

PROJECT MANUAL FOR:

THEATER STAGE RIGGING CONTROL REPLACEMENT

FERRIS HIGH SCHOOL

Bid #26-2425

SPOKANE PUBLIC SCHOOLS
Spokane, Washington

January 10, 2025

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INSTRUCTIONS TO BIDDERS

Theater Stage Riggings Controls Replacement – Ferris High School

1.01 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 or deducted from the amount of the Base Bid if the corresponding change in the Work, as described in the Bidding Documents, is accepted by the Owner.
- 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. A contract is only formed upon execution of the contract, and not simply by Award.
- E. The “**Award Requirements**” include the following statutory requirements as a condition precedent to Award. The lowest responsive Bidder shall:
 - (1) have a certificate of registration in compliance with RCW 18.27;
 - (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) have received training on the requirements related to public works and prevailing wages under chapters 39.04 and 39.12 RCW, or be exempt from such training requirements if the Bidder has completed three or more public works projects and has had a valid business license in Washington for three or more years; and
- (8) within the three-year period immediately preceding the date of the bid solicitation, not have been determined by a final and binding citation and notice of assessment issued by the department of labor and industries or through a civil judgment entered by a court of limited or general jurisdiction to have willfully violated, as defined in RCW 49.48.082, any provision of chapter 49.46, 49.48, or 49.52 RCW.

Further, under revised RCW 39.04.350, if the Bidder has a history of receiving monetary penalties for not achieving the apprentice utilization requirements pursuant to RCW 39.04.320, or is habitual in utilizing the good faith effort exception process, the bidder must submit an apprenticeship utilization plan within ten business days immediately following the Owner's notice to proceed.

- 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. A “**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.
- H. A “**Bidder**” is a person or entity who submits a Bid for a prime contract with the Owner for the Work described in the Contract Documents.
- I. 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.
- J. The “**Contract Documents**” for the Work consist of the 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), the Drawings, the Specifications, and all Addenda issued prior to, and all modifications issued after, execution of the Contract.
- K. The “**Owner**” is Spokane Public Schools.
- L. A “**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.

- M. A “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 Bidding Documents or in the proposed Contract Documents.

1.02 BIDDER’S REPRESENTATIONS

By making its Bid, each Bidder represents that:

- A. BIDDING DOCUMENTS. The Bidder has read and understands the Bidding Documents, and its Bid is made in accordance with them.
- B. PRE-BID MEETING. The Bidder has attended any pre-bid meeting(s) required by the Bidding Documents.
- C. POSSIBLE SELF-PERFORMED WORK REQUIREMENT. The Bidder will perform *with its own forces* at least that percentage (if any) of the Work required by the Bidding Documents or the Contract Documents.
- D. BASIS. Its Bid is based upon the materials, systems, services, and equipment required by the Bidding Documents, without exception.
- E. EXAMINATION. 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, including any existing buildings, 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 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. 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. 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.
- F. PROJECT MANUAL. The Bidder has checked its copies of any Project Manual issued with the Table of Contents bound therein to ensure the Project Manual is complete.

- G. SEPARATE WORK. The Bidder has examined and coordinated all Drawings, Contract Documents, and Specifications for 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 under the contract being bid upon.
- H. LICENSE REQUIREMENTS. 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 in compliance with RCW 18.27, for the performance of the Work specified in the Contract Documents.
- I. NO EXCEPTIONS. Bids must be based upon the materials, systems and equipment described and required by the Bidding Documents, and terms and conditions in the Contract Documents, without exception.

1.03 BIDDING DOCUMENTS

A. COPIES

- 1. **Deposit.** Bidders may obtain complete sets of the Bidding Documents from the location designated in the Advertisement or Invitation to Bid.
- 2. **Sub-bidders.** Bidding Documents will not be issued directly to Sub-bidders or others unless specifically offered in the Advertisement or Invitation to Bid.
- 3. **Complete sets.** Bidders shall use complete set of Bidding Documents in preparing Bids. The Owner assumes no responsibility for errors or misinterpretations resulting from the use of incomplete and/or superseded sets of Bidding Documents.
- 4. **Conditions.** The Owner and/or any Architect or Engineer make copies of the Bidding Documents available on the above terms only for the purpose of obtaining Bids on the Work and do not confer a license or grant permission for any other use.

B. INTERPRETATION OR CORRECTION OF BIDDING DOCUMENTS

- 1. **Format.** The Contract Documents are 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. **Notify Owner.** Bidders and Sub-bidders shall promptly notify the Owner of any ambiguity, inconsistency, or error that they may discover upon examination of the Bidding Documents or of the site and local conditions. All Bidders and Sub-bidders shall thoroughly familiarize themselves with specified products and installation procedures and submit to the Owner any objections (in writing) no later than ten (10) days prior to the Bid Date. The

submittal of the Bid constitutes acceptance of products and procedures specified as sufficient, adequate, and satisfactory for completion of the Contract.

3. **Written request.** Bidders and Sub-bidders requiring clarification or interpretation of the Bidding Documents shall make a written request which shall reach the Owner at least three days prior to the date for receipt of Bids.
4. **Addenda.** Any interpretation, correction or change of the Bidding Documents will be made by written Addendum. Interpretations, corrections or changes of the Bidding Documents made in any other manner will not be binding, and Bidders shall not rely upon such interpretations, corrections and changes.
5. **Singular references.** Reference in the singular to an article, device, or piece of equipment shall include as many of such articles, devices, or pieces as are indicated in the Contract Documents or as are required to complete the installation.
6. **Utilities and runs.** The Bidder should assume that the exact locations of any underground or hidden utilities, underground fuel tanks, and plumbing and electrical runs may be somewhat different from any location indicated in the surveys or Contract Documents.

C. SUBSTITUTIONS

1. **Standard.** 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. **Substitution procedure.** No substitution will be considered prior to receipt of Bids unless the Owner receives a written request for approval on a complete substitution request form at least five days prior to the date for receipt of Bids. Each such request shall include the name of the material or equipment proposed to be replaced and a complete description of the proposed substitute, including drawings, cuts, 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. 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 Contract Time will not be increased, and that it will coordinate the installation of the substitute if accepted and make all associated changes in the Work. The Owner'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. 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 for these services at their customary hourly rates.

3. **Addendum.** If the Owner 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.
4. **Post-bid substitutions.** After the Contract has been executed, the Owner 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. **Written.** All Addenda will be written. They will be mailed, emailed, faxed, posted electronically, and/or delivered to those the Owner knows to have received a complete set of Bidding Documents.
2. **Copies.** Copies of Addenda will be made available for inspection wherever Bidding Documents are on file for that purpose.
3. **Verification and acknowledgment of receipt.** 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.

1.04 BIDDING PROCEDURE

A. FORM AND STYLE OF BIDS

1. **Form.** Bids 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. **Entries on the bid form.** All blanks on the Bid form shall be filled in by typewriter or manually in ink.
3. **Words and figures.** Where so indicated by the makeup of the Bid form, sums shall be expressed in both words and figures; in case of discrepancy between the two, and regardless of any statement to the contrary on the Bid form, 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 shall govern.

4. **Initial changes.** Any interlineation, alteration or erasure must be initialed by an authorized representative of the Bidder.
5. **Alternates and Unit Prices.** All requested Alternates and unit prices should be bid. The Owner reserves the right, but is not obligated, to reject any Bid on which all requested Alternates or unit prices 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 the 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 an add rather than a deduct.
6. **No conditions.** The Bidder shall make no conditions or stipulations on the bid form nor qualify its Bid in any other manner.
7. **Identity of Bidder.** 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 (include state of incorporation), 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.
8. **Bid amounts do not include sales tax.** The Bid shall include in the sum stated all taxes imposed by law, EXCEPT STATE AND LOCAL SALES TAX ON THE CONTRACT SUM.
9. **Bid breakdown.** 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.
10. **Certification Statement.**
 - (a) To ensure that the Owner does not enter into a contract with a debarred or suspended company or individual, each respondent shall include a certification statement with the bid proposal. By signing the certification statement, included as part of the Bid form, the Bidder certifies that neither it nor any of its principals have been proposed for debarment, debarred, or suspended by a Federal or State agency. It is the responsibility of each Bidder to sign the certification statement and submit it with its proposal.
 - (b) The Owner may contact the Federal or State agency for confirmation of the respondent’s status to debarment or suspension.
11. **Statement Regarding Equal Employment Opportunity.**

The Bid form includes a statement regarding equal employment opportunity. The Bidder shall complete this statement and include this information with its Bid.

12. **Verification of Compliance: Bidder Responsibility**

At the time of bid submittal, a bidder shall submit with their bid, a signed statement of Bidder Responsibility Compliance, included as part of the Bid form.

B. POSSIBLE LISTING OF SUBCONTRACTORS

1. **Procedure.** On certain projects of the Owner, the Bid form includes a requirement that certain Subcontractors must be listed, and the list submitted to the Owner. In these circumstances, the Bidder must name the Subcontractor with whom the Bidder, if awarded the Contract, will subcontract *directly* (i.e., not lower-tier Subcontractors) for performance of the work of:

- (a) HVAC (heating, ventilation and air conditioning),
- (b) plumbing as described in RCW 18.106,
- (c) electrical work as described in RCW 19.28,
- (d) structural steel installation,
- (e) rebar installation,
- (f) asbestos abatement work, and
- (g) any other categories of Work listed on the Subcontractor listing form.

NAMING OF ASBESTOS ABATEMENT SUBCONTRACTOR. To be considered for asbestos abatement work the subcontractor performing the asbestos work must meet the following standards:

- (a) Completion of the qualification statement (attached to these documents) submitted within 48 hours (2 business days) after the bid.
- (b) An asbestos subcontractor having received two serious, willful violations issued by SRCAA or OSHA in the past three years of bid date would result in probation. In order for this subcontractor to be a responsible bidder and perform the work, the subcontractor would be responsible for hiring at their own expense a qualified company that oversees asbestos abatement work. This company shall be on the school district's approved list of consultants.

(c) A subcontractor having received three serious, willful violations issued by SRCAA or OSHA in the past three years of the bid date is prohibited from bidding or performing work for Spokane Public Schools until such time as their record meets the standards of “probation” above.

(d) A serious or willful violation is one that carries a monetary fine of \$1000 and over or resulted in the potential exposure to workers or occupants.

(e) If a disqualified asbestos subcontractor is listed on a bid, the contractor shall, at their own expense, substitute a qualified asbestos subcontractor to do the work of this contract.

TIMING: The listing of HVAC, plumbing, and electrical subcontractors shall occur within one hour of the published bid submittal time. The listing of structural steel installation and rebar installation subcontractors shall occur within forty-eight hours of the published bid submittal time. The listing of any other categories of Work listed on the Subcontractor listing form(s) shall occur as indicated on such forms or as otherwise described in the bidding documents.

SELF-PERFORMANCE. If the Bidder intends to self-perform any of these categories of Work, it must name itself for each such category of Work.

IF NO SUBCONTRACTORS: If there is no work to be performed by a HVAC, plumbing, electrical, structural steel installation, rebar installation, or other subcontractor category identified on the Bid form(s), the Bidder should insert “None” or “N/A” on the Bid form. If a category is left blank, that shall indicate that the Bidder believes that there is no Work to be performed by that trade.

MULTIPLE ENTRIES. The Bidder shall not list more than one entity for a particular category of Work identified, unless a Subcontractor varies with an Alternate Bid, in which case the Bidder shall identify the Subcontractor to be used for the Alternate and the affected portion of the Work and otherwise make its Bid clear as to which subcontractor shall be utilized depending upon the selection of alternates.

MULTIPLE SUBMITTAL TIMES. In the event the Bidding Documents call for a second submittal time for receipt of alternate bids, and no additional Subcontractors are listed with such alternate bids, the Owner will consider that there is no change in the Subcontractors from those listed with the base Bid.

FAILURE TO SUBMIT. In accordance with RCW 39.30.060, failure of a Bidder to submit the names of such proposed heating, ventilation and air conditioning, plumbing, electrical, structural steel installation, and rebar installation Subcontractors or to name itself to perform such Work or the

naming of two or more Subcontractors to perform the same Work in the time periods described above shall render the Bidder's Bid nonresponsive and, therefore, void.

REQUIREMENT TO SUBCONTRACT. The Bidder, if awarded the Contract, will subcontract with the listed Subcontractor for performance of the portion of the Work designated on the Form of Proposal, subject to the provisions of the Contract for Construction and RCW 39.30.060.

2. **Replacement.** If a listed Subcontractor is unable to comply with any qualification or bondability requirements of the Bidding Documents, or other requirements of the Contract Documents (such as a finding of Subcontractor non-responsibility), the Owner may require the Bidder to replace the Subcontractor with a Subcontractor acceptable to the Owner at no change in the Contract Sum or Contract Time.
3. **Subcontractor Standards.** Subcontractors shall meet contractual and technical qualifications standards, and provide specialized certification, licensing, and/or performance bonding where specified.

C. **BID SECURITY**

1. **Purpose and procedure.** Each Bid shall be accompanied by a bid security equal to five percent (5%) of the Base Bid. 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. **Form.** The bid security shall be in the form of a certified or bank cashier's check payable to the Owner or a bid bond acceptable to the Owner and executed by a bonding company licensed in the State of Washington on a Public Works Bond or equivalent form.
3. **Retaining bid security.** 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. **Return of Bid Security.** Within 45 days after the Bid Date, the Owner will release or return bid securities to Bidders whose 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. **Procedure.** The Bid, the bid security, and any other documents required to be submitted with the Bid shall be enclosed in a sealed opaque envelope identified with the Project name, Bid number, the Bidder's name and address and, if applicable, the designated portion of the Work for which the Bid is submitted. 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. **Deposit.** 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 opened, retained unopened, or returned (open or unopened), all at the discretion of the Owner.
3. **Responsibility.** The Bidder assumes full responsibility for timely delivery at the location designated for receipt of Bids.
4. **Form.** Oral, telephonic, electronic, email, fax or telegraphic Bids are invalid and will not be considered.

E. MODIFICATION OR WITHDRAWAL OF BID

1. **After receipt time.** A Bid may not be modified, withdrawn or canceled by the Bidder during a 45-day period following the time and date designated for the receipt of Bids, and each Bidder so agrees in submitting its Bid.
2. **Before receipt time.** Prior to the time and date designated for receipt of Bids, any Bid submitted may be modified or withdrawn 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, and the notice shall be worded so as not to reveal the amount of the original Bid.
3. **Resubmittal.** 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 with resubmission.** 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 over the signature of the Bidder and delivered in person or by mail, express delivery, telegram or fax. If the notice is by telegram or fax, written confirmation over the signature of the Bidder must be mailed and postmarked on or before the date and time set for the notice.

1.05 CONSIDERATION OF BIDS

- A. **OPENING OF BIDS:** Unless stated otherwise in the Advertisement or Invitation to Bid or Addendum, 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. **Owner.** 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. The Owner has the right to waive any informality or irregularity in any Bid(s) received and to accept the Bid(s) which, in its judgment, is in its own best interests.
 2. **Alternates.** The Owner shall have the right to accept Alternates in any order or combination, unless otherwise specifically provided in Article 1.09, and to determine the low Bidder on the basis of the sum of the Base Bid and the Alternates accepted. The Owner retains the right to accept Alternate Bid items at the price bid within 45 days after the Agreement is executed.
 3. **Requirements for Award: Bidder Responsibility.** Before award of a Public Works Contract, a bidder must meet the Award Requirements and the following responsibility criteria to be considered a responsible bidder and qualified to be awarded a public works project.
 - A. The ability, capacity, and skill to perform the Contract;
 - B. The character, integrity, reputation, judgment, experience, and efficiency of the Bidder;
 - C. Whether the Bidder can perform the Contract within the time specified;
 - D. The previous and existing compliance by the Bidder with laws relating to the Contract;

- E. The quality of performance of previous contracts, including demonstration of successful completion of similar projects of equal or greater size, scope and value in the last three (3) years;
 - F. The designated Project Manager shall have a minimum of three (3) years of successful experience in project management and scheduling of projects of similar scope and complexity;
 - G. The designated Superintendent shall have a minimum of five (5) years of successful supervision of projects of similar scope and complexity;
 - H. Any other qualifications required by the Contract Documents or Bidding Documents; and
 - I. Such other information as may be secured having a bearing on the decision to award the contract.
4. At the time of bid submittal, a bidder will submit with their bid, a signed statement in accordance with RCW 9A.72.085 verifying under penalty of perjury that the bidder is in compliance with the bidder responsibility criteria requirement of subsection (3) (G) of this section.

D. BID PROTEST PROCEDURES

1. **Procedure.** 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 rejection of a Bid, the award of the Contract or any other aspect arising from or relating in any way to the bidding or award or lack thereof shall cause a written protest to be filed with and received by 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:

Director of Purchasing Services
Spokane Public Schools
2815 East Garland Avenue
Spokane, WA 99208

2. **Consideration.** 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 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 business days of the Owner's receipt of the protest. (If more than one 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-business-day period, the protest shall be deemed rejected.

3. **Waiver.** Failure to comply with these protest procedures will render a protest waived.
4. **Condition precedent.** 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.

1.06 POST BID INFORMATION

A. INFORMATION FROM APPARENT LOW BIDDER

1. **Submittal.** Within five (5) days of the Owner's request, the apparent low Bidder shall submit to the Owner:
 - (a) a properly executed Contractor's Qualification Statement on the form provided (if requested);
 - (b) 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;
 - (c) 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;
 - (d) a detailed breakdown of the Bid in a form acceptable to the Owner;
 - (e) 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
 - (f) the proprietary names and the suppliers of the principal items or systems of materials and equipment proposed for the Work.

Failure to provide any of the above information in a timely manner may constitute an event of breach permitting forfeiture of the Bid security.

2. **Responsibility.** The Bidder will be required to establish to the satisfaction of the Owner the reliability and responsibility of the persons or entities proposed to furnish and perform the Work described in the Bidding Documents. The responsibility of the Bidder may be judged in part by the responsibility of

these proposed entities. In addition to any other criteria stated within these Instructions to Bidders, the following will be considered:

- The ability, capacity, and skill to perform the contract;
- The character, integrity, reputation, judgment, experience, and efficiency of the Bidder;
- Whether the Bidder can perform the contract within the time specified;
- The quality of performance of previous contracts;
- The previous and existing compliance by the Bidder with laws relating to the contract; and
- Such other information as may be secured having a bearing on the decision to award the contract.

3. **Subcontractors.** The responsibility of the Bidder may be judged in part by the responsibility of its Subcontractors. Bidders must verify responsibility criteria for each first-tier Subcontractor. A Subcontractor of any tier that hires other Subcontractors must verify responsibility criteria for each of its lower-tier Subcontractors. Verification shall include that each Subcontractor, at the time of subcontract execution, is Responsible and possesses an electrical contractor license, if required by RCW 19.28, or an elevator contractor license, if required by RCW 70.87.
4. **Request to Modify Criteria.** 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 in these Instructions to Bidders. 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. **Objection.** Prior to the award of the Contract, the Owner will notify the Bidder in writing if the Owner, after due investigation, has reasonable objection to the Bidder or a person or entity proposed by the Bidder. If the Owner has reasonable objection to a proposed person or entity, the Bidder may, at Bidder's option, (1) withdraw the Bid, (2) submit an acceptable substitute person or entity with no change in the established 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 1.05(D). In the event of withdrawal, bid security will not be forfeited.
6. **Change.** Persons and entities proposed by the Bidder and to whom the Owner has 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.

- 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 Contractor's Qualification Statement, 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.

1.07 PERFORMANCE BOND AND LABOR AND MATERIAL PAYMENT BOND

- A. **BOND REQUIREMENTS:** Within ten (10) days after the issuance of the Notice of Intent to Award, 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 bond shall be included in the Base Bid.
- B. **TIME OF DELIVERY AND FORM OF BONDS:** The Bidder shall deliver the required bonds to the Owner within ten (10) days after the date of execution of the Contract and prior to commencing operations at the site.

1.08 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 Supplemental or Special Conditions, and the other Contract Documents included with the Project Manual. In the event no form is enclosed, an AIA Document A101, "Standard Form of Agreement Between Owner and Contractor, where the basis of payment is a Stipulated Sum," along with revised AIA Document A201, General Conditions, both as revised, modified and supplemented by the Owner, will be used.
- 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.

1.09 CONTRACT DOCUMENTS

This paragraph contains descriptions of some but not all of the provisions of the Contract Documents. Bidders should review in detail the Contract Documents themselves and not rely upon these brief descriptions as complete, inclusive or accurate.

- A. **RETAINAGE:** The Contract Documents specify the statutory retainage requirements of RCW 60.28 for this Project.
- B. **CONTRACT TIME:** The Contract Documents specify the Contract Time. Timely completion of this Project is essential to the Owner.
- C. **PREVAILING WAGES:** The Contract Documents contain requirements regarding the payment of prevailing wages pursuant to RCW 39.12.
- D. **WRITTEN CLAIMS AND NOTICE:** The Contract Documents contain a number of provisions that require the Contractor to provide notice and to make and support Claims in writing within a specified time in order to maintain the claim.
- E. **CHANGES IN CONTRACT SUM:** The Contract Documents contain provisions specifying requirements for and pricing of changes in the Contract Sum.
- F. **CONTRACTOR REGISTRATION:** Pursuant to RCW 39.06, the Bidder shall be registered or licensed as required by the laws of the State of Washington, including but not limited to RCW 18.27.
- G. **POSSIBLE COMMISSIONING OF CRITICAL SYSTEMS:** Certain systems may be designated in the Contract Documents as “Critical Systems.” If so, after the Contractor notifies the Owner no later than 30 days prior to the Date of Substantial Completion that the Critical Systems are up and running and ready for normal operation, the Owner will schedule a pre-commissioning inspection of these systems. When the Critical Systems are complete, the Owner will establish the Date of Commissioning.

1.10 POSSIBLE TRENCH EXCAVATION SAFETY PROVISIONS

- A. To ensure that the Bidder agrees to comply with relevant trenching safety requirements of RCW 39.04.180 and RCW 49.17, the Base Bid may include the cost of any required trenching. The Bidder shall enter in the blank provided on the Bid form the dollar amount the Bidder has included in its Base Bid for any work requiring trenching that will exceed a depth of four feet. If trench excavation safety provisions do not pertain to the Project, the Bidder should enter “N.A.” or “Not Applicable” in the blank on the bid form.

1.11 OTHER REQUIREMENTS

- A. **ACCESS TO PREMISES.** Any prospective Bidders or Subcontractors who wish to enter the premises must first notify the school principal or the Capital Projects and Planning Department and make known their presence.
- B. **NON-MANDATORY PRE-BID WALK-THROUGH CONFERENCE.** A non-mandatory pre-bid conference will be held at 10:00 a.m. on February 4, 2025 at the Ferris High School public office 3020 E. 37th Avenue, Spokane, WA. The purpose of the conference will be to discuss the Project and to answer any questions concerning interpretation of the Bid Documents.

- C. **DATE OF COMMENCEMENT.** Following submittal of documents required in these “Instructions To Bidders” and “Agreement Between Spokane Public Schools and Contractor – Public Works Contract”, the Date of Commencement is expected to be on or about March 10, 2025.
- D. **DATE OF SUBSTANTIAL COMPLETION.** The Work shall be Substantially Completed to the Owner’s satisfaction on or before August 15, 2025.
- E. **SCHEDULE OF WORK**
- Work shall start when the Contractor receives a formal “Notice to Proceed”, shall proceed with promptness and dispatch, and shall conform to Section 01010, “Summary of Work.”
- F. **SEQUENCE OF WORK, BUILDING-TO-BUILDING**
- Prior to receiving the Notice to Proceed on the project, the successful vendor must present a management plan and time line describing the process for completion of punch list items, as-built drawings and test results for each site. The management plan must be delineated and staffed to the satisfaction of the owner. Punch list items must be completed within 5 working days after the substantial completion notice for that site. As-built drawings and test results documentation must be completed within 10 working days after substantial completion notice for that site.
- G. **REQUIREMENTS FOR “AFTER-HOURS” OR “SWING-SHIFT” WORK**
1. During the school year, all work must occur after school, generally commencing at 3:00 p.m. to 4:00 p.m. and ending approximately 7 to 8 hours thereafter. School officials will provide access to the work and lock-up at the end of each day’s shift. All work must be cleaned up at the end of each shift, leaving each building in a clean, usable condition, ready for the next day of school.
 2. During the summer break period, conventional day-time hours may be adopted for all work. Daily clean-up is still required during this period so as not to conflict with major summer cleaning efforts by custodial staff.
 3. During winter break and spring break, conventional day-time hours may be adopted for all work – to be verified with the head custodian for that site location. Daily clean-up is still required during this period so as not to conflict with any cleaning efforts by custodial staff.
 4. Except for the summer break period noted above, all work shall be conducted on a “swing-shift” schedule.
- H. **LIQUIDATED DAMAGES.** If the Contractor fails to achieve Substantial Completion of all the Work on or before August 15, 2025, then the Contractor agrees, as part of consideration for awarding the Contract, to pay the Owner the

amount of 500 dollars (\$500.00) for each calendar day beyond this date as liquidated damages.

- I. L & I FEES. The State of Washington requires payment of fees for approval of “Statement of Intent to Pay Prevailing Wages” forms and “Affidavit of Wages Paid” forms. Payment of such fees is the responsibility of the Contractor.
- J. PLAN CHECK AND OTHER FEES. The Owner will prepay the plan check fee and building permit. The plan check fee and building permit should not be included in the amount Bid. The Contractor shall pay all fees, permits, etc. as specified in the General Conditions.

END OF SECTION

BID FORM

Theater Stage Rigging Controls Replacement – Ferris High School

The undersigned hereby submits the following Bid to:

Purchasing Department
Spokane Public Schools
2815 East Garland Avenue
Spokane, Washington 99207

A. CONTRACT

The undersigned, if notified of the acceptance of this Bid within thirty (30) days of the time set for the opening of Bids, agrees to execute a Contract for the Work, for a compensation of the sum(s) stated below and to give bonds as required by the Contract Documents and Washington statutes.

The Agreement Between Spokane Public Schools and Contractor – Public Works Contract, has been modified and made the FORM OF AGREEMENT for this contract. The form is bound herein after this section.

B. BID GUARANTEE

The undersigned further agrees that the certified check or Bid bond, payable to the Owner and accompanying this Bid, is the measure of liquidated damages which the Owner will sustain by failure of the undersigned to execute and deliver the above-named agreement and bonds within ten (10) days of written notification of the award of the Contract. Should the undersigned fail to enter into the Contract, the certified check, cashier's check, or Bid bond shall be forfeited as liquidated damages. If this Bid is not accepted by the Owner within thirty (30) days after the time set for the opening of Bids, or if the undersigned executes and delivers said bonds, the check or Bid bond shall be returned.

C. ADDENDA

Receipt of Addenda numbered _____ is hereby acknowledged.

(Fill in number of each addendum received)

D. BID

1. BASE BID

Having carefully examined the Bidding Documents and Instruction To Bidders as well as premises and conditions affecting the Work, the undersigned proposes to furnish all labor and materials and to perform all Work required by and in strict accordance with the above-named documents for a fixed amount in the sum of the following amount, NOT INCLUDING SALES TAX:

Dollars \$ _____

(Please print dollar amount in words in space above) (Dollar amount in numerals)

2. SALES TAX AND PERMITS

The retail sales tax shall not be included in the Bid sums; the Owner will pay such taxes proportionally with each periodic payment. All City of Spokane plan check and building permit fees have been paid by the owner and shall not be included in the Bid. (See SPECIAL CONDITIONS of the CONTRACT section following the GENERAL CONDITIONS of the CONTRACT for CONSTRUCTION for detailed requirements. All other necessary fees and taxes shall be paid by the Contractor and included in the Bid.)

3. OVERHEAD AND PROFIT

All of the above Bid prices (and alternate bid or unit cost prices) include overhead and profit.

4. TIME OF COMPLETION/LIQUIDATED DAMAGES

The Undersigned agrees if awarded the Contract, to complete the entire project as stipulated in the Contract Documents. The Undersigned further agrees that the Owner may retain from the compensation otherwise due, liquidated damages costs incurred by the owner, for each calendar day expiring beyond a time fixed for completion that the work remains not substantially completed. This sum is not to be construed in any sense as penalty, but as agreed liquidated damages which the Owner shall sustain in the case of failure of the Undersigned to complete the work at the time stipulated. For dates of completion and liquidated damages amount, see SECTION entitled "INSTRUCTIONS TO BIDDERS".

5. VERIFICATION

The undersigned hereby verifies under penalty of perjury, in accordance with RCW 9A.72.085, that Bidder is in compliance with the responsible bidder criteria requirement of subsection (1)(g) of RCW 39.04.350. Specifically, within the three-year period immediately preceding the date of the bid solicitation for this Project, Bidder has not been determined by a final and binding citation and notice of assessment issued by the department of labor and industries or through a civil judgment entered by

a court of limited or general jurisdiction that Bidder has willfully violated, as defined in RCW 49.48.082, any provision of chapter 49.46, 49.48, or 49.52 RCW. The undersigned certifies (or declares) under penalty of perjury under the laws of the State of Washington that the foregoing is true and correct.

E. BIDDER

Bidder's Firm Name

Contractor's Tax ID Number

Signed

Contractor's Registration Number

Address

Date and place

City, State, Zip Code

Telephone

Email

END OF SECTION

DEBARMENT / EEO FORM

Theater Stage Rigging Controls Replacement – Ferris High School

A. STATEMENT REGARDING EQUAL EMPLOYMENT OPPORTUNITY

We hereby certify that we have made a conscientious effort to comply with federal, state and local equal employment opportunity requirements in bidding this project and we will make the same efforts in fulfilling the requirements if awarded the Contract. We further designate:

Name _____

Title _____

Telephone Number _____

as the person who has been charged with the responsibility for securing compliance with and reporting progress on affirmative efforts.

B. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

In submitting the bid to do the work as outlined in the Contract Specifications, we hereby certify that we have not been suspended or in any way are excluded from Federal procurement actions by any Federal agency. We fully understand that, if information contrary to this certification subsequently becomes available, such evidence may be grounds for non-award or nullification of the Contract.

This certification is required by the regulations implementing Executive Order 12549, Debarment and Suspension, Participant's responsibilities.

Signed _____

Title _____

Firm _____

Address _____

City & State _____

Date _____

END OF SECTION

RESPONSIBLE BIDDER DETERMINATION FORM Theater Stage Rigging Controls Replacement – Ferris High School
--

The following questionnaire must be completed in full, signed by an authorized agent of the Bidder, and submitted with Bid. Failure to submit this form is grounds for rejection of Bid. Attach additional sheets as necessary to fully provide required information.

LICENSING AND CERTIFICATION

Licensing: The contractor shall, at the time of the bid, be licensed by the State or local jurisdiction as an electrical contractor in the Limited, Intermediate, or Unlimited classification.

CONTRACTOR: _____

Home
Office: _____

Contractor's License
Number _____

Bond Registration Number _____

Bidder is a(n): _____ Individual _____ Partnership _____ Corporation

List other business names used by Bidder during past five years if different than listed above:

Address of the office that will provide service:

Length of time Bidder has been engaged in work of this type and scope:

Length of time Bidder has conducted business in the Greater Spokane Area:

Has the Bidder, or any representative or partner thereof, failed to complete any contract?

_____ No _____ Yes If yes, provide details:

Has the Bidder ever had any performance bonds called as a result of its work?

____ No ____ Yes If yes, provide project name(s), contracting party(s), bond amount(s)

Has the Bidder ever had been found guilty of any violation of State or Federal Employment Laws?

____ No ____ Yes If yes, provide details:

Has the Bidder ever filed for Chapter Eleven or other bankruptcy? ____ No ____ Yes
If yes, provide details:

Have any adverse legal judgments been rendered against the Bidder in the past five years?

____ No ____ Yes If yes, provide details:

Has the Bidder filed any claims with Washington State Workman's Compensation or other insurance company for accidents resulting in fatal injury or dismemberment to any of this employees in the past five years?

____ No ____ Yes If yes, provide dates, type(s) of injury, agency(s) receiving claim:

Provide location of Bidder's main parts support warehouse:

Provide standard labor rate for service work performed on a time and materials basis:

TECHNICIANS

Provide number of trained technicians that your serving office currently has on full-time payroll?

