge of material as used on metal wall panels, aluminum-zinc alloy-coated steel sheet in finish type and colors to match siding panels as indicated on the drawings. Provide flashing and trim as required to seal against weather and to provide finished appearance. Locations include, but are not limited to, bases, drips, sills, jambs, corners, endwalls, framed openings, rakes, fasciae, parapet caps, soffits, reveals, and fillers. Finish flashing and trim with same finish system as adjacent metal wall panels.

C. Closure Strips: Manufacturers standard closed cell neoprene closure strips of size and shape to match siding profile.

2.7 FABRICATION

A. General: Fabricate and finish metal wall panels and accessories at the factory to greatest extent possible, by manufacturer's standard procedures and processes, as necessary to fulfill indicated performance requirements demonstrated by laboratory testing. Comply with indicated profiles and with dimensional and structural requirements.

B. Provide panel profile, including major ribs, for full length of panel.

C. Where indicated, fabricate metal wall panel joints with factory-installed captive gaskets or separator strips that provide a tight seal and prevent metal-to-metal contact, in a manner that will minimize noise from movements within panel assembly.

D. Sheet Metal Accessories: Fabricate flashing and trim to comply with recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to the design, dimensions, metal, and other characteristics of item indicated.

1. Form exposed sheet metal accessories that are without excessive oil canning, buckling, and tool marks and that are true to line and levels indicated, with exposed edges folded back to form hems.
2. Seams: Fabricate nonmoving seams in accessories with flat-lock seams.
3. Sealed Joints: Form nonexpansion but movable joints in metal to accommodate elastomeric sealant to comply with SMACNA standards.

4. Conceal fasteners and expansion provisions where possible. Exposed fasteners are not allowed on faces of accessories exposed to view.
5. Fabricate cleats and attachment devices from same material as accessory being anchored or from compatible, noncorrosive metal recommended by metal wall panel manufacturer.

    a. Size: As recommended by SMACNA's "Architectural Sheet Metal Manual" or metal wall panel manufacturer for application but not less than thickness of metal being secured.

2.8 FINISHES, GENERAL

A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

B. Protect mechanical and painted finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

C. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances, metal wall panel supports, and other conditions affecting performance of work.

1. Examine primary and secondary wall framing to verify that backing, angles, channels, studs, and other structural panel support members and anchorage have been installed within alignment tolerances required by metal wall panel manufacturer.
2. Examine solid wall sheathing and underlayment to verify that sheathing joints are supported by framing or blocking and that installation is within flatness tolerances required by metal wall panel manufacturer.
3. For the record, prepare written report, endorsed by Installer, listing conditions detrimental to performance of work.

B. Examine roughing-in for components and systems penetrating metal wall panels to verify actual locations of penetrations relative to seam locations of metal wall panels before metal wall panel installation.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Substrate Board: Confirm substrate board installation is complete and ready for metal wall panel installation.

B. Confirm complete installation of building wrap as specified in other sections.

C. Clean substrates of substances harmful to insulation, including removing projections capable of interfering with insulation attachment.

D. Install flashings and other sheet metal to comply with requirements specified in Division 7 Section "Sheet Metal Flashing and Trim."

E. Install fascia and copings to comply with requirements specified in Division 7 Section "Sheet Metal Flashing and Trim."

F. Miscellaneous Framing: Install base angles, sills, furring, and other miscellaneous wall panel support members and anchorage according to ASTM C 754 and metal wall panel manufacturer's written recommendations.

3.3 METAL WALL PANEL INSTALLATION, GENERAL

A. Standing Seam Metal Wall Panels: Install metal wall panels in orientation, sizes, and locations indicated on Drawings. Install panels perpendicular to backing/blocking in metal stud walls, unless otherwise indicated. Anchor metal wall panels and other components of the Work securely in place, with provisions for thermal and structural movement.

1. Install metal wall panels following the manufacturer’s printed instructions.
2. Field cutting of metal wall panels by torch is not permitted.
3. Shim or otherwise plumb substrates receiving metal wall panels.
4. Rigidly fasten base end (unless recommended otherwise by manufacturer) of metal wall panels and allow eave end free movement due to thermal expansion and contraction. Pre-drill panels.
5. Flash and seal metal wall panels with weather closures at eaves, rakes, and at perimeter of all openings. Fasten with self-tapping screws. Do not begin installation until weather barrier and flashings that will be concealed by metal wall panels are installed.
6. Install screw fasteners in predrilled holes.
7. Locate and space fastenings in uniform vertical and horizontal alignment.
8. Install flashing and trim as metal wall panel work proceeds.
9. Panel splices are not allowed. Fabricate panels full length of span for all conditions.
10. Apply elastomeric sealant continuously between metal base channel (sill angle) and concrete, and elsewhere as indicated or, if not indicated, as necessary for waterproofing.
11. Align bottom of metal wall panels and fasten with blind rivets, bolts, or self-tapping screws. Fasten flashings and trim around openings and similar elements with self-tapping screws.
12. Provide weatherproof escutcheons for pipe and conduit penetrating exterior walls.

B. Fasteners: Use stainless-steel fasteners for all metal wall panels.

C. Metal Protection: Where dissimilar metals will contact each other or corrosive substrates, protect against galvanic action by painting contact surfaces with bituminous coating, by applying rubberized-asphalt underlayment to each contact surface, or by other permanent separation as recommended by metal wall panel manufacturer.

1. Coat back side of wall panels with bituminous coating where wall panels will contact wood, ferrous metal, or cementitious construction.

D. Joint Sealers: Install gaskets, joint fillers, and sealants where indicated and where required for weatherproof performance of metal wall panel assemblies. Provide types of gaskets, fillers, and sealants indicated or, if not indicated, types recommended by metal wall panel manufacturer.

1. Seal metal wall panel end laps with double beads of tape or sealant, full width of panel. Seal side joints where recommended by metal wall panel manufacturer.
2. Prepare joints and apply sealants to comply with requirements in Division 7 Section "Joint Sealants."

3.4 ACCESSORY INSTALLATION

A. General: Install accessories with positive anchorage to building and weathertight mounting and provide for thermal expansion. Coordinate installation with flashings and other components.

1. Install components required for a complete metal wall panel assembly including trim, copings, corners, seam covers, flashings, sealants, gaskets, fillers, closure strips, and similar items.

B. Flashing and Trim: Comply with performance requirements, manufacturer's written installation instructions, and SMACNA's "Architectural Sheet Metal Manual." Provide concealed fasteners where possible, and set units true to line and level as indicated. Install work with laps, joints, and seams that will be permanently watertight and weather resistant.

1. Install exposed flashing and trim that is without excessive oil canning, buckling, and tool marks and that is true to line and levels indicated, with exposed edges folded back to form hems. Install sheet metal flashing and trim to fit substrates and to result in waterproof and weather-resistant performance.
2. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim. Space movement joints at a maximum of 10 feet (3 m) with no joints allowed within 24 inches (600 mm) of corner or intersection. Where lapped or bayonet-type expansion provisions cannot be used or would not be sufficiently weather resistant and waterproof, form expansion joints of intermeshing hooked flanges, not less than 1 inch (25 mm) deep, filled with mastic sealant (concealed within joints).

3.5 ERECTION TOLERANCES

A. Installation Tolerances: Shim and align metal wall panel units within installed tolerance of 1/4 inch in 20 feet (6 mm in 6 m), nonaccumulative, on level, plumb, and location lines as indicated and within 1/8-inch (3-mm) offset of adjoining faces and of alignment of matching profiles.

3.6 FIELD QUALITY CONTROL

A. Testing Agency: Owner may engage a qualified independent testing and inspecting agency to perform field tests and inspections and prepare test reports.

B. Water Penetration: Test areas of installed system indicated on Drawings for compliance with system performance requirements according to ASTM E 1105 at minimum differential pressure of 20 percent of inward-acting, wind-load design pressure as defined by ASCE 7, "Minimum Design Loads for Buildings and Other Structures," but not less than 6.24 lbf/sq. ft. (300 Pa).

C. Water-Spray Test: After completing the installation of 75-foot- (23-m-) by-2-story minimum area of metal wall panel assembly, test assembly for water penetration according to AAMA 501.2 in a 2-bay area directed by Architect.

D. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect completed metal wall panel installation, including accessories. Report results in writing.

E. Remove and replace applications of metal wall panels where inspections indicate that they do not comply with specified requirements.

F. Additional tests and inspections, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

3.7 CLEANING AND PROTECTION

A. Remove temporary protective coverings and strippable films, if any, as metal wall panels are installed, unless otherwise indicated in manufacturer's written installation instructions. On completion of metal wall panel installation, clean finished surfaces as recommended by metal wall panel manufacturer. Maintain in a clean condition during construction.

B. After metal wall panel installation, clear weep holes and drainage channels of obstructions, dirt, and sealant.

C. Replace metal wall panels that have been damaged or have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

3.8 WASTE MANAGEMENT

A. See Division 1 Section “Waste Management” and the requirements of Part 1 of this Section for requirements related to Waste Management.

3.9 SIDING INSTALLER'S WARRANTY

A. WHEREAS <**Insert name**> of <**Insert address**>, herein called the "Siding Installer," has performed siding and associated work ("work") on the following project:

1. Owner: <**Insert name of Owner.**>
2. Address: <**Insert address.**>
3. Building Name/Type: <**Insert information.**>

4. Address: <**Insert address.**>
5. Area of Work: <**Insert information.**>
6. Acceptance Date: <**Insert date.**>
7. Warranty Period: <**Insert time.**>
8. Expiration Date: <**Insert date.**>

B. AND WHEREAS Siding Installer has contracted (either directly with Owner or indirectly as a subcontractor) to warrant said work against leaks and faulty or defective materials and workmanship for designated Warranty Period,

C. NOW THEREFORE Siding Installer hereby warrants, subject to terms and conditions herein set forth, that during Warranty Period he will, at his own cost and expense, make or cause to be made such repairs to or replacements of said work as are necessary to correct faulty and defective work and as are necessary to maintain said work in a watertight condition.

D. This Warranty is made subject to the following terms and conditions:

1. Specifically excluded from this Warranty are damages to work and other parts of the building, and to building contents, caused by:

   a. lightning;
   b. peak gust wind speed exceeding 72 mph (m/sec);
   c. fire;
   d. failure of siding system substrate, including cracking, settlement, excessive deflection, deterioration, and decomposition;
   e. faulty construction of walls, and other edge conditions and penetrations of the work;
   f. vapor condensation on bottom of siding; and
   g. activity on siding by others, including construction contractors, maintenance personnel, other persons, and animals, whether authorized or unauthorized by Owner.

2. When work has been damaged by any of foregoing causes, Warranty shall be null and void until such damage has been repaired by Siding Installer and until cost and expense thereof have been paid by Owner or by another responsible party so designated.
3. Siding Installer is responsible for damage to work covered by this Warranty but is not liable for consequential damages to building or building contents resulting from leaks or faults or defects of work.
4. During Warranty Period, if Owner allows alteration of work by anyone other than Siding Installer, including cutting, patching, and maintenance in connection with penetrations, attachment of other work, and positioning of anything on wall, this Warranty shall become null and void on date of said alterations, but only to the extent said alterations affect work covered by this Warranty. If Owner engages Siding Installer to perform said alterations, Warranty shall not become null and void unless Siding Installer, before starting said work, shall have notified Owner in writing, showing reasonable cause for claim, that said alterations would likely damage or deteriorate work, thereby reasonably justifying a limitation or termination of this Warranty.
5. During Warranty Period, if original use of wall is changed and it becomes used for, but was not originally specified for, this Warranty shall become null and void on date of said change, but only to the extent said change affects work covered by this Warranty.

6. Owner shall promptly notify Siding Installer of observed, known, or suspected leaks, defects, or deterioration and shall afford reasonable opportunity for Siding Installer to inspect work and to examine evidence of such leaks, defects, or deterioration.
7. This Warranty is recognized to be the only warranty of Siding Installer on said work and shall not operate to restrict or cut off Owner from other remedies and resources lawfully available to Owner in cases of siding failure. Specifically, this Warranty shall not operate to relieve Siding Installer of responsibility for performance of original work according to requirements of the Contract Documents, regardless of whether Contract was a contract directly with Owner or a subcontract with Owner's General Contractor.

E. IN WITNESS THEREOF, this instrument has been duly executed this <**Insert day**> day of <**Insert month**>, <**Insert year**>.

1. Authorized Signature: <**Insert signature.**>
2. Name: <**Insert name.**>
3. Title: <**Insert title.**>

END OF SECTION 07 42 13

SECTION 074600 - SIDING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Fiber-Cement Panel siding system.
2. Trim. Flashing and related Accessories.

B. Related Sections:

1. Division 06 Section "Rough Carpentry" for wood furring, grounds, nailers, and blocking.
2. Division 06 Section "Sheathing" for wall sheathing.
3. Division 07 Section "Weather Barriers" for weather barriers installed integrally with assemblies specified in this Section.
4. Division 07 Section “Thermal Insulation” for insulation systems installed integrally with assemblies specified in this Section, and for metal furring installed with installation which must be coordinated with furring installed under this section.
5. Division 07 Section “Sheet Metal Flashing and Trim” for coordination of flashing installed integrally with assemblies specified in this Section.
6. Division 09 Section “Painting and Staining” for paint systems to finish products specified in this Section.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, sealants, primers and finishes.

B. Samples for Verification: For each type, color, texture, and pattern required.

1. 12-inch- (300-mm-) long-by-actual-width Sample of each siding type.
2. 24-inch- (600-mm-) wide-by-36-inch- (900-mm-) high Sample panel of siding assembled on plywood backing, of each siding type, including rain screen system, all components.
3. 12-inch- (300-mm-) long-by-actual-width Samples of trim and accessories.
4. Soffit vents.
5. Insect screen.

1.4 INFORMATIONAL SUBMITTALS

A. Qualification Data: For qualified vinyl siding Installer.

B. Product Certificates: For each type of siding and soffit, from manufacturer.

C. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for fiber-cement siding.

D. ASTM Requirements: Must comply with ASTM E283, E330 and E331.

E. Warranty: Sample of special warranty.

1.5 CLOSEOUT SUBMITTALS

A. Maintenance Data: For each type of siding and soffit and related accessories to include in maintenance manuals.

1.6 QUALITY ASSURANCE

A. Labeling: Provide fiber-cement siding that is tested and labeled according to ASTM C 1186 by a qualified testing agency acceptable to authorities having jurisdiction.

B. Source Limitations: Obtain each type, texture, and pattern of siding and soffit, including related accessories, from single source from single manufacturer.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Store materials in a dry, well-ventilated, weathertight place.

1.8 COORDINATION

A. Coordinate installation with flashings, painting, and other adjoining construction to ensure proper sequencing.

1.9 WARRANTY

A. Special Warranty: Standard form in which manufacturer agrees to repair or replace siding and soffit that fail(s) in materials or workmanship within specified warranty period.

1. Failures include, but are not limited to, the following:

   a. Structural failures including cracking, deforming.
   b. Deterioration of metals, metal finishes, and other materials beyond normal weathering.

2. Warranty Periods (Provide all three):

a. Warranty Type 1: Manufacturer's non-prorated 30-year warranty from date of Substantial Completion providing coverage against hail and pest damage and defects in materials and workmanship.
b. Warranty Type 2: Manufacturer's 15-year warranty from date of Substantial Completion providing coverage against peeling, cracking, and chipping of panel finish.
c. Warranty Type 3: Installer's 2-year warranty from date of Substantial Completion for coverage against defects in installation.

PART 2 - PRODUCTS

2.1 FIBER-CEMENT PANEL SIDING AND RAINSCREEN COMPONENTS (FCP)

A. General: ASTM C 1186, Type A, Grade II, fiber-cement board, noncombustible when tested according to ASTM E 136; with a flame-spread index of 25 or less when tested according to ASTM E 84. In addition, meet or exceed the Basis of Design product manufacturer's standard specifications, as if included herein.

1. Basis-of-Design Product: Subject to compliance with requirements, provide JAMES HARDIE, "HARDIEPANEL" REVEAL 2.0 Siding, (HZ10), or comparable product by one of the following:

a. Cemplank.
b. CertainTeed Corp.
a. Or approved substitution per Sections 002113 and 012500.

2. Panel Board Size: 4 foot by 8 foot, (47.5" wide x 95.5" long)
3. Panel Board Thickness: 7/16 inch thick
4. Finish: Smooth
5. Underlayment: Per Section 072500 "Weather Barriers".
6. Factory and Field Priming: Manufacturer's standard acrylic primer, ready for field painting.
7. Gap between panels: ½ inch.

B. Trim and Fasteners

1. Aluminum Trim: Provide panel board manufacturer's trim components consisting of:

a. Vertical and horizontal trim
b. Drip cap trim
c. Inside and outside corner trim
d. J-Channel trim
e. Manufacturer's primed finish ready for field painting. Field touch up end cuts and cutouts.

2.2 SOFFIT PANELS

A. Product: "HARDIESOFFIT BEADED PORCH PANEL

1. Thickness: ¼" Thick
2. Size: As needed for application – see Drawings.

2.3 ACCESSORIES

A. Fasteners: Stainless steel (304 Austenitic Stainless), Tor pan head type, #10-12 self-tapping screws for wood substrates.

B. Pre-finished Head Color: As selected by Architect from manufacturer's standard colors.

PART 3 - EXECUTION

3.1 EXAMINATION

A. General: Examine substrates for compliance with requirements for installation tolerances and other conditions affecting performance of siding and soffit and related accessories.

B. Weather Barrier: Confirm that the weather barrier installed under another section has been completed, inspected, and is ready for installation of the systems specified under this Section. Commencement of work under this Section indicates acceptable of the framing and weather barrier installation by the siding system installer. Make sure the weather barrier is complete, full sealed, wrinkle free, and any penetrations are fully sealed.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Clean substrates of projections and substances detrimental to application.

3.3 INSTALLATION

A. General: Comply with siding and soffit manufacturer's written installation instructions applicable to products and applications indicated unless more stringent requirements apply.

1. Do not install damaged components.

B. Flexible Foundation Flashing: Install as indicated on the drawings following the manufacturer's printed instructions.

C. Fiber-Cement Composite Wall Panel System Installation: Install materials in strict accordance with the manufacturer's installation instructions.

1. Place fasteners no closer than 3/4 inch (9.5 mm) from panel edges and 2 inches (51 mm) from panel corners.
2. Install panel using 1/2 inch (13 mm) spacers at horizontal joints. Leave bottom edge of panel above all horizontal trims exposed, no caulking shall be placed at this overlap of Horizontal Reveal Trim. Factory primed edge shall always be used.

3. Install a kick-out flashing to deflect water away from the siding at the roof intersection.
4. Install membrane flashing on the wall before the sub-fascia and trim boards are nailed in place, and then install the kick-out.
5. Allow minimum vertical clearance between the bottom edge of siding and any other material in strict accordance with the manufacturer's installation instructions and as determined by the Climate Zone.
6. Maintain clearance between siding and adjacent finished grade.
7. Comply with all applicable codes for fasteners requirements, in addition to manufacturer’s requirements. Touch up end cuts and cutouts with acrylic primer.
8. Panel fasteners shall be of a length that will not penetrate the building wrap. Only furring fasteners may penetrate the building wrap and only through self-sealing stripping.

D. Install joint sealants as specified in Division 07 Section "Joint Sealants" and to produce a weathertight installation.

3.4 FIELD QUALITY CONTROL

A. Manufacturer’s Field Service: For both siding types, provide field services to insure product installation is in accordance with the manufacturer’s instructions and installation manual and approved shop drawings. Keep copy of installation manual onsite for reference.

B. Field Reports: Manufacturer’s representative shall provide Field Reports to Owner, Architect and Contractor for weekly site visits. Provide report within three days of visit.

3.5 ADJUSTING AND CLEANING

A. Remove damaged, improperly installed, or otherwise defective materials and replace with new materials complying with specified requirements.

B. Clean finished surfaces according to manufacturer's written instructions. Touch up damaged primer and maintain in a clean condition during construction.

END OF SECTION 07 46 00

SECTION 076200 - SHEET METAL FLASHING AND TRIM

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Formed Products:

a. Formed wall sheet metal fabrications.

B. Related Sections:

1. Division 06 Section "Rough Carpentry" for wood nailers, curbs, and blocking.
2. Division 06 Section “Exterior Finish Carpentry”
3. Division 07 Section "Siding" for sheet metal flashing and trim integral with siding system.
4. Division 07 Section “Metal Siding” for standing seam metal siding system.
5. Division 08 Section, “Plastic Glazing” for flashings installed in wall openings.

1.3 PERFORMANCE REQUIREMENTS

A. General: Sheet metal flashing and trim assemblies as indicated shall withstand wind loads, structural movement, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Completed sheet metal flashing and trim shall not rattle, leak, or loosen, and shall remain watertight.

B. Fabricate and install copings capable of resisting the following forces according to recommendations in FMG Loss Prevention Data Sheet 1-49:

1. Wind Zone 2: For velocity pressures of 31 to 45 lbf/sq. ft. (1.48 to 2.15 kPa): 90-lbf/sq. ft. (4.31-kPa) perimeter uplift force, 120-lbf/sq. ft. (5.74-kPa) corner uplift force, and 45-lbf/sq. ft. (2.15-kPa) outward force.

C. Thermal Movements: Provide sheet metal flashing and trim that allows for thermal movements from ambient and surface temperature changes.

1. Temperature Change (Range): 120 deg F (67 deg C), ambient; 180 deg F (100 deg C), material surfaces.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each manufactured product and accessory.

