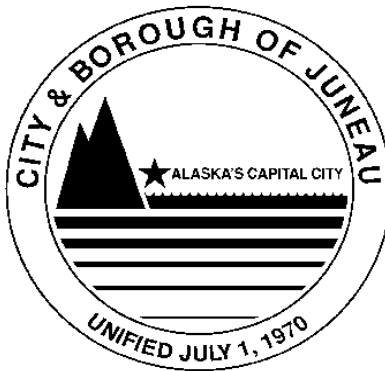


# **CAPITAL CITY FIRE AND RESCUE (CCFR) SECTIONAL DOORS AND OPERATORS REPLACEMENT**

**Contract No. E10-219**

File No. 1685



ENGINEERING DEPARTMENT

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### DRAWINGS

- Auke Bay Fire Station – 11900 Glacier Highway, Juneau
- Douglas Fire Station – 1016 w. 3<sup>rd</sup> Street, Douglas
- Glacier Fire Station – 1700 Crest Avenue, Juneau
- Lynn Canal Fire Station – 17900 Glacier Highway, Juneau
- Juneau Fire Station – 820 Glacier Avenue, Juneau

END OF SECTION

## SECTION 00030 - NOTICE INVITING BIDS

**OBTAINING CONTRACT DOCUMENTS.** The Contract Documents are entitled:

### **CCFR-SECTIONAL DOORS & OPERATORS REPLACEMENT CBJ Contract No. E10-219**

The Contract Documents may be obtained at the CBJ Engineering Department, 3<sup>rd</sup> Floor Marine View Center, upon payment of **\$30.00** (non-refundable) for each set of Contract Documents (including Technical Specifications and Drawings.)

**PRE-BID CONFERENCE.** Prospective Bidders are encouraged to attend a Pre-Bid conference of the proposed WORK, which will be conducted by the OWNER and ARCHITECT, at 10:00 a.m. on April 13, 2010, in the City and Borough of Juneau Engineering Conference Room, 3<sup>rd</sup> Floor, Marine View Center. The object of the conference is to acquaint Bidders with the bid documents and site conditions

**DESCRIPTION OF WORK.** This Project consists of replacement of sectional doors and operators at the Douglas, Juneau, Glacier, Auke Bay, and Lynn Canal fire stations:

Replace existing sectional door operators with trolley or jackshaft types per the specifications. New sectional door operators to have integrated wireless remote control and external antenna. Operators must be compatible with existing Overhead Door Model 591 sectional doors to remain at specified fire stations. Install NEMA-4 weatherproof infra-red sensing eyes and weatherproof three-button door controls at each door. Replace door torsion bars, center couplers, door rollers, door bottom astagal seals, perimeter weather stripping, and balance all doors.

Electrical work includes conduit installation and relocation as required, new 25 Ampere, single-pole breakers and wiring to existing electrical panels.

Mechanical work includes re-routing of existing overhead water piping at Glacier Fire Station to facilitate installation of new jackshaft type operators, conduit and electrical controls and perform all WORK as described in these Contract Documents.

At Auke Bay and Lynn Canal fire stations only:

Replace existing sectional doors with Overhead Door Model 591 insulated sectional overhead doors or approved equal. New door assemblies to have thermal glass windows in third panel, related hardware and include all accessories for a complete installation.

Electrical work includes conduit installation and relocation as required, new 25 Ampere, single-pole breakers and wiring to existing electrical panels and perform all WORK as described in these Contract Documents.

### **COMPLETION OF WORK.**

<u>Work Description</u>	<u>Completion Date</u>
Substantial Completion	November 1, 2010
Final Completion	December 1, 2010

**DEADLINE FOR BIDS:** Sealed bids must be received by the Purchasing Division **prior to 2:00 p.m., Alaska Time on April 21, 2010,** or such later time as may be announced by addendum at any time prior to the deadline. Bids will be time and date stamped by the Purchasing Division, which will establish the official time of receipt of bids. Bids will be opened immediately thereafter in the Assembly Chambers of the Municipal Building, 155 S. Seward Street, unless otherwise specified.