Provide the number of total clients which are the responsibility of the service technicians indicated above: _____

Provide list of technicians currently certified for the type of work requested:

Technician Name	Type of Certification	Certifying Organization	Date Certified

The undersigned represents and warrants under penalties of perjury that the foregoing information is true and accurate to the best of their knowledge. The undersigned hereby authorizes the Owner or their Consultant to verify all information contained herein.

Signature of

Bidder: _____

Title: _____

Date: _____

PROJECT REFERENCES:

Provide list of project references for projects of similar type and scope, completed within the past five years. Each reference should include organization name, contact name, address, telephone number, and a description of project. If needed, use the identical form on additional sheets of paper, continuing to number the references.

Name and Address	Contact Name and Telephone Number	Project Type, Contract Amount	Date
---------------------	--------------------------------------	----------------------------------	------

(EXAMPLE)

ABC Co.	John Smith	Re-Construct Library	
Spokane, WA	(509) 555-5555	\$150,000.00	5/25/19

1. _____

2. _____

3. _____

The undersigned represents and warrants under penalties of perjury that the foregoing information is true and accurate to the best of their knowledge. The undersigned hereby authorizes the Owner or their Consultant to verify all information contained herein.

Signature of

Bidder:

Title:

Date:

END OF SECTION

ASBESTOS ABATEMENT CONTRACTOR STANDARD Theater Stage Rigging Controls Replacement – Ferris High School

The abatement contractor is required to submit the following information to the school district 72 hours prior to the bid opening (excluding holidays and weekends). Failure to disclose accurate or complete information may result in disqualification or probation.

Abatement Contractor name _____

Company address _____

Contractor License number _____

Contact name and phone number _____

List 3 previous jobs and references (include history of job size, contact name and phone number):

1. _____

2. _____

3. _____

Asbestos abatement done under other company names in the last 5 years: _____

Has your company received violations pertaining to incomplete paperwork regarding asbestos abatement?
If so please list violations: _____

Does your company have unpaid workers' compensation claims?

List all violations (including those pending) for Washington, Idaho, Montana and Oregon:

**AGREEMENT
BETWEEN
SPOKANE PUBLIC SCHOOLS
AND CONTRACTOR
PUBLIC WORKS CONTRACT**

This AGREEMENT is made as of the _____ day of _____, 2025, between:

The “School District”:

Spokane Public Schools, District No. 81
200 N. Bernard St
Spokane, Washington 99201
Attn: Gregory Forsyth, Director of Capital Projects and Planning

and the “Contractor”:

Attn: _____

A general description of the Project is:

Theater Stage Rigging Control Replacement - Ferris H.S.
3020 E. 37th Avenue
Spokane, WA 99223

The Architect/Engineer (“A/E”), if any, is:

PLA Designs

The School District’s Representative is:

Tim Ryan
Spokane Public Schools, District No. 81
2815 E. Garland Ave.
Spokane, Washington 99207
timrya@spokaneschools.org

The School District and Contractor agree as set forth below.

**ARTICLE 1
THE WORK**

1.1 The Contractor shall fully execute and complete the entire Work described in the Contract Documents.

**ARTICLE 2
DATES OF COMMENCEMENT AND SUBSTANTIAL AND FINAL COMPLETION**

2.1 Contractor shall proceed with the Work upon receipt of the School District’s notice to proceed, expected to be on or about March 17, 2025, with on-site Work to commence no earlier than June 18, 2025.

2.2 The Contractor shall achieve Substantial Completion of the entire Project no later than August 15, 2025, and shall achieve Final Completion no later than thirty days thereafter, subject to adjustments of the Contract Time as provided in the Contract Documents.

2.3 Liquidated damages shall be \$500 per day for each calendar day after the Contract Time that Substantial Completion of the Project is not timely attained and \$100 per day for each calendar day after the Contract Time that Final Completion of the Project is not timely attained.

ARTICLE 3
CONTRACT SUM

3.1 The School District shall pay the Contractor for the Contractor's performance of the Contract the Contract Sum of _____ Dollars (\$_____), subject to additions and deductions as provided in the Contract Documents. Sales tax is not included in and shall be added to the Contract Sum.

3.2 The Contract Sum is based upon and includes the following alternates, if any, which are described in the Contract Documents and are hereby accepted by the School District:

3.3 Unit prices, if any, are as follows: N/A

3.4 Allowances, if any, are as follows: N/A

3.5 According to the School District's pre-bid estimate, this Project is estimated to cost less than one million dollars, and so the apprenticeship requirements of RCW 39.04.320 do not apply.

ARTICLE 4
PAYMENT

4.1 The School District will make payments to the Contractor as provided below and elsewhere in the Contract Documents based upon Application(s) for Payment submitted by the Contractor. The School District will make progress payments on account of the Contract Sum per Article 15. The School District will make final payment, constituting the entire unpaid balance of the Contract Sum except statutory retainage, to the Contractor when the Work has achieved Final Completion, the Agreement has been fully performed, and the School District's Board of Directors has accepted the Work. The retainage shall be paid pursuant to RCW 60.28 and the Contract Documents. A performance and payment bond is required; see Article 17.

4.2 Payments due and unpaid under the Agreement shall bear interest as specified by RCW 39.76, not to exceed the Bank of America prime rate plus 2%.

ARTICLE 5
PERMITS AND FEES

5.1 The School District will secure and pay for only those governmental permits, approvals, fees, licenses, inspections, governmental charges and inspection fees explicitly listed as the School District's responsibility in the Contract Documents. The Contractor shall prepare documents for, secure, and pay for all other necessary permits required for the Work.

5.2 The School District shall secure and pay for necessary approvals, easements, assessments and charges required for the use or occupancy of permanent structures or permanent changes in existing facilities.

ARTICLE 6
PROPERTY INSURANCE

6.1 The School District shall include this project in its existing property insurance coverage for loss or damage to the property in the course of construction. This may be a standard property policy and is not necessarily a builder's risk policy.

6.2 The Contractor shall be responsible for securing property insurance for its own equipment. This property insurance shall be on an "all-risk" or equivalent policy form and shall include, but not be limited to, coverage for fire and extended coverage, theft, vandalism, malicious mischief, collapse and windstorm. Any deductible shall be the sole responsibility of the Contractor.

6.3 Any loss insured under Section 6.1 is to be adjusted with the School District and made payable to the School District as trustee for the insureds, as their interest may appear. The Contractor shall pay each subcontractor a just share of any insurance moneys received by the Contractor, and by appropriate agreement, written where legally required for validity, shall require each subcontractor to make payments to his sub-subcontractors in similar manner.

6.4 The School District as trustee shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within five (5) days after the occurrence of loss to the School District's exercise of this power, and if such objection is made, the matter shall be decided by a court of competent jurisdiction or as the parties in interest otherwise agree. The School District as trustee shall, in that case, make settlement with the insurers in accordance with directions of the court.

ARTICLE 7
ENUMERATION OF CONTRACT DOCUMENTS

The Contract Documents are enumerated as follows, except for modifications issued after execution of this Agreement:

7.1 This executed Agreement between the School District and Contractor, including the attached General Conditions.

7.2 Any Supplementary and other Conditions of the Agreement that are in the Project Manual or Specifications, or referenced therein.

7.3 The Specifications as follows:

<u>Section</u>	<u>Title</u>	<u>Pages</u>
As listed in the Index of Specifications in the Project Manual.		

7.4 The Drawings as follows:

<u>Number</u>	<u>Title</u>	<u>Date</u>
As listed in the Index of Drawings in the Project Manual.		

7.5 The Addenda (if any) as follows:

<u>Number</u>	<u>Date</u>	<u>Pages</u>
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7.6 Any other documents forming part of the Contract Documents and listed below:
Department of Labor and Industries Prevailing Wage Rates.

This Agreement entered into as of the day and year first written above.

SPOKANE PUBLIC SCHOOLS, DISTRICT NO. 81

CONTRACTOR

By _____
(Signature)

(Printed name and title)

By _____
(Signature)

(Printed name and title)

GENERAL CONDITIONS

ARTICLE 8 **THE CONTRACT DOCUMENTS**

8.1 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 is as binding as if required by all. Performance by the Contractor is required to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the intended results.

8.2 The Contract Documents shall not be construed to create a contractual relationship of any kind between the School District and a Subcontractor of any tier, between the A/E (if any) and the Contractor, or between any persons or entities other than the School District and Contractor.

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

8.4 The term "A/E" means the entity listed as such on the first page of this Agreement, if any. The A/E may be an architect, engineering or similar company, or consultant, and is not necessarily a licensed architect or engineer. If "None" or "N/A" is listed for the A/E, then the School District or its designated representative will perform all of the functions of the A/E described herein. The A/E is not an agent of the School District, and is not authorized to speak on behalf of or bind the School District.

8.5 The Contractor's execution of the Agreement is a representation and acknowledgement that the Contractor has visited the site and become familiar with the local conditions under which the Work is to be performed, that the Contract Sum is reasonable compensation for all the Work, and that the Contract Time is adequate for the performance of the Work. The Contractor's execution of the Agreement is a further representation and acknowledgement that the Contractor has carefully checked and verified all pertinent figures and that it has carefully examined the Contract Documents and the Project site, including any existing structures, and that 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, as well as the surface conditions and other matters that may be encountered at the Project site or affect performance of the Work or the cost or difficulty thereof.

ARTICLE 9 **ADMINISTRATION OF THE AGREEMENT**

9.1 The School District, with assistance from the A/E, will provide administration of the Agreement. The School District must approve in writing all changes in the Contract Sum or Time and all Change Orders, Construction Change Directives, and payments to the Contractor. The School District's Representative may perform any of the duties of the A/E described herein, at the discretion of the School District.

9.2 Other than the School District's designated representative, no representative of the School District is authorized to revoke, alter, enlarge, relax or release any requirements of the Contract Documents, nor to approve or accept any portion of the Work whether or not executed in accordance with, nor to issue instructions contrary to the Contract Documents.

9.3 The School District or the A/E may disapprove, condemn or reject work when, in its opinion, the Work does not conform to the Contract Documents. The School District or the A/E may require special inspection or testing of any Work in accordance with the provisions of the Contract Documents whether or not such Work is then fabricated, installed or completed.

9.4 The School District or the A/E may call, schedule and conduct job meetings, which the Contractor and representatives of its Subcontractors shall attend, to discuss such matters as procedures, progress, problems and scheduling.

9.5 The School District and the A/E may visit the site at intervals each considers appropriate to the stage of the Work to become generally familiar with the progress and quality of the completed Work. However, neither will be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work.

9.6 The School District may occupy the site during the course of the Work.

ARTICLE 10 **THE CONTRACTOR**

10.1 The Contractor shall perform, 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, personnel and procedures, for safety, and for coordinating all portions of the Work under the Agreement, unless the Contract Documents specifically provide other instructions concerning these matters. 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 School

District or to act as or be an agent or employee of the School District.

10.2 The Contractor shall provide and pay for all labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, disposal, and other facilities and services necessary for the proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

10.3 Workers. 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 skilled in tasks assigned to them. The Contractor shall be responsible to the School District for the acts and omissions of the Contractor's employees, Subcontractors of any tier and their agents and employees, and other persons performing portions of the Work under a contract with the Contractor. Upon the School District's request and for any employee working on the Project, the Contractor shall provide the School District with background checks on each of its employees and of the employees of all Subcontractors of any tier. At no change to the Contract Sum or Contract Time, the School District may provide written notice requiring the Contractor to remove from the Work any employee or other person carrying out the Work that the School District considers objectionable. If the Work is being performed at a site in active school use or where there is a likelihood of contact with children, a person shall be unfit and removed from the site if he or she is a registered sex offender or has pled guilty to or has been convicted of any felony crime involving the physical injury or death of a child (RCW 9A.32 or RCW 9A.36 but not RCW 46.61-motor vehicle violation), the physical neglect of a child (RCW 9A.42), sexual offenses against a minor (RCW 9A.44), sexual exploitation of a child (RCW 9.68A), the sale or purchase of a minor child (RCW 9A.64.030), promoting prostitution of a child (RCW 9A.88), or violation of similar laws of another jurisdiction. Failure to comply with this section shall be grounds for the immediate termination of this Agreement for cause.

10.4 Warranty. The Contractor warrants that materials and equipment furnished under the Agreement will be of good quality and new, that the Work will be performed in a skillful and workmanlike manner, free from defects not inherent in the quality required or explicitly permitted, and that the Work will conform to the requirements of the Contract Documents. The School District may conclude that Work not conforming to these requirements, including substitutions or deviations from the drawings or specifications not properly approved and authorized, is defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, modifications not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear under normal usage.

10.5 Taxes and Fees. The Contractor shall pay sales, consumer, use, B & O, and other similar taxes that are legally enacted when bids are received, whether or not yet effective or merely scheduled to go into effect.

10.6 Legal Compliance. The Contractor shall comply with and give notices required by laws, ordinances, rules, regulations, and lawful orders of public authorities bearing on performance of the Work. The Contractor shall promptly notify the School District and A/E in writing if the Contractor observes the Drawings or Specifications to be at variance with them.

10.7 Submittals. The Contractor shall review, approve and submit to the School District or A/E with reasonable promptness Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents. The Work shall be in accordance with approved submittals.

10.8 Progress Schedule. Within *seven days* of execution of this Agreement, the Contractor shall submit a preliminary schedule of the Work to the School District. Failure to do so shall constitute a material breach of the Contract and a material breach of the conditions of the bid bond. Within *thirty days* after execution of the Agreement, and before any progress payment need be made, the Contractor, after consultations with its Subcontractors, shall submit a Progress Schedule to the School District. Neither the School District nor the A/E will, however, be required to review or approve the substance or sequence of the Progress Schedule, which are the Contractor's sole responsibility. The Contractor will be responsible for planning, scheduling, managing, and reporting the progress of the Work in accordance with all of the specific methods and submittals described in the Contract Documents. The Contractor shall use the Contract Schedule to plan, coordinate, and prosecute the Work in an orderly and expeditious manner.

10.9 Clean-Up. The Contractor shall keep the premises and surrounding area free from accumulation of waste materials or rubbish caused by operations under the Agreement. Prior to completion of the Work or at the School District's request, the Contractor shall remove from and about the Project waste materials, rubbish, the Contractor's tools, construction equipment, machinery and surplus materials. If the Contractor fails to do so, the School District may do so and charge to the Contractor all costs incurred.

10.10 Access. The Contractor shall provide the School District and the A/E and their respective consultants access to the Work wherever located.

10.11 Royalties and Patents. The Contractor shall pay all royalties and license fees, shall defend suits or claims for infringement of patent rights and shall hold the School District and the A/E harmless from loss on account thereof, unless the Contract Documents require the particular infringing design, process or product of a particular manufacturer or manufacturers.

10.12 Indemnification. Subject to the following conditions and to the fullest extent permitted by law, the Contractor shall defend, indemnify, and hold harmless the School District, the School District's Representative, and A/E and their respective agents, employees, officers, directors, consultants, successors and assigns ("Indemnified Parties") from and against all claims, damages, losses and expenses, direct and indirect, or

consequential, including but not limited to costs and attorneys' fees incurred on such claims and in proving the right to indemnification, arising out of or resulting from performance of the Work, any act or omission of the Contractor, its agents, any of its Subcontractors of any tier, and anyone directly or indirectly employed by the Contractor or Subcontractors of any tier ("Indemnitor"). The Contractor will fully defend, indemnify, and hold harmless the Indemnified Parties for the sole negligence of the Indemnitor. The Contractor will defend, indemnify, and hold harmless the Indemnified Parties for the concurrent negligence of the Indemnitor to the extent of the Indemnitor's negligence. The Contractor agrees to being added by the School District as a party to any mediation, arbitration, or litigation with third parties in which the School District alleges indemnification or contribution from an Indemnitor. The Contractor agrees that all of its Subcontractors of any tier will, in the subcontracts, similarly stipulate; in the event any does not, the Contractor shall be liable in place of such Subcontractor(s). To the extent a court or arbitrator strikes any portion of this indemnification provision for any reason, all remaining provisions shall retain their vitality and effect. In claims against any person or entity indemnified under this Section 10.12 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under this Section 10.12 shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts or other employee benefit acts. After mutual negotiation of the parties, the Contractor waives immunity as to the School District, the A/E 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 SCHOOL DISTRICT PRIOR TO THE DATE FOR THE RECEIPT OF BIDS, OR THE CONTRACTOR WILL BE DEEMED TO HAVE NEGOTIATED AND WAIVED THIS IMMUNITY. The provisions of this Section shall survive the expiration or termination of this Agreement.

10.13 Prevailing Wages.

10.13.1 Pursuant to RCW 39.12, no worker, laborer, or mechanic employed in the performance of any part of this Agreement shall be paid less than the "prevailing rate of wage" (in effect as of the date that bids are due) as determined by the Industrial Statistician of the Department of Labor and Industries, ESAC Division, PO Box 44540, Olympia WA 98504-4540, Telephone (360) 902-5335. The schedule of the prevailing wage rates for the locality or localities where this Work will be performed is attached and made a part of this Agreement by reference as though fully set forth herein; if not attached, then the applicable prevailing wages are determined as of the Bid Date for the county in which the Project is located and are available at <http://www.lni.wa.gov/TradesLicensing/PrevWage/WageRates/default.asp>. A copy is available for viewing at the School District's office, and a hard copy will be mailed upon request. To the extent that there is any discrepancy between the attached or provided schedule of prevailing wage rates and the published rates as are applicable under WAC 296-127-011, or if

no schedule is attached, then the applicable published rates shall apply at no increase to the Contract Sum. The Contractor shall provide the respective Subcontractors with a schedule of the applicable prevailing wage rates. The Industrial Statistician will answer questions relating to prevailing wage data upon request.

10.13.2 Pursuant to RCW 39.12.060, in case any dispute arises as to what are the prevailing rates of wages for work of a similar nature, and such dispute cannot be adjusted by the parties in interest, including labor and management representatives, the matter shall be referred for arbitration to the director of the Department of Labor and Industries, whose decision therein shall be final and conclusive and binding on all parties involved in the dispute.

10.13.3 The Contractor shall defend, indemnify and hold the School District harmless, including attorneys' fees, from any violation or alleged violation of RCW 39.12 ("Prevailing Wages on Public Works") and RCW 51 ("Industrial Insurance"), including without limitation RCW 51.12.050, by the Contractor, any Subcontractor of any tier, or any person performing Work on behalf of the Contractor or any Subcontractor of any tier.

10.14 The Contractor shall comply with all applicable provisions of RCW 49.28.

10.15 Pursuant to RCW 49.70 and WAC 296-307-560 et seq., the Contractor shall provide the School District copies of and have available at the Project Site a workplace survey or material safety data sheets for all "hazardous" chemicals under the control or use of Contractor or any Subcontractor at the Project Site.

10.16 The Contractor shall maintain and preserve for at least three years from the date of final payment books, ledgers, records, documents, estimates, bidding documents, correspondence, logs, schedules, electronic data and other evidence relating or pertaining to the costs incurred by the Contractor in connection with or related to the Agreement and/or performance of the Contract ("records") to such extent and in such detail as will properly reflect and fully support compliance with the Contract Documents and with all costs, charges and other amounts of whatever nature for which reimbursement or payment is or may be claimed under the Contract. The Contractor agrees to make available at all reasonable times at the office of the Contractor all such records for inspection, audit and reproduction (including electronic reproduction) by the School District and its representatives. These requirements shall be applicable to each Subcontractor of any tier and included in each Subcontract and purchase order issued with respect to the Work. The Contractor agrees, on behalf of itself, its representatives, and Subcontractors of any tier and their representatives, that any rights under RCW 42.56 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 any of their representatives shall initiate an equivalent right to disclosures from the Contractor and Subcontractors of any tier for the benefit of the School District. Because of the importance of the access of such records to the School District in the case of a Claim, if the Contractor or any

Subcontractor fails to fully comply with the requirements of this section with regard to any Claim, such Claim shall be deemed to be waived.

ARTICLE 11 **SUBCONTRACTORS**

11.1 A “Subcontractor” is a person or entity that has a direct contract with the Contractor to perform a portion of the Work at the site or to supply materials or equipment. A “Subcontractor of any tier” includes Subcontractors as well as all direct and lower level sub-subcontractors and suppliers.

11.2 As soon as practicable after award of the Agreement, the Contractor shall confirm in writing to the School District the names of the Subcontractors for each portion of the Work. The Contractor shall not contract with any Subcontractor to whom the School District has made reasonable and timely objection or which is different from the one listed in conjunction with the bid. Contracts between the Contractor and Subcontractors shall (1) require each Subcontractor to be bound to the Contractor by the terms of the Contract Documents to the extent of the Work to be performed by the Subcontractor and to assume toward the Contractor all the obligations and responsibilities which the Contractor, by the Contract Documents, assumes toward the School District, and (2) allow to the Subcontractor the benefit of all rights, remedies and redress afforded to the Contractor by these Contract Documents.

11.3 The Contractor shall promptly pay (and secure the discharge of any liens asserted by) all persons properly furnishing labor, equipment, materials or other items in connection with the performance of the Work (including, but not limited to, any Subcontractors). The Contractor shall furnish to the School District such releases of liens and Claims and other documents as the School District may request from time to time to evidence such payment (and discharge). The School District may, at its option, withhold payment, in whole or in part, to the Contractor until such documents are so furnished. The Contractor shall defend, indemnify, and hold harmless the School District from any liens, including all expenses and attorneys’ fees. Nothing in the Contract Documents shall create any obligation on the part of School District or A/E to pay or to see to the payment of any moneys due any Subcontractor of any tier or other person or entity, except as may otherwise be required by laws and regulations.

ARTICLE 12 **CONSTRUCTION BY SCHOOL DISTRICT OR BY SEPARATE CONTRACTORS**

12.1 The School District reserves the right to perform construction or operations related to the Project with the School District’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 those of the Contract Documents. The Contractor has the responsibility to coordinate its Work with such separate contractors and the School District’s own forces.

12.2 The Contractor shall afford the School District and separate contractors reasonable opportunity for the introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor’s construction and operations as required by the Contract Documents.

ARTICLE 13 **CHANGES IN THE WORK**

13.1 The School District, without invalidating the Agreement, may order changes in the Work consisting of additions, deletions or modifications (“Changes”), and the Contract Sum and Contract Time will be adjusted accordingly. Changes in the Work, the Contract Sum and/or the Contract Time shall be authorized only by written Change Order signed by the School District, the A/E and the Contractor or by written Construction Change Directive signed by the School District and the A/E.

13.1.1 Change Orders. A Change Order is a written instrument signed by the School District and the Contractor stating their agreement upon a change in the Work; the itemized amount of the adjustment in the Contract Sum, if any; and the extent of the adjustment in the Contract Time, if any.

13.1.2 Construction Change Directives. A Construction Change Directive is a written order prepared and signed by the School District and the A/E that directs a change in the Work and states a proposed basis for adjustment, if any, in the Contract Sum or Contract Time, or both. It shall be used in the absence of total agreement on the terms of a Change Order. The Contractor shall promptly proceed with the change in the Work described in the Construction Change Directive. As soon as possible, and within *seven days* of receipt, the Contractor shall advise the School District in writing of the Contractor’s agreement or disagreement with the cost or the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.

13.2 If the parties cannot agree on the cost or credit to the School District from a Change in the Work, the Contractor shall keep and present, in such form as the School District may prescribe, an itemized accounting together with supporting data. The total cost of any Change or Claim shall be limited to the reasonable value of the following:

13.2.1 Direct labor costs: The effective W.D.O.L. & I. prevailing hourly wage for the laborers, journeymen, and foremen performing and/or directly supervising the Changed Work on the site. The premium portion of overtime wages may not be included unless pre-approved in writing by the School District. The hourly cost shall be based upon basic wages and mandatory fringe benefits and workers’ insurances.

13.2.2 Direct material costs: An itemization of the quantity of materials necessary to perform the Change in the Work and the net cost therefor.

13.2.3 Construction equipment usage costs: An itemization of the actual length of time construction equipment appropriate for the Work will be used solely on the Change in the Work at the Site times the lower of the actual rental receipt or applicable current state, NECA, EquipmentWatch, or MCA rental cost. Actual, reasonable mobilization costs are permitted if the equipment is brought to the Site solely for the Change in the Work. The rate for equipment necessarily standing by for future use on the Work shall be 50% of the rate established above.

13.2.4 Cost of any change in insurance or bond premium. Upon request, the Contractor shall provide the School District with supporting documentation.

13.2.5 Subcontractor costs: Payments the Contractor makes to Subcontractors for Changed Work performed by Subcontractors of any tier. The cost of Work for Subcontractors of any tier shall be determined in the same manner as prescribed in this Section 13.2.

13.2.6 Fee: The allowance for all combined overhead, profit, and other costs, including all office, home office, extended and site overhead (including project manager, project engineer, superintendent and general foreman time), and all delay and including impact costs of any kind, added to the total cost to the School District of any Change Order or any Claim for additional work or extra payment of any kind on this Project shall be strictly limited to the following schedule:

- .1 For the Contractor, for any materials or work performed by the Contractor's own forces, 12% of the cost.
- .2 For the Contractor, for materials or work performed by its Subcontractor, 7% of the amount due the Subcontractor.
- .3 For each Subcontractor (including lower tier subcontractor involved), for any materials or work performed by its own forces, 12% of the cost.
- .4 For each Subcontractor, for materials or work performed by its subcontractors of any lower tier, 6% of the amount due the sub-subcontractor.
- .5 The cost to which the Fee is to be applied shall be determined in accordance with Section 13.2.1-4.

13.3 Dispute Resolution. All claims, disputes and other matters in question of the Contractor, direct or indirect, arising out of, or relating to, the Contract Documents or the breach thereof ("Claims"), except Claims which have been waived under the terms of the Contract Documents, shall be decided exclusively by the following dispute resolution procedure. The Contractor shall diligently carry on the Work and maintain the progress schedule during the dispute resolution procedure, including any litigation proceedings, unless the parties mutually agree in writing otherwise.

13.3.1 Notice of Claim. The Contractor shall submit notice of all Claims to the School District in writing within *seven days* of the event giving rise to them and shall include a clear description of the event and its probable effect. Failure to comply with these requirements shall constitute waiver of the Claim.

13.3.2 Claim Submission. Within *fourteen days* of the Notice of Claim, the Contractor shall provide the School District in writing with a Claim, which shall include a clear description of the Claim, any and all changes in cost and in time to which the Contractor and its Subcontractors of any tier may be entitled under this Agreement for the Claim, and data supporting the Claim. The Claim of a Subcontractor may be brought only through the Contractor and only after the Contractor notifies the School District in writing that the Contractor has reviewed and agrees with the Claim. No act, omission, or knowledge, actual or constructive, of the School District shall in any way be deemed to be a waiver of the requirement for a timely written Claim unless the School District provides the Contractor with an explicit, unequivocal written waiver.

13.3.3 Informal Resolution. The School District will make a determination of the Claim. If no determination is made within two weeks of submission of the Claim, the Claim shall be deemed rejected. If the Contractor disagrees with the School District's determination and wishes to pursue the Claim further, the Contractor must, within *fourteen days* of receipt of the determination, provide the School District with a written request that a representative of the Contractor and the School District meet, confer, and attempt to resolve the Claim. This meeting will then take place at a mutually convenient time within *thirty days* of the request, unless the School District elects to proceed directly to mediation.

13.3.4 Mediation. The Contractor may bring no litigation against the School District unless the Claim is first subject to non-binding mediation under the Construction Mediation Rules of the American Arbitration Association ("AAA"). The Contractor is responsible for initiating the mediation process. This requirement cannot be waived except by an explicit written waiver signed by the School District and the Contractor. To initiate the mediation process, the Contractor shall submit a written mediation request to the School District within *thirty days* of the meeting undertaken in Section 13.3.3. If the parties are unable to agree to a mediator within *thirty days* after the School District's receipt of the written request for mediation, either party may submit a request for mediation to the AAA. An officer of the Contractor and the Superintendent or designee of the School District, both having full authority to settle the Claim (subject only to ratification by the School District's Board of Directors), must attend the mediation session. To the extent there are other parties in interest, such as Subcontractors, their representatives, with full authority to settle the Claim, shall also attend the mediation session. Unless the School District and Contractor mutually agree in writing otherwise, all unresolved Claims in the Project shall be considered at a single mediation session which shall occur prior to Final Acceptance by the School District.

13.3.5 Litigation. The Contractor may bring no litigation on Claims unless such Claims have been properly raised and considered in the dispute resolution procedures of Sections 13.3.1 through 13.3.4 above. All unresolved Claims of the Contractor shall be waived and released unless the Contractor has strictly complied with the time limits of the Contract Documents, and litigation is served and filed within the earlier of (a) *120 days* after the Date of Substantial Completion designated in writing by the School District or (b) *60 days* after Final Acceptance. This requirement cannot be waived except by an explicit written waiver signed by the School District and the Contractor. The pendency of a mediation (calculated as the period from the written request for mediation through the day following the mediation proceeding) shall toll these filing requirements.

13.4 Notice and Claims. All notices and Claims shall be made in writing as required by the Agreement.

13.4.1 Any notice of a Claim of the Contractor against the School District and any Claim of the Contractor, whether under the Agreement or otherwise, must be made pursuant to and in strict accordance with the applicable provisions of the Contract Documents. Failure to comply with these requirements shall constitute waiver of the Claim. No act, omission, or knowledge, actual or constructive, of the School District or the A/E shall in any way be deemed to be a waiver of the requirement for timely written notice and a timely written Claim unless the School District and the Contractor sign an explicit, unequivocal written waiver approved by the School District's Board of Directors.

13.4.2 The fact that the School District and the Contractor may continue to discuss or negotiate a Claim that is or may have been defective or untimely under the Contract shall not constitute waiver of the provisions of the Contract Documents unless the School District and Contractor sign an explicit, unequivocal written waiver approved by the School District's board of directors.

13.4.3 The Contractor expressly acknowledges and agrees that the Contractor's failure to timely submit required notices or timely submit Claims has a substantial impact upon and prejudices the School District, 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 parties stipulate that the School District is prejudiced by the Contractor's failure to timely submit notices or Claims as required by the Contract Documents.

13.5 Claims for Concealed or Unknown Conditions. If conditions unknown to the Contractor are encountered at the site which are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature, which differ materially from those ordinarily found and generally recognized as inherent in activities of the character provided for in the Contract Documents,

then the Contractor shall give written notice to the School District promptly before conditions are disturbed and in no event later than *seven days* after the first observance on the conditions. The Contractor shall make any Claim arising from such condition in accordance with the dispute resolution procedure in Section 13.3.

13.6 Claims for Consequential Damages. The Contractor and School District waive Claims against each other for consequential damages arising out of or relating to this Agreement. This mutual waiver includes without limitation:

.1 damages incurred by the School District 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 and home office overhead and expenses including without limitation the compensation of personnel stationed there, for losses of financing, business and reputation, for losses on other projects, for loss of profit, and for interest or financing costs.

This mutual waiver is applicable to all consequential damages of any cause, including without limitation due to either party's termination in accordance with Article 20. Nothing contained in this Section 13.6 shall be deemed to preclude an award of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

13.7 The Contractor (including Subcontractors of any tier) 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; concurrent operations; dilution of supervision; learning curve; beneficial or joint occupancy; logistics; ripple; season change; extended overhead; profit upon damages for delay; impact damages; or similar damages.

ARTICLE 14 **TIME**

14.1 If, through no fault of the Contractor or a Subcontractor of any tier, the Work is delayed at any time in progress of the Work by changes ordered in the Work, by unanticipated general labor disputes, fire, unusual delay in deliveries, abnormal adverse weather conditions not reasonably anticipatable, unavoidable casualties, delays caused by the School District or its separate contractors, or any causes beyond the Contractor's control and for which it and its subcontractors of any tier are not responsible, or by other causes which may justify delay, then the Contract Time shall be extended by Change Order to the extent the critical path is affected. The Contractor (including Subcontractors) shall be entitled to damages for delay, the total limited to the liquidated rate of Section 2.3, only where the School District's own actions or inactions were the actual, substantial cause of the delay and where the Contractor could not

have reasonably avoided the delay by the exercise of due diligence. If a 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.

14.2 THE TIMELY COMPLETION OF THIS PROJECT IS ESSENTIAL TO THE SCHOOL DISTRICT. The School District 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. Consequently, the Agreement includes provisions for liquidated damages. The School District's right to liquidated damages is not affected by partial completion, occupancy, or beneficial occupancy.