B. Shop Drawings: Show fabrication and installation layouts of sheet metal flashing and trim, including plans, elevations, expansion-joint locations, and keyed details. Distinguish between shop- and field-assembled work.

C. Samples for Initial Selection: For each type of sheet metal flashing, trim, and accessory indicated with factory-applied color finishes involving color selection. Samples shall be on actual metal chips, not printed colors applied to paper or card stock.

D. Samples for Verification: For each type of exposed finish required, prepared on Samples of size indicated below:

1. Sheet Metal Flashing: 12 inches (300 mm) long by actual width of unit, including finished seam and in required profile. Include fasteners, cleats, clips, closures, and other attachments.
2. Trim, Metal Closures, Expansion Joints, Joint Intersections, and Miscellaneous Fabrications: 12 inches (300 mm) long and in required profile. Include fasteners and other exposed accessories.
3. Accessories and Miscellaneous Materials: Full-size Sample.

1.5 INFORMATIONAL SUBMITTALS

A. Qualification Data: For qualified fabricator.

B. Warranty: Sample of special warranty.

1.6 CLOSEOUT SUBMITTALS

A. Maintenance Data: For sheet metal flashing, trim, and accessories to include in maintenance manuals.

1.7 QUALITY ASSURANCE

A. Fabricator Qualifications: Shop that employs skilled workers who custom fabricate sheet metal flashing and trim similar to that required for this Project and whose products have a record of successful in-service performance.

B. Sheet Metal Flashing and Trim Standard: Comply with SMACNA's "Architectural Sheet Metal Manual" unless more stringent requirements are specified or shown on Drawings.

1.8 DELIVERY, STORAGE, AND HANDLING

A. Do not store sheet metal flashing and trim materials in contact with other materials that might cause staining, denting, or other surface damage. Store sheet metal flashing and trim materials away from uncured concrete and masonry.

B. Protect strippable protective covering on sheet metal flashing and trim from exposure to sunlight and high humidity, except to the extent necessary for the period of sheet metal flashing and trim installation.

1.9 WARRANTY

A. Special Warranty on Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace sheet metal flashing and trim that shows evidence of deterioration of factory-applied finishes within specified warranty period.

1. Exposed Panel Finish: Deterioration includes, but is not limited to, the following:

a. Color fading more than 5 Hunter units when tested according to ASTM D 2244.
b. Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.
c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.

2. Finish Warranty Period: 20 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 SHEET METALS

A. General: Protect mechanical and other finishes on exposed surfaces from damage by applying a strippable, temporary protective film before shipping.

B. Stainless-Steel Sheet: ASTM A 240/A 240M or ASTM A 666, Type 304, dead soft, fully annealed.

1. Finish: 2D (dull, cold rolled).
2. Surface: Smooth, flat.

C. Metallic-Coated Steel Sheet: Restricted flatness steel sheet, metallic coated by the hot-dip process and prepainted by the coil-coating process to comply with ASTM A 755/A 755M.

1. Aluminum-Zinc Alloy-Coated Steel Sheet: ASTM A 792/A 792M, Class AZ50 coating designation, Grade 40 (Class AZM150 coating designation, Grade 275); structural quality.
2. Surface: Smooth, flat, and with manufacturer's standard clear acrylic coating on both sides where another finish is not specified.
3. Exposed Coil-Coated Finish: Provide for all flashing except where specifically indicated to be a bare galvalume or zincalume finish, if any.

a. Two-Coat Fluoropolymer: AAMA 621. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in color coat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.

4. Color: color to be selected by Architect from manufacturer's full range of available colors, or a custom color. Quantity of colors as indicated on Color and Material Schedule on drawings.
5. Concealed Finish: Pretreat with manufacturer's standard white or light-colored acrylic or polyester backer finish, consisting of prime coat and wash coat with a minimum total dry film thickness of 0.5 mil (0.013 mm).

2.2 MISCELLANEOUS MATERIALS

A. General: Provide materials and types of fasteners, solder, welding rods, protective coatings, separators, sealants, and other miscellaneous items as required for complete sheet metal flashing and trim installation and recommended by manufacturer of primary sheet metal unless otherwise indicated.

B. Fasteners: Self-tapping screws, self-locking rivets and bolts, and other suitable fasteners designed to withstand design loads and recommended by manufacturer of primary sheet metal.

1. General: Blind fasteners or self-drilling screws, gasketed, with hex-washer head.

a. Exposed Fasteners: Heads matching color of sheet metal using plastic caps or factory-applied coating.
b. Blind Fasteners: High-strength stainless-steel rivets suitable for metal being fastened.

2. Fasteners for Stainless-Steel Sheet: Series 300 stainless steel.
3. Fasteners for Aluminum-Zinc Alloy-Coated Steel Sheet: Hot-dip galvanized steel according to ASTM A 153/A 153M or ASTM F 2329 or Series 300 stainless steel.

C. Solder:

1. For Stainless Steel: ASTM B 32, Grade Sn60, with an acid flux of type recommended by stainless-steel sheet manufacturer.

D. Sealant Tape: Pressure-sensitive, 100 percent solids, gray polyisobutylene compound sealant tape with release-paper backing. Provide permanently elastic, nonsag, nontoxic, nonstaining tape 1/2 inch (13 mm) wide and 1/8 inch (3 mm) thick.

E. Butyl Sealant: ASTM C 1311, single-component, solvent-release butyl rubber sealant; polyisobutylene plasticized; heavy bodied for hooked-type expansion joints with limited movement.

F. Epoxy Seam Sealer: Two-part, noncorrosive, aluminum seam-cementing compound, recommended by aluminum manufacturer for exterior nonmoving joints, including riveted joints.

G. Bituminous Coating: Cold-applied asphalt emulsion complying with ASTM D 1187.

H. Asphalt Roofing Cement: ASTM D 4586, asbestos free, of consistency required for application.

2.3 FABRICATION, GENERAL

A. General: Custom fabricate sheet metal flashing and trim to comply with recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to design, dimensions, geometry, metal thickness, and other characteristics of item indicated. Fabricate items at the shop to greatest extent possible.

1. Fabricate sheet metal flashing and trim in thickness or weight needed to comply with performance requirements, but not less than that specified for each application and metal.
2. Obtain field measurements for accurate fit before shop fabrication.
3. Form sheet metal flashing and trim without excessive oil canning, buckling, and tool marks and true to line and levels indicated, with exposed edges folded back to form hems.
4. Conceal fasteners and expansion provisions where possible. Exposed fasteners are not allowed on faces exposed to view.

B. Fabrication Tolerances: Fabricate sheet metal flashing and trim that is capable of installation to a tolerance of 1/4 inch in 20 feet (6 mm in 6 m) on slope and location lines as indicated and within 1/8-inch (3-mm) offset of adjoining faces and of alignment of matching profiles.

C. Sealed Joints: Form nonexpansion but movable joints in metal to accommodate elastomeric sealant.

D. Expansion Provisions: Where lapped expansion provisions cannot be used, form expansion joints of intermeshing hooked flanges, not less than 1 inch (25 mm) deep, filled with butyl sealant concealed within joints.

E. Fabricate cleats and attachment devices from same material as accessory being anchored or from compatible, noncorrosive metal.

F. Fabricate cleats and attachment devices of sizes as recommended by SMACNA's "Architectural Sheet Metal Manual" and by FMG Loss Prevention Data Sheet 1-49 for application, but not less than thickness of metal being secured.

1. Thickness: As recommended by SMACNA's "Architectural Sheet Metal Manual" and FMG Loss Prevention Data Sheet 1-49 for application but not less than thickness of metal being secured.

G. Seams: Fabricate nonmoving seams with flat-lock seams. Form seams and seal with elastomeric sealant unless otherwise recommended by sealant manufacturer for intended use. Rivet joints where necessary for strength. Do not use graphite pencils to mark metal surfaces.

2.4 WALL SHEET METAL FABRICATIONS

A. Opening and Penetration Flashings in Frame Construction: Fabricate head, sill, jamb, and similar flashings to extend 4 inches (100 mm) beyond wall openings, unless detailed otherwise. Form head and sill flashing with 2-inch- (50-mm-) high, end dams. Fabricate from the following materials:

1. Aluminum-Zinc Alloy-Coated Steel: 0.022 inch (0.56 mm) thick, unless noted otherwise on the drawings.

2.5 MISCELLANEOUS SHEET METAL FABRICATIONS

A. Equipment Support Flashing: Fabricate from the following materials:

1. Aluminum-Zinc Alloy-Coated Steel: 0.028 inch (0.71 mm) thick.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, to verify actual locations, dimensions and other conditions affecting performance of the Work.

1. Verify compliance with requirements for installation tolerances of substrates.
2. Verify that substrate is sound, dry, smooth, clean, sloped for drainage, and securely anchored.

B. For the record, prepare written report, endorsed by Installer, listing conditions detrimental to performance of the Work.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION, GENERAL

A. General: Anchor sheet metal flashing and trim and other components of the Work securely in place, with provisions for thermal and structural movement. Use fasteners, solder, welding rods, protective coatings, separators, sealants, and other miscellaneous items as required to complete sheet metal flashing and trim system.

1. Install sheet metal flashing and trim true to line and levels indicated. Provide uniform, neat seams with minimum exposure of solder, welds, and sealant.
2. Install sheet metal flashing and trim to fit substrates and to result in watertight performance. Verify shapes and dimensions of surfaces to be covered before fabricating sheet metal.

   a. Space cleats not more than 12 inches (300) apart. Anchor each cleat with a minimum of two fasteners. Bend tabs over fasteners.

3. Space cleats not more than 12 inches (300 mm) apart. Anchor each cleat with two fasteners. Bend tabs over fasteners.
4. Install exposed sheet metal flashing and trim without excessive oil canning, buckling, and tool marks.
5. Install sealant tape where indicated.
6. Torch cutting of sheet metal flashing and trim is not permitted.
7. Do not use graphite pencils to mark metal surfaces.

B. Metal Protection: Where dissimilar metals will contact each other or corrosive substrates, protect against galvanic action by painting contact surfaces with bituminous coating or by other permanent separation as recommended by SMACNA.

1. Coat back side of stainless-steel sheet metal flashing and trim with bituminous coating where flashing and trim will contact wood, ferrous metal, or cementitious construction.
2. Underlayment: Where installing metal flashing directly on cementitious or wood substrates, install a course of felt underlayment and cover with a slip sheet or install a course of polyethylene sheet.

C. Expansion Provisions: provide for thermal expansion of exposed flashing and trim. Space movement joints at a maximum of 10 feet (3 m) with no joints allowed within 24 inches (600 mm) of corner or intersection. Where lapped expansion provisions cannot be used or would not be sufficiently watertight, form expansion joints of intermeshing hooked flanges, not less than 1 inch (25 mm) deep, filled with sealant concealed within joints.

D. Fastener Sizes: Use fasteners of sizes that will penetrate wood sheathing not less than 1-1/4 inches (32 mm) for nails and not less than 3/4 inch (19 mm) for wood screws, and metal decking not less than recommended by fastener manufacturer to achieve maximum pull-out resistance.

E. Seal joints as shown and as required for watertight construction.

1. Where sealant-filled joints are used, embed hooked flanges of joint members not less than 1 inch (25 mm) into sealant. Form joints to completely conceal sealant. When ambient temperature at time of installation is moderate, between 40 and 70 deg F (4 and 21 deg C), set joint members for 50 percent movement each way. Adjust setting proportionately for installation at higher ambient temperatures. Do not install sealant-type joints at temperatures below 40 deg F (4 deg C).
2. Prepare joints and apply sealants to comply with requirements in Division 07 Section "Joint Sealants."
3. Flashing Lap Joints: At all lap joints in metal flashings, lap sheet metal a minimum of 4 inches, or more if recommend by SMACNA, or more if indicated on the drawings. Install at least two continuous beads of sealant in each lap joint within and fully concealed by the lap joint.

F. Soldered Joints: Clean surfaces to be soldered, removing oils and foreign matter. Pre-tin edges of sheets to be soldered to a width of 1-1/2 inches (38 mm), except reduce pre-tinning where pre-tinned surface would show in completed Work.

1. Do not solder metallic-coated steel sheet.
2. Do not use torches for soldering. Heat surfaces to receive solder and flow solder into joint. Fill joint completely. Completely remove flux and spatter from exposed surfaces.

3. Stainless-Steel Soldering: Tin edges of uncoated sheets using solder recommended for stainless steel and acid flux. Promptly remove acid flux residue from metal after tinning and soldering. Comply with solder manufacturer's recommended methods for cleaning and neutralization.

3.3 WALL FLASHING INSTALLATION

A. General: Install sheet metal wall flashing to intercept and exclude penetrating moisture according to SMACNA recommendations and as indicated. Coordinate installation of wall flashing with installation of wall-opening components such as windows, doors, and louvers.

B. Opening Flashings in Frame Construction: Install continuous head, sill, jamb, and similar flashings to extend 4 inches (100 mm) beyond wall openings, unless detailed otherwise.

C. At wall openings that interrupt metal thru-wall flashings, bend end of flashing up to form ½" high end dams at all jambs. At sheet metal flashing end dams, fully seal corners. At stainless steel flashing, continuously weld corners.

D. Wall Base Flashing: Install stainless steel wall base flashing as detailed. Extend from 4 inches below grade (unless detailed otherwise), up above grade to 45 degree bend, and up 6 inches above the finished floor, over building wrap unless detailed otherwise. Seal with waterproof underlayment as detailed.

3.4 ERECTION TOLERANCES

A. Installation Tolerances: Shim and align sheet metal flashing and trim within installed tolerance of 1/4 inch in 20 feet (6 mm in 6 m) on slope and location lines as indicated and within 1/8-inch (3-mm) offset of adjoining faces and of alignment of matching profiles.

3.5 CLEANING AND PROTECTION

A. Clean exposed metal surfaces of substances that interfere with uniform oxidation and weathering.

B. Clean and neutralize flux materials. Clean off excess solder.

C. Clean off excess sealants.

D. Remove temporary protective coverings and strippable films as sheet metal flashing and trim are installed unless otherwise indicated in manufacturer's written installation instructions. On completion of installation, remove unused materials and clean finished surfaces. Maintain in a clean condition during construction.

E. Replace sheet metal flashing and trim that have been damaged or that have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

END OF SECTION 076200

SECTION 07 92 00 - JOINT SEALANTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Caulking and sealants. Not specified in other sections

B. Related Sections:

1. Division 07 Section “Siding” for sealants associated with Fiber Cement Board panels
2. Division 07 Section “Metal Siding” for standing seam metal siding systems
3. Division 06 Section “Exterior Finish Carpentry”

1.3 SUBMITTALS

A. Product Data: For each joint-sealant product indicated.

B. Samples for Initial Selection: Manufacturer's color charts consisting of strips of cured sealants showing the full range of colors available for each product exposed to view.

C. Joint-Sealant Schedule: Include the following information:

1. Joint-sealant application, joint location, and designation.
2. Joint-sealant manufacturer and product name.
3. Joint-sealant formulation.
4. Joint-sealant color. (Manufacturer’s full range).

D. Product Certificates: For each kind of joint sealant and accessory, from manufacturer.

E. Warranties: Sample of special warranties.

F. Qualification Data: Information establishing the qualifications of installers and manufacturers as required in this Section.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: Company specializing in Work of this Section with minimum five (5) years continuous documented experience for commercial quality sealant Work comparable to Project scope.

B. Source Limitations: Obtain each kind of joint sealant from single source from single manufacturer.

1.5 DELIVERY, STORAGE AND HANDLING

A. Comply with manufacturer's instructions.

B. Store and handle to protect from intrusion of contaminants.

1.6 PROJECT CONDITIONS

A. Do not proceed with installation of joint sealants under the following conditions:

1. When ambient and substrate temperature conditions are outside limits permitted by joint-sealant manufacturer or are below 40 deg F (5 deg C).
2. When joint substrates are wet.
3. Where joint widths are less than those allowed by joint-sealant manufacturer for applications indicated.
4. Where contaminants capable of interfering with adhesion have not yet been removed from joint substrates.

1.7 WARRANTY

A. Special Installer's Warranty: Manufacturer's standard form in which Installer agrees to repair or replace joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.

B. Special warranties specified in this article exclude deterioration or failure of joint sealants from the following:

1. Movement of the structure caused by structural settlement or errors attributable to design or construction resulting in stresses on the sealant exceeding sealant manufacturer's written specifications for sealant elongation and compression.
2. Disintegration of joint substrates from natural causes exceeding design specifications.
3. Mechanical damage caused by individuals, tools, or other outside agents.
4. Changes in sealant appearance caused by accumulation of dirt or other atmospheric contaminants.
5. Warranties:

   a. Silicone Sealants: Standard twenty (20)-year warranty against failure of material.
   b. Other Sealants: Standard five (5)-year warranty against failure of material.

c. Installer's Warranty: Installer's standard form in which Installer agrees to repair or replace joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.

1) Warranty Period: Two (2) years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 EXTERIOR SEALANTS

A. Weather Barrier Sealant: Interior air sealing between a sheet or liquid applied weather resistant barrier and fenestration element. Edge lap seal for weather resistant barriers. Silicone, ASTM C 920, Type S, Grade NS, Class 25. ASTM C719 +/-25% movement

1. Dow Corning 758

B. Vertical Surfaces, Non-Porous Materials and Porous to Non-Porous Materials, Non-Paintable, Weatherproofing Sealant: Silicone, ASTM C 920, Type S, Grade NS, Class 25. Joint movement capabilities: 50% extension and 50% compression.

1. Dow Corning 791 or Dow Corning 795.
2. GE, Silpruf.
3. Pecora 895.

C. Vertical surfaces - Joints and cracks to receive paint coating: One-component elastomeric urethane sealant, ASTM C 920, Type S, Grade NS, Class 25, Use NT. Verify compatibility with coating system.

1. BASF Sonolastic NP1

D. Vertical surfaces - Joints and cracks to receive paint coating: Elastomeric (hybrid) sealant. ASTM C 920, Type S, Grade S, Class 50, Use NT. Verify compatibility with coating system.

1. BASF Sonolastic 150 with VLM Technology

2.2 INTERIOR SEALANTS

A. General Sealant: Paintable, siliconized acrylic latex sealant, complying with ASTM C 834. Where installed at non-painted surfaces, match adjacent field color or provide colors as selected by Architect.

1. Sonneborn, Sonolac, acrylic latex.
2. Pecora, AC-20 Acrylic Latex.
3. Tremco, Acrylic Latex 834.

B. Threshold Sealant: Consistency for use with gun or knife without paint finish, light gray color.

1. Sonneborn, Sonolastic NP 2.
2. Tremco, HPL.

2.3 ACCESSORIES

A. Joint Cleaner: As recommended by sealant or caulking manufacturer for joint surfaces.

B. Joint Primers: Non-corrosive and non-staining type, as recommended by sealant manufacturer, for joint surface conditions encountered.

C. Bond Breaker Tape: Polyethylene tape/plastic tape recommended by sealant manufacturer, applied to sealant contact surfaces where bond to substrate or backer rod must be avoided for proper performance of sealant. Provide self-adhesive tape where applicable.

D. Backer Rods: Provide non-adhering type as recommended by sealant manufacturer and the following:

1. Horizontal Joints: Closed cell polyethylene foam rod, except where joint filler is specified at paving.
2. Vertical Joints: Closed cell polyethylene foam or "soft rod" (skinned open cell) polyethylene foam.
3. Diameter: 1/3 greater than width of joint where it is to be installed.
4. Polystyrene foam and open cell rods are not acceptable.

2.4 COLORS AND FINISHES

A. For Paintable Sealants: Paint under Work of Division 09 Section “Painting.”

B. Color: Sealant color shall match the color of the materials at each side of the joint, except where paintable sealants are installed. If materials change along the length of a continuous joint, the color shall change to match the surrounding materials. When materials differ on each side of the joint, consult Architect.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify surfaces and conditions ready to receive Work of this Section. Do no Work until conditions are satisfactory.

B. Verify surfaces clean and dry before proceeding.

C. Remove lacquers and protective films from metal surfaces.

3.2 PREPARATION

A. Clean and prime joints in accordance with manufacturer's instructions.

B. Remove loose materials and foreign matter which might impair adhesion of sealant.

C. Verify that back-up material and release tapes are compatible with sealant.

D. Perform preparation in accordance with referenced ASTM C 790 for latex base sealant and ASTM C 804 for solvent-release type materials.

3.3 INSTALLATION

A. Install in accordance with manufacturer's instructions. Where in conflict with Contract Documents, follow more stringent requirements. Refer to requirements of individual Sections.

B. Seal joints between locations as detailed and required to make weathertight.

C. Seal interior and exterior joints between locations as detailed and required to make airtight and weathertight. Refer to Architectural Drawings for window installation sequence.

1. Around windows, relites, doors, and other openings in walls.
2. Joints of dissimilar materials.
3. Horizontal joints, including exterior paving joints over joint filler.
4. At joints in sheet metal, flashing, and trim.

D. Backing for surfaces:

1. Where more than 3/4" wide, pack with foam rod back-up material to within 1/2" of surface.
2. Where less than 1/2" wide, install foam rod back-up material to within 1/4" of surface.
3. Where less than 1/2" deep, apply bond breaker tape to bottom of joints to prevent adhesion of sealant to bottom of joint.
4. Provide backing materials in as long lengths as practicable. Install with proper tool. Force backing into joint to proper depth for sealant.
5. Do not insert with sharp objects. Do not puncture backer rod.