## SECTION 00030 - NOTICE INVITING BIDS

Bid documents delivered in person or by courier service must be delivered to:

**PHYSICAL LOCATION:**

City and Borough of Juneau, Purchasing Division  
105 Municipal Way, Room 300  
Juneau, AK 99801

Bid documents delivered by the U.S. Postal Service must be mailed to:

**MAILING ADDRESS:**

City and Borough of Juneau, Purchasing Division  
155 South Seward Street  
Juneau, AK 99801

**Please affix the label below to outer envelope in the lower left hand corner.**

IMPORTANT NOTICE TO BIDDER		
<b>To submit your Bid:</b>		
1. Print your company name and address on the upper left corner of your envelope.		
2. <b>Complete this label and place it on the lower left corner of your envelope.</b>		
<b>S E A L E D</b>	<b>BID NUMBER:</b>	<b>B I D</b>
	<b>E10-219</b>	
	<b>SUBJECT:</b>	
	<b>CCFR-SECTIONAL DOORS AND OPERATORS REPLACEMENT</b>	
	<b>DEADLINE DATE:</b>	
	<hr/>	
	<b>PRIOR TO 2:00PM ALASKA TIME</b>	

**Mailing/delivery times to Alaska may take longer than other areas of the U.S.** Late bids will not be accepted and will be returned.

**SITE OF WORK.** The locations of the WORK are the Douglas, Juneau, Glacier, Auke Bay, and Lynn Canal fire stations. See address listings in 00030 Table of Contents.

**BIDDING, CONTRACT, or TECHNICAL QUESTIONS.** All communications relative to this WORK, prior to opening Bids, shall be directed to the following:

Jennifer Mannix, Contract Administrator  
CBJ Engineering Department, 3<sup>rd</sup> Floor, Marine View Center  
jennifer\_mannix@ci.juneau.ak.us  
Telephone: (907) 586-0873  
Fax: (907) 586-4530

**BID SECURITY.** Each Bid shall be accompanied by a certified or cashier's check or Bid Bond, in the

## SECTION 00030 - NOTICE INVITING BIDS

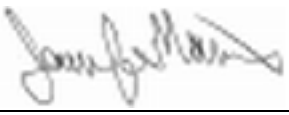
amount of 5% percent of the Bid, payable to the City and Borough of Juneau, Alaska, as a guarantee that the Bidder, if its Bid is accepted, will promptly execute the Agreement. A Bid shall not be considered unless one of the forms of Bidder's security is enclosed with it.

**CONTRACTOR'S LICENSE.** All contractors are required to have a current Alaska Contractor's License, prior to submitting a Bid, and a current Alaska Business License prior to award.

**BID TO REMAIN OPEN.** The Bidder shall guarantee the Bid for a period of 90 Days from the date of Bid opening. Any component of the Bid may be awarded anytime during the 90 Days.

**OWNER'S RIGHTS RESERVED.** The OWNER reserves the right to reject any or all Bids, to waive any informality in a Bid, and to make award to the lowest responsive, responsible Bidder as it may best serve the interests of the OWNER.

**OWNER: City and Borough of Juneau**

By:   
Jennifer Mannix, Contract Administrator

March 30, 2010  
Date

**END OF SECTION**

## SECTION 00100 - INSTRUCTIONS TO BIDDERS

**1.0 DEFINED TERMS.** Terms used in these Instructions to Bidders and the Notice Inviting Bids, which are defined in the General Conditions, have the meanings assigned to them in the General Conditions. The term "Bidder" means one who submits a Bid directly to the OWNER, as distinct from a sub-bidder, who submits a Bid to a Bidder.

### **2.0 INTERPRETATIONS AND ADDENDA.**

A. **INTERPRETATIONS.** All questions about the meaning or intent of the Contract Documents are to be directed to the Engineering Contracts Administrator. Interpretations or clarifications considered necessary by the Engineering Contracts Administrator in response to such questions will be issued by Addendum, mailed, faxed, or delivered to all parties recorded by the Engineering Contracts Administrator, or OWNER, as having received the Contract Documents. Questions received less than seven Days prior to the Deadline for Bids may not be answered. Only questions answered by formal written Addendum will be binding. Oral and other interpretations or clarifications will be without legal effect.