ARTICLE 15 **PAYMENTS AND COMPLETION**

15.1 Progress Payments. Payments shall be made as provided in Articles 3 and 4 of this Agreement. If Progress payments are specified, they will be made monthly for Work duly approved and performed during the calendar month preceding the application according to the following procedure.

15.1.1 Draft Application. Within the first three days of each month, the Contractor shall submit to the A/E a report on the current progress of the Work as compared to the Contractor's CPM Construction Schedule, an updated Construction Schedule, and a draft, itemized application for payment for Work performed during the prior calendar month on a State of Washington Application for Payment on Contract form approved by the School District. This shall not constitute a payment request. The Contractor, the A/E and the School District shall meet within the next ten days and confer regarding the current progress of the Work and the amount of payment to which the Contractor is entitled. The A/E or the School District may request the Contractor to provide data substantiating the Contractor's right to payment as the School District or the A/E may require, such as copies of requisitions from Subcontractors of 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 furnished.

15.1.2 Payment Request. After the Contractor and the School District have met and conferred regarding the draft application, and the Contractor has furnished all data requested, the Contractor may submit by the 10th of the month a payment request in the agreed-upon amount, in the form of a notarized, itemized Application for Payment for Work performed during the prior calendar month on a form supplied or approved by School District. Among other things, the Application shall state that prevailing wages have been paid in accordance with the prefiled statement(s) of intent to pay prevailing wages on file with the School District and that all payments due Subcontractors from the School District's prior payments have been made. The submission of this Application constitutes a certification that the Work is current on the Progress Schedule, unless otherwise noted

on the Application. 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 10th of the month, submit to the School District 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.

15.1.3 Payments to Subcontractors. No payment request shall include amounts the Contractor does not intend to pay to a Subcontractor. If, after making a request for payment 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 for unsatisfactory performance or other reasons, the Contractor may withhold the amount as allowed under the subcontract, but it shall give the Subcontractor and the School District written notice of the remedial actions that must be taken as soon as practicable after determining the cause for the withholding but before the due date for the Subcontractor payment, and pay the Subcontractor within *eight working days* after the Subcontractor satisfactorily completes the remedial action identified in the notice.

15.2 Prevailing Wages. Pursuant to RCW 39.12, the Contractor will not receive any payment until the Contractor and all Subcontractors have submitted a "Statement of Intent to Pay Prevailing Wage" to the School District. The statement must have the approval of the Industrial Statistician of the Department of Labor and Industries before it is submitted to the School District. The Contractor and the respective Subcontractors shall pay all fees required by the Department of Labor and Industries, including fees for the approval of the "Statement of Intent to Pay Prevailing Wages." Approved copies of the "Statement of Intent to Pay Prevailing Wages" must be posted where workers can easily read them.

15.3 Progress payments. The School District shall make progress payments within 30 days of its receipt of the approved payment request.

15.4 Withheld Payments. Payments may be withheld on account of (1) defective Work not remedied, (2) claims filed by third parties, (3) failure of the Contractor to make payments properly to Subcontractors or for labor, materials or equipment, (4) reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum, (5) damage to the School District or another contractor, (6) reasonable evidence that the Work will not be completed within the Contract Time and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay, (7) failure to carry out the Work in accordance with the Contract Documents, or (8) liquidated damages. When the School District intends to withhold all or part of a payment for unsatisfactory performance, the School District will provide the Contractor, within *eight working days* after the School District's receipt of the Application for Payment, written notification of the reasons that all or part of

the payment is being withheld and what remedial actions the Contractor must take to receive the withheld amount.

15.5 Substantial Completion.

15.5.1 When the Contractor believes that the entire Work is Substantially Complete, it shall notify the School District and A/E in writing. When the School District agrees, it will issue a Certificate of Substantial Completion. Substantial Completion is the stage in the progress of the Work when the construction is sufficiently complete, in accordance with the Contract Documents, so the School District can fully utilize the Work (or the designated portion thereof) for the use for which it is intended. All Work other than incidental corrective or punchlist work and final cleaning shall have been completed. The Work is not Substantially Complete if all systems and parts affected by the Work are not usable, if an occupancy permit (temporary or final) has not been issued, or if utilities affected by the Work are not connected and operating normally. The fact that the School District may use or occupy the Work or designated portion thereof does not indicate that the Work is Substantially Complete, nor does such occupation toll or change any liquidated damages due the School District.

15.5.2 Immediately before partial or complete occupancy, the School District will schedule an inspection tour of the area to be occupied. A representative of the School District, A/E and Contractor will jointly tour the area and record items still remaining to be finished and/or corrected. The Contractor shall supply and install any items missed by the inspection but required or necessary for Final Completion as a part of the Contract Sum, notwithstanding their not being recorded during the inspection tour.

15.6 Final Payment. Pursuant to RCW 60.28, completion of the Contract Work shall occur after the Contractor has notified the School District and the A/E that the Work has been concluded and the Contractor submits the items listed below to the School District, any required final occupancy permit has been issued, and the School District Board formally accepts the Project ("Final Acceptance"). Final Payment shall not become due until after Final Acceptance. Before Final Acceptance, the Contractor must have submitted the following to the School District:

- .1 An affidavit that all payrolls, Subcontractors, bills for materials and equipment, and other indebtedness connected with the Work for which the School District or its property might in any way be responsible or encumbered, have been paid or otherwise satisfied,
- .2 consent of surety to final payment,
- .3 a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be canceled or allowed to expire until at least *30 days'* prior written notice has been given to the School District,

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

.5 other data establishing payment or satisfaction of or protection (satisfactory to the School District) against all obligations, such as receipts, releases and waivers of liens arising out of the Agreement, satisfactorily demonstrating to the School District that the claims of Subcontractors, material suppliers, and laborers who have filed claims have been paid,

.6 pursuant to RCW 39.12.040, an "Affidavit of Wages Paid" from the Contractor and from each Subcontractor certified by the Industrial Statistician of the Department of Labor and Industries, with fees paid by the Contractor or Subcontractor,

.7 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, without limitation, city/county building departments, health districts and utility districts; attach a copy of each of these closed or signed-off permits),

.8 all warranties, guarantees, certificates, spare parts, specified excess material, and other documents or items required by the Contract Documents, and

.9 a hard copy of as-built drawings and specifications, delivered in a clear, clean and legible condition.

If any Subcontractor of any tier refuses to furnish a release or waiver required by the School District, the School District may retain in the fund, account, or escrow funds 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. If any such lien remains unsatisfied after all payments are made, the Contractor shall refund to the School District all moneys that the latter may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.

Retainage shall be paid pursuant to RCW 60.28 and after the Contractor has properly submitted certificates from the Department of Revenue, the Department of Labor and Industries and, pursuant to RCW 50.24, a certificate from the Department of Employment Security.

15.7 Waivers.

15.7.1 Final Payment by School District. The making of final payment shall constitute a waiver of claims by the School District except those arising from (1) liens, claims, security interests, or encumbrances arising out of the Agreement and unsettled; (2) failure of the Work to comply with the requirements of the Contract Documents; or (3) terms of warranties required by the Contract Documents or law.

15.7.2 Final Payment to Contractor. Acceptance of final payment by the Contractor shall constitute a waiver of Claims except those previously made in writing and identified in writing as unsettled on the final Application for Payment.

15.7.3 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. If the Contractor adds to a Change Order or any other document a reservation of rights that has not been initialed by the School District, all the amounts previously agreed shall be considered disputed and not yet payable unless the costs are re-negotiated or the reservation is withdrawn or changed in a manner satisfactory to and initialed by the School District. If the School District makes payment for a Change Order or an Application for Payment that contains a reservation of rights not initialed by the School District to indicate agreement with the reservation, and if the Contractor negotiates the check for such payment or otherwise accepts the payment, then the reservation of rights shall be deemed waived, withdrawn, and of no effect.

15.8 Retainage.

15.8.1 Progress Payments. If progress payments are to be made to the Contractor:

.1 Pursuant to RCW 60.28, the School District will reserve 5% retainage from the moneys the Contractor earns on estimates during the progress of the Work, to be retained as a trust fund for the protection and payment of the claims of any person arising under the Agreement and the state with respect to taxes imposed pursuant to Title 82 RCW which may be due from the Contractor.

.2 The moneys reserved may, at the option of the Contractor, be (1) retained in a fund by the School District until *45 days* following Final Acceptance; or (2) deposited by the School District in an interest-bearing account in a bank, mutual savings bank, or savings and loan association, not subject to withdrawal until *45 days* following Final Acceptance, with interest to the Contractor; or (3) placed in escrow with a bank or trust company until *45 days* following the Final Acceptance, by the School District's joint check to the bank or trust company and the Contractor, to be converted into bonds and securities chosen by the Contractor, approved by the School District, and held in escrow, with interest on the bonds and securities paid to the Contractor as it accrues.

.3 Contractor may retain payment of not more than 5% from the moneys earned by any Subcontractor, provided that the Contractor pays interest to the Subcontractor at the same interest rate it receives from its reserved funds.

15.9 Warranty of Title. The Contractor warrants and guarantees that title to Work, materials and equipment covered by an Application for Payment, whether incorporated in

the Project or not, will pass to the School District no later than the time of payment free and clear of liens. The Contractor shall promptly pay (and secure the discharge of any liens asserted by) all persons properly furnishing labor, equipment, materials or other items in connection with the performance of the Work (including, but not limited to, any Subcontractors). The Contractor shall furnish to the School District such releases of claims and other documents as may be requested by the School District from time to time to evidence such payment (and discharge). The School District may, at its option, withhold payment, in whole or in part, to the Contractor until such documents are so furnished. The Contractor shall indemnify and hold harmless the School District from any liens, including all expenses and attorneys' fees.

ARTICLE 16 **PROTECTION OF PERSONS AND PROPERTY**

16.1 The Contractor shall have the right to control and shall be solely responsible for, and neither the School District nor its Representative nor the A/E shall have responsibility for, all aspects of safety, including initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Agreement. The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury or loss to (1) employees on the Work and other persons who may be affected thereby; (2) the Work and materials and equipment to be incorporated therein; and (3) other property at the site or adjacent thereto. The Contractor shall maintain the Work site and perform the Work in a manner that meets statutory and common-law requirements for the provision of a safe place to work. This requirement shall apply continuously and not be limited to working hours.

16.2 The Contractor shall give notices and comply with applicable laws, ordinances, rules, regulations and lawful orders of public authorities bearing on safety of persons and property and their protection from damage, injury, or loss. The Contractor shall promptly remedy damage and loss to property at the site caused in whole or in part by the Contractor, a Subcontractor of any tier, 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, except for damage or loss attributable to acts or omissions of the School District or A/E or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor or a Subcontractor of any tier. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 10.12.

16.3 The Contractor shall not be required to perform without consent any Work relating to asbestos or polychlorinated biphenyl ("PCB") unless specifically required by the Contract Documents.

16.4 The Contractor shall bear the risk of any loss, damage or destruction of its own property, including without limitation its tools, trailers and equipment, whether rented or owned, to the extent that they will not be incorporated in the

Work. Any insurance provided by the School District will not cover any such loss, damage or destruction.

16.5 If the scope of the Work requires the Contractor to perform Work relating to hazardous materials, the Contractor shall be responsible to take all reasonable precautions to prevent foreseeable bodily injury or death resulting from such materials or substances, and to dispose of such materials as required by the Contract Documents and all applicable state and federal laws and regulations. The Contractor shall defend, indemnify, and hold harmless the School District, its consultants, the A/E, and their respective agents, employees, consultants, successors and assigns from and against any and all claims to the extent of the Contractor's failure to abide by such Contract Documents and all applicable state and federal laws and regulations.

ARTICLE 17 **INSURANCE AND BONDS**

17.1 Contractor's Liability Insurance.

17.1.1 The Contractor shall purchase from and maintain during the life of this Agreement, at its own cost in a company or companies admitted to do business in the State of Washington, possessing a Best's policy holder's rating of A- or better and a financial rating of no less than VIII, and reasonably acceptable to the School District, an occurrence-based Commercial General Liability Insurance Policy which shall provide bodily injury and property damage liability on the Contractor's operations, including its Subcontractors of any tier; owned, non-owned and hired vehicles; and on work the Contractor may subcontract or sublet to others; and on the indemnity provisions of this Agreement. This insurance will name the School District, the A/E, and the School District's Representative and their employees as additional insureds per Additional Insured Owner's (Form B) for Work performed under this Agreement. The Contractor's policy shall be designated primary coverage for both defense and indemnity, and any School District policies excess. Such limits of liability insurance shall have per project general aggregate provisions and shall not be less than the following:

.1 Commercial General Liability, Bodily Injury and Property Damage Liability, including Premises and Operations, Independent Contractors, Protective Liability, Completed Operations and Products, Contractual in the amount of \$1,000,000 per occurrence with a per-project general aggregate limit of at least \$2,000,000;

.2 Commercial Auto Liability, Bodily Injury and Property Damage, in an amount of at least \$1,000,000 Combined Single Limit;

.3 \$1,000,000 for claims involving blanket contractual liability insurance (included and defined in the Commercial General Liability Insurance Policy) applicable to the Contractor's obligations under Section 10.12; and

.4 In addition, the Contractor shall maintain an umbrella policy that provides excess limits over the primary layer, in an amount not less than \$5,000,000.

17.1.2 The insurance described above shall include coverage for underground, collapse and explosion exposures.

17.1.3 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 Employer's Liability with coverage of at least \$250,000/\$500,000.

17.1.4 Before commencing the Work or exposure to loss can occur, and, in any event, within *seven days* after the School District has issued its notice of intent to award contract, the Contractor shall furnish the School District with Certificates of Insurance, in duplicate, as evidence of all insurance required by the Contract Documents. All policies and certificates must be signed copies. Coverages afforded under the policies shall not be materially altered, allowed to expire or canceled without the Contractor first giving *45 days* written notice by certified mail to the School District. The Contractor shall furnish to the School District copies of any subsequently issued endorsements amending, modifying, altering, or restricting coverage of limits.

17.1.5 Coverage shall be maintained without interruption from the date of commencement of the Work until the date of Final Acceptance, except for any coverage required to be maintained after Final Acceptance. Completed operations coverage, including additional insured completed operations, shall remain in force for three years after Final Acceptance.

17.1.6 If the School District is damaged by the failure of the Contractor to maintain any of the above insurance or to so notify the School District, then the Contractor shall bear all costs properly attributable thereto. THE SCHOOL DISTRICT MAY WITHHOLD PAYMENT PENDING RECEIPT OF ALL CERTIFICATES OF INSURANCE. Failure to withhold payment shall not constitute a waiver.

17.1.7 If Contractor or its Subcontractors of any tier use or operate a drone or unmanned aircraft on or over the construction site or any other property of the School District, Contractor shall provide to School District evidence of sufficient insurance such as aircraft liability insurance to cover any damages, including bodily injury or property damage, caused by the operation and use of such drone or unmanned aircraft prior to its use on or above the construction site or any other property of the School District. If a Subcontractor of any tier is the operator of such a drone or unmanned aircraft, the evidence of such insurance shall be provided by that Subcontractor. The limit of liability shall be at least \$1,000,000 each occurrence.

17.1.8 The School District's specification or approval of the insurance in this Agreement or of its 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 or additional insurance.

17.2 Property Insurance.

17.2.1 The requirements for property insurance are addressed in Article 6 above.

17.3 Waivers of Subrogation.

17.3.1 The School District and the Contractor waive all rights against each other and any of their subcontractors of any tier, the School District's Representative, the A/E, their consultants, separate contractors described in Article 12 (if any), and any of their respective agents and employees, for damages caused by fire or other causes of loss to the extent covered by the property insurance obtained pursuant to Articles 6 and 17.2, except such rights as they have to proceeds of such insurance held by the School District as fiduciary. The School District does not waive any subrogation rights to the extent of its property insurance on structures or portions of structures that do not comprise the Work. 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.

17.4 Payment and Performance Bond.

17.4.1 Pursuant to RCW 39.08, the Contractor is required to submit payment and performance bonds secured from a surety company licensed to do business in the State of Washington. The Contractor shall pay for the bonds in the full amount of the Contract Sum plus sales tax. The Contractor shall deliver evidence of its bondability to the School District within five days of bid opening. Within *seven days* of entering into the Agreement, the Contractor shall deliver two copies of the bond (including the original bond) to the School District and one copy to the A/E. THE SCHOOL DISTRICT MAY DECLINE TO ENTER INTO THE CONTRACT IF EVIDENCE OF BONDABILITY IS NOT RECEIVED, AND THE SCHOOL DISTRICT MAY WITHHOLD ITS NOTICE TO PROCEED AND/OR WITHHOLD PAYMENT TO THE CONTRACTOR UNTIL SUCH SURETY BONDS ARE RECEIVED.

ARTICLE 18 **CORRECTION OF WORK**

18.1 The Contractor shall promptly and within no more than *fourteen (14) days* of notice from the School District or A/E correct Work rejected or failing to conform to the requirements of the Contract Documents at any time through a period of one year from the date of Substantial Completion of the Agreement or by terms of a longer manufacturer's warranty or an applicable special warranty required by the Contract Documents.

The provisions of this Article apply to Work done by Subcontractors of any tier as well as to Work done by direct employees of the Contractor.

18.2 If the Contractor fails to correct Work that is not in accordance with the requirements of the Contract Documents or fails to carry out the Work in accordance with the Contract Documents, the School District, by a written order, may order the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated.

18.3 Nothing contained in this Article shall be construed to establish a period of limitation with respect to other obligations which the Contractor might have under the Contract Documents. Establishment of the time period of one year as described above 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.

ARTICLE 19 **MISCELLANEOUS PROVISIONS**

19.1 Applicable Law and Venue. The Agreement shall be governed by the laws of the State of Washington, without regard to its choice of law provisions. The exclusive venue for any litigation regarding this Agreement shall be in the Superior Court in the county in which the Project is located.

19.2 Statutes. The Contractor shall abide by the provisions of all applicable Washington statutes. The statutes referenced in the Contract Documents are not meant to be a complete list and should not be relied upon as such.

19.3 Contractor Registration and Related Requirements. Pursuant to RCW 39.06, the Contractor shall be registered or licensed as required by the laws of the State of Washington, including but not limited to RCW 18.27. The Contractor shall: 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, and; 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).

19.4 Law Against Discrimination. Contractor shall comply with pertinent statutory provisions relating to public works of RCW 49.60.

19.5 Provisions for Aged and Handicapped Persons. Contractor shall comply with pertinent statutory provisions relating to public works of RCW 70.92.

19.6 Safety Standards. Contractor shall comply with pertinent provisions of Chapter 296-155 WAC, "Safety Standards for Construction Work."

19.7 Unemployment Compensation. Pursuant to RCW 50.24 in general and RCW 50.24.130 in particular, the Contractor shall pay contributions for wages for personal services performed under this Agreement or arrange for a bond acceptable to the commissioner.

19.8 Drug-Free Workplace. The Contractor and all Subcontractors 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.

19.9 Tobacco-Free Environment. 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 School District property.

19.10 Asbestos Removal. To the extent this Project involves asbestos removal, the Contractor shall comply with RCW 49.26 and any provisions of the Washington Administrative Code promulgated thereunder.

19.11 Assignment. The Contractor shall not let, assign or transfer this Agreement, or any interest in it or part of it, without the written consent of the School District.

19.12 Weapons. The Contractor and its employees, agents, and Subcontractors of any tier shall not bring onto the Project site or onto any School District 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 a violation shall be grounds for a termination of this Agreement for cause at the School District's discretion.

19.13 Contaminated Properties. To the extent this Project involves the remediation of contaminated property, the Contractor shall comply with RCW 64.44 and 70.105D and any provisions of the Washington Administrative Code promulgated thereunder, including the use of authorized contractors as provided in RCW 64.44.060.

19.14 Disposal of Materials. To the extent this Project involves the remediation of contaminated property, the Contractor shall comply with all applicable requirements of RCW 70.95 and any provisions of the Washington Administrative Code promulgated thereunder.

ARTICLE 20

TERMINATION OF THE CONTRACT

20.1 Termination for Cause by Contractor. If the School District fails to make payment for a period of *60 days*

through no fault of the Contractor, the Contractor may, upon *seven additional days'* written notice to the School District, terminate the Agreement and recover from the School District payment for all Work properly executed and for proven loss with respect to materials, equipment, tools, and construction equipment and machinery, including Fees applicable thereto.

20.2 Termination for Cause by School District. The School District may, upon *seven days'* written notice to the Contractor, terminate (without prejudice to any right or remedy of the School District) the whole or any portion of the Work for cause, including but not limited to the following circumstances:

- .1 the Contractor fails to prosecute the Work or any portion thereof with sufficient diligence to ensure the completion of the Work within the Contract Time;
- .2 the Contractor is in material default of or materially breaches any provisions of this Agreement;
- .3 the Contractor 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 the Contractor fails to supply a sufficient number of properly skilled workers or proper materials;
- .5 the Contractor fails to make prompt payment to Subcontractors or for materials or labor;
- .6 the Contractor materially disregards laws, ordinances, rules, regulations or orders of any public authority having jurisdiction; or
- .7 the Contractor fails to comply with the provisions of RCW 28A.400.330 by permitting a worker on the Project having contact with children who has been convicted of or pled guilty to a felony crime involving children as described in Section 10.3.

20.3 Termination for Convenience by School District. The School District may, at any time upon *seven days'* written notice to the Contractor, terminate (without prejudice to any right or remedy of the School District) the whole or any portion of the Work for the convenience of the School District. The School District shall be liable to Contractor only for those costs reimbursable to Contractor in accordance with the following.

- .1 The amount due under Articles 4 and 15 of this Agreement for the performance of the Work actually and properly performed; and
- .2 Other pre-approved costs, consistent with Section 13.2, necessary and reasonably incurred in connection with the termination of Work.

The total sum to be paid to the Contractor under this Section 20.3 shall not exceed the Contract Sum as reduced by the amount of payments otherwise made.

20.4 Effects of Termination.

20.4.1 Unless the School District directs otherwise, after receipt of a Notice of Termination from the School District pursuant to Sections 20.2 or 20.3, the Contractor shall promptly:

- .1 stop Work under the Agreement 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 School District, to the extent that they relate to the performance of Work terminated;
- .4 assign to the School District all of the right, title and interest of the Contractor under all orders and subcontracts, in which case the School District 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 School District's approval, settle all outstanding liabilities and all claims arising out of such termination of orders and subcontracts not assigned to the School District;
- .6 transfer title and deliver to the entity or entities designated by the School District the fabricated or unfabricated 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 its best efforts to sell any property of the types referred to in Section 20.4.1.6. The Contractor may acquire any such property under the conditions prescribed by and at a price or prices approved by the School District, and the proceeds of any such transfer or disposition may be applied in reduction of any payments to be made by the School District to the Contractor;
- .8 take such action as may be necessary or as directed by the School District to preserve and protect the Work and property related to this Project in the possession of the Contractor in which the School District has an interest; and
- .9 continue performance only to the extent not terminated.

20.4.2 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 Agreement;
- .2 any claim which the School District may have against the Contractor;
- .3 an amount necessary to protect the School District against outstanding or potential liens or claims; and
- .4 the agreed price for or the proceeds of sale of any materials, supplies or other things acquired by the Contractor or sold, pursuant to the provisions of Section 20.4.1.7, and not otherwise recovered by or credited to the School District.

20.4.3 If (and only if) the termination pursuant to Section 20.3 is partial, the Contractor may file a Claim for an equitable adjustment of the price or prices specified in the Agreement relating to the continued portion of the Agreement. The Contractor must assert any Claim for an equitable adjustment under this subsection within *twenty-one days* from the effective date of the Termination.

20.4.4 The Contractor shall refund to the School District any amounts the School District paid to the Contractor in excess of costs reimbursable under Section 20.3.

20.4.5 The damages and relief from termination by the School District specifically provided in Article 20 shall be the Contractor's sole entitlement in the event of termination.

End of Section

PROJECT MANUAL INDEX

WASHINGTON STATE PREVAILING WAGES FOR SPOKANE COUNTY Theater Stage Rigging Controls Replacement – Ferris High School
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Disclaimer: Contractor will be responsible for accessing the Department of Labor website to verify the published rate schedule and coordinate schedule with Benefit Code Key.

The State of Washington prevailing wage rates are applicable for this public works project located in Spokane County. Bidders are responsible to verify and use the most recent prevailing wage rates. The “Effective Date” for this project is the Bid Proposal due date. The applicable prevailing wage rates may be found on the Department of Labor and Industries website located at:

<https://lni.wa.gov/licensing-permits/public-works-projects/prevailing-wage-rates>

- A. Contractor will be responsible for meeting the requirements of RCW 39.12.
- B. Contractor shall be responsible for all fees and submission of all Intent, Affidavit and other forms to the Department of Labor and Industries associated with meeting requirements of RCW 39.12.
 - 1. Intent forms must be filed prior to the start of work, or as soon as possible thereafter.
 - 2. Intent and Affidavit forms (approved and certified by the Department of Labor and Industries) must be submitted to the Owner in order to receive payment.
 - 3. The Monthly Subcontractor’s List (attached herein) must be submitted along with the Contractor’s monthly billings to the Owner in order to receive payment.
- C. The Director of the Department of Labor & Industries shall arbitrate all disputes of the prevailing wage rates.

END OF SECTION

MONTHLY SUBCONTRACTORS LIST AND CERTIFICATIONS

Theater Stage Rigging Controls Replacement – Ferris High School

Contractor's Name and Address:		Project Name:	
		Project No.:	
Billing Period		Invoice Date:	Invoice Number:
Through			

Instructions: List all subcontractors, including all subcontractors of any tier, who performed work on the project site for this billing period.

[illegible]

END OF SECTION

PART I - GENERAL

1.01 DESCRIPTION OF WORK

A. The Scope of Work shall be as stated in Section 116100 of these Specifications.

1.02 EMERGENCY INCIDENT RESPONSE

All Contractors shall implicitly follow instructions by “Early Responder” personnel, including SPS site Administrators, Police, Fire, Emergency Medical Technicians, and SPS Safety/Security Officers. All alarms, drills, notifications, and directives given by any Early Responder or Administrative personnel must be responded to immediately, whether it is a real or practice situation. All Contractors shall immediately stop work, clear egress routes and evacuate to an “Area of Refuge” where directed. During school “Lock Downs”, Contractors shall not be permitted to either leave or enter the facility until directed otherwise.

1.03 PERSONAL IDENTIFICATION

All contractors, sub-contractors, and/or vendor personnel shall be provided with a company identification card. At a minimum, this identification card shall display the name of the company, the name of the employee represented, and photograph of the individual for whom the card has been issued. The contractor’s, sub-contractor’s, and/or vendors employees shall prominently display such ID cards at all times while on Spokane District Property. Such identification cards shall be obtained through the School District for a nominal fee of \$5.00 per card. For further information, or to make arrangements to obtain such photo ID cards, contact Spokane School District Property Security Services at 354-7345. Badge expiration date shall be 60 days after the project completion date. Contractor shall call security services and make an appointment prior to their arrival.

1.04 PRE-QUOTE AND ON-SITE IDENTIFICATION PROCEDURES

- A. All contractors who wish to visit the site before submitting a quote shall schedule an appointment with the Spokane Public Schools Project Manager identified on the cover of these specifications. Contractors shall not be allowed access to the site without a prior scheduled appointment.
- B. Prior to the start of construction, the contractor and all of his sub-contractors shall submit a list to the Owner of all individuals who will be performing work at the site through the duration of this project.
- C. All Contractors and their employs on the project site shall be required to wear at all times a District photo ID badge, as described in section 1.03 of this specification section. Access to the site is prohibited to all individuals not displaying a District badge.

1.05 SCHEDULE OF WORK

- A. Project Duration:
 - Construction Start: June 18, 2025
 - Construction Completion: August 15, 2025

1.06 CONTRACTS AND PERMITS

- A. The General Conditions and Contract Requirements are applicable to this work.
- B. Contractor shall be responsible for obtaining and paying for all permits if required for this project. Furnish the Owner's representative a copy of the permit prior to the first request for payment.
- C. Contractor is responsible for notifying local jurisdictional authorities for inspections as required per the current adopted model building codes and ordinances.

1.07 LIQUIDATED DAMAGES

- A. Liquidated Damages shall be as stipulated in the Instructions to Bidders.

1.08 CODES AND STANDARDS

All local, municipal and state laws, rules, and regulations governing or relating to any portion of this work are hereby incorporated into and made a part of these specifications.

1.09 WARRANTY REQUIREMENTS

- A. All work shall be done in a manner such that it does not void any manufacturer's warranties.
- B. Contractor shall guarantee his installation for (1) year from the date of acceptance by the Owner for each respective site.
- C. Hardware and software warranty periods for each piece of equipment shall be as provided by the manufacturer.

1.10 OWNER OCCUPANCY

- A. Cooperate with Owner to minimize conflict, and to facilitate Owner's operations. Modification and/or interface with existing utilities to be coordinated with the Owner.
- B. Schedule the Work to accommodate these requirements. Provide an activity plan or schedule to adequately define sequence, duration and interface requirements which may affect daily operations.
- C. Use by Owner prior to project acceptance does not relieve Contractor of his responsibility to maintain all insurance and bonds required of Contractor under the contract until project is completed and accepted by Owner.

1.11 CONTRACTOR'S USE OF PREMISES

- A. Contractors shall have use of the immediate property for the execution of the work. Contractor will have access to water and power as required for the work. Use of these utilities shall have a minimal impact and/or interruption to the daily operations of the facility.
- B. The Contractor is granted use of the restroom facilities at the work sites; however, the Contractor will be responsible for cleaning up after themselves and their employees after use of these facilities.

1.12 UTILITIES

- A. Known existing utilities are shown in the plans at their approximate locations. The Contractor shall take care to protect such existing utility appurtenances during his operation. Should other systems not shown on the plans be encountered, the Owner shall be immediately notified. **It shall be the Contractor's responsibility to provide private utility locate services anywhere on the interior of the site that is not the local purveyor's or local utility provider's responsibility.**
- B. Contractor shall notify the Owner a minimum of one (1) week prior to any intended utility interruptions.

1.13 FIELD CONDITIONS, CONSTRUCTION PROCEDURES AND COMMUNICATION

Requests For Information (RFI):

The Contract Documents are complementary. Before starting each portion of the work, the Contractor shall carefully study and compare the various Drawings and other Contract documents relative to that portion of the work. Contractor shall be responsible for verification of existing site conditions, installation standards and construction conditions. Field verify all necessary dimensions. Errors, Discrepancies or omissions discovered by the Contractor between existing conditions and the construction documents shall be reported promptly to the attention of the Owner and the Architect/Engineer as a Request For Information in such form as the Owner and the Architect/Engineer may require. Work performed without the approval of the Owner and the Architect/Engineer or work performed that is knowingly installed in a non-approved Owner standard may be rejected and shall be removed and re-constructed to the satisfaction of the Owner at the Contractor's expense. The Contractor's quoted price shall cover all materials and work necessary to provide the completed project.

1.14 WORKMANSHIP

Conform to accepted trade practices, industry standards, stipulated specifications and adopted model

building codes, whichever is more stringent.

1.15 SALVAGE

The Owner may desire to salvage certain items which are to be dismantled, excavated and removed during the course of construction. Prior to removal of any existing items from the site of work, the Contractor shall ascertain from the Architect/Architect/ Engineer whether or not a particular item is to be salvaged. Items to be salvaged shall be stockpiled on the site by the Contractor in a location as directed by the Owner. All other items of equipment shall be disposed of off site by the Contractor at his own expense.

1.16 PROTECTION

General: Appropriate first aid facilities and supplies shall be kept and maintained by the Contractor at the site of the work. Conform to OSHA and WISHA Safety and Health Standards for Construction.

- A. All dangerous equipment shall be secured and made safe at the completion of each day's work.
- B. The Contractor shall be responsible to protect buildings and grounds from damage.
- C. Comply with standards and code requirements for erection of structurally adequate temporary barricades. Paint with appropriate colors, graphics and warning signs to inform personnel and the public of the hazard being protected against. Where appropriate and needed provide lighting, including flashing red or amber lights.
- D. Provide First Aid supplies. Comply with governing regulations.
- E. Where required at specific sites, provide hand-carried, portable UL-rated, 10 lb. Class "ABC" fire extinguishers.