E. Install sealants to size and shape as indicated, with slightly concave surface and depth from 75% to 125% of normal joint width, unless noted otherwise.

F. Install sealants in non-traffic joints with slight concave surface.

1. Sealant Bite: Install between 1/4" and 1/2" deep, except minimum 50% of joint width.
2. Narrowest Dimension at Sealant Profile: Minimum 1/8" thick at center of profile.
3. Verify dimension requirements with manufacturer's instructions.

G. Install sealants in concrete traffic joints with slightly concave surface and depth equal to 75% of joint width, except not more than 5/8" and not less than 3/8" deep. Verify dimension requirements with manufacturer's instructions.

H. Seal joints before final coat of finish is applied to adjacent surfaces.

3.4 REPAIR

A. Examine installation carefully. Repair areas where sealant is not properly adhered due to bubbles, foreign matter, or other defects.

3.5 CLEANING

A. Remove excess sealant material.

B. Remove and dispose of masking materials.

C. Leave surfaces neat, clean, and smooth.

3.6 PROTECTION

A. Protect surfaces adjacent to joints. Apply masking around joints to protect adjacent surfaces from defacement and staining during sealing operations.

B. Protect from dust, moisture, and other harmful substances during installation.

C. Protect sealed joints for at least 12 hours.

END SECTION 07 92 00

SECTION 088400 - PLASTIC GLAZING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:
   1. Multiwalled structured polycarbonate glazing.

B. Related Requirements:
   1. Section 099113 "Painting and Staining" for back-painting

1.3 COORDINATION

A. Coordinate glazing channel dimensions to provide necessary bite on plastic glazing, minimum edge and face clearances, and adequate sealant thicknesses, with reasonable tolerances.

1.4 PREINSTALLATION MEETINGS

A. Preinstallation Conference:

   1. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.

1.5 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Plastic Glazing Samples: For each color and finish of plastic glazing indicated, 12 inches (300 mm) square and of same thickness indicated for final Work.

C. Glazing Accessory Samples: For gaskets and sealants, in 12-inch (300-mm) lengths.

1.6 INFORMATIONAL SUBMITTALS

A. Qualification Data: For testing agency.

B. Product Certificates: For plastic glazing and glazing products.

C. Product Test Reports: For all components, for tests performed by a qualified testing agency.

D. Sample Warranty: For special warranty.

1.7 CLOSEOUT SUBMITTALS

A. Maintenance Data: For plastic glazing to include in maintenance manuals.

1.8 QUALITY ASSURANCE

A. Sealant Testing Agency Qualifications: An independent testing agency qualified according to ASTM C 1021 to conduct the testing indicated.

B. Manufacturer’s Qualifications
   1. ISO 9002 and 14001 certified.

C. Mockups: Build mockups to verify selections made under Sample submittals, to demonstrate aesthetic effects, and to set quality standards for materials and execution.
   1. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.9 DELIVERY, STORAGE, AND HANDLING

A. Protect plastic glazing materials according to manufacturer's written instructions. Prevent damage to plastic glazing and glazing materials from condensation, temperature changes, direct exposure to sun, or other causes.

B. Maintain protective coverings on plastic glazing to avoid exposures to abrasive substances, excessive heat, and other sources of possible deterioration.

1.10 FIELD CONDITIONS

A. Environmental Limitations: Do not proceed with glazing when ambient and substrate temperature conditions are outside limits permitted by glazing material manufacturers and when glazing channel substrates are wet from rain, frost, condensation, or other causes.

   1. Do not install glazing sealants when ambient and substrate temperature conditions are outside limits permitted by sealant manufacturer or below 40 deg F (4.4 deg C).

1.11 WARRANTY

A. Manufacturer's Special Warranty for Abrasion- and UV-Resistant, Multiwalled Polycarbonate: Manufacturer agrees to replace polycarbonate products that break or develop defects from normal use that are attributable to manufacturing process and not to practices for maintaining and cleaning plastic glazing contrary to manufacturer's written instructions. Defects include coating delamination, haze, excessive yellowing, and loss of light transmission beyond the limits stated in plastic glazing manufacturer's standard form.

1. Warranty Period: Ten (10) years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Source Limitations: Obtain plastic glazing from single source from single manufacturer. Obtain sealants and gaskets from single source from single manufacturer for each product and installation method.

2.2 PERFORMANCE REQUIREMENTS

A. Plastic glazing sheets and glazing materials shall withstand normal temperature changes, wind, and impact loads without failure, including loss or breakage of plastic sheets attributable to the following: failure of sealants or gaskets to remain watertight and airtight, deterioration of plastic sheet and glazing materials, or other defects in materials and installation.

B. Windborne-Debris-Impact Resistance: Exterior plastic glazing shall comply with protection testing requirements for Wind Exposure “B” when tested according to ASTM E 1886. Test specimens shall be no smaller in width and length than plastic glazing indicated for use on Project and shall be installed in same manner as indicated for use on Project.

1. Large-Missile Test: For plastic glazing located within 30 feet (9.1 m) of grade.
2. Small-Missile Test: For plastic glazing located more than 30 feet (9.1 m) above grade.

C. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes acting on plastic glazing and glazing framing members.

1. Temperature Change: 120 deg F **(67 deg C),** ambient; 180 deg F (100 deg C), material surfaces.

D. Fire-Test-Response Characteristics of Plastic Glazing: As determined by testing plastic glazing by a qualified testing agency acceptable to authorities having jurisdiction.

1. Self-ignition temperature of 650 deg F (343 deg C) or higher when tested according to ASTM D 1929 on plastic sheets in thicknesses indicated for the Work.
2. Smoke density of 75 or less when tested according to ASTM D 2843 on plastic sheets in thicknesses indicated for the Work.
3. Burning extent of 1 inch (25 mm) or less when tested according to ASTM D 635 at a nominal thickness of 0.060 inch (1.52 mm) or thickness indicated for the Work, where Class CC1 is indicated.
4. Flame-spread index of not less than that indicated when tested according to ASTM E 84.

2.3 PLASTIC GLAZING, GENERAL

A. Glazing Publication: Comply with published instructions of plastic glazing manufacturers and with GANA's "Glazing Manual" unless more stringent requirements are indicated. See this

publication for definitions of glazing terms not otherwise defined in this Section or in other referenced standards.

B. Plastic Glazing Labeling: Identify plastic sheets with appropriate markings of applicable testing and inspecting agency, indicating compliance with required fire-test-response characteristics.

2.4 MULTIWALLED STRUCTURED POLYCARBONATE GLAZING

A. Multiwalled Structured Polycarbonate Sheet: Manufacturer's standard polycarbonate extruded shape with smooth, flat exterior surfaces and internal ribbing.
   1. Nominal Thickness: 8 mm
   2. Confi
   3. UV Resistance: On outer surface
   4. Color: Clear.
      a. Provide back-painting in field per Specification Section 099113.
   5. Combustibility Class: CC1.
   6. Flame-Spread Index: 85 when tested in accordance with ASTM E84.

B. Manufacturer
   1. Provide products as manufactured by POLYGAL, INC, or approved substitution during bidding per Section 012500.

2.5 GLAZING GASKETS

A. Soft Compression Gaskets: Extruded or molded, closed-cell, integral-skinned EPDM gaskets complying with ASTM C 509, Type II, black; and of profile and hardness required to maintain watertight seal.

2.6 GLAZING SEALANTS

A. General:

   1. Compatibility: Provide glazing sealants that are compatible with one another and with other materials they contact, including plastic glazing products and glazing channel substrates, under conditions of service and application, as demonstrated by sealant manufacturer based on testing and field experience.
   2. Suitability: Comply with sealant and glass manufacturers' written instructions for selecting glazing sealants suitable for applications indicated and for conditions existing at time of installation.
   3. Colors of Exposed Glazing Sealants: As selected by Architect from manufacturer's full range.

B. Glazing Sealant: Neutral-curing silicone glazing sealant complying with ASTM C 920, Type S, Grade NS, Class 100/50, Use NT.

2.7 GLAZING TAPES

A. Back-Bedding Mastic Glazing Tapes: Preformed, butyl-based, 100 percent solids elastomeric tape; nonstaining and nonmigrating in contact with nonporous surfaces; with or without spacer rod as recommended in writing by tape and glass manufacturers for application indicated; and complying with ASTM C 1281 and AAMA 800 for products indicated below:

1. AAMA 804.3 tape, where indicated.
2. AAMA 806.3 tape, for glazing applications in which tape is subject to continuous pressure.
3. AAMA 807.3 tape, for glazing applications in which tape is not subject to continuous pressure.

B. Expanded Cellular Glazing Tapes: Closed-cell, PVC foam tapes; factory coated with adhesive on both surfaces; and complying with AAMA 800 for the following types:

1. AAMA 810.1, Type 1, for glazing applications in which tape acts as the primary sealant.
2. AAMA 810.1, Type 2, for glazing applications in which tape is used in combination with a full bead of liquid sealant.

2.8 MISCELLANEOUS GLAZING MATERIALS

A. Compatibility: Provide products of material, size, and shape complying with requirements of manufacturers of plastic glazing and other glazing materials for application indicated, and with a proven record of compatibility with surfaces contacted in installation.

B. Cleaners, Primers, and Sealers: Types recommended by sealant or gasket manufacturer.

C. Setting Blocks: EPDM or silicone as required for compatibility with glazing sealant and plastic glazing, and of hardness recommended by plastic glazing manufacturer for application indicated.

D. Compressible Filler Rods: Closed cell of waterproof-jacketed rod stock of synthetic rubber or plastic foam, flexible and resilient, with 5- to 10-psi (35- to 70-kPa) compression strength for 25 percent deflection.

2.9 FABRICATION

A. Sizes: Fabricate plastic glazing to sizes required for openings indicated. Allow for thermal expansion and contraction of plastic glazing without restraint and without withdrawal of edges from frames, with edge clearances and tolerances complying with plastic glazing manufacturer's written instructions.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine plastic glazing framing, with glazing Installer present, for compliance with the following:

1. Manufacturing and installation tolerances, including those for size, squareness, and offsets at corners.
2. Minimum required face or edge clearances.
3. Effective sealing between joints of plastic glazing framing members.

B. Proceed with glazing only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Clean glazing channels and other framing members immediately before glazing. Remove coatings not firmly bonded to substrates. Remove lacquer from metal surfaces where elastomeric sealants are indicated for use.

3.3 GLAZING, GENERAL

A. Comply with combined written instructions of manufacturers of plastic glazing materials, sealants, gaskets, and other glazing materials unless more stringent requirements are indicated, including those in referenced glazing publication.

B. Glazing channel dimensions indicated on Drawings are designed to provide the necessary bite on plastic glazing, minimum edge and face clearances, and adequate sealant thicknesses, with reasonable tolerances. Adjust plastic glazing lites during installation to ensure that bite is equal on all sides.

C. Sand or scrape cut edges of plastic glazing to provide smooth edges, free of chips and hairline cracks.

D. Remove burrs and other projections from glazing channel surfaces.

E. Protect plastic glazing surfaces from abrasion and other damage during handling and installation, according to the following requirements:

1. Retain plastic glazing manufacturer's protective covering or protect by other methods according to plastic glazing manufacturer's written instructions.
2. Remove covering at border of each piece before glazing; remove remainder of covering immediately after installation where plastic glazing is exposed to sunlight or where other conditions make later removal difficult.
3. Remove damaged plastic glazing sheets from Project site and legally dispose of off-site. Damaged plastic glazing sheets are those containing imperfections that, when installed, result in weakened glazing and impaired performance and appearance.

F. Apply primers to joint surfaces where required for adhesion of sealants, as determined by preconstruction sealant-substrate testing.

G. Install elastomeric setting blocks in sill channels, sized and located to comply with referenced glazing publication, unless otherwise instructed by plastic glazing manufacturer. Set blocks in thin course of compatible sealant suitable for heel bead.

H. Provide edge blocking to comply with referenced glazing publication unless otherwise instructed by plastic glazing manufacturer.

I. Where wedge-shaped gaskets are driven into one side of channel to pressurize sealant or gasket on opposite side, provide adequate anchorage so gasket cannot walk out when installation is subjected to movement.

J. Square cut wedge-shaped gaskets at corners and install gaskets as recommended in writing by gasket manufacturer to prevent corners from pulling away; seal corner and butt joints with sealant recommended by gasket manufacturer.

3.4 GASKET GLAZING (DRY)

A. Fabricate compression gaskets in lengths recommended in writing by gasket manufacturer to fit openings exactly, with allowance for stretch during installation.

B. Insert soft compression gasket between plastic glazing and frame or fixed stop so it is securely in place with joints miter cut and bonded together at corners.

C. Center plastic glazing lites in openings on setting blocks and press firmly against soft compression gasket by inserting dense compression gaskets formed and installed to lock in place against faces of removable stops. Start gasket applications at corners and work toward centers of openings. Compress gaskets to produce a weathertight seal without developing bending stresses in plastic glazing. Seal gasket joints with sealant recommended by gasket manufacturer.

D. Install gaskets so they protrude past face of glazing stops.

3.5 CLEANING AND PROTECTION

A. Protect plastic glazing from contact with contaminating substances from construction operations. If, despite such protection, contaminating substances do come into contact with plastic glazing, remove immediately and wash plastic glazing according to plastic glazing manufacturer's written instructions.

B. Remove and replace plastic glazing that is broken, chipped, cracked, abraded, or damaged in other ways during construction period, including natural causes, accidents, and vandalism.

C. Wash plastic glazing on both faces before date scheduled for inspections intended to establish date of Substantial Completion in each area of Project. Wash plastic glazing according to plastic glazing manufacturer's written instructions.

END OF SECTION 088400

SECTION 09 29 00 - GYPSUM BOARD

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Interior gypsum board.
2. Texture finishes.

B. Related Requirements:

1. Division 06 Section “Rough Carpentry” for framing, blocking, etc.
2. Division 09 Section “Painting” for finishing gypsum board surfaces.

1.3 SUBMITTALS

A. Product Data: For each type of product.

B. Samples: For the following products:

1. Trim Accessories: Full-size Sample in 12-inch- (300-mm-) long length for each trim accessory indicated.

1.4 QUALITY ASSURANCE

A.

1.5 DELIVERY, STORAGE AND HANDLING

A. Store materials inside under cover and keep them dry and protected against weather, condensation, direct sunlight, construction traffic, and other potential causes of damage. Stack panels flat and supported on risers on a flat platform to prevent sagging. Any gypsum or related materials that become wet or damaged shall be removed and replaced with new materials.

1.6 FIELD CONDITIONS

A. Environmental Limitations: Comply with ASTM C 840 requirements or gypsum board manufacturer's written recommendations, whichever are more stringent.

B. Do not install paper-faced gypsum panels until installation areas are enclosed and conditioned. Maintain conditioning continuously once gypsum board installation begins, through Substantial Completion, without interruption.

C. Do not install panels that are wet, those that are moisture damaged, and those that are mold damaged.

1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

PART 2 - PRODUCTS

2.1 GYPSUM BOARD, GENERAL

A. Size: Provide maximum lengths and widths available that will minimize joints in each area and that correspond with support system indicated.

2.2 INTERIOR GYPSUM BOARD

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

1. American Gypsum.
2. CertainTeed Corp.
3. Georgia-Pacific Gypsum LLC.
4. National Gypsum Company.
5. USG Corporation.

B. Gypsum Board, Type X: ASTM C 1396/C 1396M.

1. Thickness: 5/8 inch (15.9 mm), typical, unless specifically indicated otherwise on drawings.
2. Long Edges: Tapered.
3. Location: For all locations where gypsum wall board is indicated on the Drawings for fire rated and non-fire rated assemblies, except as noted herein.

2.3 TRIM ACCESSORIES

A. Standard Interior Trim: ASTM C 1047.

1. Manufacturers: Subject to compliance with requirements, provide products by any manufacturer meeting the requirements of this section for standard trim shapes.
2. Material: Galvanized or aluminum-coated steel sheet, rolled zinc, or paper-faced galvanized steel sheet.
3. Shapes:

    a. Cornerbead.
    b. LC-Bead: J-shaped; exposed long flange receives joint compound.
    c. L-Bead: L-shaped; exposed long flange receives joint compound.
    d. U-Bead: J-shaped; exposed short flange does not receive joint compound.
    e. Pull-away Pre-mask L-Bead: Use at all windows storefront and curtain wall. “Trim-Tex” “Pullaway” Pre-mask L-Bead or similar.
    f. Expansion (control) joint.

B. Aluminum Trim: Provide standard and custom aluminum trim shapes where indicated on the drawings, and of the type indicated on the drawings. Provide in finish and color indicated on drawings, factory applied. Provide Fry Reglet, Gordon or approved substitution per instructions to Proposers and Division 01 “Product Requirements.”

2.4 JOINT TREATMENT MATERIALS

A. General: Comply with ASTM C 475/C 475M.

B. Joint Tape:

1. Interior Gypsum Board: Paper.
2. Tile Backing Panels: As recommended by panel manufacturer.

C. Joint Compound for Interior Gypsum Board: For each coat use formulation that is compatible with other compounds applied on previous or for successive coats.

1. Prefilling: At open joints, rounded or beveled panel edges, and damaged surface areas, use setting-type taping compound.
2. Embedding and First Coat: For embedding tape and first coat on joints, fasteners, and trim flanges, use setting-type taping compound.

    a. Use setting-type compound for installing paper-faced metal trim accessories.

3. Fill Coat: For second coat, use setting-type, sandable topping compound.
4. Finish Coat: For third coat, use setting-type, sandable topping compound.

D. Joint Compound for Tile Backing Panels:

1. Glass-Mat, Water-Resistant Backing Panel: As recommended by backing panel manufacturer.

2.5 AUXILIARY MATERIALS

A. General: Provide auxiliary materials that comply with referenced installation standards and manufacturer's written recommendations.

B. Laminating Adhesive: Adhesive or joint compound recommended for directly adhering gypsum panels to continuous substrate.

1. Laminating adhesive shall have a VOC content of 50 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

C. Steel Drill Screws: ASTM C 1002, unless otherwise indicated.

1. Use screws complying with ASTM C 954 for fastening panels to steel members from 0.033 to 0.112 inch (0.84 to 2.84 mm) thick.

D. Acoustical Joint Sealant: Manufacturer's standard nonsag, paintable, nonstaining latex sealant complying with ASTM C 834. Product effectively reduces airborne sound transmission through perimeter joints and openings in building construction as demonstrated by testing representative assemblies according to ASTM E 90.

1. Acoustical joint sealant shall have a VOC content of 250 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas and substrates including welded hollow-metal frames and framing, with Installer present, for compliance with requirements and other conditions affecting performance.

B. Examine panels before installation. Reject panels that are wet, moisture damaged, and mold damaged.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 APPLYING AND FINISHING PANELS, GENERAL

A. Comply with ASTM C 840.

B. Install ceiling panels across framing to minimize the number of abutting end joints and to avoid abutting end joints in central area of each ceiling. Stagger abutting end joints of adjacent panels not less than one framing member.

C. Install panels with face side out. Butt panels together for a light contact at edges and ends with not more than 1/16 inch (1.5 mm) of open space between panels. Do not force into place.

D. Locate edge and end joints over supports, except in ceiling applications where intermediate supports or gypsum board back-blocking is provided behind end joints. Do not place tapered edges against cut edges or ends. Stagger vertical joints on opposite sides of partitions. Do not make joints other than control joints at corners of framed openings.

E. Form control and expansion joints with space between edges of adjoining gypsum panels.

F. Cover both faces of support framing with gypsum panels in concealed spaces (above ceilings, etc.), except where indicated otherwise.

1. Unless concealed application is indicated or required for sound, fire, air, or smoke ratings, coverage may be accomplished with scraps of not less than 8 sq. ft. (0.7 sq. m) in area.
2. Fit gypsum panels around ducts, pipes, and conduits.
3. Where partitions intersect structural members projecting below underside of floor/roof slabs and decks, cut gypsum panels to fit profile formed by structural members; allow 1/4- to 3/8-inch- (6.4- to 9.5-mm-) wide joints to install sealant.

G. Isolate perimeter of gypsum board applied to non-load-bearing partitions at structural abutments, except floors. Provide 1/4- to 1/2-inch- (6.4- to 12.7-mm-) wide spaces at sides of these locations and 1 inch below, at designated deflection joints (unless noted otherwise), and trim edges with edge trim where edges of panels are exposed. Seal joints between edges and abutting structural surfaces with acoustical sealant.

H. Attachment to Steel Framing: Attach panels so leading edge or end of each panel is attached to open (unsupported) edges of stud flanges first.

I. STC-Rated Assemblies: Seal construction at perimeters, behind control joints, and at openings and penetrations with a continuous bead of acoustical sealant. Install acoustical sealant at both faces of partitions at perimeters and through penetrations. Comply with ASTM C 919 and with manufacturer's written recommendations for locating edge trim and closing off sound-flanking paths around or through assemblies, including sealing partitions above acoustical ceilings.

3.3 APPLYING INTERIOR GYPSUM BOARD

A. Install interior gypsum board in the following locations:

1. Wallboard Type: As indicated on Drawings.

B. Single-Layer Application:

1. On ceilings, apply gypsum panels before wall/partition board application to greatest extent possible and at right angles to framing unless otherwise indicated.
2. On partitions/walls, apply gypsum panels horizontally (perpendicular to framing) unless otherwise indicated or required by fire-resistance-rated assembly, and minimize end joints.

a. Stagger abutting end joints not less than one framing member in alternate courses of panels.