B. **ADDENDA.** Addenda may be issued to modify the Contract Documents as deemed advisable by the OWNER. Addenda may be faxed or, if addendum format warrants, addenda may be posted to the CBJ Engineering Department website. In any event, notification of addendum issuance will be faxed to planholders. Hard copies are available upon request. The OWNER will make all reasonable attempts to ensure that all planholders receive notification of Addenda, however, it is strongly recommended by the OWNER that bidders independently confirm the contents, number, and dates of each Addendum prior to submitting a Bid.

**3.0 FAIR COMPETITION.** More than one Bid from an individual, firm, partnership, corporation, or association under the same or different names will not be considered. If the OWNER believes that any Bidder is interested in more than one Bid for the WORK contemplated, all Bids in which such Bidder is interested will be rejected. If the OWNER believes that collusion exists among the Bidders, all Bids will be rejected.

**4.0 RESPONSIBLE BIDDER.** Only responsive Bids from responsible Bidders will be considered. A Bid submitted by a Bidder determined to be not responsible may be rejected. A responsible Bidder is one who is considered to be capable of performing the WORK.

1. financial resources
2. ability to meet delivery standards
3. past performance record
  - a. References from others on contractor's performance
  - b. Record of performance on prior OWNER contracts
4. record of integrity
5. obligations to OWNER
  - a. Bidders must be registered as required by law and in good standing for all amounts owed to the OWNER within ten Days of OWNER's Notice of Intent to Award.

## SECTION 00100 - INSTRUCTIONS TO BIDDERS

- b. City and Borough of Juneau (CBJ) Finance Department, Treasury Division administers the registration and assessment of sales, business personal property and business real property taxes.
- A. Special standards for responsibility, if applicable, will be specified. These special standards establish minimum standards or experience required for a responsible Bidder on a specific contract.
- B. Before a Bid is considered for award, a Bidder may be requested to submit information documenting its ability and competency to perform the WORK, according to general standards of responsibility and any special standards which may apply. It is Bidder's responsibility to submit sufficient, relevant, and adequate information. OWNER will make its determination of responsibility and has no obligation to request clarification or supplementary information.

**5.0 NON-RESPONSIVE BIDS.** Only responsive Bids will be considered. Bids may be considered non-responsive and may be rejected. Some of the reasons a Bid may be rejected for being non-responsive are:

- A. If a Bid is received by the CBJ Purchasing Division after the Deadline for Bids.
- B. If the Bid is on a form other than that furnished by the OWNER, or legible copies thereof; or if the form is altered or any part thereof is detached; or if the Bid is improperly signed.
- C. If there are unauthorized additions, conditional or alternate Bids, or irregularities of any kind which may tend to make the bid incomplete, indefinite, ambiguous as to its meaning, or in conflict with the OWNER's Bid document.
- D. If the Bidder adds any unauthorized conditions, limitations, or provisions reserving the right to accept or reject any award, or to enter into a contract pursuant to an award. This does not exclude a Bid limiting the maximum gross amount of awards acceptable to any one Bidder at any one Bid opening, provided that any selection of awards will be made by the OWNER.
- E. If the Bid does not contain a Unit Price for each pay item listed, except in the case of authorized alternate pay items.
- F. If the Bidder has not acknowledged receipt of each Addendum.
- G. If the Bidder fails to furnish an acceptable Bid guaranty with the Bid.
- H. If any of the Unit Prices Bid are excessively unbalanced (either above or below the amount of a reasonable Bid) to the potential detriment of the OWNER.
- I. If a Bid modification does not conform to Article 15.0 of this Section.



## **SECTION 00100 - INSTRUCTIONS TO BIDDERS**

### **6.0 BIDDER'S EXAMINATION OF CONTRACT DOCUMENTS AND SITE.** It is the responsibility of each Bidder before submitting a Bid:

- A. To examine thoroughly the Contract Documents, and other related data identified in the Bidding documents (including "technical data" referred to below):  
To visit the site to become familiar with and to satisfy the Bidder as to the general and local conditions that may affect cost, progress, or performance, of the WORK,
  - 1. To consider federal, state and local laws and regulations that may affect cost, progress, or performance of the WORK,
  - 2. To study and carefully correlate the Bidder's observations with the Contract Documents, and other related data; and
  - 3. To notify the ARCHITECT of all conflicts, errors, or discrepancies in or between the Contract Documents and such other related data.