1.17 HOT WORK

- A. Before initiating any hot work, the contractor shall complete a Hot Work Permit and post at the site until completion of the Work. Contractor shall deliver the permit to the Head Custodian at the site after the Work is completed. Hot work includes, but is not limited to, brazing, cutting, grinding, soldering, welding, and torch applied roofing.
- B. Hot Work Permits are available from the owner, and shall be submitted each time any applicable work is done. Contractor shall complete all parts of the permit, and follow all the requirements listed on the permit.
- C. Contractor shall be liable for any damages resulting from hot work if he fails to submit a Hot Work Permit and follow the requirements listed on the permit.

1.18 ASBESTOS

If asbestos has been identified, it will be shown in supplemental documents attached within the Appendix. Contractor shall take proper precautions and adhere to required work practices and AHERA, WISHA and OSHA regulations, when drilling or cutting through materials containing asbestos. Manuals indicating asbestos containing materials reside at each site and at the Spokane Public Schools Facility Services Building. Provide incidental demolition, as required. Reference appropriate specifications attached herein if asbestos abatement is required.

END OF SECTION 01010

PART I - GENERAL

1.01 GENERAL

This Section includes procedures for the preparation and submittal of Schedule of Values and Applications for Payment in accordance with the General Conditions.

1.02 RELATED SECTIONS

Coordinate related work specified in other parts of the Specifications, including but not limited to the following:

- A. General Conditions.
- B. Change Order Procedures, Section 01026
- B. Submittals, Section 01300.
- C. Construction Schedule, Section 01310.
- D. Project Closeout, Section 01700.

1.03 PRIOR TO FIRST PROGRESS PAYMENT

- A. Submit and receive approval for the construction schedule.
- B. Submit approved "Intent to Pay Prevailing Wages Form", proof of Insurance and Performance Bonds prior to commencing the work.
- C. Submit and receive approval of Schedule of Values".

1.04 SUBMITTAL PROCEDURES

- A. Submit three (3) copies each of the Schedule of Values and Application for Payment.
- B. Submit an updated progress schedule with each Application for Payment.
- C. Submit under a Transmittal Letter.
- D. Submit (3) copies each of proof of release of liens as stipulated in the General Conditions.

1.05 SUBSTANTIATING DATA

- A. When Owner or Architect requires substantiating information, submit data justifying dollar amounts in question.
- B. Provide one (1) copy of data with cover letter for each copy of the submittal. Show Application number and date, and line item by number and description.

1.06 SCHEDULE OF VALUES

- A. Submit typed schedule on AIA Form G703 – Application and Certificate for Payment Continuation Sheet or on Contractor's standard form or electronic media printout as

approved by Owner.

- B. Submit Schedule of Values in duplicate within 15 days after date established in the Notice to Proceed.
- C. Format: List all major work activities indicated on the project schedule. Where appropriate, separate construction sequences, trades and phases recognized in CSI divisions. Identify site mobilization, bonds and insurance.
- D. Revise schedule to list approved Change Orders with each Application for Payment.
- E. Identify “Separately Funded Work” and amounts separately.
- F. List separate line items for General, Mechanical and Electrical equipment closeout (which includes operation and maintenance manuals) and include the dollar amount for each portion of the project.
- G. For each unit of work where payment requests will be made on account of materials or equipment purchased, fabricated, delivered but not yet installed; show “separate line items” for “order and receive” and “installation” of that unit of work.
- H. Show line items of indirect costs, and margins of actual costs, only to the extent that such items will be individually listed in payment requests. In general, establish each item in the schedule of values (and in payment requests) to be complete with its total expenses and proportionate share of general overhead and profit margin.
- I. Except as otherwise required, major cost items, which are not directly cost of actual work-in-place, such as distinct temporary facilities, may be either shown as line items in schedule of values or distributed as general overhead expense, at Contractor’s option.
- J. Make sum of total scheduled costs equal to Contract Sum, do not include State sales tax.

1.07 APPLICATIONS FOR PAYMENT

- A. Submit three (3) copies of each application on AIA Form G702 – Application and Certificate for Payment.
- B. Content and Format: Utilize Schedule of Values for listing items in Application for Payment.
- C. Payment Period: one (1) month.
- D. Include Intent to Pay Prevailing Wages Form as required by Owner.
- E. Proof of Payment as required by Owner.

G. Certified Payroll.

1.08 APPLICATION FOR FINAL PAYMENT

- A. Submit three (3) copies of the final application for payment on AIA Form G702 – Application and Certificate for Payment identifying total adjusted Contract Sum, previous payments and sum remaining due.
- B. Include Intent to Pay Prevailing Wages Form as required by Owner.
- C. Include Affidavits of Wages Paid Form as required by Owner.
- D. Submit proof of release of all liens as stipulated in the General Conditions.

END OF SECTION 01025

PART I - GENERAL

1.01 GENERAL

This Section includes procedures for the preparation and submittal of Change Orders in accordance with the General Conditions.

1.02 RELATED SECTIONS

Coordinate related work specified in other parts of the Specifications, including but not limited to the following:

- A. General Conditions.
- B. Schedule of Values and Applications for Payment, Section 01025.
- B. Submittals, Section 01300.
- C. Construction Schedule, Section 01310.
- D. Project Closeout, Section 01700.

1.03 SUBMITTAL PROCEDURES

- A. Submit name of the individual authorized to receive change documents, and be responsible for informing others in Contractor's employ or Subcontractors of changes to the Work.
- B. Submit (3) copies each of change order form, AIA G701, Change Order.

1.04 DOCUMENTATION OF CHANGE IN CONTRACT SUM AND CONTRACT TIME

- A. Maintain detailed records of Work done on a time and material basis. Provide full information required for evaluation of proposed changes, and to substantiate costs of changes in the Work.
- B. Document each quotation for a change in cost or time with sufficient data to allow evaluation of the quotation.
- C. On request, provide additional data to support computations:
 - 1. Quantities of products, labor, and equipment.
 - 2. Taxes, insurance and bonds.
 - 3. Overhead and Profit.
 - 4. Justification for any change in Contract Time.
 - 5. Credit for deletions from Contract, similarly documented.
- D. Support each claim for additional costs, and for work done on a time and material basis, with additional information:
 - 1. Origin and date of claim.

2. Dates and times work was performed, and by whom.
3. Time records and wage rates paid.
4. Invoices and receipts for products, equipment, and subcontracts, similarly documented.

1.05 CHANGE PROCEDURES

- A. The Owner will advise of minor changes in the Work not involving an adjustment to the Contract Sum or Contract Time as work associated with the completion of the original Contract.
- B. The Owner, Owner's representative, or Owner's consultant may issue a proposal request which may include a detailed description of a proposed change with supplementary or revised drawings and specifications, a change in Contract Time for executing the change with a stipulation of any overtime work required and the period of time during which the requested price will be considered valid. Contractor shall prepare and submit an estimate within ten (10) days.
- C. The Contractor may propose a change by submitting a request for change to the Owner, describing the proposed change and its full effect on the Work, with a statement describing the reason for the change, and the effect on the Contract Sum/Price and Contract Time with full documentation and a statement describing the effect on Work by separate or other Contractors. Document any requested substitutions in accordance with Section 01600.

1.06 CONSTRUCTION CHANGE DIRECTIVE

- A. Owner may issue a document, instructing the Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
- B. The document will describe changes in the Work, and will designate method of determining any change in the Contract Sum or Contract Time.
- C. Contractor shall not execute the change in Work without written approval by the Owner.

1.07 STIPULATED SUM CHANGE ORDER

- A. Based on a Proposal Request and Contractor's maximum price quotation, or Contractor's request for a Change Order as approved by the Owner.

1.08 UNIT PRICE CHANGE ORDER

- A. For pre-determined unit prices and quantities, the Change Order will be executed on a fixed unit price basis.

- B. For unit costs or quantities of units of work which are not pre-determined, execute Work under a Construction Change Directive.
- C. Changes in Contract Sum or Contract Time will be computed as specified for Time and Material Change Order.

1.09 TIME AND MATERIAL CHANGE ORDER

- A. Submit itemized account and supporting data after completion of change, within time limits indicated in the Conditions of the Contract.
- B. Owner shall determine the change in Contract Sum and Contract Time as provided in the Contract Documents.
- C. Maintain detailed records of work done on a Time and Material basis.
- D. Provide full information required for the evaluation of proposed changes, and to substantiate costs for changes in the work.

1.10 EXECUTION OF CHANGE ORDERS

Contractor shall issue a Change Order Proposal for Owner approval and signature prior to the commencement of any Change Order Directive.

1.11 CORRELATION OF DOCUMENTS

- A. Promptly revise the Schedule of Values and Applications for Payment forms to record each authorized Change Order as a separate line item and adjust the Contract Sum.
- B. Promptly revise progress schedules to reflect any change in the Contract Time, revise sub-schedules to adjust time for other items of work affected by the change, and resubmit.
- C. Promptly enter changes in Project Record Documents.

1.12 COST ALLOWANCES

- A. A maximum allowance for overhead and profit combined, may be added to additive change orders by the Contractor and shall not exceed the following schedule:
 - 1. For the General Contractor, 15% of the cost for any materials or work performed by his own forces.
 - 2. For the General Contractor, for materials or work performed by its subcontractor, 8% of the amount due to the Subcontractor.
 - 3. No markup will be allowed for small tools, shop burden, labor burden, or freight.

END OF SECTION 01026

PART I - GENERAL

1.01 GENERAL

This Section specifies administrative and supervisory requirements necessary for Project coordination including, but not necessarily limited to:

- A. Coordination.
- B. Administrative and supervisory personnel.
- C. General installation provisions.
- D. Cleaning and protection.

1.02 COORDINATION

Coordination: Coordinate construction activities included under various Sections of these Specifications to assure efficient and orderly installation of each part of the Work. Coordinate construction operations included under different Sections of the Specifications that are dependent upon each other for proper installation, connection, and operation.

- A. Where installation of one part of the Work is dependent on installation of other components, either before or after its own installation, schedule construction activities in the sequence required to obtain the best results.
- B. Where availability of space is limited, coordinate installation of different components to assure maximum accessibility for required maintenance, service and repair.
- C. Make adequate provisions to accommodate items scheduled for later installation.
- D. Where necessary, prepare memoranda for distribution to each party involved outlining special procedures required for coordination. Include such items as required notices, reports, and attendance at meetings.
- E. Prepare similar memoranda for the Owner and separate Contractors where coordination of their Work is required.

1.03 ADMINISTRATIVE PROCEDURES

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

- A. Testing and Inspections.
- B. Installation and removal of temporary facilities.
- C. Delivery and processing of submittal.

1.04 POSTINGS

Staff Names: Within 15 days of Notice to Proceed, post a list of the Contractor's principal staff assignments, including the Superintendent and other personnel in attendance at the site; identify individuals, their duties and responsibilities; list their addresses and telephone numbers.

- A. Post copies of the list in the Project meeting room, the temporary field office, and each temporary telephone.

1.05 GENERAL INSTALLATION PROVISIONS

- A. 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.
- B. Manufacturers instructions: Comply with manufacturer's installation instructions and recommendations, to the extent that those instructions and recommendations are more explicit or stringent than requirements contained in Contract Documents.
- C. Inspect materials or equipment immediately upon delivery and again prior to installation. Reject items not complying with the specifications or approved submittal.
- D. Provide attachment and Connection devices and methods necessary for securing Work. Secure Work true to line and level. Allow for expansion and building movement.
- E. Visual Effects: Provide uniform joint widths in exposed Work. Arrange joints in exposed Work to obtain the best visual effect. Refer questionable choices to the Architect/ Engineer for final decision.
- F. Recheck measurements and dimensions, before starting each installation.
- G. Install each component during weather conditions and Project status that will ensure the best possible results. Isolate each part of the completed construction from incompatible material as necessary to prevent deterioration.
- H. Coordinate temporary enclosures with required inspections and tests, to minimize the necessity of uncovering completed construction for that purpose.
- I. Mounting Heights: Where mounting heights are not indicated, install individual components at standard mounting heights recognized within the industry for the particular application indicated. Refer questionable mounting height decisions to the Architect/ Engineer for final decision.

1.06 CLEANING AND PROTECTION

- A. During handling and installation, clean and protect construction in progress and adjoining

materials in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.

- B. Clean and maintain completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.

1.07 LIMITING EXPOSURES:

Supervise construction activities to ensure 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:

- A. Excessively high or low temperatures.
- B. Excessively high or low humidity.
- C. Air contamination or pollution.
- D. Water or ice.
- E. Solvents.
- F. Chemicals.
- G. Light.
- H. Puncture.
- I. Abrasion.
- J. Heavy traffic.
- K. Soiling, staining and corrosion.
- L. Combustion.
- M. Electrical current.
- N. Unusual wear or other misuse.
- O. Misalignment.
- P. Excessive weathering.
- Q. Unprotected storage.
- R. Improper shipping or handling.
- S. Theft and vandalism.

END OF SECTION 01040

PART I - GENERAL

1.01 GENERAL

This Section specifies administrative and procedural requirements for cutting and patching.

1.02 RELATED WORK

Coordinate related work specified in other parts of the Specifications, including but not limited to the following:

- A. Refer to other Sections for specific requirements and limitations applicable to cutting and patching individual parts of the Work.

1.03 SUBMITTALS

Cutting and Patching Proposal: Where approval of procedures for cutting and patching is required before proceeding, submit a proposal describing procedures well in advance of the time cutting and patching will be performed and request approval to proceed. Include the following information, as applicable, in the proposal:

- A. Describe the extent of cutting and patching required and how it is to be performed; indicate why it cannot be avoided.
- B. Describe anticipated results in terms of changes to existing construction; include changes to structural elements and operating components as well as changes in the building's appearance and other significant visual elements.
- C. List products to be used and firms or entities that will perform Work.
- D. Indicate dates when cutting and patching is to be performed.
- E. List utilities that will be disturbed or affected, including those that will be relocated and those that will be temporarily out-of-service. Indicate how long service will be disrupted.
- F. Where cutting and patching involves addition of reinforcement to structural elements, submit details and engineering calculations to show how reinforcement is integrated with the original structure.
- G. Approval by the Architect to proceed with cutting and patching does not waive the Architect's right to later require complete removal and replacement of a part of the Work found to be unsatisfactory.

1.04 QUALITY ASSURANCE

- A. Requirements for Structural Work: Do not cut and patch structural elements in a manner that would reduce their load-carrying capacity or load-deflection ratio.
 - 1. Obtain approval of the cutting and patching proposal before cutting and patching the

- following structural elements.
- a. Foundation Construction
 - b. Retaining walls
 - c. Structural Concrete
 - d. Beams, Joists and Trusses.
 - e. Load Bearing walls and partitions.
- B. Requirements for Mechanical and Electrical Work: Refer to Division 15 and division 16 for other requirements and limitations applicable to cutting and patching mechanical and electrical installations.
- C. Operational and Safety Limitations: Do not cut and patch operating elements or safety related components in a manner that would result in reducing their capacity to perform as intended, or result in increased maintenance, or decreased operational life or safety.
1. Obtain approval of cutting and patching proposal before cutting and patching the following operating elements or safety related systems.
 - a. Shoring, bracing and sheeting
 - b. Electrical and Alarm Systems
 - c. Data and Communication Systems
 - d. Plumbing Systems
 - e. Energy Management Systems (EMS)
- D. Visual Requirements: Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in the Owner's opinion, reduce the building aesthetic qualities, or result in visual evidence of cutting and patching. Remove and replace Work cut and patched in a visually unsatisfactory manner.
1. If possible, retain the original installer or fabricator to cut and patch exposed Work, or engage another recognized, experienced and specialized firm.

PART II - PRODUCTS

2.01 GENERAL

Use materials that are identical to existing materials. If identical materials are not available or cannot be used where exposed surfaces are involved, use materials that match existing adjacent surfaces to the fullest extent possible with regard to visual effect. Use materials whose installed performance will equal or surpass that of existing materials.

PART III - EXECUTION

3.01 INSPECTION

- A. Before cutting existing surfaces, examine surfaces to be cut and patched and conditions under which cutting and patching is to be performed. Take corrective action before proceeding, if unsafe or unsatisfactory conditions are encountered.
- B. Before proceeding, meet at the 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.

3.02 PREPARATION

- A. Temporary Support: Provide temporary support of Work to be cut.
- B. Protection: Protect existing construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of the Project that might be exposed during cutting and patching operations.
- C. Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
- D. Take all precautions necessary to avoid cutting existing pipe, conduit or ductwork serving the existing building.

3.03 PERFORMANCE

- A. General: Employ skilled workmen to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time and complete without delay.
 - 1. Cut existing construction to provide for installation of other components or performance of other construction activities and the subsequent fitting and patching required to restore surfaces to their original condition.
- B. Cutting: Cut existing construction using methods least likely to damage elements to be retained or adjoining construction. Where possible review proposed procedures with the original installer; comply with the original installer's recommendations.
 - 1. In general, where cutting is required, use hand or small power tools designed for sawing or grinding, not hammering or chopping. Cut holes and slots neatly to size required with minimum disturbance to adjacent surfaces. Temporarily cover openings when not in use.
 - 2. To avoid marring existing finished surfaces, cut or drill from the exposed or finished

side into concealed surfaces.

3. Cut through asphalt and concrete using a cutting machine such as a carborundum saw or diamond core drill.
 4. By-pass utility services such as pipe or conduit, before cutting, where services are shown or required to be removed, relocated or abandoned. Cut-off pipe or conduit in walls or partitions to be removed. Cap, valve or plug and seal the remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after by-passing and cutting.
 5. Comply with the requirements of applicable Sections of Division 2.
- C. Patching: Patch with durable seams that are as invisible as possible. Comply with specified tolerances.
1. Where feasible, inspect and test patched areas to demonstrate integrity of the installation.
 2. Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
 3. Where patching occurs in a smooth painted surface, extend final paint coat over entire unbroken areas containing the patch, to adjacent abutting surfaces,; after the patched area has received primer and second coat.

3.04 CLEANING

Thoroughly clean areas and spaces where cutting and patching is performed or used as access. Remove completely paint, mortar, oils, putty, and items of similar nature. Thoroughly clean piping, conduit, and similar features before painting or other finishing is applied. Restore damaged pipe covering to its original condition.

3.05 LIMITING ASBESTOS EXPOSURE:

Asbestos Containing Building Materials (ACBM's) may be encountered during cutting procedures. Contact the Owner's Project Manager prior to starting work. Owner will provide a "Good Faith Survey" to ascertain and provide direction for protective procedures for abatement activities. Contractor shall be responsible for implementing these procedures for the protection of their employees, building occupants, and the general public around the Work site. Contractor will adhere to all training requirements for their employees as stated in Federal, State and local directives.

END OF SECTION 01045

PART I - GENERAL

1.01 GENERAL

This section establishes the requirements necessary to ensure compliance with asbestos safety regulations while working in Spokane Public School District facilities.

1.02 RELATED DOCUMENTS

- A. EPA 40CFR Part 763, Sub part E – AHERA Regulations for Schools
- B. OSHA 29CFR 1926.1101
- C. WISHA Standard 296-65 WAC
- D. WISHA Standard 296-62-077 WAC

1.03 WORKER QUALIFICATIONS

- A. The contractor shall provide Department of Labor and Industries Asbestos Class III trained workers for any work required to be completed in the tunnels or crawl spaces, or for the performance of any task that will disturb asbestos containing materials within School District facilities.
- B. Class III training may be obtained from several certified asbestos training providers in the Spokane area. The Spokane Public School District can provide a partial list of certified training providers, and additional training providers can be found in the yellow pages of the local telephone book under Asbestos Consulting.
- C. The training consultant shall be certified to provide Class III Training. The Class III training shall cover how to work around asbestos containing materials, and how to perform maintenance work on and around asbestos containing building materials. Class III training does not cover full asbestos abatement. Due to the specific nature of our tunnels and crawl spaces the consultant shall provide training in the following areas:
 - 1. How to safely enter and work in the tunnels without stepping on or otherwise causing damage to the pipes that have asbestos insulation wraps.
 - 2. How to exit the tunnels and remove suits and respirators using approved decontamination procedures.

3. The School District is particularly concerned that the rooms above the tunnel accesses do not become contaminated with asbestos fibers and asbestos containing soil.
 4. The Class III training shall cover proper techniques for drilling through asbestos containing materials on the floor, ceiling, roofs or walls for the purpose of making attachments or routing pipes or conduit.
- D. Representatives of the Spokane Public School District are available to coordinate with the training provider regarding course material. They will also be available to assist the contractor with designating appropriate set-up areas, answering asbestos questions, and reviewing the asbestos management plan available at each school.

PART II - PRODUCTS

2.01 RESPIRATORS

Select respirators from those approved by the Department of Labor, or the National Institute of Safety and Health (NIOSH).

- A. Single-use, disposable, or quarter face masks or respirators are not allowed.
- B. Provide half-face or full-face type respirators, as required, with nose cup or other anti-fogging device.
- C. Respirators shall be equipped with HEPA type filters.

2.02 PROTECTIVE CLOTHING

Provide personnel entering tunnels or crawl spaces, or otherwise exposed to airborne concentrations of asbestos fibers with disposable, protective, whole body clothing, head coverings, gloves and foot covering.

- A. A single-piece suit is preferred.

PART III - EXECUTION

3.01 PERSONNEL

All contractor personnel on this project who will be entering a tunnel or crawlspace and/or to perform any task that will, or potentially could, disturb Asbestos Containing Material (ACM), shall:

- A. Be a Class III trained worker
- B. Wear personal protective clothing
- C. Wear appropriate respiratory protection

3.02 ACCESS

Entrance and egress to tunnels and crawlspaces shall be made at openings in boiler rooms, custodial rooms, or other non-public or non-student spaces.

3.03 DISPOSAL

Asbestos containing waste materials shall be legally disposed. Removal of disposal bags shall be via the least public route, or shall be done during non-school hours.

3.04 APPEARANCE

Workers shall never be in asbestos protective clothing or wearing their respirators when they are in view of staff, students or the public.

PART IV - SUBMITTALS

4.01 CERTIFICATION

Copies of the Class III training attendance records or certificates for each qualified worker shall be required as a submittal before work begins.

4.02 DISPOSAL RECEIPTS

Copies of the waste disposal receipts shall be submitted to the School District as verification of proper disposal of asbestos contaminated waste.

END OF SECTION 01060

PART I - GENERAL

1.01 GENERAL

This Section specifies administrative requirements for compliance with governing regulations, codes and standards.

- A. Requirements include obtaining permits, licenses, inspections, releases and similar documentation, as well as payments, statements and similar requirements associated with regulations, codes and standards.
- B. Refer to General Conditions for requirements for compliance with governing regulations.

1.02 DEFINITIONS

General: Definitions contained in this Article are not necessarily complete, but are general to the extent that they are not defined more explicitly elsewhere in the Contract Documents.

- A. Indicated refers to graphic representations, notes or schedules on the Drawings, or other Paragraphs or Schedules in Specifications, and similar requirements in Contract Documents. Where terms such as "shown," "noted," "scheduled," and "specified" are used, it is to help locate the reference; no limitation on location is intended except as specifically noted.
- B. Directed: Terms such as "directed," "requested," "authorized," "selected," "approved," "required," and "permitted" mean "directed by the Architect/ Engineer," "requested by the Architect/ Engineer," and similar phrases. However, no implied meaning shall be interpreted to extend the Architect/ Engineer's responsibility into the Contractor's area of construction supervision.
- C. Approve: The term "approved," where used in conjunction with the Architect/ Engineer's action on the Contractor's submittal, applications, and requests, is limited to the responsibilities and duties of the Architect/ Engineer. Such approval shall not release the Contractor from responsibility to fulfill Contract Document requirements, unless otherwise provided in the Contract Documents.
- D. Regulation: The term "Regulations" includes laws, statutes, ordinances and lawful orders issued by authorities having jurisdiction, as well as rules, conventions and agreements within the construction industry that control performance of the Work, whether they are lawfully imposed by authorities having jurisdiction or not.
- E. Furnish: The term "furnish" is used to mean "supply and deliver to the Project site, ready for unloading, unpacking, assembly, installation, and similar operations."

- F. Install: The term "install" is used to describe operations at project site including the actual "unloading, unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing, protecting cleaning and similar operations."
- G. Provide: The term "provide" means "to furnish and install, complete and ready for the intended use."
- H. Installer: An installer" is an entity engaged by the Contractor, either as an employee, subcontractor or sub-subcontractor for performance of a particular construction activity, including installation, erection, application and similar operations. Installers are required to be experienced in the operations they are engaged to perform.
 - 1. The term "experienced," when used with the term "Installer" means having a minimum of 5 previous Projects similar in the and scope to this Project, and familiar with the precautions required, and has complied with requirements of the authority having jurisdiction.
- I. Project Site is the space available to the Contractor for performance of the Work, either exclusively or in conjunction with others performing other construction as part of the Project. The extent of the Project Site is shown on the Drawings, and may or may not be identical with the description of the land upon which the Project is to be built.
- J. Testing Laboratories: A "testing laboratory" is an independent entity engaged to perform specific inspections or tests, either at the Project Site or elsewhere, and to report on and, if required, to interpret results of those inspections or tests.

1.03 SPECIFICATION FORMAT AND CONTENT EXPLANATION

This Article is provided to help the user of these Specifications understand the format, language, implied requirements, and similar conventions. None of the explanations shall be interpreted to modify the substance of Contract requirements.

- A. Specification Format: These Specifications are organized into Divisions, Sections or Trade Headings based on the Construction Specifications Institute's 16-Division format and numbering system. This organization conforms generally to recognized construction industry practice.
- B. Specification Content: This Specification has been produced employing conventions in the use of language and the intended meaning of certain terms, words, and phrases when used in particular situations or circumstances. These conventions are explained as follows:

1. Language used in the Specifications and other Contract Documents is the abbreviated type. Implied words and meanings will be appropriately interpreted. Singular words will be interpreted as plural and plural words interpreted as singular where applicable and where the full context of the Contract Documents so indicates.
 2. Imperative Language is used generally in the Specifications. Requirements expressed imperatively are to be performed by the Contractor. At certain locations in the text, for clarity, subjective language is used to describe responsibilities which must be fulfilled indirectly by the Contractor, or by others when so noted.
- C. Assignment of Specialists: The Specification requires that certain specific construction activities shall be performed by specialists who are recognized experts in the operations to be performed. The specialists must be engaged for those activities, and the assignments are requirements over which the Contractor has no choice or option. Nevertheless, the ultimate responsibility for fulfilling Contract requirements remains with the Contractor.
1. This requirement should not be interpreted to conflict with enforcement of building codes and similar regulations governing the work. It is also not intended to interfere with local trade union jurisdictional settlements and similar conventions.
- D. Trades: Use of titles such as "carpentry" is not intended to imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to trades persons of the corresponding generic name.

1.04 INDUSTRY STANDARDS

Applicability of Standards: Except where Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into Contract Documents. Such standards are made a part of the Contract Documents by reference. Individual Sections indicate which codes and standards the Contractor must keep available at the Project Site for reference.

- A. Publication Dates: Where compliance with an industry standard is required, comply with standard in effect as of date of Contract Documents.
- B. Conflicting Requirements: Where compliance with two or more standards is specified, and they establish different or conflicting requirements for minimum quantities or quality levels, the most stringent requirement will be enforced, unless the Contract Documents indicate

otherwise. Refer requirements that are different, but apparently equal, and uncertainties as to which quality level is more stringent to the Architect/ Engineer for a decision before proceeding.

- C. Minimum Quantities or Quality Levels: In every instance the quantity or quality level shown or specified shall be the minimum to be provided or performed. The actual installation may comply exactly, within specified tolerances, with the minimum quantity or quality specified, or it may exceed that minimum within reasonable limits. In complying with these requirements, indicated numeric values are minimum or maximum values, as noted, or appropriate for the context of the requirements. Refer instances of uncertainty to the Architect/ Engineer for decision before proceeding.
- D. Copies of Standards: Each entity engaged in construction on the Project is required to be familiar with industry standards applicable to that entities' construction activity. Copies of applicable standards are not bound with the Contract Documents. Where copies of standards are needed for performance of a required construction activity, the Contractor shall obtain copies directly from the publication source.
- E. Abbreviations and Names: Trade association names and titles of general standards are frequently abbreviated. The following acronyms or abbreviations as referenced in Contract Documents are defined to mean the associated names. Names and addresses are subject to change, and are believed to be, but are not assured to be, accurate and up-to-date as of date of Contract Documents:
1. AA Aluminum Association
900 19th St., Suite 300; Washington, DC 20006
(202)862-5100
 2. AABC Associated Air Balance Council
1518 K Street NW, Suite 503; Washington, DC 20005
(202)737-0202
 3. AAN American Association of Nurserymen
1250 Eye Street NW, Suite 500; Washington DC 20005
(202)789-2900
 4. AASHTO American Association of State Highway & Transportation Officials
444 N. Capital St., Suite 500; Washington, DC 20005

- (202)624-5800
5. ACI American Concrete Institute
P.O. Box 19150; Detroit, MI 48219
(313)532-2600
6. AGA American Gas Association
1515 Wilson Blvd.; Arlington, VA 22209
(703)841-8400
7. AHA American Hardboard Association
520 N. Hicks Rd.; Palatine IL 60067
(312)943-8800
8. AI Asphalt Institute
Asphalt Inst. Bldg.; College Park MD 20740
(301)227-4258
9. AISC American Institute of Steel Construction
400 N. Michigan Ave.; 8th Flr; Chicago IL 60611
(312)670-2400
10. AITC American Institute of Timber Construction
333 W. Hampden Ave.; Englewood Co 80110
(303)761-3212
11. ANSI American National Standards Institute
1430 Broadway; New York, NY 10018
(212)354-3300
12. APA American Plywood Association
P.O. Box 11700; Tacoma, WA 98411
(206)565-6600
13. ARMA Asphalt Roofing Manufacturers Association
6288 Montrose Road.; Rockville, MD 20852
(301)231-9050
14. ASC Adhesive and Sealant Council
1500 Wilson Blvd.; Suite 515; Arlington, VA 22209
(703)841-1112

15. ASHRAE American Society of Heating, Refrigerating and Air Conditioning Architect/ Engineers
1791 Tulie Circle, NE; Atlanta, GA 30329
(404)636-8400
16. ASME American Society of Mechanical Architect/ Engineer
345 East 47th St.; New York, NY 10017
(212)705-7722
17. ASPE American Society of Plumbing Architect/ Engineers
3617 Thousand Oaks Blvd., Suite 210; Westlake, CA 91362
(805)495-7120
18. ASSE American Society of Sanitary Architect/ Engineering
P.O. Box 40362; Bay Village, OH 44140;
(216)835-3040
19. ASTM American Society of Testing and Materials
1916 Race St; Philadelphia, PA 19103;
(215)299-5400
20. AWI Architectural Woodwork Institute
2310 S. Walter Reed Dr.; Arlington, VA 22206;
(703)671-9100
21. AWWPA American Wood Preservers' Association
P.O. Box 5283; Springfield, VA 21666
(703)339-6660
22. AWWA American Water Works Association
6666 W. Quincy Ave.; Denver, CO 80235
(303)794-7711
23. BHMA Builders' Hardware Manufacturers Association
60 East 42nd St., Room 511; New York, NY 10165
(212)682-8142
24. CAGI Compressed Air and Gas Institute
c/o Thomas Associates, Inc.
1230 Keith Building; Cleveland, OH 44115

- (216)241-7333
25. CISPI Cast Iron Soil Pipe Institute
1499 Chain Bridge Rd.; Suite 203; McLean, VA 22101
(703)827-9177
26. CRI Carpet and Rug Institute
Box 2048; Dalton, GA 30720
(404)278-3176
27. CRSI Concrete Reinforcing Steel Institute
933 Plum Grove Road; Schaumburg, IL 60195
(312)490-1700
28. DHI Door and Hardware Institute
7711 Old Springhouse Rd.; McLean, VA 22102
(703)556-3990
29. GA Gypsum Association
1603 Orrington Ave.; Evanston, IL 60201
(312)491-1744
30. GCC Insulating Glass Certification Council
Route 11; Industrial Park; Cortland, NY 13045
(607)753-6711
31. NAPA National Asphalt Pavement Association
Calvert Building, Suite 620; 6811 Kenilworth Ave.;
Riverdale, MD 20737
(301)779-4880
32. NEC National Electrical Code (by NFPA)
33. NKCA National Kitchen Cabinet Association
P.O. Box 6830; Falls Church, VA 22046
(703)237-7580
34. NPA National Particle Board Association
18928 Premier court, Gaithersburg, MD 20879
(301)670-0604
35. NPCA National Paint and Coatings Association

- 1500 Rhode Island Avenue, N.W.; Washington, DC 20005
(202)462-6272
36. PDI Plumbing and Drainage Institute
(c/o Austin O. Roche,Jr.)
5342 Boulevard Pl.; Indianapolis, IN 46208
(317)251-5298
37. RFCI Resilient Floor Covering Institute
966 Hungerford Drive; Suite 12-B; Rockville, MD 20805
(301)340-8580
38. SMACNA Sheet Metal & Air Conditioning Contractors National Association
P.O. Box 70; Merrifield, VA 22116
(703)790-9890
39. TPI Truss Plate Institute
583 D'Onotrio Drive, Suite 200; Madison, WI 53719
(608)833-5900
40. UL Underwriters Laboratories
333 Pingsten Rd.; Northbrook, IL 60062
(312)272-8800
41. CLIB West Coast Lumber Inspection Bureau
P.O. Box 23145; Portland, OR 97223
(503)639-0651
42. WRI Wire Reinforcement Institute
8361 A Greensboro Drive; McLean, VA 22102
(703)790-9790
43. WWPA Western Wood Products Association
1500 Yeon Bldg.; Portland, OR 97204
(503)224-3930
44. W.W.P.A. Woven Wire Products Association
2515 N. Nordica Ave.; Chicago, IL 60635
(312)637-1359
- F. Federal Government Agencies: Names and titles of federal government standard or

Specification producing agencies are frequently abbreviated. The following acronyms or abbreviations referenced in the Contract Documents indicate names of standard or Specification producing agencies of the federal government. Names and addresses are subject to change but are believed to be, but are not assured to be, accurate and up-to-date as of the date of the Contract Documents.