3. On Z-furring members, apply gypsum panels vertically (parallel to framing) with no end joints. Locate edge joints over furring members.
4. Fastening Methods: Apply gypsum panels to supports with steel drill screws.

C. Multilayer Application:

1. On ceilings, apply gypsum board indicated for base layers before applying base layers on walls/partitions; apply face layers in same sequence. Apply base layers at right angles to framing members and offset face-layer joints one framing member, 16 inches (400 mm) minimum, from parallel base-layer joints, unless otherwise indicated or required by fire-resistance-rated assembly.
2. On partitions/walls, apply gypsum board indicated for base layers and face layers vertically (parallel to framing) with joints of base layers located over stud or furring member and face-layer joints offset at least one stud or furring member with base-layer joints, unless otherwise indicated or required by fire-resistance-rated assembly. Stagger joints on opposite sides of partitions.
3. On Z-furring members, apply base layer vertically (parallel to framing) and face layer either vertically (parallel to framing) or horizontally (perpendicular to framing) with vertical joints offset at least one furring member. Locate edge joints of base layer over furring members.
4. Fastening Methods: Fasten base layers and face layers separately to supports with screws.

D. Laminating to Substrate: Where gypsum panels are indicated as directly adhered to a substrate (other than studs, joists, furring members, or base layer of gypsum board), comply with gypsum board manufacturer's written recommendations and temporarily brace or fasten gypsum panels until fastening adhesive has set.

3.4 INSTALLING TRIM ACCESSORIES

A. General: For trim with back flanges intended for fasteners, attach to framing with same fasteners used for panels. Otherwise, attach trim according to manufacturer's written instructions.

B. Control Joints: Install control joints according to ASTM C 840 and in specific locations approved by Engineer for visual effect, and as indicated on Drawings.

C. Interior Trim: Install in the following locations:

1. Cornerbead: Use at outside corners unless otherwise indicated.
2. LC-Bead: Use at exposed panel edges.
3. L-Bead: Use where indicated.
4. U-Bead: Use at exposed panel edges where indicated.

3.5 FINISHING GYPSUM BOARD

A. General: Treat gypsum board joints, interior angles, edge trim, control joints, penetrations, fastener heads, surface defects, and elsewhere as required to prepare gypsum board surfaces for decoration. Promptly remove residual joint compound from adjacent surfaces.

B. Prefill open joints, rounded or beveled edges, and damaged surface areas.

C. Apply joint tape over gypsum board joints, except for trim products specifically indicated as not intended to receive tape.

D. Glass-Mat Faced Panels: Finish according to manufacturer's written instructions.

3.6 APPLYING TEXTURE FINISHES

A. Surface Preparation and Primer: Prepare and apply primer to gypsum panels and other surfaces receiving texture finishes. Apply primer to surfaces that are clean, dry, and smooth.

B. Prevent texture finishes from coming into contact with surfaces not indicated to receive texture finish by covering them with masking agents, polyethylene film, or other means. If, despite these precautions, texture finishes contact these surfaces, immediately remove droppings and overspray to prevent damage according to texture-finish manufacturer's written recommendations.

C. Texture Schedule: Finish panels to levels indicated below and according to ASTM C 840:

1. Match existing texture

3.7 PROTECTION

A. Protect adjacent surfaces from drywall compound and promptly remove from floors and other non-drywall surfaces. Repair surfaces stained, marred, or otherwise damaged during drywall application.

B. Protect installed products from damage from weather, condensation, direct sunlight, construction, and other causes during remainder of the construction period.

C. Remove and replace panels that are wet, moisture damaged, and mold damaged.

1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

END OF SECTION 09 29 00

SECTION 096513 - RESILIENT BASE AND ACCESSORIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Resilient base.
2. Resilient molding accessories.

B. Related Sections:

1. Division 09 Section “Gypsum Board” for substrate.

1.3 ACTION SUBMITTALS

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

B. Samples for Color Selection: For each type of product indicated.

C. Samples for Verification: For each type of product indicated, in manufacturer's standard-size Samples but not less than 12 inches (300 mm) long, of each resilient product color, texture, and pattern required.

1.4 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Furnish not less than 10 linear feet (3 linear m) for every 500 linear feet (150 linear m) or fraction thereof, of each type, color, pattern, and size of resilient product installed.

1.5 QUALITY ASSURANCE

A. Fire-Test-Response Characteristics: As determined by testing identical products according to ASTM E 648 or NFPA 253 by a qualified testing agency.

1. Critical Radiant Flux Classification: Class I, not less than 0.45 W/sq. cm.

B. Mockups: Provide resilient products with mockups specified in other Sections.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Store resilient products and installation materials in dry spaces protected from the weather, with ambient temperatures maintained within range recommended by manufacturer, but not less than 50 deg F (10 deg C) or more than 90 deg F (32 deg C).

1.7 PROJECT CONDITIONS

A. Maintain ambient temperatures within range recommended by manufacturer, but not less than 70 deg F (21 deg C) or more than 95 deg F (35 deg C), in spaces to receive resilient products during the following time periods:

1. 48 hours before installation.
2. During installation.
3. 48 hours after installation.

B. Until Substantial Completion, maintain ambient temperatures within range recommended by manufacturer, but not less than 55 deg F (13 deg C) or more than 95 deg F (35 deg C).

C. Install resilient products after other finishing operations, including painting, have been completed.

PART 2 - PRODUCTS

2.1 RESILIENT BASE

A. Locations: Where “RB” (Rubber Base) is scheduled on drawings.

B. Resilient Base:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following. In addition to meeting all specification standards and requirements, the manufacturer must also have products in colors acceptable to the Architect:

a. Allstate Rubber Corp.; Stoler Industries.
b. Armstrong World Industries, Inc.
c. Burke Mercer Flooring Products; Division of Burke Industries, Inc.
d. Endura Rubber Flooring; Division of Burke Industries, Inc.
e. Estrie Products International; American Biltrite (Canada) Ltd.
f. Flexco, Inc.
g. Johnsonite.
h. Mondo Rubber International, Inc.
i. Musson, R. C. Rubber Co.
j. Nora Rubber Flooring; Freudenberg Building Systems, Inc.
k. PRF USA, Inc.

l. Roppe Corporation, USA.
m. VPI, LLC; Floor Products Division.
n. Or approved substitution per Instructions to bidders and Division 01 “Product Requirements.”

C. Resilient Base Standard: ASTM F 1861.

1. Material Requirement: Type TP (rubber, vulcanized thermoplastic).
2. Manufacturing Method: Group I (solid, homogeneous).
3. Style: Cove (base with toe).

D. Minimum Thickness: 0.125 inch (3.2 mm).

E. Height: 4 inches (102 mm) unless indicated otherwise on drawings.

F. Lengths: Coils in manufacturer's standard length.

G. Outside Corners: Preformed.

H. Inside Corners: Job formed.

I. Surface: Smooth

J. Finish: Matte.

K. Colors and Patterns: Match existing rubber base color.

2.2 RESILIENT MOLDING ACCESSORY

A. Resilient Molding Accessory:

1. Manufacturers: Subject to compliance with requirements, provide of the same manufacturer as the resilient base.

B. Description: Carpet edge for glue-down applications, nosing for carpet nosing for resilient floor covering, reducer strip for resilient floor covering, joiner for tile and carpet, transition strips, and other accessories as shown on the drawings or as otherwise required for a complete and proper installation.

C. Material: Rubber.

D. Profile and Dimensions: As indicated, and as required for a complete and proper installation, and as approved by the Architect.

2.3 INSTALLATION MATERIALS

A. Trowelable Leveling and Patching Compounds: Latex-modified, portland cement based or blended hydraulic-cement-based formulation provided or approved by manufacturer for applications indicated.

B. Adhesives: Water-resistant type recommended by manufacturer to suit resilient products and substrate conditions indicated.

1. Adhesives shall have a VOC content of 50 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, with Installer present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.

B. Verify that finishes of substrates comply with tolerances and other requirements specified in other Sections and that substrates are free of cracks, ridges, depressions, scale, and foreign deposits that might interfere with adhesion of resilient products.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Prepare substrates according to manufacturer's written instructions to ensure adhesion of resilient products.

B. Fill cracks, holes, and depressions in substrates with trowelable leveling and patching compound and remove bumps and ridges to produce a uniform and smooth substrate.

C. Do not install resilient products until they are same temperature as the space where they are to be installed.

1. Move resilient products and installation materials into spaces where they will be installed at least 48 hours in advance of installation.

D. Sweep and vacuum clean substrates to be covered by resilient products immediately before installation.

3.3 RESILIENT BASE INSTALLATION

A. Comply with manufacturer's written instructions for installing resilient base.

B. Apply resilient base to walls, columns, pilasters, casework and cabinets in toe spaces, and other permanent fixtures in rooms and areas where base is required.

C. Install resilient base in lengths as long as practicable without gaps at seams and with tops of adjacent pieces aligned.

D. Tightly adhere resilient base to substrate throughout length of each piece, with base in continuous contact with horizontal and vertical substrates.

E. Do not stretch resilient base during installation.

F. On masonry surfaces or other similar irregular substrates, fill voids along top edge of resilient base with manufacturer's recommended adhesive filler material.

G. Preformed Corners: Install preformed corners before installing straight pieces.

H. Job-Formed Corners:

1. Inside Corners: Use straight pieces of maximum lengths possible.

3.4 RESILIENT ACCESSORY INSTALLATION

A. Comply with manufacturer's written instructions for installing resilient accessories.

B. Resilient Molding Accessories: Butt to adjacent materials and tightly adhere to substrates throughout length of each piece. Install reducer strips at edges of carpet and resilient floor covering that would otherwise be exposed.

3.5 CLEANING AND PROTECTION

A. Comply with manufacturer's written instructions for cleaning and protection of resilient products.

B. Perform the following operations immediately after completing resilient product installation:

1. Remove adhesive and other blemishes from exposed surfaces.
2. Sweep and vacuum surfaces thoroughly.
3. Damp-mop surfaces to remove marks and soil.

C. Protect resilient products from mars, marks, indentations, and other damage from construction operations and placement of equipment and fixtures during remainder of construction period.

END OF SECTION 09 65 13

SECTION 098433 - SOUND-ABSORBING WALL UNITS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes shop-fabricated, fabric-wrapped panel units tested for acoustical performance, including:

1. Sound-absorbing wall panels to replace existing acoustic panels in Council Chambers

B. Related Sections:

1. Division 02 Section “Selective Demolition” for removal of existing acoustic panels

1.3 DEFINITIONS

A. NRC: Noise Reduction Coefficient.

B. SAA: Sound Absorption Average.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of fabric facing, panel edge, core material, and mounting indicated.

1.5 CLOSEOUT SUBMITTALS

A. Maintenance Data: For sound-absorbing wall units to include in maintenance manuals. Include fabric manufacturers' written cleaning and stain-removal recommendations.

1.6 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials from same production run that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Fabric: For each fabric, color, and pattern installed, provide length equal to 10 percent of amount installed, but no fewer than 10 yards (9 m).
2. Mounting Devices: Full-size units equal to 5 percent of amount installed, but no fewer than 5 devices, including unopened adhesives.

1.7 QUALITY ASSURANCE

A. Source Limitations: Obtain sound-absorbing wall units from single source from single manufacturer.

B. Fire-Test-Response Characteristics: Provide sound-absorbing wall units meeting the following as determined by testing identical products by UL or another testing and inspecting agency acceptable to authorities having jurisdiction:

1. Surface-Burning Characteristics: As determined by testing per ASTM E 84.

a. Flame-Spread Index: 25 or less.
b. Smoke-Developed Index: 450 or less.

1.8 DELIVERY, STORAGE, AND HANDLING

A. Comply with fabric and sound-absorbing wall unit manufacturers' written instructions for minimum and maximum temperature and humidity requirements for shipment, storage, and handling.

B. Deliver materials and units in unopened bundles and store in a temperature-controlled dry place with adequate air circulation.

1.9 PROJECT CONDITIONS

A. Environmental Limitations: Do not install sound-absorbing wall units until spaces are enclosed and weathertight, wet work in spaces is complete and dry, work at and above ceilings is complete, and ambient temperature and humidity conditions are maintained at the levels indicated for Project when occupied for its intended use.

B. Air-Quality Limitations: Protect sound-absorbing wall units from exposure to airborne odors, such as tobacco smoke, and install units under conditions free from odor contamination of ambient air.

C. Field Measurements: Verify locations of sound-absorbing wall units and actual dimensions of openings and penetrations by field measurements before fabrication.

1.10 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of sound-absorbing wall units that fail in materials or workmanship within specified warranty period.

1. Failures include, but are not limited to the following:

a. Acoustical performance.
b. Fabric sagging, distorting, or releasing from panel edge.
c. Warping of core.

2. Warranty Period: Two years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 SOUND-ABSORBING WALL UNITS

A. Basis-of-Design Product: Subject to compliance with requirements, provide F-Sorb (www.f-sorb.com); Acoustical Panel System, or an equal and comparable product by one of the following:

1. Or approved substitute during the bid process per Specification Sections 002113 and 012500.

B. Sound-Absorbing Panel (AKA "Acoustic Wall Panels"): Manufacturer's standard panel construction consisting of 70 percent post-consumer polyester-fiber which is 100 percent recyclable, hypoallergenic, dust and formaldehyde free, and causes no skin irritation or respiratory problems and contains no VOC's, binders or chemicals.

1. Rating: Class A Fire Rated per ASTM E-84
2. NRC Surface Mounted Type A Mounting per ASTM C423. 1 inch thick, with NRC of 0.75.
3. Density: 6.0 pound.
4. Panel Thickness: 1 inch.
5. Panel Size: As indicated on the drawings.

C. Facing Material – Fabric Wrapped Panels: Where indicated on Drawings, provide panels with fabric wrap.

1. Fabric: Match existing fabric type, weight, and style.
2. Color: Provide options from manufacturer's full range to best match existing.

D. Mounting: Mechanically fastened to substrate with concealed fasteners.

2.2 FABRICATION

A. General: Use manufacturer's standard construction except as otherwise indicated; with facing material applied to face, edges, and back border of dimensionally stable core; and with rigid edges to reinforce panel perimeter against warpage and damage.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine fabric, fabricated units, substrates, areas, and conditions, for compliance with requirements, installation tolerances, and other conditions affecting performance of sound-absorbing wall units.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Install sound-absorbing wall units in locations indicated with vertical surfaces and edges plumb, top edges level and in alignment with other units, faces flush, and scribed to fit adjoining work accurately at borders and at penetrations.

B. Comply with sound-absorbing wall unit manufacturer's written instructions for installation of units using type of mounting devices indicated. Mount units securely to supporting substrate.

C. Align and level fabric pattern and grain among adjacent units.

3.3 INSTALLATION TOLERANCES

A. Variation from Plumb and Level: Plus or minus 1/16 inch (1.6 mm).

3.4 CLEANING

A. Clip loose threads; remove pills and extraneous materials.

B. Clean panels on completion of installation to remove dust and other foreign materials according to manufacturer's written instructions.

END OF SECTION 09 84 33

SECTION 099113 – PAINTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes surface preparation and the application of stain, paint and high performance coating systems on interior and exterior substrates.

1. "Paint" as used herein means coating systems materials, including primers, emulsions, enamels, stains, sealers and fillers, and other applied materials whether used as primer, intermediate or finish coats.
2. Priming and coats of paint specified are in addition to shop-priming and surface treatment specified under other sections of work.
3. Work includes painting of all interior and exterior items noted or scheduled for painting, unless specified under another section, plus any items not listed herein as factory finished, and any items factory primed for field painting not specified under another section, and field surface preparation and field priming.
4. Work includes field painting of interior and exterior exposed bare and covered pipes and ducts (if any), and of hangers, exposed steel and iron work, and primed metal surfaces of equipment in exposed areas installed under mechanical and electrical work, except as otherwise indicated, and except as specified under other sections.

B. No Finish Required: Unless specifically specified otherwise, the following surfaces or categories of work are not included as part of field-applied finish work of this section:

1. Pre-Finished Items: Unless otherwise indicated, do not include painting when factory-finishing or installer-finishing is specified for such items as (but not limited to) integrally colored concrete masonry, acoustic materials, glass, sealant (excluding caulking as specified herein), ceramic tile, and finished mechanical and electrical equipment including and lighting fixtures.
2. Exposed Finish Metal Surfaces: Unless otherwise indicated, metal surfaces of anodized aluminum, stainless steel, chromium plate, copper, brass, bronze and similar finished materials will not require painting.

C. Related Requirements:

1. Division 05 Sections for shop priming of metal substrates with primers specified in this Section.
2. Division 06 Sections for shop priming carpentry with primers specified in this Section.

1.3 DEFINITIONS

A. Gloss Level 1: Not more than 5 units at 60 degrees and 10 units at 85 degrees, according to ASTM D 523.

B. Gloss Level 3: 10 to 25 units at 60 degrees and 10 to 35 units at 85 degrees, according to ASTM D 523.

C. Gloss Level 4: 20 to 35 units at 60 degrees and not less than 35 units at 85 degrees, according to ASTM D 523.

D. Gloss Level 5: 35 to 70 units at 60 degrees, according to ASTM D 523.

E. Gloss Level 6: 70 to 85 units at 60 degrees, according to ASTM D 523.

F. Gloss Level 7: More than 85 units at 60 degrees, according to ASTM D 523.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product. Include surface preparation requirements and application instructions.

B. Samples for Initial Selection: For each type of topcoat product.

1. Color Wheel: Submit one full spectrum color wheel for each of the various coatings involved, for Architect's use for color selections. Submit additional color wheels or the like for high performance coatings of other manufacturers where different from paint supplier.

C. Samples for Verification: For each type of paint system and each color and gloss of topcoat.

1. Applied Finish Samples: Submit samples of each color, texture and sheen on rigid backing, 8-1/2” x 11”. Submit 4 sets of each color and finish.
2. Step coats on Samples to show each coat required for system.
3. Label each coat of each Sample.
4. Label each Sample for location and application area and schedule reference from Color Schedule.
5. Label each Sample with the paint manufacturer’s name, paint color name and number, and the specified manufacturer color name and number from the architectural drawings.
6. Where directed by the Architect, the Contractor shall provide custom colors to match the Architect’s samples, colors indicated on the Color Schedule, or as required to achieve the color desired by the Architect.
7. Additional Applied Finish Samples: Furnish additional sets of samples, in the quantities noted herein, until colors, finishes, textures are reviewed and accepted by the Architect/Owner (followed by written authorization to proceed).
8. Time: Allow ample time for submittal and resubmittal of color samples. Do no work on site until all samples are approved. Samples cannot be reviewed or approved until all building color samples have been provided.

D. Qualification Data: Submit proof of compliance with all requirements of the Quality Assurance article herein.

E. Product List: For each product indicated, include the following:

1. Cross-reference to paint system and locations of application areas. Use same designations indicated on Drawings and in schedules.
2. Printout of current "MPI Approved Products List" for each product category specified, with the proposed product highlighted.
3. VOC content.

1.5 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Paint: 5 percent, but not less than 1 gal. (3.8 L) of each material and color applied.

1.6 QUALITY ASSURANCE

A. Mockups: Apply mockups of each paint system indicated and each color and finish selected to verify preliminary selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution. Do no work until mock up has been approved.

1. Architect will select one surface to represent surfaces and conditions for application of each paint system specified in Part 3.

a. Vertical and Horizontal Surfaces: Provide samples of at least 100 sq. ft. (9 sq. m).
b. Other Items: Architect will designate items or areas required.

2. Final approval of color selections will be based on mockups.

3. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
4. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

B. Referenced Standards:

1. Master Painters Institute (MPI): Except as hereinafter specified, for materials and workmanship, conform to the “Architectural Painting Specification Manual” and SSPC as published by the Master Painters Institute, hereinafter referred to as “MPI”,as published by the following:

a. International:

Master Painters Institute
4090 Graveley Street
Burnaby, BC
Canada V5C 3T6

b. United States of American:

PDCA – Painting & Decorating Contractors of America
3913 Old Lee Highway, Suite 33-B
Fairfax, Virginia 22030-2433
703-359-0826
www.pdca.org

c. State of Washington:

PDCA – Washington State Council
870 SW 136th Street
Burien, WA. 98166
206-243-7477

2. Consult the MPI and SSPC Manual's for surfaces not specifically mentioned in this Section.
3. Work in this Section may be inspected and tested by an independent inspection agency at the Owner's option and expense. If the Owner engages a testing agency, notify inspection agency at least ten (10) full working days prior to starting work under this Section. Allow full access to the work and give full cooperation at all times with the inspection agency in the performance of their duties of inspecting and testing the work. Painting contractor shall repair all destructive testing sites.
4. Conform to above Manual's entire standards for "Custom" materials and work, except as otherwise indicated.
5. Inspection and testing fees for work of this Section shall be paid for by the Owner. The Contractor, shall, however, make all arrangements with the testing agency and notify them of award of contract, the amounts of the contract, and the commencement of work.
6. SSPC Volume 1 and 2.
7. Manufacturer's printed installation instructions.

C. Regulatory Agency Requirements:

1. Occupational Safety & Health and Pollution Regulations: Conform to the Federal and State requirements for painting work applicable to this project.
2. Permits: Obtain and pay for any special permits required by local governmental agencies.
3. Codes: Conform to any special local code requirements applicable to work of this Section.