1. DOT Department of Transportation
400 Seventh Street NW; Washington, DC 20590
(202)426-4000
2. EPA Environmental Protection Agency
401 M Street SW, Washington, DC 20460
(202)829-3535
3. FS Federal Specification
(General Services Administration)
Specifications Unit (WFSIS); 7th and D Streets SW;
Washington, DC 20406; (202)472-2205 or 472-2140

1.05 PERMITS. LICENSES. AND CERTIFICATES

For the Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, and similar documents, correspondence and records established in conjunction with compliance with standards and regulations bearing upon performance of the work.

END OF SECTION 01090

PART I - GENERAL

1.01 DEFINITION AND SCOPE

- A. Mobilization shall include the obtaining of all permits, insurance and bonds, moving onto the site of all material and equipment, furnishing and erecting temporary buildings and other temporary construction facilities, furnishing and erecting all temporary and permanent fencing; final clean-up and finishing of all construction-related activities to moving off site upon project completion (demobilization); all as required for the proper performance and completion of the work. Mobilization for this work shall include, but is not necessarily limited to, the following principal items:
1. Obtaining all required bonds, insurance, permits and licenses.
 2. Submittal of all required subcontractor insurance certificates and bonds.
 3. Pre-construction conference and submittal of construction schedule.
 4. Arranging for and erection of Contractor's work and storage yard.
 5. Providing a field office trailer for the Contractor, including furnishings, utility services and telephone.
 6. Installing temporary construction power and wiring.
 7. Providing on-site sanitary facilities as specified
 8. Moving on to the site of all Contractor's material and equipment required for the first month of work.
 9. Having the Contractor's superintendent at the job site full time.
 10. Posting all OSHA/WISHA required notices and establishing of safety programs.
 11. Posting of all required posters, notices and wage rates (if required).
 12. Documentation of placing order for major equipment.
 13. Providing shoring and protection of existing structures, utilities, and facilities as may-be required during the course of the work.

1.02 PAYMENT FOR MOBILIZATION

- A. No payment for mobilization, or any part thereof, will be approved under the Contract until all mobilization items listed above have been completed as specified.
- B. Payment for Mobilization and Demobilization
1. Mobilization consists of preconstruction expenses and the costs of preparatory work and operations performed by the Contractor which occur before 10% of the total original contract amount is earned from other bid items. Items which are not to be

included in the item of Mobilization include, but are not limited to:

- a. Any portion of the work covered by the specific bid item or incidental work which is to be included in a bid item(s);
- b. Profit, interest on borrowed money, overhead, or management costs.

END OF SECTION 01100

PART I - GENERAL

1.01 SUMMARY

- A. Requirements for meetings, lines of communications, schedule and payments.

1.02 ORDER OF PRECEDENCE OF CONTRACT DOCUMENTS

- A. In resolving conflicts resulting from conflicts, errors, ambiguities or discrepancies in any of the Contract Documents, the order of precedence shall be as follows:

1. Agreement
2. Specifications
3. Drawings

- B. Within the Specifications, the order of precedence is as follows:

1. Addenda
2. Supplemental General Conditions
3. Instructions to Bidders
4. Quotation and Contract Requirements
5. Division 1, General Conditions
6. Division 2-16, Technical Specifications
7. Referenced Standard Specifications

- C. With reference to the Drawings, the order of precedence is as follows:

1. Figures govern over scaled dimensions
2. Detail drawings govern over general drawings
3. Change order drawings govern over contract drawings
4. Contract drawings govern over standard drawings
5. Contract drawings govern over shop drawings

1.03 PROJECT MEETINGS

- A. Pre-construction meeting

Meet at Owner's office within two weeks prior to start of work. Attendees to include Owner and Contractor. Agenda shall include discussions of:

1. Mobilization considerations,
2. Administrative procedures,
3. Review of schedule and submittals and
4. Any start-up and coordination items to be addressed.

B. Weekly Progress Meetings

Meet at the work site at least once each week. Attendees to include owner and Contractor's Project Supervisor. Agenda shall include:

1. Review of schedule
2. Discussion of current work activities
3. Discussion of work activities for next week and
4. Review of technical aspects, material deliveries and coordination of activities.

C. Pre-Installation Meetings

Meet at the site prior to the installation of all complex building systems and components requiring special scheduling and safety procedures.

1. Review the schedule for the coordination activities with other trades.
2. Discuss special installation procedures and safety considerations.

D. Close-Out Meeting

Meet at Owner's office on or before contract completion date. Attendees to include Owner and Contractors Project Supervisor. Agenda shall include:

1. Status of punch list work and submittals and
2. Review of requirements for final close-out and payment

1.04 SCHEDULE OF WORK

- A. Schedule of work shall be in sufficient detail to show the start and completion dates for activity.
- B. The schedule shall be reviewed and updated each week.

1.05 WORK HOURS

A. Custodial Hours:

Elementary Schools:

Monday and Wednesday – 5:30 am to 6:30 pm

Tuesday, Thursday and Friday – 5:30 am to 10:15 pm

Middle Schools:

Monday through Friday – 5:30 am to 10:15 pm

High Schools:

Monday through Friday – 5:30 am to 11:00 pm

- B. Unless otherwise noted, all work can take place during the hours of 7:00 a.m. to 4:00 p.m. School officials will provide access to the work and lock-up at the end of each day's shift. All work must be cleaned up at the end of each shift, leaving each building in a

clean, usable condition, ready for the next day of school. Custodial coverage is required when the Contractor is in the facility.

- C. Exceptions would be any work that is exceptionally noisy or dirty, setting the exhaust fan and makeup air unit on the roof, or any special activities scheduled during the day in the classroom or building performed in limited access areas such as mechanical rooms or custodial closets.
- D. During the summer break period, conventional day-time hours may be adopted for all work. Typically, the contractor is able to work based on the hours listed below on the interior of the building. Summer break Contractor working hours (custodial coverage – to be confirmed with site’s head custodian):

Monday – Friday 7:00 am to 3:00 pm

Or

Four Tens 6:00 am to 4:00 pm

- E. The contractor may wish to arrange additional custodial coverage as discussed below. Daily clean-up is still required during this period so as not to conflict with major summer cleaning efforts by custodial staff.
- F. During winter break, spring break and holidays conventional day-time hours may be adopted for all work – to be verified with the head custodian for that site location. Typically, the contractor is able to work based on the hours listed below on the interior of the building.
- Monday – Friday 7:00 am to 3:00 pm
- Or
- Four Tens 6:00 am to 4:00 pm
- G. Exterior work may occur during the school day and weekends as long as the work does not interfere with the educational process or impede access of students or staff to the site and facilities. Custodial coverage is not required for exterior work hours.
- H. School District Holidays which the Contractor will not be able to work are the following:
Veteran’s Day
Thanksgiving Holiday (2 days observed)
Christmas Holiday (2 days observed)

New Years Holiday (2 days observed)

Martin Luther King Junior Day

President's Day

Memorial Day

Independence Day

Labor Day

- I. Days which are non/student and curricular planning days (not district employee holidays) have custodial coverage limited from 7:00 a.m. to 3:00 p.m.
- J. Contractor shall confirm all schedules and working hours with the Principal and Head Custodian. Contractor shall be responsible for coordinating with the school's principal and custodian of special events (i.e. carnival event, open house, etc.) which may impact the Contractor's ability to perform project work. In some cases it may not be possible for the Contractor to work that evening.
- K. **Requests for extended work hours shall be made 48 hours in advance to the Project Manager. Custodial staff will be notified and must be on site prior to any extended work hours. The Contractor shall be responsible for covering Custodial Rates for extended work hours (typically in the form of a deductive change order to the Project). Rates shall be per the Custodial Contracts with the School District.**

1.06 LINES OF COMMUNICATION

- A. A direct line of daily communication shall be maintained between the Owner's representative and the Contractor's Project Supervisor.
- B. Each work site shall have a person-in-charge at anytime work is being performed.

1.07 PROGRESS PAYMENTS

Five percent of the current billing amount shall be withheld from each pay request for retainage.

A. Initial Progress Payment

Owner's approval of the initial pay request shall be based on completion or receipt of the following:

- 1. Owner's receipt of:
 - a. Certificate of Insurance
 - b. Performance Bond
 - c. Statement of Intent to Pay Prevailing Wages approved by the Department of Labor and Industries and
- 2. Satisfactory processing of submittals required by Section 01300, Paragraph 1.03.

3. Attendance of Pre-Construction meeting,
 4. Satisfactory completion of portion of work for which billing is submitted.
- B. Subsequent progress payments shall be approved by the Owner for portions of work completed up to 90% of contract price contingent upon:
1. Attendance of Weekly Progress Meetings,
 2. Adherence to Approved Schedule of Work and
 3. Satisfactory compliance with the project specifications.
- C. Final progress payment shall be approved by the Owner upon completion of:
1. Satisfactory completion of the scope of work including punch list items.
 2. Execution of Change Orders if required.
- D. Payment of retainage shall be in accordance with Division 0, Quotation and Contract Requirements.

PART I - GENERAL

1.01 GENERAL

- A. Wherever submittals are required from the Contractor by the Contract Documents all such submittals shall be submitted to the Architect/ Engineer in accordance with the requirements of this section.
- B. Each submittal shall be transmitted on Contractor's standard letterhead form. This includes but is not limited to Administrative submittals, Contractor submittals, Project Close-out submittals, Applications for Payment, Construction Management processes and Requests for Information and all such transmitted documents. Transmittal shall include, Project Name, Purchase Order Number, and Date.
- C. If alternate major equipment items require any modification or deviation from the Plans, the Contractor agrees to prepare and submit detailed drawings to the Architect/ Engineer showing all modifications in structures, piping, electrical, mechanical or other work required to adapt the Plans to the alternate equipment. The Contractor further understands that the Architect/ Engineer will review said detailed drawings of modifications and either approve them or indicate thereon changes necessary to comply with the project requirements Detailed drawings which are not approved will be revised and then resubmitted to the Architect/ Engineer. Any deduct and add amounts are "installed" prices and take into consideration and include any cost of the design or construction changes that may be required as a result of using the alternate equipment. See also Section 01600, Materials and Equipment, 1.06 Substitutions.

1.02 SUBMITTAL PROCEDURES

- A. Coordination: Coordinate preparation and processing of submittal with performance of construction activities. Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay.
 - 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittal and related activities that require sequential activity.
 - 2. Coordinate transmittal of different types of submittal for related elements of the Work so processing will not be delayed by the need to review submittal concurrently for coordination.
 - 3. Coordinate and consolidate Submittals to include complete assemblies and systems. Partial or incomplete Submittals will not be reviewed until complete Submittal is

received.

- B. Deviations on Submittals: Identify deviations from Contract Documents, conforming to industry standards or standard shop practices by drawing cloud or other identify in marking around deviation and noting change. Identify Product or system limitations which may be detrimental to successful performance of completed Work.
- D. Processing: Allow sufficient review time so that installation will not be delayed as a result of the time required to process submittal, including time for re-submittal. Allow (10) days for review.
- E. Submittal Preparation: Place a permanent label or title block on each submittal for identification. Indicate the name of the entity that prepared each submittal on the label or title block. Sequentially number the transmittal forms. Re-submittals shall have the original number with an alphabetical suffix. Identify each copy of submittal with number.
 - 1. Include the following information on the label for processing and recording action taken.
 - Project name.
 - Date.
 - Name and address of Contractor.
 - Name and address of subcontractor or supplier.
 - Pertinent Drawing sheet, detail number and specification Section number.
 - 2. Apply Contractor's stamp, signed or initialed certifying that review, verification of products required, all dimensions and field verified dimensions, shop drawing dimensions, adjacent construction work, and coordination of information, is in accordance with the requirements of the Work and the Contract Documents.
 - a. Compliance with specified characteristics is the Contractor's responsibility. Approval of submittals does not release the Contractor from the requirements of a proper installation, compliance with applicable codes or coordination of the work.
 - 3. Provide space for Contractor and Architect/Engineer review stamps.
- F. Distribution: Following response to initial submittal, print and distribute copies to the Architect/ Engineer, subcontractors, and other concerned parties required to comply with submittal dates indicated. Post copies in the field office.
- G. When revisions are made, distribute 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 construction activities.

1.03 ADMINISTRATIVE SUBMITTAL

Refer to General Conditions and other Contract Documents for requirements for administrative submittal. Such submittal shall include, but are not limited to:

- A. Permits.
- B. Applications for payment.
- C. Performance and payment bonds.
- D. Insurance certificates.
- E. Inspection and test reports are included in Section 01400 Quality Control.

1.04 CONTRACTOR'S SUBMITTALS

Submittals to be in accordance with the following, but not limited to:

- A. General Conditions.
- B. Construction Schedule.
- C. Weekly Progress Reports.
- D. Contractor's Price Breakdown "Schedule Of Values".
- E. Outline of construction sequence of the work, as specified, and as construction requirements become more evident. Relate outline to construction schedule and contractor price breakdown. Submit document for review prior to commencing work at the site.

1.05 SUBMITTALS/SHOP DRAWINGS

- A. Wherever called for in these Specifications or on the Drawings, or where required by the Architect/ Engineer, the Contractor shall furnish to the Architect/ Engineer for review, three (3) copies of each submittal. The term "submittal" as used herein shall be understood to include detail design calculations, shop drawings, fabrication and installation drawings, erection drawings, lists, graphs, operating instructions, catalog sheets, data sheets, samples and similar items. Where required, each submittal shall contain a photocopy of the governing technical section. Any deviation from the governing technical section shall be noted and referenced to the appropriate paragraph of the section. Unless otherwise required, said submittals shall be submitted to the Architect/ Engineer at a time sufficiently early to allow review of same by the Architect/ Engineer and to accommodate the rate of construction progress required under the Contract.
- B. All shop drawings or other submittals shall be accompanied by the Contractor's standard

submittal transmittal form as approved by the Architect/ Engineer. Any submittal not accompanied by such a form, or where all applicable items on the form are not completed, will be returned for re-submittal. The Contractor may authorize a material or equipment supplier to contact the Architect/ Engineer directly with regard to questions pertaining to submittals, however, ultimate responsibility for the accuracy and completeness of the information contained in the submittal shall remain with the Contractor.

- C. Normally, a separate transmittal form shall be used for each specific item or class of material or equipment for which a submittal is required. Transmittal of a submittal of various items using a single transmittal form will be permitted only when the items taken together constitute a manufacturer's "package" or are so functionally related that expediency indicates review of the group or package as a whole. A multiple-page submittal shall be collated into sets, and each set shall be stapled or bound, as appropriate, prior to transmittal to the Architect/ Engineer.
- D. Except as may otherwise be provided herein, the Architect/ Engineer will return prints of each submittal to the Contractor with his comments noted thereon, within fifteen (15) working days following their receipt by the Architect/ Engineer. It is considered reasonable that the Contractor shall make a complete and acceptable submittal to the Architect/ Engineer by the second submission of a submittal item. The Owner reserves the right to withhold monies due the Contractor to cover additional costs of the Architect/ Engineer's review beyond the second submission.
- E. If two (2) copies of a submittal are returned to the Contractor marked "NO EXCEPTIONS TAKEN," formal revision and re-submission of said submittal will not be required. Owner will retain (1) copy.
- F. If two (2) copies of a submittal are returned to the Contractor marked "MAKE CORRECTIONS NOTED," formal revision and resubmission of said submittal will not be required. However, all corrections must be made or noted prior to fabrication. Owner will retain (1) copy.
- G. If one (1) copy of the submittal is returned to the Contractor marked "REVISE AND RESUBMIT," the Contractor shall revise said submittal and shall resubmit three (3) copies of said revised submittal to the Architect/ Engineer.
- H. If one (1) copy of the submittal is returned to the Contractor marked "REJECTED," the Contractor shall revise said submittal and shall resubmit three (3) copies of said revised

submittal to the Architect/ Engineer.

- I. If one (1) copy of the submittal is returned to the Contractor marked "SUBMIT SPECIFIED ITEM," the Contractor shall make another complete submittal of three (3) copies of the item required by the Specifications.
- J. Fabrication of an item shall not be commenced before the Architect/ Engineer has reviewed the pertinent submittals and returned copies to the Contractor marked either "NO EXCEPTIONS TAKEN," or "MAKE CORRECTIONS NOTED," unless allowed otherwise by the Architect/ Engineer. Revisions indicated on submittals shall be considered as changes necessary to meet the requirements of the Contract Drawings and Specifications and shall not be taken as the basis of claims for extra work.
- K. All Contractor submittals shall be carefully reviewed by an authorized representative of the Contractor prior to submission to the Architect/ Engineer. Each submittal shall be dated, signed and certified by the Contractor as being correct and in strict conformance with the Contract Drawings and the Specifications, unless approved otherwise by the Architect/ Engineer. Any variation from the specifications, if any, and a written explanation of the need for a change shall be noted on the submittal. Any non-certified submittals may be returned to the Contractor without action taken by the Architect/ Engineer, and any delays caused thereby shall be the total responsibility of the Contractor.
- L. The Architect/ Engineer's review of Contractor submittals shall not relieve the Contractor of the responsibility for the correctness of details and dimensions. The Contractor shall assume all responsibility and risk for any misfits due to any errors in Contractor-submitted submittals. Any fabrications or other work performed in advance of the receipt of approved submittals shall be entirely at the Contractor's risk and expense. The Contractor shall be responsible for the dimensions and the design of adequate connections and details.
- M. Sheet Size: Except for templates, patterns and similar full-size Drawings, submit Shop Drawings on sheets at least 8 - 1/2" x 11" but no larger than 24" x 36".

1.06 CONTRACTOR'S SCHEDULES

- A. Contractor's construction schedule shall be prepared and submitted to the Architect/ Engineer in accordance with the provisions of Section 01310.

1.07 SUBMITTAL OF PROPOSED EQUIVALENT PRODUCTS

- A. All materials, processes or equipment which are to be listed and provided shall comply with the General Conditions.

1.08 SAMPLES

- A. Unless otherwise specified, whenever in the Specifications samples are required, the Contractor shall submit not less than one (1) sample of each such item or material to the Architect/ Engineer for approval at no additional cost to the Owner.
- B. Samples, as required herein, shall be submitted for approval a minimum of fifteen (15) working days prior to ordering such material for delivery to the job site, and shall be submitted in an orderly sequence so that dependent materials or equipment can be assembled and reviewed without causing delays in the work.
- C. All samples shall be individually and indelibly labeled or tagged, indicating thereon all specified physical characteristics and Manufacturer's names for identification and submittal to the Architect/ Engineer for approval. Upon receiving approval of the Architect/ Engineer, one (1) set of the samples will be stamped and dated by the Architect/ Engineer and returned to the Contractor, one (1) set will be retained by the Architect/ Engineer, and one (1) set of samples shall remain at the job site until completion of the work.
- D. Unless otherwise specified, all colors and textures of specified items will be selected by the Owner from the Manufacturer's standard colors and standard product lines.

1.09 SPECIAL JOB-SITE SUBMITTALS

- A. Hazardous Chemical Inventory:
 - 1. In order to comply with the State of Washington's Hazard Communication Standard (Chapter 296-62-054 through 05427 WAC), the Owner requires the contractor to provide a complete inventory of all potentially hazardous chemicals which the Contractor (including sub-contractors) will bring into or produce at the work site. This inventory shall be submitted to the Owner and Architect/Engineer no later than three days prior to the chemicals arrival to the site. Specific information for each chemical, in the form of Material Safety Data Sheets (MSDS), and the personal protective equipment required for working with the materials (respirators, special clothing, etc.) shall be included in the submittal.
 - 2. The Contractor shall revise this information as necessary (i.e. when new chemicals are brought onto or produced at the worksite), with updates forwarded to the Owner and Architect/Engineer. A complete and accurate copy of this information shall be

immediately available at the Contractor's worksite office for reference by Owner representatives and the Contractor's employees during the Contractor's working hours.

3. Submit MSDS information for all chemicals or hazardous materials. All chemicals and hazardous materials shall meet NIOSH Permissible Exposure Levels (P.E.L.) and OSHA Time Weighted Average (T.W.A.). All MSDS information shall be submitted in bound three ring binders and tabulated by specification section. A copy of all MSDS information shall be kept on the job site.

1.10 TECHNICAL MANUALS

- A. The Contractor shall furnish to the Architect/ Engineer three (3) identical sets of technical manuals when required. Each set shall consist of one or more volumes, each of which shall be bound in a standard size, 3-ring, looseleaf, vinyl plastic hard cover binder suitable for bookshelf storage. Binder ring size shall not exceed 2.5 inches. Manuals shall be furnished to the Architect/ Engineer within thirty (30) days of delivery of each item of equipment to the construction site, unless required otherwise by the Architect/ Engineer.
- B. The technical manuals shall include the following for each item of mechanical and electrical equipment:
 1. Complete operating instructions, including location of controls, special tools or other equipment required, related instrumentation, and other equipment needed for operation.
 2. Lubrication schedules, including a list of acceptable lubricants from at least three (3) different major manufacturers whose products are locally available.
 3. Preventive maintenance procedures and schedules.
 4. Parts lists, by generic title and identification number, complete with exploded views of each assembly, including the weights of individual components weighing over one hundred (100) pounds.
 5. Disassembly and reassembly instructions.
 6. Name and location of nearest supplier and spare parts warehouse.
 7. Recommended troubleshooting and startup procedures.
 8. Reproducible prints of the as-built diagrams, schematics, and installation drawings required under the electrical and instrumentation portions of these Specifications.

1.11 SPARE PARTS LISTS

- A. The Contractor shall furnish to the Architect/ Engineer three (3) identical sets of spare parts information for all mechanical, electrical and instrumentation equipment when required. The spare parts list shall include the current list price of each spare part. The spare parts list shall be limited to those spare parts which each Manufacturer recommends be maintained by the Owner in inventory at the plant site. Each Manufacturer or supplier shall indicate the name, address and telephone number of its nearest outlet of spare parts to facilitate the Owner in ordering. The Contractor shall cross-reference all spare parts lists to the equipment numbers designated in the Specifications or on the Drawings. The spare parts lists shall be bound in standard size, 3-ring, looseleaf, vinyl plastic hard cover binders suitable for bookshelf storage. Binder ring size shall not exceed 2.5 inches.

1.12 RECORD DRAWINGS

- A. The Contractor shall keep and maintain, at the job site, one (1) record set of Specifications, Addenda, Change Orders, modifications, full-size Contract Drawings and Shop Drawings. On these he shall mark all project conditions, locations, configurations, and any other changes or deviations which may vary from the details represented on the original Contract Drawings, including buried or concealed construction and utility features which are revealed during the course of construction. Special attention shall be given to recording the horizontal and vertical location of all buried utilities that differ from the locations indicated, or which were not indicated on the Contract Drawings. Said Record Drawings shall be supplemented by any detailed sketches as necessary or directed to indicate, fully, the work as actually constructed. These master Record Drawings of the Contractor's representation of as-built conditions, including all revisions made necessary by addenda, change orders, and the like, shall be maintained up-to-date during the progress of the work.
- B. In the case of those drawings which depict the detail requirement for equipment to be assembled and wired in the factory, such as motor control centers and the like, the Record Drawings shall be updated by indicating those portions which are superseded by final Shop Drawings, and by including appropriate reference information describing the Shop Drawings by Manufacturer, drawing and revision numbers.
- C. Record Drawings shall be accessible to the Architect/ Engineer at all times during the construction period and shall be delivered to the Architect/ Engineer upon completion of the work.
- D. Requests for partial payments will not be approved if the Record Drawings are not kept

current, and not until the completed Record Drawings, showing all variations between the work as actually constructed and as originally shown on the Contract Drawings or other Contract Documents, have been inspected by the Architect/ Engineer.

- E. Final payment will not be approved until the Contractor-prepared Record Drawings have been delivered to the Architect/ Engineer. Said up-to-date Record Drawings may be in the form of a set of prints with carefully plotted information overlaid in pencil.
- F. Upon completion of the work and prior to final acceptance, the Record Drawings shall be turned over to the Architect/ Engineer for transmittal to the Owner. See specification Section 01700, "Project Closeout" for submittal requirements.

1.13 SUPERINTENDENT'S RESUME

- A. If requested by the Architect/ Engineer and/or Owner, and prior to execution of the Agreement, the Contractor shall submit to the Architect/ Engineer the experience resume of the person who will be designated Construction Superintendent While this person shall serve at the pleasure of the Contractor, he shall be replaced on this project at the option of the Owner(s) upon five (5) days written notice.

1.14 PERMITS. LICENSES. AND CERTIFICATES

For the Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, and similar documents, correspondence and records established in conjunction with compliance with standards and regulations bearing upon performance of the work.

PART I - GENERAL

1.01 SCOPE OF WORK

- A. This section specifies reports and schedules when required by the Owner's Representative for planning and monitoring the progress of the work.

1.02 SUBMITTAL PROCEDURES

- A. Preliminary Schedule: Within ten (10) calendar days after receiving the Notice of Award, the Contractor shall furnish to the Architect/Engineer a preliminary schedule for the work showing his general plan for orderly completion of the work and showing in detail his planned mobilization of materials and equipment, sequence of early operations, and timing of procurement of materials and equipment. The Contractor shall assist the Architect/Engineer in reviewing and evaluating such schedule.
- B. Detailed Schedule: Within fifteen (15) calendar days after receiving the Notice to Proceed, the Contractor shall furnish to the Architect/Engineer a detailed schedule for orderly completion of the work showing his planned sequences of operations and the dates for commencement and completion of all important features of the work.
 - 1. The schedule shall be comprehensive, covering both activities at the site of the work and off-site activities such as design, procurement and fabrication. The schedule shall show the time allowed for testing and other required procedures prior to the work being put into operation. The schedule shall be orderly and realistic, and shall be revised as necessary to meet this requirement. The Contractor shall promptly advise the Architect/Engineer of any occurrence requiring substantial revision of the schedule and shall furnish a revised schedule within ten (10) calendar days after receipt.
 - 2. The detailed schedule and each revision thereof shall be subject to approval by the Architect/Engineer for conformity with the requirements of this section. The Contractor shall assist the Architect/Engineer in reviewing and evaluating each schedule furnished. Disapproved schedules will be returned to the Contractor, shall be revised by him to correct the defects noted, and shall be re-submitted to the Architect/Engineer within ten (10) calendar days after receipt.
- C. The Architect/Engineer may require the Contractor to modify any portions of the work schedule that become infeasible because of "activities behind schedule" or for any other valid reason. An activity that cannot be completed by its original latest completion date shall

be deemed to be behind schedule.

- D. The Contractor shall submit three (3) copies of each schedule required.

1.03 SCHEDULE MONITORING

- A. Not later than the fifth day of each calendar month, the Contractor shall provide a copy of the construction schedule with notes thereon indicating the percentage of completion of each subdivision of the work on the last day of the previous month and the deviations from the schedule. Contract time extensions shall be incorporated into updated schedules, reflecting their effect at the time they occur.

1.04 CHANGE ORDERS

- A. Upon approval of a change order, the approved change shall be reflected in the next submittal by the Contractor.

1.05 SPECIFIC ACTIVITY REQUIREMENTS

- A. General Categories: The construction schedule shall, as a minimum, be divided into the following general categories or similar items as approved by the Architect/Engineer:
1. Mobilization
 2. Demolition
 3. Electrical/Security
 4. Clean-up and Demobilization
- B. Winter Work: All work shall continue through the winter unless allowed otherwise by the Contract Documents. Work that cannot be completed shall be completed in the spring on a schedule approved by the Owner.
- C. Construction Schedule: The construction schedule shall include for removing equipment or structures from operation.

PART I - GENERAL

1.01 SITE INVESTIGATION AND CONTROL

- A. The Contractor shall verify all dimensions in the field and shall check field conditions continuously during construction. The Contractor shall be solely responsible for any inaccuracies built into the work due to his failure to comply with this requirement.
- B. The Contractor shall inspect related and appurtenant work and shall report in writing to the Architect/ Engineer any conditions which will prevent proper completion of the work. Failure to report any such conditions shall constitute acceptance of all site conditions, and any required removal, repair replacement caused by unsuitable conditions shall be performed by the Contractor at his expense.

1.02 INSPECTION OF THE WORK

- A. The work shall be conducted under the general observation of the Architect/ Engineer and shall be subject to inspection by representatives of the Architect/ Engineer acting on behalf of the Owner to insure strict compliance with the requirements of the Contract Documents. Such inspection may include mill, plant, shop or field inspection, as required. The Architect/ Engineer shall be permitted access to all parts of the work, including plants where materials and equipment are manufactured or fabricated. The Contractor shall at all times provide access to the work by representatives of any government agencies.
- B. The presence of the Architect/ Engineer or any inspector(s), however, shall not relieve the Contractor of the responsibility for the proper execution of the work in accordance with all requirements of the Contract Documents. Compliance is a duty of the Contractor, and said duty shall not be avoided by any act or omission on the part of the Architect/ Engineer or any inspector(s).
- C. All materials and articles furnished by the Contractor shall be subject to rigid inspection, and no materials or articles shall be used in the work until they have been inspected and accepted by the Architect/ Engineer or his authorized representative. No work shall be backfilled, buried, cast in concrete, hidden or otherwise covered until it has been inspected by the Architect/ Engineer or his authorized representative. Any work so covered in the absence of inspection shall be subject to uncovering. Where un-inspected work cannot be uncovered, such as in concrete cast over reinforcing steel, all such work shall be subject to demolition, removal and reconstruction under proper inspection, and no additional payment or time for completion will be allowed therefore.

1.03 TIME OF INSPECTION AND TESTS

- A. Samples and test specimens required under these Specifications shall be furnished and prepared for testing in ample time for the completion of the necessary tests and analyses before said articles or materials are to be used. The Contractor shall furnish and prepare all required test specimens at his own expense. Except for compaction testing, performance of all required tests will be borne by the Contractor at no cost to the Owner.
- B. Whenever the Contractor is ready to backfill, bury, cast in concrete, hide or otherwise cover any work under the Contract, he shall notify the Architect/ Engineer not less than 24 hours in advance to request inspection before beginning any such work of covering. Failure of the Contractor to notify the Architect/ Engineer at least 24 in advance of any such inspections shall be reasonable cause for the Architect/ Engineer to order a sufficient delay in the Contractor's schedule to allow time for such inspections and any remedial or corrective work required; and all costs of such delays, including its effect upon other portions of the work, shall be borne by the Contractor.

1.04 SAMPLING AND TESTING

- A. When not otherwise specified, all sampling and testing shall be in accordance with the methods prescribed in the current standards of the ASTM, as applicable to the class and nature of the article or materials considered; however, the Owner reserves the right to use any generally-accepted system of inspection which, in the opinion of the Architect/ Engineer, will insure the Owner that the quality of the workmanship is in full accord with the Specifications.
- B. Any waiver of any specific testing or other quality assurance measures, whether or not such waiver is accompanied by a guarantee of substantial performance as a relief from the specified testing or other quality assurance requirements as originally specified, and whether or not such guarantee is accompanied by a Performance Bond to assure execution of any necessary corrective or remedial work, shall not be construed as a waiver of any technical or qualitative requirements of the Specifications.
- C. Notwithstanding the existence of such waiver, the Architect/ Engineer shall reserve the right to make independent investigations and test as specified in Paragraph 1.04 D, following; and upon failure of any portion of the work to meet any of the qualitative requirements of the Specifications, shall be reasonable cause for the Architect/ Engineer to require the removal or correction and reconstruction of any such work.

- D. In addition to any other inspection or quality assurance provisions that may be specified, the Architect/ Engineer shall have the right to independently select, test and analyze, at the expense of the Owner, additional test specimens of any or all of the materials to be used. Results of such tests and analyses shall be considered along with the tests or analyses made by the Contractor to determine compliance with the applicable specifications for the materials so tested or analyzed; provided that wherever any portion of the work is discovered, as a result of such independent testing or investigation by the Architect/ Engineer, which fails to meet the requirements of the Specifications, all costs of such independent inspection and investigation, and all costs of removal, correction, and reconstruction or repair of any such work shall be borne by the Contractor.

1.05 RIGHT OF REJECTION

- A. The Architect/ Engineer, acting for the Owner, shall have the right, at all times and places to reject any articles or materials to be furnished hereunder which, in any respect, fail to meet the requirements of these Specification, regardless of whether the defects in such articles or materials are detected at the point of manufacture or after completion of the work at the site. If the Architect/ Engineer or inspector, through an oversight or otherwise, has accepted materials or work which are defective or which are contrary to the Specifications, such as material, no matter in what stage or condition of manufacture, delivery or erection, may be rejected by the Architect/ Engineer for the Owner.
- B. The Contractor shall promptly remove rejected articles or materials from the site of the work after notification of rejection.
- C. All costs of removal and replacement of rejected articles or materials as specified herein shall be borne by the Contractor.

END OF SECTION 01400

PART I - GENERAL

1.01 CONTRACTOR'S PARTS AND EQUIPMENT

- A. General: It shall be the contractor's responsibility to provide parts and equipment that is adequate for the performance of the work under this Contract within the time specified, at the Contractor's expense. All parts and equipment shall be kept in satisfactory operating condition, shall be capable of safely and efficiently performing the required work, and shall be subject to inspection and approval by the Architect/ Engineer at any time within the duration of the Contract. All work hereunder shall conform to the applicable requirements of the WISHA and OSHA Standards for Construction.
- B. Separate Contracts: Whenever portions of the work hereunder are let under separate contracts, all of the provisions of this section shall apply to each such prime contractor, including requirements for separate field offices and communications facilities.
- C. Construction Lighting: All work conducted at night or under conditions of deficient daylight shall be suitably lighted to insure proper work and to afford adequate facilities for inspection and safe working conditions.
- D. Construction Wiring: All wiring for temporary electric light and power shall be installed and maintained in first-class manner, and shall be securely fastened in place. All electrical facilities shall conform to the requirements of the WISHA and OSHA Safety and Health Standards for Construction.
- E. Separation of Circuits: Unless otherwise permitted by the Architect/ Engineer, circuits separate from lighting circuits shall be used for all power purposes.
- F. Fire Protection: The construction and all other parts of the work shall be connected with the Contractor's water supply system and shall be adequately protected against damage by fire. Hose connections and hose, water casks, chemical equipment, or other sufficient means shall be provided for fighting fires in the temporary structures and other portions of the work, and responsible persons shall be designated and instructed in the operation of such fire apparatus so as to prevent or minimize the hazard of fire. The Contractor's fire protection program shall conform to the requirements of the WISHA and OSHA Standards for Construction.
- G. Heating Units: Provide temporary heating units that have been tested and labeled by UL, FM or another recognized trade association related to the type of fuel being consumed.

- H. Temporary Offices: Provide prefabricated or mobile units or similar job-built construction with lockable entrances, operable windows and serviceable finishes. Provide heated units on foundations adequate for normal loading.
- I. Temporary Toilet Units: Provide self-contained single occupant toilet units of the chemical, aerated recirculation, or combustion type, properly vented and fully enclosed with a glass fiber reinforced polyester shell or similar nonabsorbent material. Toilets shall conform to the requirements of the WISHA and OSHA Standards For Construction.
- J. First Aid supplies: Comply with governing regulations.
- K. Fire Extinguishers: Provide hand-carried, portable UL-rated, class "ABC" fire extinguishers for temporary offices.

1.02 UTILITIES

- A. General
 - 1. Engage the appropriate local utility company to install temporary service or connect to existing service. Where the company provides only part of the service, provide the remainder with matching, compatible materials and equipment; comply with the company's recommendations.
 - 2. Arrange with the company and existing users for a time when service can be interrupted, where necessary, to make connections for temporary services.
 - 3. Provide adequate capacity at each stage of construction. Prior to temporary utility availability, provide trucked-in services.
- B. Water Supply: Water for construction and testing purposes will be supplied to the Contractor at no cost from the existing potable water systems as necessary during the course of the work to the extent it is available from the existing water supply at the site. The Contractor shall install a backflow preventor at the connection to the existing system, if required. The Contractor shall not waste water.
- C. Removal of Water Connections: Before final acceptance of the work on the project, all temporary connections and piping installed by the Contractor shall be entirely removed, and all affected improvements shall be restored to their original condition, or better, to the satisfaction of the Architect/ Engineer and Owner.
- D. Power: The Contractor shall purchase from the local utility all necessary power required for his operation under this Contract, and shall provide and maintain all temporary power lines required to perform the work in a safe and satisfactory manner.

- E. Approval of Electrical Connections: All temporary connections for electricity shall be subject to approval of the Architect/ Engineer and Owner, and shall be removed in like manner at the Contractor's expense prior to final acceptance of the work.
- F. Telephone Services: The Contractor shall provide and maintain at all times during the progress of the work, at his own expense, not less than one (1) telephone in good working order, at his own field construction office. Each such telephone shall be connected to an established exchange for toll service and with all other telephones utilized by the Contractor.
- G. Telephone Use: The Contractor shall permit the Architect/ Engineer, the Owner, or their authorized representatives or employees free and unlimited use of said telephone facilities for all calls that do not involve published toll charges. Calls originated by the Architect/ Engineer, the Owner, their authorized representatives or employees which involve toll or message unit charges shall be billed to the Owner by the Contractor at the rates charged him by the telephone company.

1.03 SAFETY

- A. General: Appropriate first aid facilities and supplies shall be kept and maintained by the Contractor at the site of the work. All persons within the construction area shall be required to wear protective helmets. In addition, all employees of the Contractor and his subcontractors shall be provided with, and required to use, personal protective and life saving equipment as set forth in the WISHA and OSHA Safety and Health Standards for Construction.

1.04 INSTALLATION GENERAL

- A. Use qualified personnel for installation of temporary facilities. Locate facilities where they will serve the Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required.
- B. Provide each facility ready for use when needed to avoid delay. Maintain and modify as required. Do not remove until facilities are no longer needed, or are replaced by authorized use of completed permanent facilities.
- C. Provide weatherproof, grounded electric power service and distribution system of sufficient size, capacity, and power characteristics during construction period. Include meters, transformers, overload protected disconnects, automatic ground-fault interrupters and main distribution switch gear.

- D. Install and operate temporary lighting that will fulfill security and protection requirements, without operating the entire system, and will provide adequate illumination for construction operations and traffic conditions.
- E. At each telephone, post a list of important and emergency telephone numbers.
- F. Locate field offices, storage sheds, sanitary facilities and other temporary construction and support facilities for easy access.
- G. Maintain temporary construction and support facilities until near Substantial Completion. Remove prior to Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to the Owner.
- H. Provide temporary heat required by construction activities, for curing or drying of completed installations or protection of installed construction from adverse effects of low temperatures or high humidity. Select safe equipment that will not have a harmful effect on completed installations or elements being installed. Coordinate ventilation requirements to produce the ambient condition required and minimize consumption of energy.
- I. Provide insulated, weather tight temporary offices of sufficient size to accommodate required office personnel at the Project site. Keep the office clean and orderly for use for small meetings.
- J. Install self-contained toilet units. Shield toilets to ensure privacy. Use of pit-type privies will not be permitted.
- K. Provide containerized tap-dispenser bottled-water type drinking water units.
- L. Provide temporary enclosure for protection of construction in progress and completed, from exposure, foul weather, other construction operations and similar activities.

1.05 BARRICADES WARNING SIGNS AND LIGHT

Comply with standards and code requirements for erection of structurally adequate temporary barricades. Paint with appropriate colors, graphics and warning signs to inform personnel and the public of the hazard being protected against. Where appropriate and needed provide lighting, including flashing red or amber lights.

1.06 SUPERVISION

Enforce strict discipline in use of temporary facilities. Limit availability of temporary facilities to essential and intended uses to minimize waste abuse.

1.07 MAINTENANCE

Maintain facilities in good operating condition until removal. Protect from damage by freezing temperatures and similar elements.

1.08 TERMINATION AND REMOVAL

- A. Unless the Architect/ Engineer requires that it be maintained longer, remove each temporary facility when the need has ended, or when replaced by authorized use of a permanent facility, or no later than Substantial Completion.
- B. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with the temporary facility. Repair damaged work, clean exposed surfaces and replace construction that cannot be satisfactorily repaired.
- C. Materials and facilities that constitute temporary facilities are property of the contractor. At Substantial Completion, clean and renovate permanent facilities that have been used during the construction periods.
- D. Replace significantly worn parts and parts that have been subject to unusual operating conditions. Replace lamps that are burned out or noticeably dimmed by substantial hours of use.

END OF SECTION 01500

PART I - GENERAL

1.01 EXPLOSIVES AND BLASTING

- A. The use of explosives shall not be allowed.

1.02 DUST ABATEMENT

- A. The Contractor shall furnish all labor, equipment and means required and shall carry out effective measures wherever and as often as necessary to prevent his operation from producing dust. The Contractor shall be responsible for any damage resulting from any dust originating from his operations. The dust abatement measures shall be continued until the Contractor is relieved of further responsibility by the Architect/ Engineer.

1.03 RUBBISH CONTROL

- A. During the progress of the work, the Contractor shall keep the site of the work and other areas used by him in a neat clean condition, and free from any accumulation of rubbish. The Contractor shall dispose of all rubbish and waste materials of any nature occurring at the work site, and shall establish regular intervals of collection and disposal of such materials and waste. He shall also keep his haul roads free from dirt, rubbish and unnecessary obstructions resulting from his operations. Equipment and material storage shall be confined to areas approved by the Owner. Disposal of all rubbish and surplus materials shall be off the site of construction, at the Contractor's expense, all in accordance with all applicable safety laws, and to the particular requirements of the WISHA and OSHA Safety and Health Standards for Construction.

1.04 SANITATION

- A. The Contractor shall establish a regular collection of all sanitary and organic wastes. All wastes and refuse from sanitary facilities provided by the Contractor, or organic material wastes from any other source related to the Contractor's operations, shall be disposed of away from the site in a manner satisfactory to the Architect/ Engineer and in accordance with all laws and regulations pertaining thereto. Disposal of all such wastes shall be at the Contractor's expense. Comply with requirements of NFPA 241 for removal of combustible waste material and debris. Enforce requirements strictly. Do not hold materials more than seven (7) days during normal weather or three (3) days when the temperature is expected to rise above 80 degrees F (27 degrees C). Handle hazardous, dangerous, or unsanitary waste

materials separately from other waste by containerizing properly. Dispose of material in a lawful manner.

1.05 CHEMICALS

- A. All chemicals used during project construction or furnished for project operation, whether disinfectant, polymer, reactant or of other classifications, shall show approval of the U.S. Environmental Protection Agency and maintain Safety Data Sheets (SDS) for all materials contained on site and turned over to Owner. Use of all such chemicals and disposal of residues shall be in strict accordance with the printed instructions of the manufacturer
- B. See Specification Section 01300, Submittals for procedures for the use of chemicals or hazardous materials at the job site.

END OF SECTION 01560

PART I - GENERAL

1.01 GENERAL

- A. This Section specifies administrative and procedural requirements governing the Contractor's selection of products for use in the Project.
- B. The Contractor's Schedule of Submittal IS included under Section 01300, "Submittal."
- C. Standards: Refer to Section "Definitions and Standards" for applicability of industry standards to products specified.

1.02 DEFINITIONS

- A. Definitions used in this Article are not intended to change the meaning of other terms used in the Contract Documents, such as "specialties," "systems," "structure," "finishes," "accessories," and similar terms. Such terms are self-explanatory and have well recognized meanings in the construction industry.
- B. "Products" are items purchased for incorporation in the Work, whether purchased for the Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
- C. "Named Products" are items identified by manufacturer's product name, including make or model designation, indicated in the manufacturer's published product literature, that is current as of the date of the Contract Documents.
- D. "Materials" are products that are substantially shaped, cut, worked, mixed, finished, refined or otherwise fabricated, processed, or installed to form a part of the Work.
- E. "Equipment" is a product with operational parts, whether motorized or manually operated, that requires service connections such as wiring or piping.

1.03 QUALITY ASSURANCE

- A. Source Limitations: To the fullest extent possible, provide products of the same kind, from a single source.
- B. Compatibility of Options: When the Contractor is given the option of selecting between two or more products for use on the Project, the product selected shall be compatible with products previously selected, even if previously selected products were also options.

1.04 PRODUCT DELIVERY. STORAGE. AND HANDLING

- A. Deliver, store and handle products in accordance with the manufacturer's recommendations using means and methods that will prevent damage, deterioration and loss, including theft.

- B. Schedule delivery to minimize long-term storage at the site and to prevent overcrowding of construction spaces.
- C. 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.
- D. Deliver products to the site in the manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting and installing.
- E. Inspect products upon delivery to ensure compliance with the Contract Documents, and to ensure that products are undamaged and properly protected.
- F. Store products at the site in a manner that will facilitate inspection and measurement of quantity or counting of units.
- G. Store products subject to damage by the elements above ground, under cover in a weather tight enclosure, with ventilation adequate to prevent condensation. Maintain temperature and humidity within ranges required by manufacturer's instructions.

1.05 PRODUCT SELECTION

- A. General Product Requirements: Provide products that comply with the Contract Documents, that are undamaged and, unless otherwise indicated, unused at the time of installation. Products shall be new and free from defects. Products and materials delivered to the job site shall meet the specifications of previously approved submittal.
 - 1. Provide products complete with all accessories, trim, finish, safety guards and other devices and details needed for a complete installation and for the intended use and effect.
- B. Standard Products: Where available, provide standard products of types that have been produced and used successfully in similar situations on other projects.
- C. Product Selection Procedures: Product selection is governed by the Contract Documents and governing regulations, not by previous Project experience. Procedures governing product selection include the following:
 - 1. Proprietary Specification Requirements: Where only a single product or manufacturer is named, provide the product indicated. No substitutions will be permitted without Architect/Engineer approval.
 - 2. Where products or manufacturers are specified by name, accompanied by the term

“or” equal,” or “or approved equal” comply with Section 1.06, “Substitutions” to obtain approval for use of an unnamed product.

3. Descriptive Specification Requirements: Where Specifications describe a product or assembly, listing exact characteristics required, with or without use of a brand or trade name, provide a product or assembly that provides the characteristics and otherwise complies with Contract requirements.
 4. Performance Specification Requirements: Where Specifications require compliance with performance requirements, provide products that comply with these requirements, and are recommended by the manufacturer for the application indicated. General overall performance of a product is implied where the product is specified for a specific application.
- H. Manufacturer's recommendations may be contained in published product literature, or by the manufacturer's certification of performance.
- I. Compliance with Standards, Codes and Regulations: Where the Specifications only require compliance with an imposed code, standard or regulation, select a product that complies with the standards, codes or regulations specified.
- J. Visual Selection: Where specified product requirements include the phrase "...as selected from manufacturer's standard colors, patterns, textures..." or a similar phrase, select a product and manufacturer that complies with other specified requirements. The Owner will select the color, pattern and texture from the product line selected.

1.06 SUBSTITUTIONS

- A. Section 17900, General Provisions for Integrated Security Systems, specifies time restrictions for submitting requests for substitutions during the quote period to requirements specified in this section.
- B. Substitutions after the quote, including during construction, may be considered per Instructions to Respondents and the following:
 1. When a product becomes unavailable through no fault of the Contractor, or
 2. When the delivery of the specified product will adversely impact the Construction Schedule even if ordered with all possible haste.
- C. Document each request with complete data substantiating compliance of proposed Substitution with the Contract Documents.

- D. A request constitutes a representation that the Contractor:
1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product.
 2. Will provide the same warranty for the Substitutions as for the specified products.
 3. Will coordinate installation and make changes to other Work which may be required for the Work to be completed with no additional cost to the Owner.
 4. Waive claims for additional costs or time extension which may subsequently become apparent.
 5. Will reimburse the Owner for review or design services associated with re-approval by authorities.
- E. Substitutions will not be considered when they are indicated or implied on shop drawings or product data submittals, without separate written request, or when acceptance will require revision to the Contract Documents.
- F. Substitution Submittal Procedure:
1. Submit three (3) copies of request for Substitution for consideration on the Substitution Request Form included at the end of this section. Limit each request to one (1) proposed substitution.
 2. Submit shop drawings, product data, and certified test results attesting to the proposed product equivalence.
 3. The Architect/Engineer will notify the Contractor of a decision to accept or reject request, based on the Owner's approval by returning one (1) copy of the request form if a self addressed, stamped envelope was submitted with the substitution request.

1.07 INSTALLATION OF PRODUCTS

- A. Comply with manufacturer's instructions and recommendations for installation of products in the applications indicated. Anchor each product securely in place, accurately located and aligned with other Work.
- B. Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.

END OF SECTION 01600

PART I - GENERAL

1.01 GENERAL

This Section specifies administrative and procedural requirements for Project Closeout.

- A. See General Conditions for project Closeout requirements.

1.02 PRELIMINARY PROCEDURES

Before requesting inspection for certification of Substantial completion, complete the following (list exceptions in the request):

1. Certificates of inspection and acceptance by local governing agencies having jurisdiction.
2. Release from all parties who are entitled to claims against the subject project, property or improvement pursuant to the provisions of law.
3. Advise Owner of pending insurance changeover requirements.
4. Submit specific warranties, workmanship bonds, maintenance agreements, final certifications and similar documents.
5. Obtain and submit releases enabling the Owner unrestricted use of the Work and access to services and utilities; include occupancy permits, operating certificates and similar releases.
6. Submit record drawings, maintenance manuals, and similar final record information.
7. Make final change-over of permanent locks and transmit keys to the Owner. Advise the Owner's personnel of change-over in security provisions.
8. Complete start-up testing of systems, and instruction of the Owner's operating and maintenance personnel. Discontinue or change over and remove temporary facilities from the site, along with construction tools, mock-ups, and similar elements.
9. Complete final clean up requirements, including touch-up painting. Touch-up and otherwise repair and restore marred exposed finishes.

1.03 INSPECTION PROCEDURES

See General Conditions and Division 1 for final inspection requirements.

1.04 FINAL INSPECTION - ACCEPTANCE

See General Conditions for inspection procedures.

1.05 SETTLEMENT

- A. Submit the final payment request with releases and supporting documentation not previously submitted and accepted. Include certificates of insurance for products and completed operations where required.
- B. Submit an updated final statement, accounting for final additional changes to the Contract Sum.

- C. Submit a certified copy of the Architect/ Engineer's final inspection list of items to be completed or corrected, stating that each item has been completed or otherwise resolved for acceptance, and the list has been endorsed and dated by the Architect/ Engineer.

1.06 RECORD DOCUMENT SUBMITTAL

- A. General: Do not use record documents for construction purposes; protect from deterioration and loss in a secure, fire-resistive location; provide access to record documents for the Owner's reference during normal working hours.
- B. Record Drawings: Maintain a clean, undamaged set of blue or black line white-prints of Contract Drawings and Shop Drawings. Mark the set to show the actual installation where the installation varies substantially from the Work as originally shown. Mark whichever drawing is most capable of showing conditions fully and accurately; where Shop Drawings are used, record a cross-reference at the corresponding location on the Contract Drawings. Give particular attention to concealed elements that would be difficult to measure and record at a later date.
 - 1. Prepare and submit the original and two (2) copies of record drawings at settlement.

1.07 MAINTENANCE MANUALS (Operation and Maintenance Manuals "O&M's")

Organize operating and maintenance data into suitable sets of manageable size. Bind properly indexed data in individual binders. Mark appropriate identification on front of each binder. Submit two (2) copies of maintenance manuals for the Owner.

1.08 FINAL CLEANING

Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to the condition expected in a normal, commercial building cleaning and maintenance program. Comply with manufacturers instructions.

- A. Complete the following cleaning operations before requesting inspection for Final Certificate.
 - 1. Remove labels that are not permanent labels.
 - 2. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compound and other substances that are noticeable vision obscuring materials. Replace chipped or broken glass and other damaged transparent materials.
 - 3. Clean exposed exterior and interior hard-surfaced finishes to a dust-free condition, free of stains, films and similar foreign substances. Restore reflective surfaces to their original reflective condition. Leave concrete floors broom clean.
 - 4. Wipe surfaces of mechanical and electrical equipment. Remove excess lubrication and other substances. Clean plumbing fixtures to a sanitary condition. Clean light

fixtures and lamps.

5. Clean the site, including landscape development areas, of rubbish, litter and foreign substances. Sweep paved areas broom clean; remove stains, spills and other foreign deposits. Rake grounds that are neither paved nor planted, to a smooth even-textured surface.

1.09 REMOVAL OF PROTECTION

Remove temporary protection and facilities installed for protection of the Work during construction.

1.10 COMPLIANCE

Comply with regulations of authorities having jurisdiction and safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on the Owner's property. Do not discharge volatile, harmful or dangerous materials into drainage systems. Remove waste materials from the site and dispose of in a lawful manner.

- A. Where extra materials of value remaining after completion of associated Work have become the Owner's property, arrange for disposition of these materials as directed.

1.11 MAINTENANCE AND GUARANTEE

- A. The Contractor shall comply with the guarantee requirements contained in the General Conditions with regard to repairs or replacements.
- B. Replacement of Work, where it has settled below the required finish elevations, work that has fallen out of plumb, work that has lost adhesion or fasteners, work that has become discolored, deflected or disfigured shall be considered as a part of such required repair work, and any repair or resurfacing constructed by the Contractor which becomes necessary by reason of such settlement shall likewise be considered as a part of such required repair work unless the Contractor shall have obtained a statement in writing from the affected private owner or public agency releasing the Owner from further responsibility in connection with such repair or resurfacing.
- C. The Contractor shall make all repairs and replacements promptly upon receipt of written order from the Owner. If the Contractor fails to make such repairs or replacement promptly, the Owner reserves the right to do the work, and the Contractor and his surety shall be liable to the Owner for the cost thereof.
- D. The Contractor shall warrant all work for a period of one (1) year or as specified in all appropriate specification sections and the General Conditions of the Contract Documents.

1.12 BOND

- A. The Contractor shall provide a Bond to guarantee performance of the provisions contained in Paragraph 1.11 above and the General Conditions.

1.13 IN-SERVICE TRAINING

- A. The Contractor must train Owner maintenance personnel in the operation and maintenance of the Integrated Security System. Coordination must be maintained with systems designers for developing the hours of instruction and scope of material to be covered. Training of Owner personnel must not begin until the Owner has approved the final submittal copy of the Operation and Maintenance Manual.
- B. Schedule Submittal: The proposed scope of training and materials and instruction schedule must be submitted for review and approval. Mutually agreeable dates for training must be arranged with the Owner maintenance personnel, but the training must be completed before final acceptance of the facility.

PART I - GENERAL

1.01 GENERAL

- A. This Section specifies general administrative and procedural requirements for warranties and bonds required by the Contract Documents, including manufacturer's standard warranties on products and special warranties.
- B. Refer to the General Conditions for terms of the Contractor's special warranty of workmanship and materials.
- C. General closeout requirements are included in Section 01700 "Project Closeout."

1.02 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, nor does it relieve suppliers, manufacturers, and subcontractors required to countersign special warranties with the Contractor.

1.03 WARRANTY REQUIREMENTS

- A. Related Damages and Losses: When correcting warranted Work that has failed, remove and replace other Work that has been damaged as a result of such failure or that must be removed and replaced to provide access for correction of warranted Work.
- B. Reinstatement of Warranty: When Work covered by a warranty has failed and been corrected by replacement or re-building, 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 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. Submit written warranties to the Owner prior to the date of Settlement.

**SECTION 11 6100
STAGE EQUIPMENT SPECIALIST**

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes: This section covers the general requirements for the specialty fabricator / installer firm responsible for the specialty work of demolition of existing theater stage rigging controls elements, and the furnishing, delivering, installing and testing of selected theater stage rigging controls, including any or all incidental or related items necessary to complete the work shown on the TR series drawings and as described in each referenced Section of the Specifications listed below, even though the incidental items may not be specifically listed or described.

1.02 RELATED SECTIONS

- A. Section 11 6133 Rigging Systems and Controls

1.03 INTEGRATION

- A. The Specialty Fabricator/Installer firm defined herein shall be responsible for all the work listed in subsection 1.02 above.
- B. The Specialty Fabricator/Installer firm defined herein shall be responsible for all required Electrical design and required Electrical Engineering, including the procurement of any Electrical Permitting, and Electrical Installation Labor, Raceway, Wiring, and any and all necessary miscellaneous materials required for the complete installation of motorized stage rigging equipment.
- C. Drawings and general provisions of the Contract, including General and other Conditions and other Division 1 - General Requirements sections, apply to the work specified in this Section.

1.04 REFERENCES

- A. The following listed codes, standards, and regulations refer to the latest current edition and are to be considered a part of this Section: ASTM, AISC, NEC, NESC, NEMA, NFPA, UL, IEEE, ANSI, USITT, ESTA, OSHA, and IBC.
- B. Understand and comply with all prevailing local, community, city, county, state, and national codes, and standards, as well as applicable labor and wage requirements and regulations.

1.05 DEFINITIONS

- A. Provide: Furnish and Install equipment, unless otherwise noted.
- B. Furnish: To purchase and/or fabricate, assemble and deliver to the site.
- C. Install: To physically install equipment in the intended location in the project.

1.06 SYSTEM DESCRIPTION

- A. Refer to individual 'Related Sections' listed above.

1.07 QUALIFICATIONS

- A. The Work referenced in this specification section shall be performed by a qualified and experienced stage specialty equipment fabricator / installer properly qualified in the practice of manufacturing, fabricating sub-assemblies and installation of final equipment elements for standard and heavy stage equipment systems.
- B. Fabricator: Full-service heavy stage rigging and drapery fabricator utilizing permanent employees as primary means of fabrication and installation labor, with a minimum of 5 consecutive years documented experience in projects of a similar scope, licensed as a contractor in the state of Washington, prior to the bid date.
 - 1. Fabricator shall have local, authorized and trained warranty support staff, experienced in repair, replacement and technical support for rigging, track and drapery systems, for entire period of warranty. Support staff may be direct employees or subcontracted.

2. Fabricator shall employ a project manager who shall be assigned to this project, who shall be a Factory Authorized installer of ETC Stage Rigging products.
- C. Installer: Project manager must possess a minimum of 10 years' experience with similar projects and shall be a Factory Authorized installer of ETC Stage Rigging products. On-site supervisor of employees and subcontracted installers must possess experience with installations of the type and complexity proposed for this project and equal to that of the fabricator.
 1. If installation labor services are subcontracted by the Stage Specialty Equipment Fabricator/Installer, the installation subcontractor shall meet the same requirements for licensing as a contractor in the State of Washington, equal to the Stage Specialty Equipment Fabricator / Installer firm.
 2. The subcontracted installation firm shall include an ETCP Certified Rigger as part of the crew available to be at the jobsite daily during rigging installation work.
 3. Include with the specialty stage equipment fabricator/installer subcontractor bid to a bidding general contractor, the name of any subcontracted installation labor firm, with evidence of State of Washington, current contractor's license.
- D. The qualified specialty fabricator installer shall be a firm which meets or exceeds the following minimum standards, and can, upon request, provide objective documentation of qualification:
 1. Provide list of not less than 10 successful projects of similar scope, including current reference contact, photographs of work and detailed list of work scope.
 2. Provide company profile information, including bonding capacity, bonding underwriter, list of any past claims against bonding, whether performance bond or payment.
 3. Provide resumes of key project staff that would be assigned to the project.
 4. Provide list of manufacturers whose equipment is regularly purchased and/or utilized by the candidate firm on past projects.
 5. Provide evidence that bidding company and any installers subcontracted to same are licensed as contractors in State of Washington are in compliance with all wage and labor requirements, including, but not limited to compliance with prevailing wage requirements.
 6. Provide evidence that any installers subcontracted to bidding company have the experience with installation of the kind and type of rigging systems equal to that of the bidding company. Experience with unrelated types of rigging shall not be considered as equivalent.
- E. Acceptance of a firm as the specialty fabricator / installer for the theater stage equipment work shall not constitute approval of any products which the firm manufactures for themselves or represents as being manufactured under their own brand label. Refer to the product specification and approval requirements in the 'Related Sections' listed above for the separate requirements to obtain prior approval of substitute products.

1.08 PRE-APPROVED STAGE EQUIPMENT FABRICATOR-INSTALLERS

- A. Stagecraft Industries – Portland, OR & Seattle, WA. (503) 286-1600
- B. VIP Productions – Spokane, WA. (509) 747-4804
- C. Bellevue Lighting – Renton, WA. (425) 230-5230
- D. Or others approved by Owner and Theater Consultant prior to bid.

1.09 SUBMITTALS

- A. Submit under provisions of Division 1.
- B. Existing Field Conditions: The Contractor shall obtain and record actual field verified dimensions, to be included and incorporated in all Submittal Shop Drawings.
- C. Shop Drawings

1. Provide complete detailed shop drawings and diagrams of all systems for review prior to fabrication.
 2. Refer to individual 'Related Sections' listed above.
 3. Product data sheets & shop drawings shall be submitted as electronic pdf files. Shop drawings for plan and elevation views of system layout shall be submitted as pdf files, at same size as contract drawings. Small equipment drawings may be submitted as 11x17 size pdf files, only when equipment being documented is not better represented on the larger format shop drawings.
 4. Intent of drawing size requirements is for simplification of management of drawings during review, transmission during review and record storage.
- D. Samples: Provide working samples of specified equipment if requested by Theater Consultant.
- E. Test Data and Calculations: Provide engineering calculations for all manual and motorized equipment covered or referenced by this specification section, demonstrating safe working load ratings, ultimate breaking strength ratings, dynamic load factors and other structural and mechanical data supportive of safe, proper functionality.
- F. Certificates: Refer to individual 'Related Sections' listed above.
- G. Additional Documentation:
1. Provide objective, third-party sourced or confirmed documentation of full compliance with the requirement of subpart 1.07 above, including all sub-parts within 1.07, along with product and systems submittals/shop drawings.
 2. Include in the submittal package, any content identified on the TR drawings as needing documentation, even if in addition to any requirements for submittal / shop drawings listed in the specification.

1.10 CLOSEOUT SUBMITTALS

- A. Conform to provisions of Division 1.
- B. Maintenance and Operating Data and Instructions to Owner's Personnel: Conform to provisions of Division 1
- C. Project Record Documents: Conform to provisions of Division 1
- D. Refer to individual 'Related Sections' listed above.

1.11 QUALITY ASSURANCE

- A. Specialty Fabricator / Installer shall provide a quality assurance plan document that is in compliance with the General requirements of the project documents.
- B. Specialty Fabricator / Installer shall regularly assess progress of the project and plan work scheduling and installation requirements in accordance with the Quality Assurance plan.
- C. In order to maintain appropriate levels of integrated coordination, the Contractor shall not break out any of the Work listed above in 'Related Sections' to have it performed directly to the Contractor by the vendor or manufacturer. Said work shall remain under the umbrella of the theater stage specialty fabricator / installer as stipulated herein.