D. Qualifications:

1. Manufacturer and Materials: Unless specifically specified otherwise, use only the approved products of either the paint manufactures scheduled in this Section, or one of the approved paint manufacturers. Even if listed in MPI, a manufacturer's product is not approved for use unless it is listed as an approved manufacturer herein, or is approved through the substitution process noted in this section, and the manufacturer has demonstrated their products as fully equivalent to the specific specified products, with proof being provided through the submittals process. Proof of equivalency belongs to the Contractor, and the Architect shall be the sole judge of acceptability.
2. General Application: The firm engaged for work under this Section shall, upon request, furnish in writing their qualifications attesting to past satisfactory experience in painting work of not less than the scope of this Project.

    a. Maintain a crew of painters throughout duration of the painting work who shall be qualified to fully satisfy the requirements of these Specifications.
    b. Employ only qualified journeymen, in this painting work; apprentices may be employed on the project to work under the direction of qualified journeymen, in accordance with trade regulations.

E. Single Source Responsibility: Provide primers and other undercoat paint produced by same manufacturer as finish coats. Use only thinners approved by paint manufacturer, and use only within recommended limits

F. Coordination:

1. Provide finish coats compatible with shop and field primers.
2. Review other sections of these specifications in which prime paints are to be provided to certify compatibility of total coating system for various substrates.
3. Upon request from other trades, furnish information on characteristics of specified finish materials provided for use, to certify compatible prime coats are used. Provide barrier coats over incompatible primers or remove and re-prime as required.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials to job site in unbroken sealed packages with manufacturer's original labels thereon, bearing manufacturer's name, type of paint, brand name, color designation and instructions for mixing and/or reducing. Do not open until Architect/Owner inspects and approves.

B. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than 45 deg F (7 deg C).

1. Maintain containers in clean condition, free of foreign materials and residue.
2. Remove rags and waste from storage areas daily.

C. Take all necessary precautionary measures to prevent fire hazards and spontaneous combustion; place cotton waste, cloths, and other hazardous materials in containers, and remove from site daily.

D. Toxic, acetic, and explosive materials: Take regular appropriate safety precautions conforming to manufacturer's recommendations and applicable "Regulatory Requirements".

1.8 FIELD CONDITIONS

A. Apply paints only when temperature of surfaces to be painted and ambient air temperatures are between 50 and 95 deg F (10 and 35 deg C).

B. Do not apply paints in snow, rain, fog, or mist; when relative humidity exceeds 85 percent; at temperatures less than 5 deg F (3 deg C) above the dew point; or to damp or wet surfaces. Do not apply paints when dust or insects are present.

1.9 WARRANTY

A. Installers Warranty: Two years from the date of Substantial Completion for full labor and materials on all installed painting systems.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: For specification purposes, PPG, Glidden Professional, Rodda and other specific manufacturer's products are referenced to set a basis-of-design and quality standard. Other manufacturer's listed herein below are also preapproved, provided they can furnish equivalent products for all specified paint systems and that they are all deemed equivalent by the Architect. Following are the other preapproved manufacturers. Other manufacturers desiring approval shall submit a substitution request according to the provisions of the sections referenced below. Other manufacturer's must comply with MPI, and must have products equivalent or superior to the referenced products in every respect.

1. PPG.
2. Tnemec
3. Sherwin-Williams.
4. Rodda
5. Benjamin Moore.
6. Or approved substitution per Sections 002113 and 012500.

B. Products: Subject to compliance with requirements, provide product listed in Part 3 for the paint category indicated, or an equivalent product from an approved manufacturer.

C. Material Quality:

1. Provide products equivalent to the basis-of-design products, or better.
2. Provide undercoat paint produced by the same manufacturer as the finish coats. Use only thinners approved by the paint manufacturer, and use only to recommend limits.
3. Provide paints of durable and washable quality.

2.2 PAINT, GENERAL

A. MPI Standards: Provide products that comply with MPI standards indicated and that are listed in its "MPI Approved Products List", and are equivalent to or exceed the quality standards of the referenced basis-of-design products.

B. Material Compatibility:

1. Provide materials for use within each paint system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
2. For each coat in a paint system, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated.

C. VOC Content: Provide materials that comply with VOC limits of authorities having jurisdiction.

D. Colors:

1. Selections: The Architect will select from the manufacturers full range of available colors, or to select custom colors, all without additional cost.
2. Number of Colors: See the Color Schedule on the drawings.
3. Color Variations: Vary colors of succeeding coats to readily permit inspection of number of specified coats and to prevent skipping and holidays.

E. Products: See the Schedule included in Part 3 of this Section.

2.3 SOURCE QUALITY CONTROL

A. Testing of Paint Materials: Owner reserves the right to invoke the following procedure:

1. Owner may engage the services of a qualified testing agency or inspection consultant to sample paint materials. Contractor will be notified in advance and may be present when samples are taken. If paint materials have already been delivered to Project site, samples may be taken at Project site. Samples will be identified, sealed, and certified by testing agency.
2. Testing agency or consultant will perform tests for compliance with product requirements.
3. Owner may direct Contractor to stop applying paints if test results show materials being used do not comply with product requirements. Contractor shall remove noncomplying paint materials from Project site, pay for testing, and repaint surfaces painted with rejected materials. Contractor will be required to remove rejected materials from previously painted surfaces if, on repainting with complying materials, the two paints are incompatible.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.

B. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:

1. Concrete: 12 percent.
2. Masonry (Clay and CMU): 12 percent.
3. Wood: 15 percent.
4. Portland Cement Plaster: 12 percent.
5. Gypsum Board: 12 percent.

C. Portland Cement Plaster Substrates: Verify that plaster is fully cured.

D. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.

E. Proceed with coating application only after unsatisfactory conditions have been corrected.

1. Application of coating indicates acceptance of surfaces and conditions.

3.2 PREPARATION

A. Comply with Manufacturer's written instructions and recommendations in "MPI Manual" and SSPC applicable to substrates and paint systems indicated.

B. Unless otherwise specified, surfaces considered the responsibility of other trades for work under this Section include:

1. Preparation and painting of existing wood windows and doors.

C. Remove hardware, covers, plates, and similar items already in place that are removable and are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.

1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection.

D. Clean substrates of substances that could impair bond of paints, including dust, dirt, oil, grease, and incompatible paints and encapsulants.

1. Remove incompatible primers and reprime substrate with compatible primers or apply tie coat as required to produce paint systems indicated.

E. Concrete Substrates: Remove release agents, curing compounds, efflorescence, and chalk. Do not paint surfaces if moisture content or alkalinity of surfaces to be painted exceeds that permitted in manufacturer's written instructions.

F. Steel Substrates: Remove rust, loose mill scale, and shop primer if any. Clean using methods recommended in writing by paint manufacturer but not less than the following:]

1. SSPC-SP 3, "Power Tool Cleaning."

G. Shop-Primed Steel Substrates: Clean abraded areas of shop primer, and paint exposed areas with the same material as used for shop priming. Application to comply with SSPC-PA 1 for touching up shop-primed surfaces.

H. Galvanized-Metal Substrates: Remove grease and oil residue from galvanized sheet metal by mechanical methods to produce clean, lightly etched surfaces that promote adhesion of subsequently applied paints. Apply primer with 2 to 4 hours of surface preparation.

I. Aluminum Substrates: Remove oxidation. Brighten aluminum.

J. New Wood Substrates:

1. Scrape and clean knots. Before applying primer, apply coat of knot sealer recommended in writing by topcoat manufacturer for exterior use in paint system indicated.
2. Sand surfaces that will be exposed to view, and dust off.
3. Prime edges, ends, faces, undersides, and backsides of wood. Encapsulate wood with primer.
4. After priming, fill holes and imperfections in the finish surfaces with putty or plastic wood filler. Sand smooth when dried.

K. Plastic Trim Fabrication Substrates: Remove dust, dirt, and other foreign material that might impair bond of paints to substrates. Develop profile prior to priming.

3.3 APPLICATION

A. Apply paints according to manufacturer's written instructions and recommendations in MPI and SSPC Manuals.

1. Use applicators and techniques suited for paint and substrate indicated.
2. Paint surfaces behind movable items same as similar exposed surfaces. Before final installation, paint surfaces behind permanently fixed items with prime coat only.
3. Paint both sides and edges of exterior doors and entire exposed surface of exterior door frames.
4. Paint entire exposed surface of window frames and sashes.
5. Do not paint over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.
6. Primers specified in painting schedules may be omitted on items that are factory primed or factory finished if acceptable to topcoat manufacturers except metal doors and frames.

B. Tint undercoats same color as topcoat, but tint each undercoat a lighter shade to facilitate identification of each coat if multiple coats of same material are to be applied. Provide sufficient difference in shade of undercoats to distinguish each separate coat.

C. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.

D. Priming and coats of paint specified are in addition to shop-priming and surface treatment that may be specified under other sections of work.

E. Work includes painting of all exterior items noted for painting, and any items factory primed for field painting, and surface preparation and priming.

F. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.

G. Painting Fire Suppression, Plumbing, HVAC, Electrical, Communication, and Electronic Safety and Security Work:

1. Paint the following work where exposed to view, except in mechanical rooms, storage rooms and attic spaces:

a. Equipment, including panelboards.
b. Uninsulated metal piping.
c. Uninsulated plastic piping.
d. Pipe hangers and supports.
e. Metal conduit.
f. Plastic conduit.
g. Tanks that do not have factory-applied final finishes.

3.4 FIELD QUALITY CONTROL

A. Dry Film Thickness Testing: Owner may engage the services of a qualified testing and inspecting agency to inspect and test paint for dry film thickness.

1. If the Owner engages a testing agency or inspector, notify inspection agency or inspector at least ten (10) full working days prior to starting work under this Section. Allow full access to the work and give full cooperation at all times with the inspection agency in the performance of their duties of inspecting and testing the work.
2. Contractor shall touch up and restore painted surfaces damaged by testing.
3. If test results show that dry film thickness of applied paint does not comply with paint manufacturer's written recommendations, Contractor shall pay for testing and apply additional coats as needed to provide dry film thickness that complies with paint manufacturer's written recommendations, and pay for re-testing to confirm compliance.
4. If paint failure is due to surface preparation, primer application or finish coat application, remove entire system and re-apply.

B. Testing agency / inspector or Owner may:

1. Request product invoices from single source manufacturer of products delivered to site showing the product that is being used on this project is that which was specified in the Contract Documents.
2. Engage services of an independent testing agency and/or laboratory, to sample paint being used. Samples of materials delivered to project site will be taken, identified and sealed, and certified in presence of Contractor.
3. Perform appropriate tests for any or all of the following characteristics: abrasion resistance, apparent reflectivity, flexibility, wash-ability, absorption, accelerated weathering, dry opacity, accelerated yellowness, recoating, skinning, color retention,

3.5 CLEANING AND PROTECTION

A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.

B. After completing paint application, clean spattered surfaces. Remove spattered paints by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.

C. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.

D. Use tarpaulins or drop cloths and masking tape and paper when working above or adjacent to finished work.

E. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

3.6 EXTERIOR PAINTING SCHEDULE

A. General: Work specified herein is in addition to shop coats called for under other Sections. Products listed in the following schedule are generally those of “Rodda”, “PPG” and “Glidden” to establish the type and level of quality and paint type required. See article 2 above for other approved manufacturers and the substitution process.

B. Hollow Metal Doors, Frames and Relite Frames:

1. Surfaces to be Painted: Include exposed surfaces - both faces, ends, edges and stops (all sides) of all exterior hollow metal doors and exposed frame surfaces.
2. Field Prime Coat: PPG Amerlock; Epoxy Mastic Primer” or Rodda/Cloverdale ClovaPrime #21. Apply to all exposed surfaces.
3. Field Finish Coats: Two coats, “PPG Pitthane 95-812 Ultra Gloss Urethane finish, or Rodda/Cloverdale #835 DTM Polyurethane at 2-3 mils dft per coat Apply to all exposed surfaces.

C. Mechanical, Electrical and Utility Equipment Scheduled or noted to be painted:

1. General: Work in this paragraph includes all exposed mechanical, electrical, utility equipment including, but not necessarily limited to, rooftop mechanical equipment, plastic gas vents, aluminum exhaust vents, rooftop pipe penetrations, exhaust fan hoods and the like, which are scheduled or noted to be painted.
2. Clean and prepare all surfaces to receive painting.
3. Prime Coat: PPG 90-96 AquaponWB Primer
4. Two Finish Coats: PPG 90-1210 Pitt Tech Plus, Semi-gloss.

D. Primed Cement Board Siding Panels, Soffits and Trim: Coats may be applied by either brush roller or spray application.

1. First Coat: Rodda Phextite 4 mils DFT Acrylic, Satin finish.
2. Second Coat: Rodda Phextite 4 mils DFT Acrylic, Satin finish.

E. Wood Siding Stain

1. First Coat: Rodda Rural Manor #714103, MPI #13
2. Second Coat: Rodda Rual Manor #714103, MPI #13

F. Wood / Plywood Soffits and Trim: Coats may be applied by either spray or roller or brush application.

1. Prime Coat: "PPG Speedhide Exterior Acrylic Primer 6-609 or Rodda First Coat #501601 Primer Sealer 2 mils DFT.
2. Finish Coats: Two coats "PPG Speedhide Exterior Acrylic 6-2045"or Rodda Unique II #532001 Exterior Acrylic, Satin finish. 1.5 mils DFT per coat.

3.7 INTERIOR PAINTING SCHEDULE

A. General

1. Work specified herein is in ADDITION to shop coats called for under various other Divisions and Sections.
2. Unless otherwise specifically noted on Drawings, or set forth hereinafter, all interior surfaces shall be painted, or enameled and/or finished in accordance with the number and type of coats as hereinafter specified.
3. Products listed in the following schedule are generally those of "Rodda" and "PPG". See article 2.1 herein for other manufacturer's products and substitutions.

B. Interior Wood Trim & Finish, and Casework with Wood Trim:

1. General: All exposed wood trim and finish lumber surfaces in occupied spaces including wood doors, which are not otherwise specified under work of other Sections to be factory finish, shall be finished under work of this Section by the following systems.

2. Wood Trim, Wainscots and Plywood Equipment Panels, MDO Plywood at designated casework, and Other Wood Items Noted on Drawings to be Painted:

a. 1st Coat: "PPG SEAL GRIP Interior/Exterior 100% Acrylic Universal Primer/Sealer 17-921" (1.2 to 1.5 miles dry).
b. 2nd Coat: "PPG SPEEDHIDE INTERIOR SEMI-GLOSS ACRYLIC LATEX 6-500" series, (3.0 to 4.0 mils wet, 0.9 to 1.2 miles dry per coat).
c. 3rd Coat: "PPG SPEEDHIDE INTERIOR SEMI-GLOSS ACRYLIC LATEX 6-500" series, (3.0 to 4.0 mils wet, 0.9 to 1.2 miles dry per coat).

C. Gypsum Wallboard:

1. Where "GWB" is Scheduled:

a. One coat "PPG SPEEDHIDE INTERIOR HIGH BUILD LATEX PRIMER SEALER 6-4", 4.0 mils WFT, 1.0 mils DFT over gypsum wallboard surfaces prior to texture coating application specified under Division 9 Section "Gypsum Board Assemblies".
b. Two coats "PPG PURE PERFORMANCE" Interior Latex 9-300 Series (4.0 to 4.6 mils wet, 1.5 to 1.8 mils dry per coat). Use egg-shell enamel for surfaces scheduled as "GWB."

D. Hollow Metal Relite Frames, Doors & Door Frames, Access Doors, and Metal Frames: Same as exterior Hollow metal doors and door frames.

E. Interior Exposed Steel: All interior exposed steel.

1. Provide DTM Acrylic System- Primer: Rodda Barrier II Intermediate: MultiMaster #528901 or 548901, Finish: MultiMaster 528901 or 548901.

F. Mechanical Equipment, Grilles & Diffusers

1. Inside ducts just behind grilles and diffusers: Paint to 12 inches back from grilles, one coat dead black flat, same system as specified for interior hollow-metal doors.
2. Exposed Pipes: Paint exposed pipes in occupied and otherwise public areas with finish system as specified herein for Interior Exposed Steel, except no painting required in Mechanical rooms and spaces.
3. Ducts Exposed in occupied spaces: Paint exposed ducts in occupied and otherwise public areas only where specifically noted for a painted finish, with finish system as specified herein for Interior Exposed Steel, color as selected. No painting required in Mechanical rooms and spaces.
4. All other mechanical equipment: Surfaces are factory-finished; no painting or finishing required.
5. Mechanical grilles and diffusers located in walls with accent paint: Paint to match wall using products specified for use at interior hollow metal doors and frames.

G. Electrical Equipment

1. Flush Distribution Panels in Finish-Painted Walls: Paint with same system as specified above for interior hollow metal doors and frames, of same finish color as adjacent wall.
2. Surface Mounted Panels: Unless otherwise directed by the Owner, paint with same system as specified above, of same finish color as adjacent wall.

3. Conduit: No painting required in Electrical, Mechanical and attic rooms and spaces. At all other locations, paint exposed conduit in areas with finish system as specified herein for Interior Exposed Steel, of same finish color as adjacent wall and/or ceiling, as applicable.

F. Touch up: spot repair and touch up edge to edge damaged painted surfaces. Leave painted surfaces clean of construction residue.

END OF SECTION 09 91 13

SECTION 101400 - SIGNAGE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. This Section includes the following:

1. Installation of Owner-Furnished Cast Metal Letter.
2. Logo graphic.

1.3 ACTION SUBMITTALS

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

B. Shop Drawings: Show fabrication and installation details for signs.

1. Show sign mounting heights, locations of supplementary supports and accessories.
2. Provide elevation drawings to scale showing signage and logos.

C. Samples for Initial Selection: Manufacturer's color charts consisting of actual units or sections of units showing the full range of colors available for the following:

1.4 INFORMATIONAL SUBMITTALS

A. Qualification Data: For fabricator.

B. Warranty: Special warranty specified in this Section.

1.5 CLOSEOUT SUBMITTALS

A. Maintenance Data: For signs to include in maintenance manuals.

1.6 QUALITY ASSURANCE

A. Fabricator Qualifications: Shop that employs skilled workers who custom-fabricate products similar to those required for this Project and whose products have a record of successful in-service performance.

1.7 PROJECT CONDITIONS

A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit installation of signs in exterior locations to be performed according to manufacturers' written instructions and warranty requirements.

B. Field Measurements: Verify recess openings by field measurements before fabrication and indicate measurements on Shop Drawings.

C. Information Supplied by Owner (For all Signage): Copy/ text noted herein to be supplied by Owner during shop drawing process, Contractor shall provide Owner minimum 60 days advanced notice of when such information will be needed.

1.8 COORDINATION

A. Coordinate placement of anchorage devices with templates for installing signs.

1.9 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of signs that fail in materials or workmanship within specified warranty period.

1. Failures include, but are not limited to, the following:

   a. Deterioration of finishes beyond normal weathering.
   b. Deterioration of embedded graphic image.

2. Warranty Period: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Aluminum Castings: ASTM B 26/B 26M, of alloy and temper recommended by sign manufacturer for casting process used and for use and finish indicated.

2.2 DIMENSIONAL CHARACTERS

A. Cutout Characters: Provide characters with square-cut, smooth, eased edges. Comply with the following requirements:

1. Aluminum Sheet: 0.50 inch (12.70 mm) thick.

   a. Finish: Painted.
   b. Color: As selected by Architect from manufacturer's full range.
   c. City Logo: Contractor will be provided with electronic media of City Logo.

d. Signage Letters: The Owner will furnish all cast aluminum letters indicated for the main building signage as indicated on Drawings. Contractor shall install all letters.

2. Mounting: Adhesive Projected with concealed non-corroding studs, as indicated on Drawings for substrates encountered.

2.3 ACCESSORIES

A. Anchors and Inserts: Provide nonferrous-metal or hot-dip galvanized anchors and inserts for exterior installations and elsewhere as required for corrosion resistance. Use toothed steel or lead expansion-bolt devices for drilled-in-place anchors. Furnish inserts, as required, to be set into concrete or masonry work.

2.4 FABRICATION

A. General: Provide manufacturer's standard signs of configurations indicated.

1. Welded Connections: Comply with AWS standards for recommended practices in shop welding. Provide welds behind finished surfaces without distortion or discoloration of exposed side. Clean exposed welded surfaces of welding flux and dress exposed and contact surfaces.
2. Mill joints to tight, hairline fit. Form joints exposed to weather to exclude water penetration.
3. Preassemble signs in the shop to greatest extent possible. Disassemble signs only as necessary for shipping and handling limitations. Clearly mark units for reassembly and installation, in location not exposed to view after final assembly.
4. Conceal fasteners if possible; otherwise, locate fasteners where they will be inconspicuous.

2.5 FINISHES, GENERAL

A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

C. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

2.6 ALUMINUM FINISHES

A. Baked-Enamel Finish: AA-C12C42R1x (Chemical Finish: cleaned with inhibited chemicals; Chemical Finish: acid-chromate-fluoride-phosphate conversion coating; Organic Coating: as

specified below). Apply baked enamel complying with paint manufacturer's written instructions for cleaning, conversion coating, and painting.

1. Organic Coating: Thermosetting, modified-acrylic enamel primer/topcoat system complying with AAMA 2603 except with a minimum dry film thickness of 1.5 mils (0.04 mm), medium gloss.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of work.

B. Verify that items, including anchor inserts, are sized and located to accommodate signs.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Locate signs and accessories where indicated, using mounting methods of types described and complying with manufacturer's written instructions.