1.12 PRE-INSTALLATION CONFERENCE

- A. Arrange, in accordance with Division 1
- B. Attendance: Contractor, theater stage specialty fabricator / installer, Owner's Representative, Architect, Theater Consultant, manufacturer's representative, and those requested to attend.
- C. Meeting Time: Minimum 2 weeks prior to beginning work of this Section and work of related Sections affecting work of this Section.
- D. Location: Project Site.

1.13 DELIVERY, STORAGE, AND HANDLING

A. Conform to provisions of General Requirements and manufacturer's instructions.

1.14 PROJECT CONDITIONS

A. Verify existing conditions are acceptable for installation, prior to execution of work.

1.15 FIELD MEASUREMENTS

A. Verify field measurements before beginning fabrication.

1.16 WARRANTY

A. Conform to Warranty provisions specified in General Requirements, with modifications as per 'Related Sections' listed above where modifications exceed General Requirements.

1.17 SYSTEM START-UP

A. Facility Start-up and Adjusting: Conform to provisions of General Requirements, with modifications as per 'Related Sections' listed above where modifications are in excess of General Requirements.

1.18 COMMISSIONING

A. Conform to provisions of General Requirements, with modifications as per 'Related Sections' listed above where modifications are in excess of General Requirements.

PART 2 PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

A. Refer to individual 'Related Sections' listed above.

B. Substitution Requests: Conform to provisions of Division 1, with additional provisions as specified in 'Related Sections' listed above.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify conditions as satisfactory to receive work of this Section before beginning.

3.02 ERECTION / INSTALLATION / APPLICATION

A. Conform to manufacturer's instructions and provisions of Contract Documents.

3.03 FIELD QUALITY CONTROL

A. Conform to Independent Inspections and Testing requirements under Division 1

B. Site Tests: Refer to individual 'Related Sections' listed above.

C. Inspection: Refer to individual 'Related Sections' listed above.

D. Manufacturers Field Service: Refer to individual 'Related Sections' listed above.

3.04 ADJUSTING

A. Inspect and make adjustments after installation.

B. Repair or replace defective installations.

C. Refer to individual 'Related Sections' listed above.

3.05 CLEANING

A. Leave installations clean and premises free from residue and debris from work of this Section.

3.06 PROTECTION

A. Refer to individual 'Related Sections' listed above.

END OF SECTION 11 6100

**SECTION 11 6133
RIGGING SYSTEMS AND CONTROLS**

PART 1 GENERAL

1.01 DIVISION OF RESPONSIBILITY

- A. Stage Drawings and general provisions of the Contract, including General and Special Conditions and other Division 01 - General Requirements sections, apply to the work specified in this Section.
- B. Section 11 61 00 of the Specifications applies to the Work specified in this Section.

1.02 WORK INCLUDED

- A. Replace existing motorized stage rigging controls system with new ETC VFD Motor Starter Boxes and Foundation Controller. Remove and dispose of all system components which are no longer necessary for system operation.
- B. Provide and install new stage rigging controls, for existing motorized stage rigging sets as a complete unit, & include all necessary mounting hardware, accessories, fittings, & fastenings. Provide all necessary labor, materials, equipment, services and transportation as required for the complete installation of the work as described herein.

1.03 SUBMITTALS

- A. Shop Drawings: Submit shop drawings in plan & elevation, including detailed information of typical rigging elements and drapery, for all stage equipment hereinafter specified. Show anchorage, hardware, operating equipment and all components required for a complete system. Drawings shall be same size as the Contract Drawings.
- B. Manufacturer's Product Data: In accordance with Section 11 6100, submit pertinent product data and general catalog information for each controls system component. Catalog data shall include part numbers for products intended for use herein. Provide a "Schedule of Drapery" listing fabric type, weight, color and size required. Include track style, method of attachment and length required.

1.04 SUBSTITUTIONS

- A. SUBSTITUTIONS: Refer to Division 01 and Section 11 6100 for product substitution requirements and minimum performance standards.
- B. Products by all other manufacturers must be submitted for approval by Owner and Theater consultant prior to submission of Bid, per requirements in Division 01 and Section 11 6100. If products substituted at bid time are later found to not meet specifications during submittal review, the original specified product shall be used.
- C. An acceptable substitution must be a product of functionally and visually equivalent design, construction and performance. The Contractor must submit all pertinent information required to substantiate that the products are functionally equivalent. The Contractor must submit all additional information, including test data, which may be requested in order for the Owner's Representative and Theatre Consultant to fully evaluate the substitution. The burden of proof is solely on the Contractor. Submission of data for Request to Approve Substitute Product shall occur early during the Bid Period to allow Owner and Consultant proper review time.
- D. All additional expenses of any kind with respect to substitution(s) shall be borne by the Contractor. This shall include, but not be limited to, all fees and expenses incurred by the Architect and other related sub-consultants for evaluation of the substitution and subsequent integration into the project should the substitution be taken and/or additional costs of other Contractors related to the substitution(s).

1.05 DELIVERY, STORAGE, AND PROTECTION

- A. Do not deliver rigging components, drapery tracks, or stage drapery until the building is ready for installation. Protect from damage during delivery, handling, and storage. Protect drapery from damage by dust, dirt and the work of all other trades.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Acceptable Manufacturer: ETC, Inc., which is located at: 3031 Pleasant View Rd. P. O. Box 620979; Middleton, WI 53562-0979; Tel: 608-831-4116; Fax: 608-836-1736; Email: [requestinfo \(mail@etcconnect.com\)](mailto:requestinfo@mail@etcconnect.com); Web: <https://www.etcconnect.com>

2.02 CONTROLS

- A. Basis of Design: Foundation rigging motor control system as manufactured by ETC, Inc.
1. General: For control system.
 - a. Entire motor system to be operated by a Foundation rigging control system.
 - b. Purpose-built to manage and operate motors designed for overhead lifting.
 - c. Incorporate mechanical, electrical and safety features inherent to equipment.
 - d. Capable to control up to 48 motors.
 - e. Two motor communication connections, supplying 24 motors per connection.
 - f. A surface or panel mounted primary controller and up to six external E-stop stations.
 - g. UL Listed and fabricated from UL Listed components.
 - h. Emergency Stop and Hold-To-Run Dead-man signals between control station and motor starters or drives in the motors to be hard wired 24 Volt signals.
 - 1) Use physical, industrial heavy-duty pushbuttons to create a "dead-man" signal. "Dead-man" requires operator to be at the console and pressing a button to initiate and continue motion.
 - 2) Software and bus communications to transmit signals is not acceptable.
 - i. Control System: Foundation controller, power and control distribution infrastructure, and motors. Separate drive cabinets or motor-starters are not acceptable.
 2. Enclosure: Foundation HD wall-mount rigging control console.
 - a. Side Panels of Control System: Machined out of solid Aluminum. Thickness: 0.25 inch (6 mm) minimum.
 - b. Wall Mount Bracket and Face Panel: 16 ga powder coated sheet steel formed to provide installation support.
 - 1) Wall Mount Bracket: Mountable independent of control station. Run in and terminate all wires on connectors just with the installed wall bracket.
 3. Face Panel: Printed labeling identifying button functions. Identifies system as a controller for stage rigging.
 4. Display: High resolution, full color, multitouch LCD. Articulates in Foundation Desk.
 5. Buttons and Joystick:
 - a. Power Button: One, with a power indication LED.
 - b. USB Port: One, readily accessible for connection of a memory stick for use with file transfer, inspection reports, log files, and software updates.
 - c. "GO" Buttons: Two, illuminated and dimmable.
 - d. Proportional Joystick:
 - 1) Incorporate one dead man button.
 - 2) Incorporate two illuminated and dimmable RGB LEDs that indicate direction, function, and status of Joystick.
 6. Emergency Stop (E-Stop): Hardwired NFPA-79 compliant mushroom head button with illuminated ring surrounding button.
 - a. Ring will blink in case of E-stop condition, illumination level is adjustable.

- b. Software or serial bus E-Stop systems are not acceptable.
- c. Controller to support up to six remote E-stop stations.
- d. LCD Screen: 18 inches (450 mm) industrial grade multitouch LCD display communicates system information in symbols, colors, and readable text.
 - 1) Control system employs an ambient light sensor and proximity sensor for automatic wakeup of display.
 - 2) Intensities of indicator lights and LCD intensity are dimmable and automatically adjust based on ambient light conditions.
- e. User Access Levels: Six access levels with differentiated functionality. Controllers without password-protected user access levels are not acceptable.
- 7. User Access Levels: Six access levels with differentiated functionality. Controllers without password-protected user access levels are not acceptable.
- 8. Manual Operation: Directly move up to four selected motors simultaneously.
- 9. Preset Operation: Store up to 999 presets with numbers ranging from 1 to 999.
- 10. Cue Stack Operation: User capabilities.
 - a. Store cues with numbers ranging from 0.01 to 999.99.
- 11. Locked Group Operation: Supports the control of multiple hoists connected to a single load. All hoists assigned to a Locked Group will:
 - a. Be selected for manual movement whenever any single hoist in the group is selected.
 - b. Move in the same direction, up or down.
 - c. Respond to a fault, such as an overload or slack line condition, in any of the hoists assigned to the group.
 - d. Stop movement if programmed position deltas fall outside of user-defined parameters.
- 12. File Operation: Store and read show-files on internal hard-drive and USB thumb drive.
- 13. Help System: Provide online help system embedded in console.
- 14. Remote Enable Pendant: With a 50 ft (15.24 m) long attached cable and plug.
- 15. System Diagnostics and Monitoring:
 - a. Automatic Self-Tests.
 - b. System Inspection Reminder.
 - c. Faults and Failures.
 - d. System and Individual Motor History.
- 16. Inspection: On-Board software allows easy and quick annual inspection of control system functions by a factory trained and authorized inspector.

2.03 MOTOR STARTER BOXES

- A. Motor Starter Boxes shall be built to integrate with existing VFD motors, limit switches, and all other existing system components as described in the drawings and as-built documents.
- B. Motor Starter Boxes shall integrate seamlessly with Foundation Controller described above.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Inspection/Preparation: Prior to fabrication and installation, verify all motors, limit switches, and other components to remain are in proper working condition. Replace any components which are found to be in a non-functioning state.
- B. Operating Effectiveness: Install all hardware components and motor starter boxes so that all equipment is accessible, yet does not constrict or conflict with the theatrical use of the stage.

- C. Set trim heights so all draperies maintain not greater than 1 inch nor less than 1/4 inch gap between bottom hem and floor, when lineset is at working trim.

3.02 SYSTEMS TESTING, TRAINING AND DEMONSTRATION

- A. After installation is complete, thoroughly test, adjust and demonstrate to Owner's personnel, or their representatives, all systems for correct, smooth and safe operation.
- B. Tests and inspections during the progress of the work, and for final approval shall include any or all of the following tests, inspections and operations as the Owner may deem appropriate, but not limited to:
 - 1. Operation of new control system.
 - 2. Saving of presets and batten trim levels.
 - 3. User lockout and system access levels.
- C. Provide two (2) 4-hour training sessions for designated staff members selected by the Owner, to demonstrate safety practices and proper operation of stage rigging controls system during the first session. Second session shall cover maintenance and periodic adjustments and testing of rigging controls.

3.03 CLOSE-OUT DOCUMENTS

- A. Comply with requirements as set forth in Division 01, except where specific requirements listed in this Section are more stringent.
- B. Warranty/Guarantee: All equipment shall be warranted to be free from defects in material and workmanship for a period of two (2) years. Refer to Division 01 for general requirements related to Closeout Procedures & Closeout Submittals for the start of the warranty period. Provide written warranty/guarantee to Owner.
- C. Operation/Maintenance Manuals: Provide operation and maintenance manuals. Manuals shall consist of operation, safety, and maintenance recommendations. Operation and maintenance manuals shall include as-built drawings, parts data, flameproof certificate(s) and written warranty/guarantee. Refer to Division 01 for general requirements related to Closeout Procedures & Closeout Submittals for Operation & Maintenance Manuals.

END OF SECTION 11 6133

PART 1 - GENERAL

1.01 SCOPE OF WORK

Furnish and install all labor, material, equipment, facilities and transportation required for providing electrical power, data and other systems as indicated by the Contract Drawing and Specifications. All work shall be in complete compliance with all local, State and National applicable codes, and as approved by Owner. Items not specifically mentioned in the Specifications or noted on the Drawings, but which are necessary for a complete properly functioning installation, shall be included as a part of these Contract Requirements.

1.02 GENERAL REQUIREMENTS

- A. Conditions of the Contract and Division 1, as indexed, apply to this section.
- B. If any discrepancies between this section and Division 1 should arise, Division 1 shall take precedence.

1.03 DEFINITIONS

- A. "Provide" shall mean "furnish and install".
- B. "Indicated" shall mean "indicated on drawings".
- C. "Noted" shall mean "noted on drawings or specifications".
- D. "Concealed" shall mean "hidden from sight as in trenches, chases, furred spaces or hung ceilings".
- E. "Exposed" shall mean "not concealed" as defined above.
- F. References within Division 16 to "Contractor" also referred as "the Contractor" or "this Contractor" shall mean "the Electrical Subcontractor".

1.04 DRAWING METHOD

- A. The drawings are diagrammatic. The size and location of equipment are drawn to scale wherever possible but some symbols are distorted dimensionally to obtain clarity in representation.
- B. It is intended that all outlets be located symmetrically with Architectural elements and coordinated with existing raceways and outlets.
- C. The plans and specifications are complimentary and everything called for in either document is as binding as if called for in both.

1.05 CODES, PERMITS AND FEES

- A. Contractors shall secure and pay for all necessary permits and inspections required to complete all work shown, specified and intended under the scope of this DIVISION.
- B. All work shall comply with the current requirements of all applicable local, state and national codes and ordinances.
- C. It shall be the responsibility of the contractor to fully inform himself of all such requirements.

- D. If any conflict occurs between these rules and the drawings and specifications, the rules are to govern. This does not relieve the contractor of complying with any requirements of the plans and specifications which are in excess of codes and regulations.

1.06 WORKMANSHIP

- A. All work shall be performed by skilled, qualified workmen, with adequate experience in their trade to execute all work intended.
- B. All work shall be done in accordance with manufacturer's instructions and recommendations, except where the drawings or these specifications specifically indicate other instructions.

1.07 GUARANTEE

Per General Conditions.

1.08 SUBMITTALS

- A. Contractor shall submit shop drawings and/or manufacturer's data on equipment to be used to Owner for approval in accordance with requirements on DIVISION 1. Submittal review and/or approval does not relieve the Contractor to provide a workable, safe project. No equipment subject to approval shall be purchased or installed without approved shop drawings/submittal. The burden of proof of equality for substitute equipment or materials and of specifications compliance rests with the Contractor.
- B. All electrical submittals shall be submitted at one time, not piecemeal.
- C. Contractor shall submit data for all materials and equipment he proposes to use and furnish.
- D. The submittal data shall be as follows:
1. Catalog Cuts: To be furnished for all standard (off the shelf) catalog items. Catalog cuts shall show the manufacturer, catalog number and complete specifications including rating, finish, dimensions, kind of material used, etc.
 2. Shop Drawings: To be furnished for all nonstandard or un-cataloged items. Shop drawings shall show manufacturer, manufacturer's type designation and complete specifications, including rating, finish, dimensions, kind of materials, etc.
- E. All submittals shall be coded or keyed to match the drawing or specification designation.
- F. Provide accurate "as-built" record documents, per requirements of DIVISION 1.
- G. Also provide all manufacturer's warranties, and all applicable data on operation, maintenance, parts, etc., as a part of the project O & M Manuals, per DIVISION 1, for the above items.

1.09 REVISIONS

There shall be no changes regarding the intent of the Drawing, Specifications or materials previously approved without the written approval of the Owner. Any changes believed to be necessary by the Contractor shall be brought to the attention of the Owner for his approval.

1.10 EXISTING EQUIPMENT AND MATERIALS

Existing equipment, conduit runs and wiring are shown only as a guide, and may vary from that shown on the drawings.

PART 2 - MATERIALS

2.01 MATERIALS

All materials and equipment used on this project shall be new, in an unused condition when delivered to the site and are required to bear the UL label.

2.02 OR EQUAL PRODUCTS - SUBSTITUTIONS

- A. Items of equipment or materials referred to in these specifications and on the Drawing are used for the purpose of establishing a quality and standard of materials. Equal materials by manufacturers other than those named in the specification may be used only if submitted and approved as equal products in accordance with requirements of DIVISION 1. Those products which state "or approved equal" must be submitted no later than 96 hours before the quote due date/time.
- B. The Contractor shall be responsible for checking equipment dimensions of proposed substitute equipment and be responsible for its fitting the spaces allowed.
- C. The cost of any redesigning caused by a substitution shall be borne by the Contractor.

PART 3 – EXECUTION

3.01 SITE INSPECTION

- A. Before submitting his quote, the contractor must examine the site of work and ascertain for himself, all physical conditions in relation to the work. No statement that may be made by any officer, agent or Architect of Owner in relation thereto will be binding on the Owner.
- B. The Contractor shall visit the site of the proposed work and familiarize himself with the conditions affecting the work. No additional allowance shall be granted because of lack of knowledge of such conditions. Contractor shall verify all measurements at the building and acquaint himself with the existing conditions before submitting his proposal.

3.02 DEMOLITION

- A. The Contractor shall remove miscellaneous equipment as indicated on drawings or as required by job conditions.

- B. All demolition work shall be closely coordinated with the other trades and requirements of this specification.
- C. All material removed during the demolition phase of the work shall become the property of the Contractor, and shall be removed from the site, unless specifically noted otherwise in DIVISION 1, or on the drawings. This shall include materials such as conduit, outlets, and wiring which was not in use prior to this contract.
- D. All existing equipment which is to be relocated shall be removed and reinstalled at a time convenient to the Owner. Permission for removal must be obtained from a designated representative of the Owner before any work is started and equipment must be reinstalled in the new location in as short a time as possible, utilizing normal working hours.
- E. Make fixture or equipment mounting modifications if required or directed.
- F. All existing equipment left remaining shall be maintained in service. When encountered in work, whether shown on the drawings or not, protect, brace and support existing active sewers, gas, electric, or other services where required for proper execution of the work. If existing active electrical services are encountered that require relocation in order to execute general, electric or mechanical work, relocate services as required and/or directed without additional cost to the Owner. Any equipment, which is not specifically indicated for removal or is not shown or noted shall remain in service.
- G. Cap off and abandon or remove existing services as required where existing equipment is disconnected or removed.

3.03 SCHEDULING AND CONTINUITY OF SERVICE

- A. The work must be so scheduled that there will be no prolonged shutdown of electrical services. This shall be done as part of the Contract as no extras will be allowed for maintaining electrical systems at all times they are required.
- B. The Contractor is advised that the work on this project is phased to suit the requirements of the Owner in regard to the school facility's educational process. During construction, it may be necessary to make temporary connections or installations to accommodate the phased nature of the work. Some work may need to be installed and then reinstalled in order to satisfy the operational requirements of the Owner. Power changeover for existing loads shall be made in the smallest possible increments with branch circuit by branch circuit reconnection required wherever possible.
- C. The controlling issue governing the work described under Division 16 shall be: DE-ENERGIZING OF ANY FEEDER, SWITCHBOARD, PANEL, BRANCH CIRCUIT OR OTHER EXISTING ELECTRICAL DEVICE OR ITEM SHALL BE AFFECTED ONLY AFTER NOTIFICATION AND SCHEDULING WITH THE OWNER'S PROJECT COORDINATOR.
- D. The Contractor shall prepare written proposed schedules for all systems, feeders, panels and branch circuits to be de-energized and submit same to the Owner's project

coordinator seven days in advance of the first schedule item for approval. Schedules shall include at least the following:

1. specific load to be de-energized
 2. proposed date and time to be de-energized and re-energized
 3. backup plan should an emergency occur during the outage period (for critical data)
- E. Proposed Contractor schedules are subject to adjustment by the Owner.
- F. The Contractor is advised that the above notification and scheduling requirement may necessitate rescheduling, partial completion and reconnection, overtime work at night or on weekends or delay of the work. Contractor costs incurred due to the above shall be included in the original quote price and shall not be the cause for additional claims or charges to the Owner.

3.04 EQUIPMENT MOUNTING

- A. Provide backboards where indicated on the Drawings. Backboard shall be ¾" plywood (AD grade), one side finished smooth, painted with two coats of white fire retardant paint. Sizes as indicated on the Drawings.
- B. Electrical equipment requiring service, maintenance or manual operation shall be mounted such that the highest point for such service, maintenance or manual operation shall not be more than 6'-6" above the permanent floor or other working surface.
- C. Verify the physical dimensions of each item of electrical equipment to fit the available space and promptly notify the Owner prior to roughing-in, if conflicts appear. Coordination of equipment to the available space and to the access routes through the construction shall be the Contractor's responsibility.

3.05 CUTTING AND PATCHING

- A. Cutting of concrete or other building materials shall be avoided where possible. Holes through concrete or masonry shall be made only with a core drill. All masonry or other finishes damaged or cut into during the installation of this work must be replaced or repaired with materials of like kind and quality as the original materials by skilled labor experienced in that particular building trade.
- B. Openings for electrical work shall be carefully caulked or grouted as required. Provide firestopping at all electrical penetrations.
- C. All cutting in the building construction made necessary to admit work, repair defective materials, defective workmanship, or by neglect of this Contractor to properly anticipate his requirements, shall be done. Patching shall be complete in every detail.
- D. All exterior wall penetrations shall be sealed / caulked with material equal to General Electric silicone construction sealants.

- E. All roof penetrations shall be flashed by a qualified roofing contractor normally in the business of commercial roofing. Flashing shall be in accordance with NRCA standard practices.

3.06 EXCAVATION AND BACKFILL

- A. This Contractor shall include in his quote the complete excavation and backfill cost required to install his work as specified under Division 16 (Electrical) of this specification and that of the utilities affecting the electrical work. Contractor shall provide all necessary excavation, shoring and backfilling required for the proper installation of his work, inside building and premises, or outside as may be necessary.
- B. Exercise extreme care while excavating in the area of existing utilities. Check carefully for location of all possible utilities, whether shown on the drawings or not, and establish the location of all cutoff valves and switches for ready shutoff in case of an emergency. This Contractor shall be completely responsible for all damage to any utility caused by him in excavation, as well as damage to personnel and property caused by said damaged utility.
- C. Dig trenches to the uniform width required for the particular item to be installed, sufficiently wide to provide ample working room.
- D. Where rock is encountered, carry the excavation 6" below the noted elevation, and backfill with a 6" layer of sand prior to installing raceway.
- E. Grade bottoms of trenches to provide solid bearing for the entire body of the raceway.
- F. No cinders shall be used for backfill materials.
- G. No underground lines shall be covered until the installation has been viewed by inspectors having jurisdiction and the Owner. All trenches near or under footings or utility tunnels shall be cut only after approval of the Owner's Representative. All backfilling of such trenches shall be in accordance with Owner's directions.
- H. All items of grading which will in any manner affect the bearing capacity of the soil foundation upon which will be placed floor slabs, walls, columns, footings, pipe beds, and all external backfill under paved areas shall be performed to the following specifications:
1. Compaction testing shall conform to ASTM 1557 modified proctor.
 2. Compact to:
 - 95% density for fills under all interior and exterior concrete slabs, and in all streets.
 - 90% density elsewhere.
- I. Compact carefully against foundation, basement and retaining walls so as not to create excessive pressure on walls. Backfilling shall be compacted in 8" maximum lifts.

- J. Backfill trenches with concrete where trench excavations pass within 18" of column or wall footings and which are carried below the bottom of such footings. Place concrete to the level of the bottom of the adjacent footings.
- K. Approved site material not containing rocks in excess of 8" diameter may be used for compacted backfill in amounts available. Additional approved backfill materials shall be furnished by the Contractor.
- L. Excess earth shall be removed from the site and disposed of by the Contractor at his expense.
- M. Protect adjoining properties, existing sidewalks and other improvements to remain. If damaged, repair or replace as directed by the Owner.
- N. Proper approvals shall be obtained in accordance with applicable City, County and/or State regulations.
- O. All safety regulations must be observed.
- P. Prevent spillage during hauling operations. In case of spills, clean streets by means of proper sweepers or other approved methods.

3.07 PROTECTION AND CLEANING

- A. The Contractor shall provide adequate means for protection and shall fully protect all material and equipment against damage from any causes during the progress of the work and until acceptance by the Owner.
- B. All materials and equipment, both when in storage and during construction, shall be covered in such a manner that no finished surfaces will be damaged or marred.
- C. At the time of final cleanup, all fixtures and equipment, new or existing, shall be thoroughly cleaned and left in condition for use. All debris and unused materials shall be removed from the construction site, leaving the premises in a clean condition.
- D. Site shall be kept clean on a day-to-day basis.

3.08 COMPLETION, TESTING AND CLEAN UP

Upon completion of all electrical work, the Contractor shall thoroughly clean all equipment and premises of any tools, crates, boxes, wire, etc., related to the electrical work. Contractor shall perform all tests required by the Owner, or to comply with local, state, or federal regulations. Tests shall assure a complete, balanced and safe operating system, including, but not limited to, all tests required by the sections of these Specifications.

3.09 FINAL INSPECTION (S), CORRECTIONS AND PAYMENT

During pre-final and final inspection, the electrical sub-contractor shall have a representative present for removal and replacement of any ceiling tile, box face plates, panel fronts, etc., requested by the Owner for inspection purposes. A written list of unacceptable conditions, required changes, etc., will follow inspection and the Contractor shall immediately make changes, corrections, etc., required. Final contract payment will not be made until this has

been completed to Owner's satisfaction. Refer also to applicable sections of DIVISION 1, particularly SPECIAL CONDITIONS.

3.10 CHECKLIST

PROJECT FINALIZATION AND START UP ELECTRICAL SYSTEMS			
SYSTEM	SUBMITTED OR DEMONSTRATED BY	OWNER'S REPRESENTATIVE	DATE
Written Guarantee Received			
Operations and Maintenance Manuals Received			
As-Built Drawings Received			

"I, the Contractor, associated factory representative and subcontractors, have started each system and the total system; and have proved their normal operation to the Owner's representative and have instructed him in the operation and maintenance thereof."

Owner's Representative

Contractor

PART 1 - GENERAL

1.01 SCOPE OF WORK

- A. Provide new raceway as required for the complete installation of electrical equipment as shown on the Drawings. All raceway shall be concealed unless noted otherwise.
- B. Existing raceways may be reused if size and routing is compatible with new requirements.
- C. Verify field measurements shown on Drawings.
- D. Raceway routing shown on Drawings is approximate unless dimensioned. Route raceway as required to meet project conditions.
- E. Where raceway routing is not shown and destination only is indicated, determine exact routing and lengths required.

1.02 CODES AND STANDARDS

- A. If any conflict occurs between legally adopted codes and this Specification, the codes are to prevail except that this shall not be construed as relieving the Contractor from complying with any requirements of the plans or specifications which may be in excess of code requirements and not contrary to same. Notify Owner of conflicts in the documents with regulations prior to commencing work.
- B. All materials and equipment installed, shall have been tested and listed by Underwriters Laboratories (or other code recognized laboratory) unless otherwise permitted by the Code Inspector and the Owner.
- C. NFPA No. 70 National Electric Code (as adopted and amended by RCW 19.28, WAC 296.46, and WAC 296-401; Laws, Rules and Regulations for Installing Electric Wires and Equipment.
- D. The Contractor is required to familiarize himself with the detailed requirements of these standards and any local codes and ordinances as they affect the installation of specific electrical systems.

1.03 SUBMITTALS

Manufacturer's name, model or type number and catalog cut. Supply parts replacement / ordering information as part of O & M manuals.

1.04 EXECUTION

- A. Prohibited Locations
Electrical metallic tubing shall not be installed underground or in concrete.
- B. Required Locations
 - 1. Rigid steel conduit shall be utilized for all above-grade exterior runs, for all conduit bends installed underground, and for all runs in concrete or masonry.
 - 2. Surface metal raceways shall be used only in finished areas where surface

raceways are required by building conditions, and where specifically noted on the drawings.

3. Rigid non-metallic, schedule 40 PVC conduit shall be utilized for underground. Rigid galvanized steel shall be used in those runs for conduit bends.
4. Electric metallic tubing shall be used in all locations not noted above.

1.05 INSTALLATION

In general, all new raceways shall be concealed unless specifically noted otherwise. Installation shall conform to the best trade practice in all respects. Make runs parallel or at right angles to structural framing, properly supported, and protected.

PART 2 - MATERIALS

2.01 RIGID GALVANIZED STEEL CONDUIT (RGS) AND INTERMEDIATE METAL CONDUIT (IMC)

- A. Hot dipped galvanized
- B. Fittings. Galvanized malleable iron or non-corrosive alloy compatible with galvanized conduit. Set screw type fittings must be steel.

2.02 RIGID ALUMINUM CONDUIT

Not permitted.

2.03 ELECTRICAL METALLIC TUBING (EMT)

- A. Hot dip galvanized or electrogalvanized, steel tubing.
- B. Couplings and Connectors: Raintight compression; steel. Steel set screw permitted indoors, up to 1-1/2" conduit size.

2.04 FLEXIBLE CONDUIT

- A. Galvanized flexible steel for dry locations. Fittings: steel, Thomas and Betts "Super-Tite" or equal.
- B. Liquid Tight. PVC waterproof cover over flexible steel conduit rated for damp and wet locations. PVC waterproof flex without the steel core is prohibited. Fittings: Thomas and Betts "Super-Tite" or equal.
- C. Flex length limited to 6'-0" maximum length.

2.05 RIGID NON-METALLIC CONDUIT

Polyvinyl chloride, schedule 40, heavy wall, U.L. Listed as manufactured by Carlon or P.W. Pipe. For underground installation (24 inches minimum, 30 inches maximum under grade); provide rigid steel bends in conduit runs.

2.06 SURFACE MOUNTED RACEWAY

Surface mounted raceway shall be steel Wiremold 2000 or approved equal (unless otherwise noted on Drawing), color shall be ivory. Anchorage shall be made using 2 hole strips;

anchors shall be similar to Powers Poly-Toggle cat #2305 and using a 1-1/2" screw.

2.07 EXPANSION FITTINGS

Provide expansion fittings for all rigidly fastened conduits spanning a building expansion joint, and for all runs 1-1/2" or larger exceeding 150 feet in length. Fittings shall be hot-dipped galvanized malleable iron with a packing ring to exclude water, a pressure ring, and a separate external copper bonding jumper.

2.08 UNDERGROUND RACEWAY PULL BOX

- A. Non-traffic areas: Concrete box, Utility Vault Co. #36-1017 or equal with the following essential characteristics:
 - 1. Box: Reinforced, cast concrete with extension.
 - 2. Cover: Steel diamond plate with locking bolts #36-1017C-DPF.
 - 3. Cover Marking: ELECTRICAL, TELEPHONE, or as shown.
 - 4. Size: 10 inch by 17 inch (minimum).

PART 3 - EXECUTION

3.01 GENERAL

- B. All raceway and power wiring installations shall be performed by a licensed journeyman electrician.
- C. Where possible, raceway runs shall be made above ceiling, in attic spaces, in crawl spaces or pipe tunnels. Conductors shall be run in EMT conduit in concealed spaces. Where concealed installation is not possible, surface mounted raceway shall be used.

3.02 RACEWAY INSTALLATION

- A. All open raceway shall be protected against damage and the entrances of water for foreign materials during construction.
- B. Conduit and surface mounted raceway shall be installed in neat symmetrical lines parallel and/or perpendicular to the ceilings, floors and walls of the building and tunnel construction.
- C. Raceway shall be installed with a minimum separation of 12 inches of free air from steam and hot water pipes and a minimum separation of 3 inches of free air space from all other mechanical piping.
- D. Contractor shall carefully lay out all raceway, boxes, etc. and verify that the existing plumbing, heating, ventilating and other utilities are not rendered inaccessible due to equipment or raceway passing over, under, across, or in close proximity to same, or to cause the devices or fixtures to be inaccessible for use of maintenance.
- E. Conduit routed through ceiling spaces shall be securely fastened to the underside of structural supports. No structure shall be attached to ceiling support systems, HVAC ductwork, or mechanical piping.