1. Install signs level, plumb, and at heights indicated, with sign surfaces free of distortion and other defects in appearance.

B. Exterior signs installed on exterior walls shall have all holes and penetrations into wall sealed to prevent water entry.

C. Dimensional Characters: Mount characters using standard fastening methods to comply with manufacturer's written instructions for character form, type of mounting, wall construction, and condition of exposure indicated. Provide heavy paper template to establish character spacing and to locate holes for fasteners.

1. Flush Mounting: Mount characters with backs in contact with wall surface.

3.3 CLEANING AND PROTECTION

A. After installation, clean soiled sign surfaces according to manufacturer's written instructions. Protect signs from damage until acceptance by Owner.

END OF SECTION 101400

SECTION 260000 - ELECTRICAL GENERAL CONDITIONS

PART 1 - GENERAL

1.1 GENERAL

A. Conform to the General Conditions, Supplementary Conditions, and related work in other Divisions for all work in Division 26. See Division 1 for sequence of work.

1.2 WORK INCLUDED

A. It is the intention of this division of the specifications and the accompanying drawings to describe and provide for the furnishing, installing, testing and placing in satisfactory and successful operation all equipment, materials, devices and necessary appurtenances to provide a complete electrical system, together with such other miscellaneous installations and equipment hereinafter specified and/or shown in the plans. The work shall include all materials, appliances and apparatus not specifically mentioned herein or noted on the plans, but which are necessary to make a complete working installation of all electrical systems shown on the plans or described herein. Equipment and devices furnished and installed under other divisions of this specification (or by the Owner) shall be connected under this division. The drawings and specifications are complementary and what is called for in either is binding as if called for in both.

B. By submitting a bid, the Contractor is acknowledging that he has made a thorough examination of the Contract Documents, existing site and building conditions, and has determined that these documents do sufficiently describe the scope of construction work required under this Contract.

1.3 SCOPE OF BASIC BID

A. Included in Division 26 work is all work and related items necessary to provide all electrical installations except as specifically excluded. In general, this includes all labor, equipment, tools, etc., to complete the electrical work.

1.4 STANDARDS AND REGULATIONS

A. The work shall comply with the latest edition of the applicable Standards and Codes of the following:

ASTM	American Society for Testing and Materials
NBFU	National Board of Fire Underwriters
NEC	National Electrical Code
---	State Electrical Code
NESC	National Electrical Safety Code
NEMA	National Electrical Manufacturers Association
NFPA	National Fire Protection Association

U.L.	Underwriters Laboratories Inc.
IPCEA	Insulated Power Cable Engineers Associated
CBM	Certified Ballasts Manufacturers
---	Federal, State and Local Building Codes
ETL	Electrical Testing Laboratories

B. If any conflict occurs between Government adopted Code Rules and this specification, the codes are to govern. Nothing in these drawings and specifications shall be construed to permit work not conforming with governing codes. Also, this shall not be construed as relieving the Contractor from complying with any requirements of the plans and specifications which may be in excess of, but not in conflict with, requirements of the Governing Codes.

1.5 PERMITS & FEES

A. The Contractor shall obtain and pay for all licenses, permits and inspections required by laws, ordinances and rules governing work specified herein. The Contractor shall arrange for inspection of work by the inspectors and shall give the inspectors all necessary assistance in their work of inspection.

B. The Contractor shall consult with and follow the requirements of the local fire, power, telephone, and television utilities serving the area and shall coordinate his work with them.

1.6 DEFINITIONS

A. When "Provide" is used, it shall be interpreted as "furnishing and installing complete in operating condition".

B. When "Drawings" is used, it shall be interpreted as "all Contract Drawings for all Disciplines".

C. When "Contractors" is used, it shall be interpreted as the Electrical Contractor.

1.7 INTENT OF DRAWINGS

A. The electrical drawings are intended to serve as working drawings for general layout. The equipment layout is diagrammatic and unless specifically dimensioned or detailed, does not indicate all fittings, hardware or appurtenances required for a complete operating installation.

B. Anything shown on the drawings but not covered in the specifications, or anything covered in the specifications but not shown on the drawings, shall be as if covered in both. In case of conflict between the drawings and specifications, the Engineer will select the method to be used. The Contractor shall be responsible for verifying all measurements before proceeding with the work.

C. Wiring diagrams are not intended to indicate the exact course of raceways or exact location of outlets. Raceway and outlet locations are approximately correct and are subject to revision as may be necessary or desirable at the time of installation. Precise location in every case shall be subject to the Engineer's approval.

1.8 PROTECTION

A. The Contractor shall store and guard all equipment before installation and shall protect same, and replace any equipment that has been damaged prior to final acceptance.

1.9 HOUSEKEEPING

A. All electrical materials shall be kept stored in an orderly fashion protected from heat, cold, and the weather.

B. All marred surfaces shall be refinished and painted after installation.

C. All debris shall be removed from premises during work, as directed, and at completion of job.

1.10 TEMPORARY USE

A. Temporary or interim use of any and all portions of the electrical system shall be under the supervision of the Electrical Contractor.

B. Temporary power and lighting for use during construction shall be provided per the requirements of the Division 01 specifications.

1.11 AS-BUILT DRAWINGS

A. The Contractor shall maintain, in addition to any reference drawings, an as-built set of prints, on which all deviations from the original design shall be drafted in a neat, legible manner with red colored pencil. This red lined set shall identify all drawing revisions including addenda items, change orders, and Contractor revisions. The Contractor is responsible to revise panel schedules and load calculations as required.

B. Drawings shall show locations of all concealed raceway runs larger than 1", giving the number of conductors and size of raceway. Underground ducts shall be shown with cross section elevations. All pipe, raceway, manholes or lines of other trades shall be included.

C. The Contractor shall update all references to specific products to indicate products actually installed on project. This shall include, but not be limited to, lighting fixtures, baseboard heaters, etc.

D. Upon completion of the Division 26 Work, the Contractor shall deliver the red lined drawings and one set of neatly drafted as-built drawings on electronic media in AutoCAD R-2013 format and mylar to the Engineer for transmittal through the Engineer to the Owner.

1.12 WARRANTY

A. Provide a written warranty that the Division 26 work is free from mechanical and electrical defects. Contractor shall replace and repair, to the satisfaction of the Engineer, any parts of the installation which may fail within a period of 12 months after the certificate of final acceptance provided that such failure is due to defects in material or workmanship, or failure to follow the specifications and drawings.

1.13 INSTRUCTIONS AND MANUALS

A. Operation and maintenance data shall be submitted in accordance with Section 017823.

B. Manuals shall contain shop drawings, wiring diagrams, operating and maintenance instructions, replacement parts lists, and equipment nameplate data for all equipment and systems installed under the project. Signal equipment submittals shall contain step-by-step circuit description information designed to acquaint maintenance personnel with equipment operation in each mode of operation. Manuals shall contain original brochures supplied by manufacturers. Xerox copies of originals will not be accepted.

C. Each type of device provided shall be identified in the O & M Manual using the same identification as shown on the drawings and specifications. The information included must be the exact equipment installed not the complete "line" of the Manufacturer. Where sheets show the equipment installed and other equipment, the installed equipment shall be neatly and clearly identified on such sheets. Parts lists shall give full ordering information assigned by the original parts manufacturer. Relabeled and/or renumbered parts information as reassigned by equipment supplier is not acceptable. The following information shall be provided for each device:

1. Manufacturer's name, address and phone number.
2. Local supplier's name, address and phone number.
3. Complete parts lists including quantities and manufacturer's part numbers.
4. Installation instructions.
5. Recommended maintenance items including maintenance procedure and recommended interval of maintenance listed in hours of operation, calendar unity or other similar time unit.

D. The O & M Manual shall be assembled in a loose leaf, 3-ring, hard cover binder and electronically on compact disc. The information contained in the manuals shall be grouped in an orderly arrangement by specification index. The manuals shall have a typewritten index and divider sheets between categories with identifying tabs. The covers shall be imprinted with the name of the job, Owner, Architect, Electrical Engineer, Division 26 Contractor, and year of completion. The back edge shall be imprinted with the name of the job, Owner, and year of completion. As a minimum, the following selection shall be broken out:

1. Light Fixtures
2. Motor Controls

E. Wiring Diagrams for each system shall be complete for the specific system installed under the Contract. "Typical" Line Diagrams will not be acceptable unless properly marked to indicate the exact field installation.

1.14 WORK NOT INCLUDED

A. Indicated motors, controls, and equipment as described in other divisions shall be furnished by other trades, but shall be moved, set and wired to electrical controls and power supply by the Electrical Contractor.

B. Work to be included under this Contract shall be defined on drawings and in these specifications. Any details beyond these limits are meant only to give installation clarity to that portion which is a part of this Contract.

1.15 INSTRUCTION PERIODS

A. Upon completion of the work and after all tests and final inspection of the work by the authority(s) having jurisdiction, the Contractor shall demonstrate and instruct the Owner's designated operation and maintenance personnel in the operation and maintenance of the various electrical systems. The Contractor shall arrange scheduled instruction periods with the Owner. The Contractor's representatives shall be superintendents or foremen knowledgeable in each system and suppliers representatives when so specified.

B. Costs for time involved by Contractor shall be included in the bid.

1.16 COMPLETION OF WORK

A. Upon completion of the Division 26 work, the Contractor shall deliver to the Engineer a completion letter stating that he has fulfilled all the requirements of his Contract for Division 26 work as set forth in the drawings and specifications and that all items in pre-final inspection lists submitted by the Engineer have been satisfactorily completed.

B. Arrange for and obtain all required inspections and certificates pertaining to the Division 26 work and deliver the certificates to the Engineer in triplicate.

C. Prior to or at the time of final inspection, the Contractor shall, as outlined in detail in the specifications, complete the delivery of all the following items:

1. Completion Letter
2. Certificate of Final Inspection, in triplicate form.

Electrical Inspector Fire Department	COMPLETION OF WORK 260000 – 1.17
3. Warranty to Owner (with copy for Engineer	SUPPLEMENTARY GENERAL CONDITIONS 260000- 1.13
4. Marked Set, Electronic Media Set on CD in AutoCAD R-2013 Format, and Mylar Set of “ As-Built” Electrical Drawings	GENERAL AS-BUILT DRAWINGS 260000– 1.12
5. Motor Current Readings	GENERAL, TESTS 260519 – 3.03(D)

6.	Phase Current Readings	GENERAL, TESTS 260519 – 3.03 (E)
7.	OHMIC Test Readings	GENERAL, TESTS 260519 – 3.03 (B)
8.	Panelboard and Special Equipment Shop Drawings and Final Approved List of Materials Installed	MATERIALS, GENERAL 260000– 2.03
9.	Certificate of Feeders Torque Results	WIRES AND CABLES 260519
10.	* Receipt from person to whom delivered the following spare glasses, plastic diffusers, lamps, and ballast fuses.	LIGHTING FIXTURES 265000
11.	* Receipt from person to whom delivered the following: Spare Elements for Fire Detectors, Fuses for Switches, Spare Keys for Panelboards, receptacles switches, plugs, etc.	FUSES – 262813 PANELBOARDS – 262416 SWITCHES & RECEPTACLES – 262726
12.	Wiring diagrams, Maintenance Manuals, Operation Instructions, and Brochures (5 sets minimum)	GENERAL, INSTRUCTIONS & MANUALS – 260000– 1.14

* Secure delivery instructions from Architect for delivery to Owner.

1.17 SHOP DRAWING SUBMITTALS

A. The Contractor shall submit to the Architect no later than 30 days after the award of the Contract, a minimum of seven (7) copies, each bound under separate cover, with index, detailed shop drawings, to include:

1. Manufacturer's Catalog Data.
2. Complete Physical and Technical Data.
3. Wiring Diagrams.
4. Detailed Reference (written or highlighted) noting compliance with the appropriate specification section and applicable item numbers within that section.
5. Other Descriptive Data as required by the Architect/ Engineer.

B. The Contractor shall submit to the Architect electronic shop drawings in PDF format. Electronic Shop Drawings that are submitted without following the format as outlined below will be returned for corrections without any further review.

C. A separate PDF file shall be submitted for each Division including All submittal items for that Division as outlined below:

1. Division 26 – Electrical

2. The contractor shall provide either a digital or hardware method of transporting the electronic submittal to the Architect. Files larger than 10Megabytes shall not be sent via email and shall be transferred via an FTP or similar file transfer protocol, PC compatible CD or PC compatible Thumb Drive. Divisions shall not be broken up into separate files for transfer via email.
3. Each Specification PDF shall be submitted with the following format and salient attributes:
4. Cover page including:
5. Project Title as indicated on the plans
6. Project Location including Address, City, State, Country
7. Prime Contractor name, phone number, and email address
8. Sub-Contractor name, phone number, and email address
9. Specification Division Number and Title
10. Index Page outlining each specification section included in the submittal. This list shall be linked to a corresponding Specification Section Divider for each section. This link shall enable the reviewer to jump to a specification section by clicking the item in the list.
11. Specification Section Divider: Shop Drawings shall be divided by specification section and each section shall begin with a Divider Page outlining the Specification Number, Title, and a list of Submittal Items for the section. In the upper right hand corner of the divider page, a Link shall be provided returning the reviewer to the Index Page.
12. Each Submittal Item listed on the Specification Section Divider shall be linked to the specific item being submitted. Each Submittal Item shall be hi-lighted Yellow with a Note Reference to the specific paragraph giving the submittal requirements.
13. Each page of the submittal shall be numbered in the Bottom Right corner of the page. Page numbering shall be Roman Numerals for all pages before the First Specification Section. Each Specification Section page shall be numbered with the Specification Section number, a dash, and the page number in the Specification Section.
14. Specification items shall be specifically hi-lighted as they apply to the project rather than hi-lighting an entire product family. Items that do not apply to this project shall be crossed out with a Red X.
15. The PDF file shall be not be Protected to prevent printing, selecting of text within the document, or extracting of pages from the document.

D. Shop drawings shall be submitted complete, at one time and each item indexed with dividers and separated per specification section and shall be, but not limited to the items of equipment listed below:

1. Motor starters and controls designating where items are intended to be used and equipment being controlled.
2. Disconnect Switches
3. Lighting Fixtures (Complete)
4. Wiring Devices
5. Back Boxes
6. Coverplates
7. Raceways and Connectors
8. Copper Wire

E. Within 10 working days after the date of the letter rejecting any items of equipment, lighting fixtures, or materials as not in accordance with the specifications, Contractor shall submit a new list of items he proposes to furnish and install in place of those items rejected. If the Contractor fails to submit this new list within the above specified time, or if any items on this second list are rejected as not being in accordance with these specifications, the Engineer may select the items which the Contractor shall furnish and install without change in Contract price or time of completion.

F. The acceptance of a manufacturer's name or product by the Engineer does not relieve the Contractor of the responsibility for providing materials and equipment which comply in all details with the requirements of the Contract Documents. The Contractor shall be solely responsible for submitting materials at such a time to allow a minimum of two weeks for Engineer's review.

G. Electrical Drawings for the project have been developed by the Engineer using AutoCAD™ Revision 2012 software. These drawing files will be made available to the Contractor for development of shop drawings and/or "As-Builts" for a fee of $20.00 per sheet.

1.18 SCHEDULE OF VALUES

A. Provide Schedule of Values per Division 01 and related project requirements.

B. Division 26 Breakdown: Provide schedule of values for the following categories (as a minimum):

1. Electrical Mobilization
2. Electrical Submittals
3. Electrical General Project Management, General Design, General Coordination
4. Branch Circuit Materials Rough-in
5. Branch Circuit Materials Rough in – Labor
6. Branch Circuit Trim – Materials
7. Branch Circuit Trim – Labor
8. Service Materials
9. Service Materials – Labor
10. Light Fixtures
11. Light Fixtures – Labor
12. Fire Alarm System
13. Electrical Punchlist, Closeout, and Owner Training

C. The dollar value for "Electrical Punchlist, Closeout, and Owner Training" shall in no case be less than 2% of the total dollar value of the Division 26 work (or as indicated in Division 01, whichever is higher).

D. The Contractor is advised that in addition to payments held out for retainage and project final completion (i.e. "Electrical Punchlist, Closeout, and Owner Training"), as specified above and in Division 01, the Owner reserves the right to withhold 10% of the funds for any of the above categories until the systems (of that category) have been proven to operate as specified and have been completely tested and adjusted.

PART 2 - PRODUCTS

2.1 COMPETITIVE PRODUCTS

A. Any reference in the specifications to any article, device, product, material, fixture, form or type of construction by name, make or catalog number shall be interpreted as establishing a standard of quality and shall not be construed as limiting competition. The Contractor, in such cases, may at his option use any article, device, product, material, fixture, form or type of construction which in the judgment of the Engineer, expressed in writing, is equal to that specified. However, any manufacturer not listed as an accepted bidder for a specific item must be submitted for acceptance in writing and with descriptive data verifying equal quality and performance at least ten (10) working days prior to the bid date for approval.

2.2 MANUFACTURER/EQUIPMENT PRIOR APPROVALS

A. Any manufacturer/equipment not listed as an approved substitute for a specified item must be submitted for acceptance in accordance with Section 016000, in writing, with detailed information to include:

1. Manufacturer's Catalog Data
2. Complete Physical and Technical Data
3. Wiring Diagrams
4. Detailed reference (written or highlighted) noting compliance with the appropriate Specification Section and all applicable Specification item numbers within that Section
5. Complete type written index cross referencing all proposed substitutes and specified items
6. Detailed reference to specified items (written or highlighted) noting equal quality and performance of proposed substitute equipment
7. Other descriptive data, as required by the Engineer

B. If substitute material is determined to be acceptable by the Engineer, it will be included in a subsequent Addenda prior to bidding. The acceptance of a manufacturer’s name or product by the Engineer does not relieve the Contractor of the responsibility for providing materials and equipment which comply in all details with the requirements of the Contract Documents.

C. Only materials which are specified or published in addenda as acceptable shall be used.

2.3 MATERIALS

A. All materials must be of the quality herein specified. All materials shall be new, of the best quality and free from defects. They shall be designed to ensure satisfactory operation and operational life in the environmental conditions which will prevail where they are being installed.

B. Each type of material shall be of the same make and quality. The materials furnished shall be standard products of the manufacturers regularly engaged in the production of such equipment and shall be the manufacturer's latest standard design.

C. All materials shall be U.L. or E.T.L. listed for the purpose for which they are used.

D. Equipment in compliance with U.L. standards but not bearing their label is not acceptable. If the manufacturer cannot arrange for labeling of an assembled unit at the factory the unit shall be field evaluated per the Washington State Administrative Code (WAC) and the electrical inspector's requirements.

2.4 COMPLETE SYSTEM

A. All the systems mentioned shall be complete and operational in every detail except where specifically noted otherwise. Mention of certain materials in these specifications shall not be construed as releasing the Contractor from furnishing such additional materials and performing all labor required to provide a complete and operable system.

2.5 NAMEPLATES

A. Provide nameplates constructed of plastic (black on white) laminated material engraved through black surface material to white sublayer (attach with screws on NEMA 1 enclosures). EXCEPTION (1): Emergency distribution system component labeling - white letters on red background. Exception (2): Series rated systems shall be yellow background with white letters.

1. Service Entrance Label: Refer to Section 262413
2. Panelboard Labels: Refer to Section 262416
3. Switch and Receptacle Labels: Refer to Section 262726
4. Motor Starter and Disconnect Labels: Refer to Section 262816
5. Special Equipment/Outlet Labels: Refer to Appropriate Sections.
6. Medium Voltage Feeder Tags: Refer to Section 260573.
7. Under 600 Volt Feeder Tags: Refer to Section 260519.

PART 3 - EXECUTION

3.1 GENERAL

A. Careful consideration shall be given to clearances under and over beams, pipes and ducts, to provide proper headroom in all cases. Check drawings to determine heights of all suspended ceilings and size of pipe shafts where raceway and wire-ways shall run. Coordinate installation of Division 26 wiring and equipment with Division 23 and other trades. Where insufficient room for proper installation appears, obtain clarification from Engineer before any installation is begun.

B. Cutting and Patching:

1. Obtain permission from the Architect and/or Owner's Representative prior to cutting. Locate cuttings so they will not weaken structural components. Cut carefully and only the minimum amount necessary. Cut concrete with diamond core drills except where space limitations prevent the use of such drills.

2. All construction materials damaged or cut into during the installation of this work must be repaired or replaced with materials of like kind and quality as original materials by skilled labor experienced in that particular building trade.

3.2 COORDINATION

A. The Contractor is responsible for accomplishing Division 26. The work shall coordinate with that of the other Contractors and/or other trades doing work in the building and shall examine all Drawings, including the several Divisions of Mechanical, Structural, Civil and Architectural, for Construction Details and necessary coordination. Specific locations of construction features and equipment shall be obtained from the Contract Documents, field measurements, and/or from the trade providing the material or equipment. No extra costs will be allowed for failure to obtain this information.

B. All conflicts shall be reported to the Engineer in writing before installation for decision and correction. Special attention is called to the following items:

1. Door swings to the end that switches will be located on "Strike" side of the door.
2. Location of grilles, pipes, sprinkler heads, ducts and other mechanical equipment so that all electrical outlets, lighting fixtures and other electrical outlets and equipment are clear from and in proper relation to these items.
3. Location of cabinets, counters and doors so that electrical outlets, lighting fixtures and equipment are clear from and in proper relation to these items.
4. Type and height of ceiling.
5. All device measurements referenced on drawings or specifications are to be centered of device unless noted otherwise.