- F. No section of conduit shall be longer than 100 feet or contain more than three (3) 90 degree bends between pull points or pull boxes.
 - G. Surface mounted metallic raceway (Wiremold type product) shall be used for surface routing of conductors in offices, classrooms, multipurpose rooms, etc, as indicated on the Drawings. Any proposed surface metallic raceway installed by the Contractor must be pre-approved by the Owner
 - H. Raceway fittings shall be adequately sized to accommodate minimum bend radius of conductors.
 - I. Where conduits penetrate floor slabs, or fire rated walls, they shall be sealed with a water and fire resistant sealant suitable for the fire rating required.
 - J. Surface mounted raceway shall be used only where other routes are unavailable and where it is mutually agreed to be desirable by the Contractor and Owner.
 - K. Metallic raceway shall be continuous and bonded/grounded. Transitions to ceiling, crawl or tunnel spaces are to be made from a junction box on the "concealed space" side of the penetration.
 - L. Rigid non-metallic conduit shall not be used in above grade floor slabs, or in walls or open spaces of any type.
 - M. Flexible conduit shall be used for flush mount receptacles in existing walls and shall be limited to dry locations.
 - N. Where a conduit enters a box or other fitting through a knockout, an approved double locknut and insulating bushing must be provided. All conduits shall be equipped with insulating bushings at all outlets, pullboxes, panels, etc.
 - O. Branch raceway runs are indicated on the Drawings. Except where exact routing is indicated, branch circuit raceways may be grouped, and the actual routing of branch circuit raceways may be altered, providing actual locations are properly entered on the "As-Built" drawings.
 - P. Utilize rigid steel conduit below all roadways. At depths of less than 24" encase in concrete. Over 24" depth, wrap with scotch insulating tape, or utilize conduit with factory applied PVC coating.
 - Q. Minimum size conduit to be 3/4" (metallic and non-metallic) except where a single circuit of two #12 AWG conductors are installed which requires 1/2" conduit minimum. Conduit sizes shown on the drawings supersede these requirements.
 - R. For fire alarm, 1/2" EMT will be allowed for a maximum of 4#14 conductors or a single fire alarm cable (cable not to exceed the NEC fill requirement)."
- 3.03 RIGID GALVANIZED STEEL CONDUIT (RGS)
All connections shall be watertight.
- 3.04 RIGID ALUMINUM CONDUIT
Not permitted

3.05 ELECTRICAL METALLIC TUBING (EMT)

- A. Electrical metallic tubing may be used for circuits concealed in construction and for wiring in furred ceilings and above suspended ceilings.
- B. Electrical metallic tubing may not be used in finished areas unless indicated on the Drawings. Electrical metallic tubing may be used for exposed work in unfinished areas where not exposed to physical damage. Raceways in traffic areas shall be considered exposed to physical damage where within 10 feet of floor.

3.06 FLEXIBLE CONDUIT

- A. Flexible conduit use shall be kept to a minimum (maximum length of 6'-0") and is only allowed in concealed areas, maximum size 3/4". Prior written approval required for size greater than 3/4".
- B. Flexible 1/2 " conduit shall be used to provide raceway in finished walls for flush mount receptacles indicated on Drawings.

3.07 RACEWAYS THAT PENETRATE BUILDING EXTERIOR

- A. The section of the raceway within the wall or roof shall be sealed inside (sealing conduit body and sealant shall be U.L. approved for the application) and around raceway exterior using approved sealant.
- B. All penetrations through building roofing shall be flashed by a qualified roofing contractor normally in the business of commercial roofing. Flashing shall be in accordance with NRCA standard practices.

3.08 BENDS

Bends must be carefully made, to avoid injuring or flattening. Bends 1-1/4" and larger shall be factory elbows or formed utilizing an approved bending process.

3.09 SECURING RACEWAYS, BOXES AND DEVICES

Fasten raceway to frame structures by means of clamps, screws, metal inserts or toggle bolts. Nails not permitted. For installation of surface mounted raceway, boxes and devices onto dry wall, concrete, etc., use two hole straps (for all raceways, both Wiremold and EMT, IMC, RGS types) and anchors similar to Powers Poly-Toggle cat# 2305 and minimum 1-1/2" screw.

3.10 CAP RACEWAY

Cap raceway, during construction, with manufactured seals, to prevent entrance of water or debris. Swab out all raceway before wires are pulled.

3.11 CONDENSATION

Install raceways so as to prevent trapping of seepage or condensation. Slope exterior raceways away from building.

3.12 HANGERS FOR RACEWAYS

- A. In suspended ceiling spaces, Contractor may not attach raceways to the ceiling

suspension system.

- B. When more than two conduits will use the same routing, group together on a patented channel support system (such as Unistrut).

3.13 RACEWAYS INSTALLED ON ROOF AREAS

Raceways installed on roof areas shall be supported using rooftop supports as specified in Section 16190.

PART 1 - GENERAL

1.01 SCOPE OF WORK

- A. A complete system of conductors shall be provided in the raceway system.
- B. Verify field measurements shown on Drawings.
- C. Wire and cable routing shown on Drawings is approximate unless dimensioned. Route wire and cable as required to meet project conditions.
- D. Where wire and cable routing is not shown, and destination only is indicated, determine exact routing and lengths required.

1.02 SUBMITTALS

Manufacturer's name, model or type number and catalog cut. Supply parts replacement/ordering information as part of O&M manuals.

PART 2 – MATERIALS

2.01 PROHIBITED MATERIALS

- A. Type MC cable, similar to Armor Cable and like material.

2.02 MATERIALS

- A. All wiring shall be copper unless specifically noted otherwise. Wiring shall be rated at 600 volts.
- B. Wire sizes 12 and 10 shall be solid, Type THHN (may be stranded for fire alarm signal circuits). Wire sizes 8 and larger shall be stranded, Type THW, THHN/THWN, Minimum wire size shall be 12 AWG, unless noted otherwise.
- C. All wire shall be marked with gauge and insulation type on 24" centers, and color coded as required by the N.E.C.
- D. All wire and cable shall be brought to the job in the original containers bearing the U.L. label.
- E. Molded connectors with metal thread-on core shall be used for splicing 12 and 10 wire. Stranded cable shall be connected to lugs using mechanical connectors and shall be wrapped with electrical tape to a thickness equal to the wire insulation. connecting block.

2.03 ACCEPTABLE MANUFACTURERS

- A. Wire and cable shall be as manufactured by Rome, General Cable, Southwire, Anaconda-Ericcson, Okonite, General Electric, Excell, Manhattan or approved equal.
- B. Molded connectors shall be as manufactured by 3M or Buchanan.
- C. Mechanical connectors shall be manufactured by Burndy, O.Z./Gedney Co., or Thomas & Betts.

- D. Tape shall be manufactured by 3M.
- E. Use approved wire lubricant.
- F. Substitutions may be considered only when submitted in conformance with Division 16010.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. All raceway and power wiring installations shall be performed by a licensed journeyman electrician.
- B. Wires shall be pulled in such a manner as to avoid kinking or abrasion to the insulation. Use only approved lubricants. Oil or grease shall not be used to lubricate wires.
- C. Make sure that all couplings and conduit connectors have pre-insulated busings in place before pulling wires. Pull all conductors into raceway at the same time.
- D. Where more than three current carrying conductors are installed in a single raceway, the minimum wire size shall be increased to comply with NEC 310-16, Note 8. Where the distance from the over current device to the first outlet exceeds 100 feet, the minimum wire size shall be #10 AWG.
- E. All receptacle circuits shall have separate neutrals. No shared neutrals will be allowed. Neutral conductor shall be considered as "current-carrying" for the purpose of applying N.E.C. Table 310-16, Note 8 above.
- F. Provide separate ground bonding conductor full length inside all conduit.
- G. Except where conductor sizes are indicated on the drawings or required to be adjusted by Table 310-16 note 8 or Table B310-11 (derating for more than three current carrying conductors in a raceway), the following schedule shall be adhered to:

CIRCUIT OVERCURRENT DEVICE RATING	CONDUCTOR SIZE
20 amperes or less	12
30 amperes	10
40 amperes	8
50 amperes	6

60 amperes	4
70 amperes	4
80 amperes	3
90 amperes	2
100 amperes	1

- H. Conductor length for parallel feeders shall be identical.
- I. Do not make splices in homeruns.
- J. Make splices, taps and terminations to carry full ampacity of conductors with no perceptible temperature rise.
- K. Provide terminal strip rated for the use (vs molded connector / wire nut) for joining four or more conductors together.

3.02 IDENTIFICATION

- A. Color coding: Color coding shall be as shown below. Where solid color wire installation cannot be obtained, cables shall be coded with plastic vinyl tape, 3M 190-A, 3/4 inch or equal.
- B. Feeder Cables: For writing continuity, all feeder cables shall have each phase identified according to the following color code at all junction boxes and terminals. No exceptions permitted. Left-to-right, top-to-bottom or front-to-rear shall read A-B-C and be color coded as follows:

208Y/120 Volt System

Black	Phase A
Red	Phase B
Blue	Phase C
White	Neutral
Green	Ground

480Y/277 Volt System

Brown	Phase A
Orange	Phase B

Yellow

Phase C

Gray

Neutral

Green

Ground

3.03 FIELD QUALITY CONTROL

- A. Inspect wire and cable for physical damage and proper connection.
- B. Measure tightness of bolted connections and compare torque measurements with manufacturer's recommended values.

PART 1 - GENERAL

1.01 SCOPE OF WORK

Furnish and install pull and junction boxes in all locations shown or required for proper installation of the raceway and wiring systems.

1.02 REGULATORY REQUIREMENTS

- A. Conform to requirements of ANSI/NFPA 70.
- B. Furnish products listed and classified by Underwriters Laboratories, Inc.

1.03 PROJECT CONDITIONS

- A. Verify field measurements as shown on drawings.
- B. Electrical boxes are shown on drawings at approximate locations, unless dimensioned. Install at locations required for box to serve intended purpose.

PART 2 - MATERIALS

2.01 MATERIALS

- A. Provide galvanized sheet steel junction and pull boxes, with screw-on covers, of the type, shape and size to suit each respective location and installation.
 - 1. Type for various locations:
 - a. 100 cubic inches or smaller: Standard outlet box with stamped knockouts.
 - b. 150 cubic inches or larger: Code gauge steel with sides formed and welded, with screw covers unless shown to have hinged doors. Hinged doors shall have locking device same as furnished for panelboards. Knockouts shall be factory stamped, or formed in the field with a cutting tool to provide a clean symmetrically-cut hole.
 - c. Exterior or Wet areas: Weatherproofed galvanized steel construction with proper gaskets and corrosion resistant fasteners.
 - d. Device outlets shall be a minimum of 2-3 inches deep, minimum 4 inches square.

2.02 APPROVED MANUFACTURERS

- A. Pull and junction boxes shall be as manufactured by the following:
 - Appleton Electric Co.
 - Arrow-Hart, Inc.
 - Keystone Columbia, Inc.
 - O.Z.-Gedney Co.

Panelboard/Switchboard manufacturer

PART 3 - EXECUTION

3.01 PROHIBITED INSTALLATION METHODS

No box shall be secured to the ceiling system, HVAC ductwork, or mechanical piping.

3.02 INSTALLATION

- A. Install electrical boxes as shown on drawings and as required for splices, taps, wire pulling in compliance with N.E.C. requirements, in accordance with manufacturer's recommendations and with recognized industry practices to insure that the boxes serve the intended purpose.
- B. Provide pull and junction boxes wherever necessary for proper installation of the various electrical systems.
- C. Provide knockout closures to cap all unused knockout holes where blanks have been removed.
- D. Coordinate and locate boxes to ensure accessibility of electrical wiring.
- E. Secure boxes rigidly to the building element on which they are mounted, or solidly embed boxes in concrete or masonry.
- F. Identify all boxes with label showing the individual feeder or electrical system.
- G. Install electrical boxes to maintain headroom and to present neat appearance.
- H. Install pull boxes and junction boxes above accessible ceilings, crawl spaces, tunnels and in unfinished areas only.
- I. Install boxes to preserve fire resistance rating at partitions and other elements.
- J. Support boxes independently of conduit.

PART 1 - GENERAL

1.01 SCOPE OF WORK

- A. Each wall receptacle device shall be provided with an outlet box.
- B. All outlet boxes shall be of the flush type unless specifically noted otherwise.
- C. Box dimensions shall be selected to meet wiring space requirements. Depth may be limited by building conditions.

1.02 REGULATORY REQUIREMENTS

- A. Conform to requirements of ANSI/NFPA 70.
- B. Furnish products listed and classified by Underwriters Laboratories, Inc.

1.03 PROJECT CONDITIONS

- A. Verify field measurements as shown on drawings.
- B. Electrical boxes are shown on drawings for approximate locations, unless dimensioned. Install at locations required for box to serve intended purpose.

1.04 SUBMITTALS

Per Section 16010.

PART 2 - MATERIALS

2.01 PROHIBITED MATERIALS

Sectional outlet boxes shall not be utilized.

2.02 MATERIALS

- A. Flush outlet boxes shall be galvanized pressed steel, of the knockout type, not less than 4" square, 2-1/8" deep, minimum 14 U.S. gauge, with return flange and screw retained cover.
- B. Provide extension rings for all flush boxes. Boxes which occur in concrete block walls shall be equipped with 1-1/2" square cornered tile extensions.
- C. Outlet boxes installed in surface metallic raceway systems shall be shallow boxes manufactured as part of the system.
- D. Surface mounted outlet boxes shall be utilized only in conjunction with exposed conduits, and shall be of the cast metal type with internal hubs and mounting flanges.

2.03 ACCEPTABLE MANUFACTURERS

- A. Pressed steel boxes shall be as manufactured by Bowers, Raco or Steel City.
- B. Cast metal boxes shall be as manufactured by Bell.
- C. Surface boxes which are part of surface metallic raceway systems shall be manufactured by the same manufacturer as the surface metallic raceway.

- D. Substitutions may be considered only when submitted in conformance with Section 16010.

PART III – EXECUTION

3.01 INSTALLATION

- A. All outlet boxes shall be flush unless specifically noted otherwise.
- B. This Contractor shall carefully lay out all outlets and verify that the existing plumbing, heating, ventilating and other utilities are not rendered inaccessible due to equipment or raceway passing over, under, across, or in close proximity to same, or to cause the devices or fixtures to be inaccessible for use of maintenance.
- C. Any minor changes in the location of outlets from those shown on the plans shall be made without extra charge if so directed by the Owner before installation.
- D. Where different type devices occur adjacent to each other, space outlet boxes so that finish plates will be spaced a minimum of one inch apart.
- E. Contractor shall consult the Owner for height of all outlets which may be in question.
- F. Outlet boxes shall be supported independent from the raceway system.
- G. Where a new outlet occurs near an existing outlet, they shall be mounted at the same height.
- H. Outlets which are shown immediately opposite one another on two sides of a wall shall have boxes sized to prevent contact between the two. Nipples between boxes are prohibited.
- I. Outlets shown immediately opposite one another on two sides of a fire rated wall shall have 24" minimum horizontal separation.
- J. No outlet or group of outlets in a single stud space of a fire rated wall shall have a total opening area larger than 16 square inches.
- K. All unused openings in outlet boxes must be left sealed or closed with plugs.
- L. Grout around all outlet boxes to seal space between box and wall or ceiling materials.
- M. Use two (2) gang box with plaster ring for single device outlets.

3.02 MOUNTING HEIGHTS

In spaces where existing outlets are installed, new outlets shall be mounted at the same height as existing similar outlets. Exception: Outlet height to meet ADA requirements of 15 inches minimum above floor.

PART 1 - GENERAL

1.01 SCOPE OF WORK

- A. Provide wiring devices at all device outlet locations shown on the drawings.

1.02 REGULATORY REQUIREMENTS

- A. Conform to requirements of ANSI/NFPA 70.
- B. Furnish products listed and classified by Underwriters Laboratories, Inc.

PART 2 - MATERIALS

2.01 MATERIALS

- A. Wall switches shall be as follows:

Single Pole Switches	Hubbell #1221-I
3-way Switches	Hubbell #1223-I
Key Switch - Barrel type key switch with on/off marked stainless steel cover plate	Hubbell #HBL1221RKL

- B. Wall receptacles shall be as follows:

Duplex Receptacles

Gray Color for receptacles originating from surge protected electrical panels (including the technology upgrade panels typically labeled as "T1A, T1B, TBA, T2A, etc.):

- 20A Hubbell CR5362GY
- 20A Hubbell GFR5352GYA (GFCI receptacle)
- 20A Hubbell USB20A5GY (with USB power jacks)

Receptacles originating from non-surge protected panels:

- 20A Hubbell CR5362I
- 20A Hubbell GFR5352I (GFCI receptacle)
- 20A Hubbell USB20A5I (with USB power jacks)

2.02 ACCEPTABLE MANUFACTURERS

- A. Acceptable manufacturers shall be as listed above.
- B. P&S and Leviton devices which are the approved equal of those specified above are considered acceptable.
- C. Substitutions may be considered only when submitted in conformance with Section

16010.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Mount devices securely to outlet boxes.
- B. Provide ground straps between each wiring device and its associated outlet box.
Exception: Ground strap not required with self-grounding devices.
- C. Orient receptacles so that ground pin is at bottom or to the right.
- D. All new receptacles shall be mounted 16" above finished floor in compliance with ADA requirements. All receptacles shall be colored as specified in Section 2 of this specification.

PART 1 - GENERAL

1.01 SCOPE OF WORK

- A. Furnish and install metallic, surface mount raceway assemblies in locations as shown on the drawings.

1.02 REGULATORY REQUIREMENTS

- A. Conform to requirements of ANSI/NFPA 70.
- B. Furnish products listed and classified by Underwriters Laboratories, Inc.

1.03 PROJECT CONDITIONS

- A. Verify field measurements as shown on drawings.
- B. Electrical boxes are shown on drawings for approximate locations, unless dimensioned. Install at locations required for box to serve intended purpose.

PART 2 - MATERIALS

2.01 MATERIALS

- A. Raceway assemblies shall be made of steel as manufactured by Wiremold, of type 700, 2000 or 4000 series (including devices) as noted on the drawings. Color shall be ivory.
- B. Provide all required mounting hardware, miscellaneous fittings, end caps, etc. as manufactured by Wiremold.
- C. Devices shall be as described in Section 16140 unless standard devices are not compatible with assembly.
- D. Device plates shall be as described in Section 16147, unless standard devices are not compatible with assembly.
- E. One gang device boxes for use with Wiremold 700 product shall be Wiremold part #V5748. Two gang device boxes for use with Wiremold 700 product shall be Wiremold part #V5748-2.
- F. One gang device boxes for use with Wiremold 2000 product shall be Wiremold part #V2048. Two gang device boxes for use with Wiremold 2000 product shall be Wiremold part #V2048-2.
- G. One gang device mounting cover for Wiremold 4000 product shall be part #V4007C-1. One gang GFCI receptacle mounting cover for Wiremold 4000 product shall be part #V4007C-1R. This product will allow the use of the stainless steel covers as required in Section 16147.

2.02 ACCEPTABLE MANUFACTURERS

- A. Acceptable manufacturers shall be as listed above.
- B. Walkerdut equipment which is the approved equal of the equipment specified above

is considered acceptable.

- C. Hubbell equipment which is the approved equal of the equipment specified above is considered acceptable.
- D. Substitutions may be considered only when submitted in conformance with Section 16010.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Conduit connection to raceway assemblies on existing walls shall be made by extending surface metallic raceway from the assembly to the ceiling or down to tunnel or crawl space, (or as noted), run vertical portion at room corners where receptacle is within 36" of corner and where conditions allow.
- B. Attach raceway assemblies to wall surface by method recommended by manufacturer for the particular wall construction. Use anchors similar to Powers Poly-toggle, catalog #2305.
- C. Wiremold raceway shall be ivory factory color and shall not be painted. Any raceway attached to the Wiremold product in an unconcealed area which does not come pre-painted from the manufacturer shall properly prepared for painting and shall be Wiremold #IWE-S ivory spray enamel.
- D. No Wiremold raceway fitting shall be used in such a way as to result in an unfinished surface being exposed in the finished space.

PART 1 - GENERAL

1.01 SCOPE OF WORK

- A. Provide each wiring device and each outlet with a plate.

1.02 REGULATORY REQUIREMENTS

- A. Conform to requirements of ANSI/NFPA 70.
- B. Furnish products listed and classified by Underwriters Laboratories, Inc.

PART 2 - MATERIALS

2.01 PROHIBITED MATERIALS

- A. Sectional plates shall not be utilized.

2.02 MATERIALS

- A. All devices shall be equipped with stainless steel .04" thick with #302 satin finish.
- B. All junction boxes in finished areas shall be provided with plates.
- C. Exterior receptacle covers shall be similar to Intermatic Flexi-Guard In-Use Weatherproof Clear Receptacle Cover, 3-1/2" deep, model #WP1110C.

2.03 ACCEPTABLE MANUFACTURERS

- A. Plates shall be Sierra type, S-Line.
- B. Substitutions may be considered only when submitted in conformance with Section 16010.
- C. Device plates for data shall be as stated on the Drawings.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Install plate on each receptacle outlet and junction box.
- B. All existing outlets noted on the drawings as being reused shall have device plates replaced with new.
- C. Device plates shall be fitted tight to wall.
- D. All devices shall be identified as to circuit number. See Section 16199.

PART 1 - GENERAL

1.01 SCOPE OF WORK

Provide grounding for the entire electrical system as required in Article 250 of the N.E.C., and as specified herein.

1.02 REGULATORY REQUIREMENTS

- A. Conform to requirements of ANSI/NFPA 70.
- B. Furnish products listed and classified by Underwriters Laboratories, Inc.

PART 2 - MATERIALS

2.01 MATERIALS

- A. Ground Rods: Copperweld $\frac{3}{4}$ "x 10' - 0".
- B. Ground Clamps: Burndy Type NT.
- C. Exothermic Welds: Cadweld.
- D. All conductors shall be copper.

2.02 ACCEPTABLE MANUFACTURERS

- A. Acceptable manufacturers shall be as listed above.
- B. Substitutions may be considered only when submitted in conformance with Section 16010.

PART 3 – EXECUTION

3.01 INSTALLATION

- A. New equipment installed in this project specifically included as requiring grounding:
 - 1. All primary equipment and enclosures
 - 2. Electric service, equipment, and enclosures.
 - 3. All raceways.
 - 4. Neutral conductor on interior wiring systems.
 - 5. Main switchboard, panelboards.
 - 6. Non-current carrying parts of fixed equipment.
 - 7. Grounding terminal of all receptacles.
 - 8. Transformer case and neutral.
 - 9. Loadbreak junctions, loadbreak elbows, and high voltage splices.
- B. Install ground rod vertically, with top flush with ground level unless physically

protected. Connect to water service on street side of main shutoff valve, building structural steel, and service transformer ground rod.

- C. Install ground rod at each transformer and make connection to all exposed metal parts.
- D. Provide ground strap between each wiring device and its associated outlet box. Exception: Straps may be omitted if self-grounding devices are utilized.
- E. Provide separate ground conductor full length of all raceways.

3.02 TESTING

Test ground electrode as required to assure resistance to assure resistance to ground less than 25 ohms. If resistance is higher than 25 ohms, add additional interconnected ground rods until resistance is below 25 ohms. Install additional ground rods no closer than 6 feet from original rod.

PART 1 - GENERAL

1.01 SCOPE OF WORK

Support all raceways from the building structure as required by the N.E.C. and as described below.

1.02 REGULATORY REQUIREMENTS

- A. Conform to requirements of ANSI/NFPA 70.
- B. Furnish products listed and classified by Underwriters Laboratories, Inc.

PART 2 – MATERIALS

2.01 PROHIBITED MATERIALS

Nails, wires, perforated tape or plumber's tape are unacceptable for support or securing of conduits.

2.02 MATERIALS

- A. One or two hole pipe straps shall be Kindorf HS-100 or HS-900.
- B. Lay-in pipe hangers shall be Kindorf C-149.
- C. Trapeze or wall surface supports shall be Kindorf "bolt-hole" base galvanized steel channels with C105 and C106 single bolt pipe straps.
- D. Galvanized steel channels and associated support rods shall be selected to accommodate weight of associated raceway and wire.
- E. Raceways run across roof areas shall be supported using Cooper B-line Dura-Blok supports or approval equal.

2.03 ACCEPTABLE MANUFACTURERS

- A. Acceptable manufacturers shall be as listed above.
- B. Substitutions may be considered only when submitted with Section 16010.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Individual conduits shall be secured with steel pipe straps or lay-in pipe hangers.
- B. Multiple rows of suspended conduit shall be supported from trapeze style hangers.
- C. Multiple runs of conduit on ceiling or wall surfaces shall be mounted on flush or surface steel channels.
- D. Ceiling support wires shall not be used for support of conduits.
- E. Raceways installed on roof areas shall be sufficiently supported using rooftop

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supports noted above. Supports shall be provided every 8 feet, within 1 foot of a 45 degree, 90 degree, conduit and flex conduit as a minimum. Additional support may be needed as required to satisfy N.E.C. and its intent.

END OF SECTION 16190

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Nameplates and labels
- B. Wire and cable markers
- C. Underground conduits
- D. Panel schedules

1.02 REFERENCES

- A. NFPA 70 – National Electrical Code

1.03 REGULATORY REQUIREMENTS

- A. Conform to requirements of ANSI/NFPA 70.
- B. Furnish products listed and classified by Underwriters Laboratories, Inc., and acceptable to authority having jurisdiction as suitable for purpose specified and shown.

PART 2 - MATERIALS

2.01 PROHIBITED MATERIALS

- A. Dymo (or equivalent) labels shall not be utilized, unless specifically noted.

2.02 NAMEPLATES

- A. Nameplates shall be laminated phenolic plastic, chamfer edges, black front and back with white core, with lettering etched through the outer covering. White engraved letters on black background.
- B. Nameplates for emergency power (where applicable) shall be laminated phenolic plastic. Orange front and back, with white core, with lettering etched through outer covering, white engraved letter on Orange background.
- C. Letter Size:
 - 1. Use 3/8 inch high letters for identifying individual equipment and loads.
 - 2. Use 1/2 inch high letters for identifying grouped equipment and loads.
 - 3. Use 1 inch high letters for identifying Service Disconnecting means.
- D. Nameplates shall adequately describe the function of the particular equipment involved. Where nameplates are detailed on the Drawings, inscription and size of letters shall be as shown. Nameplates for panelboards and switchboards shall include the panel designation, voltage and phase of the supply. For example, "Panel A, 120/208V, 3Ø, 4W". In addition, provide phenolic label in panel to describe where the panel is fed from. For example, "Fed from MDP/1,3,5". For equipment loads, the name on the nameplate for a particular piece of equipment shall be the same as the one used on all motor starters, disconnect and push button station nameplates serving that piece of equipment.

- E. The following items shall be equipped with nameplates: All motors, motor starters, motor-control centers, push button stations, control panels, time switches, disconnect switches, transformers, panelboards, enclosure mounted circuit breakers (i.e. all 2 pole, 3 pole C.B.'s), contactors or relays in separate enclosures, power receptacles where the nominal voltage between any pair of contacts is greater than 150V, wall switches controlling outlets that are not located within sight of the controlling switch, high voltage boxes and cabinets, large electrical systems junction and pull boxes (larger than 4-11/16"), terminal cabinets, terminal boards, and equipment racks. Nameplates shall also describe the associated panel and circuit number (if applicable).
 - F. Field install Arc Flash and Shock Warning labels on each piece of new electrical distribution equipment such as panelboards, safety switches, motor control centers, and automatic transfer switches. The labels will indicate the flash hazard boundary, the flash hazard at 18 inches, the PPE level requirements, and the approach restrictions.
 - G. Provide printed labels on inside door of each fused switch indicating NEMA fuse classification and the size fuse installed.
 - H. All Electrical Emergency System panels, transfer switches, etc. shall be labeled as per brand as defined by NEC.
- 2.03 SCHEDULES
- A. Provide typewritten or computer laser printed directory for each panel, on heavy card stock, showing all circuit numbers and circuit descriptions.
- 2.04 UNDERGROUND WARNING TAPE
- A. Description: 4 inch wide plastic tape, detectable type, colored yellow with suitable warning legend describing buried electrical lines.
- 2.05 SIGNAGE
- A. Description: Laminated phenolic plastic, chamfer edges, white core, black face color (unless color specified elsewhere), with lettering etched through the outer covering, 1 inch lettering.
 - B. Locations:
 - 1. Emergency Generator Systems per 2014 NEC 700.
 - 2. Elsewhere as noted on the Drawings

PART 3 - EXECUTION

3.01 PREPARATION

- A. Degrease and clean surfaces to receive nameplates.

3.02 APPLICATION

A. Nameplates:

1. Install nameplate parallel to equipment lines (i.e. level and plumb).
2. Secure nameplate to equipment front using stainless steel pop rivets or stainless steel screws unless method violates U.L. Listing. In this case, an epoxy based adhesive shall be used. Installer shall ensure that the nameplate is level and plumb and shall take the appropriate steps to do so. Labels that are not installed level and plumb shall be removed and reinstalled.
3. Secure nameplate to inside of door on panelboard that is recessed in finished locations.
4. Identify junction boxes and outlet boxes.
5. Nameplates installed inside on dead front cover shall be fastened using an epoxy type adhesive as noted above (do not drill or install screws in dead front unless prior approval is granted by equipment manufacturer).
6. Provide nameplates on all main and distribution switchboards, panelboards, disconnect switches, and miscellaneous systems junction boxes and cabinets installed or utilized under this contract.
7. Provide nameplates at each protective device in switchboard and distribution centers, showing circuit service.
8. Panelboards: Mount inside door, on dead front, above circuit breakers, unless panelboard is located in a utility-type room, then install nameplate on outside of panelboard above door.
9. Disconnect switches: Mount nameplate on outside of cabinet, near top. Omit nameplate from disconnect switches if located adjacent to equipment.
10. Junction Boxes: Install nameplate on exterior of cover.

B. Wire and Cable Markers:

1. All wiring in all outlet and junction boxes shall be properly identified as to circuit number. Type of marker shall be made with Brady BMP21 professional printer/labeler; locate label on inside of device box.
2. All system wiring shall be labeled on each end of wire with Brady BMP21 labels of ¾" width or approved equal. Labeling shall be located within 4 inches of the end or termination of the wire / cable.

C. Underground Conduit:

1. Identify underground conduits using underground warning tape. Install one tape per trench at 6 inches below finished grade or at depth noted on the Drawings.

D. Schedules:

1. Panelboards: Mount in frame under plastic cover, on back side of door.

Schedule shall be typed or computer laser printed and show circuit service for each circuit breaker, using room numbers and load description. Spares and spaces shall be written in pencil.

2. Existing Panelboards: Revise existing schedules to reflect current circuit configuration. Retype or computer laser print new schedules, showing new and existing circuits.

PART 1 - GENERAL

1.01 SCOPE OF WORK

- A. Modify and connect to existing switchboards, panelboards and distribution panel as shown on the Drawing(s).
- B. Revise existing nameplates and circuit directory cards as described below.

1.02 REGULATORY REQUIREMENTS

- A. Conform to requirements of ANSI/NFPA 70.
- B. Furnish products listed and classified by Underwriters Laboratories, Inc.

1.03 PROJECT CONDITIONS

- A. Verify field measurements as shown on drawings.

PART 2 - MATERIALS

2.01 MATERIALS

- A. Overcurrent devices shall match existing equipment as to manufacturer, type and minimum short-circuit rating.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Install new circuit protective devices in existing switchboards, panelboards, and distribution panels in available space. Where necessary, relocate existing active devices to make adjacent spaces available.
- B. Schedules shown for existing panelboards/switchboards represent the circuit breaker/fusible switch configuration required by the current project. Contractor shall make site investigation and determine the type, number, and arrangement of existing circuit breakers/fusible switches for each existing panelboard/switchboard to insure inclusion of all required devices.
- C. Install blank covers over live bus in existing switchboards/panelboards wherever such exposures are found.
- D. Reorganize existing switchboards/panelboards and associated equipment to provide space for new equipment as shown on the Drawing(s).
- E. Revise existing panel and switchboard schedules as required to reflect current circuit configuration. Reprint on card stock (laser printed) new schedules in accordance with Specification 16199 showing both new and existing circuits.