C. The Contractor will not be paid for work requiring reinstallation due to lack of coordination or interference with other Contractors or trades. This includes, but is not limited to, removing, replacing, relocating, cutting, patching, and finishing.

D. Device and fixture locations may be changed within 15 feet without extra charge if so desired by the Engineer, before installation.

3.3 REQUESTS FOR INFORMATION (RFI)

A. It is our intent to provide a timely response for RFIs regarding Division 26 Work. To further expedite this process, where a suggestion can be determined or derived at by the initiator of the RFI, it is required this suggestion be supplied with the submitted RFI. If no suggestion is given where one is possible, the RFI will be returned as incomplete.

3.4 CLEANING AND PAINTING

A. All equipment, whether exposed to the weather or stored indoors shall be covered to protect it from water, dust and dirt.

B. After installing, all metal finishes shall be cleaned and polished, cleaned of all dirt, rust, cement, plaster, grease and paint.

C. All equipment with a primer coat of paint shall be given two (2) or more coats of a finish enamel and scratched surfaces be refinished to look like new. Markings, identification and nameplates shall be replaced.

3.5 EQUIPMENT IDENTIFICATION

A. Provide identifying engraved bakelite nameplate on all equipment, including pull boxes, to clearly indicate its use, area served, circuit identification, voltage, and any other useful data.

B. Each auxiliary system, including communications, shall be clearly labeled to indicate its function.

3.6 DEVIATION

A. Deviation from the shop drawings in construction or installation of equipment shall not be made unless Shop Drawings showing proposed deviations are submitted to and approved by the Engineer. If any equipment is furnished under this or other divisions with current, voltage or phase ratings that differ from those shown on the drawings, the Contractor shall notify the Engineer in writing immediately and shall not connect said equipment until instructed as to required changes by the Architect. No extension of time will be granted as a result of such changes.

3.7 EXCAVATIONS

A. All excavations are to be so conducted so that no walls or footings shall be disturbed in any way.

B. Remove all surplus earth not needed for backfilling and dispose of same as directed.

3.8 WIRING METHODS

A. All low voltage wiring shall be in Raceway with Junction Boxes and Fittings where concealed in walls, in inaccessible ceiling space, or where exposed in finished or unfinished areas.

B. All branch circuit wiring shall be installed in raceway with junction boxes and fittings.

C. Provide access panels as needed for pull boxes and equipment located above ceiling or behind walls.

D. Any low voltage cables that are not terminated at both ends shall be tagged and labeled per code.

3.9 PENETRATIONS OF FIRE RATED ELEMENTS

A. Must be made such as to retain that rating.

3.10 HANGERS AND SUPPORTS

A. Provide hangers, brackets, and suspension rods and supplementary steel to support equipment.

B. Hangers provided under other divisions shall not be used for support of Division 26 equipment unless permitted by Architect/Engineer.

3.11 CHASES AND OPENINGS

A. Provide to the masonry and concrete trades all templates and details of chases, openings in floors and walls as required for Division 26 equipment installation.

3.12 PAINTING

A. Painting in general will be covered under another division of this specification, except items furnished under Division 26 that are scratched, marred in shipment or installation, shall be refinished by the Division 26 Contractor.

3.13 WORKMANSHIP AND OBSERVATION

A. Workmanship shall be of the best quality and none but competent workers shall be employed under the supervision of a competent foreman. All completed work shall represent a neat and workmanship like appearance.

B. All work and materials shall be subject to observation at any and all times by representatives of the Engineer.

3.14 MISCELLANEOUS

A. Provide complete seismic anchorage and bracing for the lateral and vertical support of conduit and electrical equipment, as required by the International Building Code.

B. Conduits that cross seismic separations shall be installed with flexible connection suitable to accommodate conditions. Secure raceways on each side of a separation and provide a minimum of 36” length of flexible conduit to span separation.

3.15 CABLE AND WIRING ROUTED UNDERGROUND OR UNDERSLAB

A. All cables and conductors, both line voltage and low voltage, routed underground or underslab shall be U.L. listed for installation in wet locations per NEC and WAC codes.

END OF SECTION 260000

SECTION 260005 - ELECTRICAL – EXISTING SYSTEMS

PART 1 - GENERAL

1.1 WORK INCLUDED

A. Portions of the existing electrical lighting, power and signal systems are to be removed as detailed on the drawings.

PART 2 - PRODUCTS

2.1 EXISTING MATERIALS

A. Existing materials which are a part of the building shall remain the property of the Owner.

2.2 EXISTING MATERIALS RE-INSTALLED

A. Existing materials and equipment that are removed as a part of the work or stored in surplus may be re-installed as a part of the new system subject to approval of condition suitability by the Architect/Engineer. The requirements of the specifications (i.e. installation, warranty, testing, etc.) shall apply as if the materials were new, supplied by the Contractor.

2.3 EXISTING MATERIALS NOT TO BE RE-INSTALLED

A. In coordination with the Architect/Engineer, these materials shall be made available for his inspection and decision as to whether the Owner will retain possession. Items selected for retention shall be delivered to a location on the premises selected by the Owner and turned over to him. Take reasonable care to avoid damage to this material. If the Contractor fails to conform to this requirement, he shall purchase and turn over to the Owner replacement materials of like kind and quality.

B. All material not selected for retention by the Owner and debris shall be disposed of by the Contractor. This shall include, but not be limited to, removal of PCB type ballasts and fluorescent lamps which shall be disposed of in accordance with EPA requirements.

PART 3 - EXECUTION

3.1 EXISTING CONDITIONS

A. Examine the structure, building, and conditions under which Division 26 work is to be installed for conditions detrimental to proper and timely completion of the work. Do not proceed with work until deficiencies encountered in installation have been corrected. Report any delay or difficulties encountered in installation of Division 26 work which might be unsuitable to connect with work by other divisions of this specification. Failure to report conditions shall constitute acceptance of other work as being fit and proper for the installation of Division 26 work.

B. Maintain continuity of existing circuits of equipment to remain. Existing circuits of equipment shall remain energized. Circuits which are to remain but were disturbed during demolition shall have circuits, wiring, and power restored back to original condition.

3.2 DEMOLITION

A. Switchboards, panelboards, signaling systems, other electrical equipment free standing (or surface mounted), raceway (exposed) and conductors no longer in service as a result of this Contract shall be removed. Unused raceways or sleeves shall be cut flush at ceiling, floor or wall and filled with grout.

3.3 NEW DEVICES IN REMODEL AREAS

A. Provide surface mounting for devices on existing walls. Where existing boxes are indicated to be reused, extend box as necessary and provide new devices and plates.

3.4 EXISTING PANELBOARD

A. Any modifications made to existing panels must be incorporated into the existing circuit index on the panel. If more than three circuits are modified a new typewritten index incorporating the changes to the existing index shall be installed in the existing panel.

B. Listing shall match circuit breaker arrangements, typically with odd numbers on the left and even numbers on the right. Room numbers used shall be final room numbers used in the building as verified with the Owner.

END OF SECTION 260005

SECTION 260519 - WIRES AND CABLES

PART 1 - GENERAL

1.1 WORK INCLUDED

A. Provide all wire, cable, and terminations complete.

PART 2 - PRODUCTS

2.1 WIRE AND CABLE (COPPER, 600-VOLT)

A. Interior and Above Grade: All wires to be Type THW or RHW. Type THWN/THHN or XHHW wire may be utilized at Contractors option, subject to code requirements. Wire and cables shall be brought to project in original containers bearing the underwriters label. Provide Type AVA wire where conductors are subject to temperature above 167 Degrees F.

B. Underground: All conductors to be type USE. Increase Raceway size when necessary to accommodate conductors per code. Exception: Underground conductors completely contained in code recognized Raceway and boxes may be Type THW, THWN or XHHW.

2.2 SPLICES

A. Above Grade: Solderless type only. Preinsulated "twist-on" type (limited to size #10 and smaller). Bolt on compression type with application of preformed insulated cover, heat shrinkable tubing or plastic insulated tape acceptable for all sizes.

B. Below Grade: Splices below grade shall be in handholes and shall be made watertight with epoxy resin type splicing kits similar to Scotchcast.

2.3 TERMINATIONS

A. Compression set, bolted or screw terminal.

B. Conductors #12 and smaller shall utilize eye or forked tongue type compression set terminator when termination is to a bolted or screw set type terminal block or terminal cabinet.

2.4 PLASTIC CABLE TIES

A. Nylon or Equivalent, locking type.

PART 3 - EXECUTION

3.1 GENERAL

A. Install all wiring in Raceway unless shown or specifically authorized otherwise.

3.2 WIRE SIZE

A. No. 12 AWG minimum for power and lighting circuits.

B. Provide solid wire for No. 10 AWG and smaller, and stranded conductors for No. 8 AWG and larger (600) volts.

3.3 TESTS

A. In addition to the factory testing of all equipment and cable, the Contractor shall test all wiring connections for continuity and ground before any fixtures or other loads are connected. Tests shall be made with a 500V minimum DC "Megger" type tester. If tests indicate faulty insulation (less that 2 megohms), such defects shall be corrected and tested again. Contractor shall provide all apparatus to make tests and shall bear all expenses of required testing. Routine operation tests shall be made on all pieces of equipment to demonstrate that working parts are in operating condition. Results of all tests shall be recorded and submitted to the Architect. The Contractor shall immediately replace all parts, which fail to pass the test.

B. Measure the OHMIC value of the Electric Service Entrance metallic "System Ground" with reference to "Earth Ground" using the "Multiple Ground Rod Fall-In-Potential" method and suitable instruments. Maximum resistance to ground shall be less than 10 ohms. If this resistance cannot be obtained with the ground system shown, notify the Architect immediately for further instructions. Provide OHMIC test results to Engineer.

C. All circuits both in and out of the building shall test out free of grounds, short circuits and other defects.

D. Check and record catalog number and ampere size of controller overload heaters installed, nameplate full-load amperes, and actual operating amperes of each motor. IMPORTANT: Submit recorded data in triplicate to the Engineer. Check proper load balance on the electrical system, direction of rotation, lubrication, and overload protection of all motors before placing in operation.

E. Provide a log of ampere reading for all panels from phase to neutral for 4 wire panels and from phase to phase for 3 wire panels. These readings shall be taken with all loads activated.

F. The final test of all equipment shall be made on dates designated by the Architect/Engineer and all readings shall be made in his presence.

G. Feeders shall be checked to ensure all phases are energized before connecting to their respective motors. Each motor shall rotate in the proper direction for its respective load. Prior to rotation test, all bearings shall be inspected for proper lubrication.

H. Minimum megger test for equipment shall be as follows:

Equipment Maximum Voltage Rating	Minimum Test Resistance
1,000-Volts or less	2 Megohms

I. Provide certification of torque values for feeder and service entrance conductors per equipment manufacturer's recommendation.

3.4 CONDUCTOR SIZES, REFERENCED ON PLANS

A. Copper, type THW or RHW unless noted.

3.5 PULLING

A. Use no mechanical means for pulling No. 8 AWG conductors and smaller. Powdered soap stone or approved spray cream shall be the only lubricant used.

3.6 STRIPPING INSULATION

A. Do not ring the cable, always pare or pencil.

3.7 TAPING

A. If used shall be half lapped synthetic tape.

3.8 CONDUCTORS IN PANELS AND SWITCHBOARDS

A. Conductors in panels, switchboards, and terminal cabinets shall be neatly grouped and formed in a manner to "Fan" into terminals with regular spacing.

3.9 CABLE SUPPORTS

A. Provide conductor support devices as required by code in vertical cable runs.

3.10 RACEWAY SIZES REFERENCED ON DRAWINGS

A. Raceways are sized for copper, type THW, unless otherwise noted. Size all Raceways per code unless specifically noted to be larger on the drawings.

END OF SECTION 260519

SECTION 260526 - GROUNDING AND BONDING

PART 1 - GENERAL

1.1 WORK INCLUDED

A. A grounding system shall be provided for neutral ground and equipment ground as required by code.

B. An isolated grounding system shall be provided for all isolated ground receptacles as allowed by Code (2011 NEC 250-146, paragraph D).

PART 2 - PRODUCTS

2.1 GROUNDING CONDUCTORS

A. Copper, code size, with physical protection where subject to damage. Bare or green insulated.

2.2 GROUND RODS

A. 3/4" x 8'-0" copper clad steel.

2.3 ISOLATED GROUND BARS

A. Provide in all panels containing isolated ground circuits.

PART 3 - EXECUTION

3.1 GENERAL

A. Provide all grounding for electrical systems and equipment as required by codes and as specified herein.

3.2 GROUND RODS

A. Provide as shown and/or required. Connect the ground conductor to each rod.

3.3 SIZE OF GROUND WIRE

A. As required by code. Where ground wire is exposed to physical damage or is used outside of building, protect with conduit.

3.4 GROUND CONNECTION OF WATER PIPING

A. Metal internal piping shall be grounded, as part of this Contract. This includes jumpers for dielectric fittings.

3.5 GROUND CONNECTION OF BUILDING STEEL

A. Structural metal shall be grounded, as part of this Contract.

3.6 CONNECTION TO THE GROUND BUS

A. Provide connections in accordance with the codes; including but not limited to raceway systems, switchboard/panelboard frames, service neutral, separately derived systems, electrically operated equipment and devices. No device or equipment shall be connected for electrical service which has a neutral conductor connected to a grounding conductor or to the frame within the device or equipment.

3.7 METHOD OF CONNECTION

A. Make all ground connections and ground cable splices by thermal welding. Grounding lugs, where provided as standard Manufacturer's items on equipment furnished, may be used.

3.8 FLEXIBLE RACEWAY

A. Shall not be used for grounding. Install separate ground conductor in all flexible raceway.

3.9 DROP CORDS

A. Shall have a grounding wire and be connected with a grounding type plug and receptacle.

END OF SECTION 260526

SECTION 260532 - OUTLET AND PULL BOXES

PART 1 - GENERAL

1.1 WORK INCLUDED

A. Provide outlet and pull boxes to enclose devices, permit the pulling of conductors and for wire splices and branches.

PART 2 - PRODUCTS

2.1 INTERIOR WIRING

A. General: Outlet and pull boxes shall be pressed drawn steel, zinc coated with plaster ring where applicable. Welded boxes not allowed. Four-inch size minimum. Large pull boxes shall be fabricated sheet steel, zinc coated or baked enamel finish, with return flange and screw retained cover.

B. Surface Metal Raceway: Boxes of same Manufacture and to match Raceway. Boxes to accommodate standard devices and device plate.

C. Concrete and Masonry: Boxes for casting in concrete or mounting in masonry walls shall be the type specifically designed for that purpose.

D. Install pull boxes so as to be accessible after completion of building construction.

E. Ceiling outlet boxes shall be galvanized octagonal 4 inch, 1-1/2 inch deep (without fixture stud), 2-1/8 inches deep (with fixture stud).

PART 3 - EXECUTION

3.1 ANCHORING

A. All boxes shall be firmly anchored directly or with concealed bracing to building studs or joints. Boxes must be so attached so that they will not "Rock" or "Shift" when devices are operated.

3.2 FLUSH MOUNTING

A. Except for surface mounted boxes or boxes above accessible ceilings, all boxes shall have front edge (box or plaster ring) even with the finished surface of the wall or ceiling.

3.3 ELECTRICAL OUTLETS

A. General: Coordinate the work of this section with the work of other sections and trades. Study all Drawings that form a part of this Contract and confer with various trades involved to eliminate conflicts between the work of this section and the work of other trades. Check and verify outlet locations indicated on Architectural Drawings, door swings, installation details, layouts of suspended ceilings and locations of all plumbing, heating and ventilating equipment.

B. Centered on Built-In Work: In the case of doors, cabinets, recessed or similar features, or where outlets are centered between such features, such as between a door jamb and a cabinet, make these outlet locations exact. Relocate any outlets which are located off center.

C. Vertical and Horizontal Relationships: Where more than one outlet is shown or specified to be at the same elevation or one above the other, align them exactly on centerlines horizontally or vertically. Relocate as directed all such outlets (including lighting, receptacle, power signal and thermostat outlets) which are not so installed, at no additional cost to Owner.

D. Device Outlet Height: Measure from the finished floor.

*Switches	4 Feet, Set Vertically, to Top of Box
*Receptacles, Telecommunications	18 Inches, Set Vertically to Centerline
Other	As Noted or as Directed by Architect

∗ *Heights may vary. See Drawings for additional information*

E. Ceiling Location: For acoustical material locate outlet either at the corner joint or in the center of a panel, whichever is closer to the normal spacing. Locate all outlets in the same room in the same panel location.

F. Installed In Sound Walls: Boxes installed in sound walls shall not be installed back to back. All boxes shall be separated by one stud space and shall be interconnected with flex conduit with a 90° loop.

3.4 ELECTRICAL WORK IN COUNTERBACKS, MILLWORK AND CASEWORK

A. Provide as shown and/or specified. Provide templates, where required, to other trades for drilling and cutting to insure accurate location of electrical fixtures (outlets and devices) as verified with the Architect. Provide all wiring, devices, plates and connections required by said fixture.

3.5 CONNECTION TO EQUIPMENT

A. For equipment furnished under this or other Divisions of the Specifications, or by others. Provide outlet boxes of sizes and at locations necessary to serve such equipment. An outlet box is required if the equipment has pigtail wires for external connection, does not have space to accommodate circuit wiring used. Study equipment details to assure proper coordination.

3.6 BLANK COVERS

A. Provide blank covers or plates over all boxes not covered by equipment.

3.7 JUNCTION OR PULL BOXES

A. Pull and junction boxes shall be installed as shown, and to facilitate pulling of wire and to limit the number of bends within code requirements. Boxes shall be permanently accessible and shall be placed only at locations approved by the Architect.

B. In suspended ceiling spaces, boxes shall be supported from the structure independently from ceiling suspension system.

C. The Drawings do not necessarily show every pull or Junction Box required. The Contractor is permitted to provide boxes deemed necessary by him for his work when installed in accordance with these Specifications.

3.8 BOXES CONTAINING MULTIPLE DEVICES

A. Boxes containing emergency and normal devices are permitted only with steel barriers Manufactured especially for the purpose of dividing the box into two completely separate compartments.

B. Device Boxes Containing Multiple Devices and Wiring Rated Over 150 Volts to Ground and Over 300 Volts Between Conductors are permitted only with steel barrier manufactured especially for the purpose of dividing the box into separate compartments for each device having exposed live parts.

3.9 BOXES IN EARTH

A. Provide for all wire splices and as required to pull conductors. Boxes (handholes) shall be set in place on a 3" sand bed. Coverplates shall be flush to, and match the slope of, the final surface grade.

3.10 NAMEPLATES

A. For all line voltage junction boxes, provide engraved nameplate indicating circuit numbering of all wiring in junction box.

END OF SECTION 260532

SECTION 260533 - RACEWAY

PART 1 - GENERAL

1.1 WORK INCLUDED

A. Provide Raceway System complete.

PART 2 - PRODUCTS

2.1 GALVANIZED RIGID STEEL CONDUIT (GRS)

A. General: Hot dipped galvanized.

B. Fittings: Galvanized malleable iron or noncorrosive alloy compatible with galvanized conduit. Erickson couplings, watertight split couplings (O.Z. type or equivalent) permitted. Running thread or set screw type fittings not approved.

2.2 INTERMEDIATE METAL CONDUIT (IMC)

A. General: Hot Dipped galvanized.

B. Fittings: Galvanized malleable iron or noncorrosive alloy compatible with galvanized conduit. Erickson couplings, watertight split couplings (O.Z. type or equivalent) permitted. Running thread or set screw type fittings not approved.

2.3 ELECTRICAL METALLIC TUBING (EMT)

A. General: Hot dipped galvanized.

B. Fittings: Raintight; steel or malleable iron type using a split corrugated compression ring and tightening nut or stainless steel locking disc. Steel set screw fittings are acceptable for dry locations. Indenter, drive-on and pressure cast or die cast type set screw are not acceptable.

2.4 FLEXIBLE METAL CONDUIT (FMC, LFMC)

A. Dry Locations:

1. General: Galvanized flexible steel for dry locations only.
2. Fittings: Malleable iron or steel, Thomas and Betts "squeeze" type or equal.

B. Damp and Wet Locations:

1. Liquid Tight: Polyvinyl chloride (PVC) weatherproof cover over flexible steel conduit.

2. Fittings: Thomas and Betts "liquid tight" or equal.

2.5 SURFACE METAL RACEWAY

A. Formed steel or aluminum type. Standard factory finish. Where color choice is available, consult Architect/Engineer for selection prior to ordering.

2.6 RIGID NON-METALLIC CONDUIT (PVC)

A. Schedule 40 rigid polyvinyl chloride type unless otherwise noted.

2.7 RIGID ALUMINUM CONDUIT

A. Permitted only in specified locations.

B. Fittings copper free cast aluminum.

PART 3 - EXECUTION

3.1 GENERAL

A. Install Raceway concealed in construction unless noted otherwise on the Drawings or specifically approved in writing by the Architect/Engineer.

B. Cut Raceway ends square, ream and extend maximum distance into all couplings and connectors.

C. Provide and install manufactured end caps on all Raceway ends during construction to prevent the entrance of water or dirt. Tape, as a cover, not permitted.

D. Swab out all Raceways before pulling wires.

E. All elbows for GRS and PVC Raceway shall be factory radius bends. For all other Raceway, use factory radius bends of 1-1/4" and larger diameter.

F. Raceway shall not penetrate sheet metal ducts unless permission is granted by Architect/Engineer. All sleeves shall be provided for Raceway installation.

G. Provide 2 - 3/4" C.O. stub into accessible ceiling space from all recessed panelboards or systems terminal boxes.

3.2 GALVANIZED RIGID STEEL CONDUIT

A. All Connections shall be watertight. Install for all Raceways in concrete or where subject to damage.

3.3 INTERMEDIATE METAL CONDUIT

A. Intermediate metal conduit is permitted as a substitute for galvanized rigid steel conduit except where GRS is required by code.

3.4 ELECTRICAL METALLIC TUBING

A. Install for wiring in masonry, frame construction, furred ceilings and above suspended ceilings. May be used for exposed work in unfinished areas where not subject to damage. Where construction involves masonry work, surface cut masonry units wherever such masonry units are to remain unplastered or uncovered in complete construction.

3.5 RIGID ALUMINUM CONDUIT

A. May be used in lieu of galvanized rigid steel conduit where Raceway is run above grade or inside of buildings; rigid aluminum conduit not permitted where Raceways are encased in or attached to concrete or are below grade.

3.6 INSERTS, SHIELDS AND SLEEVES

A. Furnish and set in place, in advance of pouring slabs and walls, all inserts and sleeves needed to execute Division 26 equipment installation.

B. Where supports in slabs are required after wall has been poured, use a drilled-in threaded insert, installed as recommended by Manufacturer.

C. Sleeves shall be provided for all wall penetrations.

3.7 RACEWAYS THAT STUB UP THROUGH FLOOR

A. Install at such depth that the exposed Raceway is vertical and no curved section of the elbow is visible.

B. PVC Raceway shall not be stubbed through floors.

3.8 SEALING OF RACEWAY PENETRATIONS

A. Exterior Wall Surfaces Above Grade: Seal around all penetrations with caulking approved by Engineer. For concrete construction above ground level, cast Raceway in wall or core drill wall and hard pack with a mixture of equal parts of sand and cement.

B. Exterior Surfaces Below Grade: Cast Raceway into wall (or floor) or use manufactured seal assembly (such as O.Z. type "FSK") cast in place.

C. Roofs: Provide mopped, lead, roof jack where Raceway penetrates roof membrane.

D. Fire Rated Floors, Walls, Ceiling/Roofs: Concrete or masonry, seal around Raceway penetration with Dow Corning 3-6548 silicone RTV foam or approved equal. Plaster or gypsum wallboard, seal around Raceway penetration with plaster, fire tape per local Fire Marshal's requirements.

3.9 SEALING OF RACEWAYS

A. Seal interior of all Raceways which pass through buildings roofs, floors or through outside walls of the building, above or below grade. Seal on the end inside the building using duct sealing mastic, non-hardening compound type, specially designed for such service to maintain the integrity of the seal of the wall, floor or roof. Pack around the wires in the Raceways.

3.10 HANGARS FOR RACEWAYS

A. In suspended ceiling spaces Contractor may, at his option, attach 1/2" or 3/4" EMT Raceways to the ceiling suspension system where such system is structurally suitable on independent wire secured at both ends; in which case, provide clips manufactured for the purpose.

B. When more than two Raceways will use the same routing, group together on a patented channel support system (such as Unistrut).

3.11 SURFACE METAL RACEWAY

A. Install parallel to building surface (i.e., wall, ceiling, floor). Fasten to surface as recommended by Manufacturer. Mount so Raceway is in the least obvious location. Shall be used in lieu of conduit in finished areas.

3.12 FLEXIBLE CONDUIT

A. Flexible conduit shall be used only for connection to motors and equipment subject to vibration with 90 degrees loop minimum to allow for isolation and for lay-in fluorescent fixtures above T-Bar ceilings. For fixture installations, one end of flex must terminate in rough-in junction box. Flex conduit shall not be installed over 6' long or used to connect from fixture to fixture. Use liquid tight for pumps, equipment which is regularly washed down, and equipment in damp locations. Provide ground wire.

3.13 PULL CORDS

A. Nylon type shall be included in all installed empty Raceway.

END OF SECTION 260533

SECTION 262419 - MOTOR CONTROLLERS

PART 1 - GENERAL

1.1 WORK INCLUDED

A. Work under this section includes all requirements for motor controls to be furnished under the electrical portion of the work on all electrical motor driven equipment. Individually mounted starters shall be provided by Division 26 Contractor. Motor controls shall conform to NEMA Standards for each specific purpose.

B. The Division 26 Contractor shall furnish all motor controllers not included with equipment furnished under other divisions of these specifications or by Owner. The Division 26 Contractor shall install all motor controllers including all controllers not factory assembled into equipment furnished under other divisions of these specifications or by Owner.

1.2 MOTOR VOLTAGE INFORMATION

A. Circuits are designed (in general) for motors as follows:

B. Smaller than 1/2 H.P. - 115 Volts, Single Phase 1/2 H.P. and larger - 460 or 200 Volts, 3 Phase

C. Verify motor sizes and voltages provided under other divisions and notify General Contractor immediately if any discrepancies are noted.

1.3 REGULATORY REQUIREMENTS

A. Provide motor protection switches of the appropriate NEMA size. For units not using NEMA rating, use equivalent NEMA size.

PART 2 - PRODUCTS

2.1 MOTOR STARTERS

A. Magnetic Motor Starters: Unless noted otherwise, shall be full voltage non-reversing with three overloads sized to suit nameplate amperes of motor served, motor "On" and "Off" pilot lights, "Hands-Off-Auto" switch, and auxiliary contacts for interlocking.

B. Combination Motor Starter/Disconnect: Shall be fused switch type with all features of Paragraph A above. In addition, provide disconnect switch auxiliary contacts for disconnection of externally powered control circuits where applicable. Fuses shall be sized in accordance with motor manufacturer's requirements.

C. Manual Starters: Shall be toggle switch or push-button type, lockable in the "Off" position, with overload relays, pilot light and enclosure pursuant to Paragraph D below. Manual starters

shall only be used where specifically shown or called out on the drawings and only for single phase, fractional horsepower motors.

D. Enclosures: All motor controllers shall be contained in an enclosure suitable for the environment in which the controller is mounted, and shall be weatherproof when exposed to weather.

E. Overload Devices: Shall be melting alloy or bimetallic type. One overload shall be provided for each phase. Provisions shall be made for resetting the overload devices from outside the starter enclosure. Provide ambient compensated overload devices only when the motor is at a constant temperature and the controller is subject to a separate, varying temperature. Automatic reset overload devices are not permitted.

2.2 ACCEPTABLE MANUFACTURERS

A. Square D

B. Allen Bradley

C. General Electric

D. Cutler-Hammer

E. Siemens

2.3 NAMEPLATES

A. Pursuant to Section 260000, Paragraph 2.5, provide nameplates permanently attach (with screws on NEMA 1 enclosures) on each controller, nameplates with the following information: Load served, voltage, phase, short circuit rating, panel/circuit number and where applicable fuse size and type.

2.4 POWER FACTOR CORRECTION

A. Provide power factor correction capacitors for all motors 25 horsepower and above. Capacitor size when indicated on the drawings is an approximation only. Final size shall be determined by the Contractor based on the recommendations of the motor manufacturer to bring the power factor to between 0.9 and 0.95. All capacitors are to be fused, with blown fuse indicators mounted on the front of the unit. Provide discharge resistors when required by code.

PART 3 - EXECUTION

3.1 FINISHED AREAS

A. In finished areas, mount motor protection switches flush and install suitable coverplates.

3.2 HEATERS

A. Install heaters co-related with full-load current of motors provided.

3.3 OVERLOADS

A. Set overload devices to suit motors provided.

3.4 SUPPORTS

A. Securely mount to equipment, wall or acceptable mounting frame.

3.5 CONNECTION TO MECHANICAL EQUIPMENT ON ROOFS

A. The Contractor shall coordinate all roofing penetrations with the general contractor and roofing contractor to assure that the roofing warranty is maintained.

B. Attachment of conduits to the roof to serve mechanical equipment and devices shall comply with Section 260533.

3.6 MECHANICAL EQUIPMENT NAMEPLATE RATINGS

A. The Division 26 00 00 Contractor shall verify that the nameplate ratings of the mechanical equipment, when they arrive on site, are consistent with the ampacity called out on the drawings. The Contractor shall bring any discrepancies to the Engineers attention prior to installation of conduit and wiring.

END OF SECTION 262419

SECTION 262726 - SWITCHES AND RECEPTACLES

PART 1 - GENERAL

1.1 BUY AMERICA

A. The Project shall comply with the "Buy America Requirements" as set forth in Part 661 of Title 49 CFR (Reference Section 003100.5.)

1.2 RELATED DOCUMENTS

A. Drawings, Standard Specifications, Special Provisions, and Specifications for Building Structures apply to this Section as applicable.

1.3 WORK INCLUDED

A. Provide all wiring devices and plates.

B. No push-in terminals allowed.

C. All devices color shall be ivory, unless otherwise noted.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

A. Hubbell

B. Pass & Seymour

C. Leviton

D. Cooper

2.2 SWITCHES

A. "Industrial Specification Grade", quiet type, rated 277 volt, 20 amp, unless noted, with plastic handle. Single pole, double pole, 3-way, or locking type as required. Meets Fed. Spec. WS-896 Provide matching styles and colors in other devices as required for the conditions of installation. Hubbell CS1221, Cooper CSB120, Leviton 1221, and P&S 20AC1

B. Interchangeable type shall be rated same as above.

C. Momentary Contact Line Voltage Switches: Single pole, double throw, 3-wire, normally open. Rating same as above.

D. Key Operated: Hubbell HBL1221L (or equal) with 1209 Key. Provide 24 spare Keys.

E. Motor rated switches: Switches serving as motor disconnecting means shall be horsepower rated with overload relays and meet requirements as stated above. See manual starters in Section 262419, 'Motor Controllers'.

F. Device plates shall be Hubbell and Cooper Type 302 stainless steel.

2.3 RECEPTACLES

A. "Industrial Specification Grade", Duplex NEMA 5-20R configuration (20-Amp, 120-Volt) unless shown otherwise. Must have "rivetless ground" contact manufactured as an integral component of the external ground screw terminal. Meets Fed Spec. WC-596 Hubbell HBL5362, Cooper 5362, P&S 5362A, and Leviton 5362.

B. Ground-Fault Circuit-Interrupter Duplex Receptacles: NEMA 5-20R. Hubbell GF20ILA, and Cooper VGF20, for 20 Amp, 125-Volt AC. Provide GFI receptacles where required by code.

C. Duplex NEMA 5-20R configuration, isolated ground, orange color. Leviton 5362 IG, and Cooper IG5362.

D. Weather Resistant (WR) / Ground Fault Circuit-Interrupter (GFCI) Outdoor Duplex Receptacles: NEMA 5-20R. Hubbell GFTR201 or equal, for 20 Amp, 125-Volt AC.

E. Special Purpose Receptacles: For special purpose receptacles, see drawings for voltage, amperage, and phase. Provide with matching plug delivered to the Owner.

2.4 DEVICE PLATES

A. Interior: Plates for receptacles other than NEMA 5-20R shall have ampere rating, voltage and phase engraved in the plate. Plates for recessed boxes shall be Hubbell and Cooper Type 302 stainless steel. Attachment screws shall match finish of plate. Plates for surface mounted boxes shall be of pressed stainless steel with size to fit exactly the box used.

B. Exterior: Intermatic # WP1010MC, for vertical mount and # WP1010HMC for horizontal mount, or equivalent for receptacles. Metal cover shall be raintight while-in-use.

PART 3 - EXECUTION

3.1 MOUNTING

A. Rigidly fasten each device to the outlet box at proper position with the wall to bring receptacle flush with plate or switch handle the proper distance through the plate.

3.2 ORIENTATION

A. Set Switches vertical with handle operating vertically, up position "ON".

B. Set Receptacles vertical with ground slot down.

3.3 DEVICE PLATES

A. Shall be stainless steel for each new wiring device and for each telephone and signal equipment outlet, except where equipment mounted thereon covers the outlet box completely.

B. Provide new covers on existing outlet boxes being reused.

3.4 RECEPTACLE GROUNDING

A. Provide bare bonding wire between receptacle grounding terminal and box. Plaster ear screws connecting frame to the box will not be acceptable for grounding.

B. Provide green insulated grounding conductor in all branch circuits supplying isolated ground and ground-fault circuit-interrupter type receptacles.

3.5 HANDICAPPED ACCESS

A. Comply with requirements of Washington State Handicapped Access Code.

END OF SECTION 262726

SECTION 262813 - FUSES

PART 1 - GENERAL

1.1 WORK INCLUDED

A. Provide all fuses as required. Provide three (3) spare of each size and type required. Fuses shall not be installed until equipment is ready to be energized. This measure prevents fuse damage during shipment of the equipment from the manufacturer to the jobsite or from water that may contact the fuse before the equipment is installed. Final tests and inspections shall be made prior to energization of the equipment. This shall include a thorough cleaning, tightening, and review of all electrical connections and inspection of all grounding conductors. All fuses shall be furnished by the Electrical Contractor. All fuses shall be of the same manufacturer.

PART 2 - PRODUCTS

2.1 MAINS, FEEDERS, AND BRANCH CIRCUITS

A. Circuits 601 to 6000 amperes shall be protected by current limiting BUSSMANN Low-Peak Time-Delay Fuses KRP-C. Fuse links shall be pure silver links (99.9% pure), delay and must hold 500% of rated current for a minimum of 4 seconds, clear 20 times rated current in .01 seconds or less and be listed by Underwriters Laboratories Inc., with an interrupting rating of 200,000 amperes r.m.s.

B. Circuits 0 to 600 amperes shall be protected by current limiting BUSSMANN LOW-PEAK Dual-Element Fuses LPN-RK (250 volts) or LPS-RK (600 volts). All dual-element fuses shall have separate overload and short-circuit elements. Fuse shall incorporate a spring activated thermal overload element having a 284°F. melting point alloy and shall be independent of the short-circuit clearing chamber. The fuse must hold 500% of rated current for a minimum of 10 seconds and be listed by Underwriters Laboratories, Inc., with an interrupting rating of 200,000 amperes r.m.s. symmetrical. The fuses shall be UL Class RK1 to maintain the Engineered protection of the system components.

C. Motor Circuits: All individual motor circuits with full load amperes ratings (FLA) of 480 amperes or less shall be protected by BUSSMANN LOW-PEAK Dual-Element Fuses LPN-RK (250 volts) or LPS-RK (600 volts). Larger H.P. motors shall be protected by BUSSMANN Type KRP-C Low-Peak Time-Delay Fuses of the ratings shown on the drawings. All other motors, (such as 1.0 service factor motors) shall be protected by BUSSMANN LOW-PEAK Dual-Element Fuses LPN-RK (250 volts) or LPS-RK (600 volts) installed in ratings of approximately 115% of the motor full load current except as noted above. The fuses shall be UL Class RK1 Dual Element Time Delay or Class L.

D. Fluorescent fixtures shall be protected by BUSSMANN Fuses GLR or GMF installed in HLR Holder. They shall have individual protection on the line side of the ballast. A fuse and holder shall be mounted within or as part of the fixture. Size and type of fuse to be recommended by the ballast manufacturer.

2.2 SPARE FUSES

A. Spare fuses shall be provided with a minimum of three of each ampere rating. See Section 265000 for quantities of spare fusing required for ballasted light fixtures.

2.3 ACCEPTABLE MANUFACTURERS

A. Bussman

B. Little Fuse

PART 3 - EXECUTION

3.1 FUSES

A. Install in all fusible devices provided under this Contract.

END OF SECTION 262813

SECTION 262816 - DISCONNECTS AND FUSED SWITCHES

PART 1 - GENERAL

1.1 WORK INCLUDED

A. Provided all disconnects, fused and unfused, required by code for equipment furnished under this and other divisions of these specifications and as shown on the drawings.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

A. General Electric

B. Square-D

C. Siemens

D. Cutler-Hammer

2.2 DISCONNECTS

A. Switch shall be heavy-duty type, shall be quick-break and shall be horsepower rated. Switch shall have blades as required to open all ungrounded conductors and shall be single throw unless noted.

B. Enclosure shall have interlocking cover to prevent opening door when switch is closed. Door interlock shall include a defeating scheme, shall be padlockable in the "Off" position.

C. Enclosure shall be suitable for environment in which mounted. All exterior enclosures shall have a minimum raintight rating.

2.3 FUSED SWITCHES (OR FUSED DISCONNECTS)

A. Shall be as above with addition of fuse space and clips to accept only fuses as noted in Section 262813.

B. Fuses shall be sized in accordance with manufacturer's requirements of protected equipment.

2.4 NAMEPLATES

A. Provide nameplates on all enclosures and include the following information: Load served, voltage, phase, panel and circuit number. Construct and attach in accordance with Section 260000, Paragraph 2.5.

PART 3 - EXECUTION

3.1 SUPPORTS

A. Secure solidly to wall or approved mounting frame. Disconnects supported only by Raceway are not acceptable.

3.2 SPLICES

A. Wiring space within enclosure shall not be used as a junction box.

END OF SECTION 262816

SECTION 265000 - LIGHTING

PART 1 - GENERAL

1.1 WORK INCLUDED

A. Provide the lighting system complete and operational.

B. Recessed fixtures installed in fire-resistive ceiling construction shall have the same fire rating as the ceiling or shall be provided with fireproofing boxes having materials of the same fire rating as the ceiling.

1.2 FIXTURE SCHEDULE MANUFACTURER'S SERIES NUMBERS

A. Are a design series reference and do not necessarily represent the number, size, wattage or the type of lamp, ballast or special requirements as specified hereinafter.

1.3 SUBMITTALS

A. Shall be neatly and clearly marked to indicate the fixtures, lamps and ballasts fully comply with contract documents. When substitute fixtures are submitted (if permitted) the data shall clearly cross reference (written or highlighted) that the substitute fixture complies with every detail of the specified fixture. Fixtures not fully complying with contract documents are not permitted.

PART 2 - PRODUCTS

2.1 METAL PARTS

A. Interior Fixtures: Steel or aluminum with 300°F, baked enamel finish, brushed aluminum with baked acrylic clear lacquer finish, or stainless steel with a brushed finish, manufacturer's standard color unless specified otherwise.

B. Exterior Fixtures: Corrosion resisting metal, a (non-ferrous, stainless steel or special finish) and in all cases suitable for outdoor service without tarnishing or other damage due to exposure; manufacturer's standard colors unless specified otherwise; cadmium plate all metal parts concealed by canopies, including screws, plates and brackets. All exposed fasteners shall be tamperproof.

2.2 LIGHT TRANSMITTING COMPONENTS

A. Virgin acrylic plastic (0.125-inch thick overall minimum) or glass. Shall be contained in a steel frame hinged and which remains attached to the fixture when door is in open position.

2.3 SPECIAL PARTS

A. Adapters, Plates, Brackets and Anchors: Provide where required by construction features of the building to suitably mount lighting fixture. All such appurtenances and mounting methods shall be approved by the Architect/Engineer prior to fabrication and installation.

2.4 LAMPS

A. Solid State Lighting Fixtures (LED):
   1. Fixtures shall provide lighting with a minimum Correlated Color temperature (CCT) of 4000K and shall have a Color Rendering Index of (CRI) of 70 or higher. Verify performance of the light producing solid state components by a test report in compliance with the requirements of IESNA LM 80. Verify performance of the solid state light fixtures by a test report in compliance with the requirements of IESNA LM 79. Provide lab results by a NVLAP certified laboratory. The light producing solid state components and drivers shall have a life expectancy of 50,000 operating hours while maintaining at least 70% of original illumination level. Provide a complete five year warranty for fixtures.

2.5 SOCKETS

A. Porcelain, medium base except where mogul base lamps are standard for the fixture specified.

2.6 OUTDOOR LIGHTING STANDARDS

A. Provide watertight insulating fuse in the base of lighting standards to individually protect each lighting fixture; buss Style "HEB" or approved, waterproof fuseholder with Buss fuse of appropriate capacity and voltage. Provide fuse for each hot circuit wire; do not fuse neutral.

PART 3 - EXECUTION

3.1 LIGHTING FIXTURES - GENERAL

A. Size and mounting height from finished floor to bottom of fixture as indicated on the drawings. Verify mounting provisions prior to the ordering of fixtures. Fixtures shall be UL listed for the location, and application in which they are installed.

3.2 DIFFUSERS AND ENCLOSURES

A. Install lighting fixture diffusers only after construction work, painting and clean up are completed. Prior to final acceptance, remove all lamps, reflectors and diffusers, wash, rinse and reinstall.

3.3 ADJUSTMENT OF FIXTURES

A. Make all final spotlight and adjustable light settings under the direction of the Architect/Engineer during a scheduled period of time prior to the completion of the project. Include costs for all equipment and personnel expenses required for adjustment.

B. For fixtures with indirect lighting, notify Engineer prior to installation of any circumstance where the fixture lamp source will be within 12” of ceiling.

3.4 LOCATION

A. Mount to the dimensions shown on the drawings. Mount at quarter points where no dimensions appear. Architect shall specify mounting locations where no dimensions appear and quarter point mounting is impractical or not indicated on the drawings.

3.5 COMMISSIONING

A. Select equipment and systems referenced in this section are to be commissioned per Section 019113 - General Commissioning Requirements and Section 260800 - Commissioning of Electrical Systems. The contractor has specific responsibilities for scheduling, coordination, startup, test development, testing and documentation. Coordinate all commissioning activities with the Commissioning Authority.

END OF SECTION 265000