### **7.0 REFERENCE IS MADE TO THE SUPPLEMENTARY GENERAL CONDITIONS FOR IDENTIFICATION OF:**

- A. Those reports of explorations and tests of subsurface conditions at the site which have been utilized by the Architect of Record in the preparation of the Contract Documents. The Bidder may rely upon the accuracy of the technical data contained in such reports, however, the interpretation of such technical data, including any interpolation or extrapolation thereof, together with non-technical data, interpretations, and opinions contained therein or the completeness thereof is the responsibility of the Bidder.
- B. Those Drawings of physical conditions in or relating to existing surface and subsurface conditions (except underground utilities) which are at or contiguous to the site have been utilized by the Architect of Record in the preparation of the Contract Documents. The Bidder may rely upon the accuracy of the technical data contained in such Drawings, however, the interpretation of such technical data, including any interpolation or extrapolation thereof, together with nontechnical data, interpretations, and opinions contained in such Drawings or the completeness thereof is the responsibility of the Bidder.
- C. Copies of such reports and Drawings will be made available by the OWNER to any Bidder on request if said reports and Drawings are not bound herein. Those reports and Drawings are not part of the Contract Documents, but the technical data contained therein upon which the Bidder is entitled to rely, as provided in Paragraph SGC-4.2 of the Supplementary General Conditions, are incorporated herein by reference.
- D. Information and data reflected in the Contract Documents with respect to underground utilities at or contiguous to the site is based upon information and data furnished to the OWNER and the Architect of Record by the owners of such underground utilities or others, and the OWNER does not assume responsibility for the accuracy or completeness thereof unless it is expressly provided otherwise in the Supplementary General Conditions, or in Section 01530 - Protection and Restoration of Existing Facilities of the General Requirements.
- E. Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders on subsurface conditions, underground utilities and other physical conditions, and possible changes in the Contract Documents due to differing conditions appear in Paragraphs 4.2, 4.3, and 4.4 of the General Conditions.

## **SECTION 00100 - INSTRUCTIONS TO BIDDERS**

- F. Before submitting a Bid, each Bidder will, at Bidder's own expense, make or obtain any additional examinations, investigations, explorations, tests, and studies and obtain any additional information and data which pertain to the physical conditions (surface, subsurface, and underground utilities) at or contiguous to the site or otherwise which may affect cost, progress, or performance of the WORK and which the Bidder deems necessary to determine its Bid for performing the WORK in accordance with the time, price, and other terms and conditions of the Contract Documents.
- G. On request in advance, the OWNER will provide each Bidder access to the site to conduct such explorations and tests as each Bidder deems necessary for submission of a Bid. Bidder shall fill all holes and shall clean up and restore the site to its former condition upon completion of such explorations.
- H. The lands upon which the WORK is to be performed, rights-of-way and easements for access thereto and other lands designated for use by the CONTRACTOR in performing the WORK are identified in the Contract Documents. All additional lands and access thereto required for temporary construction facilities or storage of materials and equipment are to be provided by the CONTRACTOR. Easements for permanent structures or permanent changes in existing structures are to be obtained and paid for by the OWNER unless otherwise provided in the Contract Documents.
- I. The submission of a Bid will constitute an incontrovertible representation by the Bidder that the Bidder has complied with every requirement of Article 6.0, "Bidder's Examination of Contract Documents and Site" herein, that without exception the Bid is premised upon performing the WORK required by the Contract Documents and such means, methods, techniques, sequences, or procedures of construction as may be indicated in or required by the Contract Documents, and that the Contract Documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions for performance of the WORK.

### **8.0 BID FORM.**

- A. The Bid shall be made on the Bid Schedule(s) bound herein, or on the yellow Bid packet provided, or on legible and complete copies thereof, and shall contain the following: Sections 00300, 00310, the required Bid Security, and any other documents required in Section 00300 – Bid.
- B. All blanks on the Bid Form and Bid Schedule must be completed in ink or typed.
- C. Bids by corporations must be executed in the corporate name by the president, a vice-president (or other corporate officer). The corporate address and state of incorporation must appear below the signature.
- D. Bids by partnerships must be executed in the partnership name and be signed by a managing partner, and the official address of the partnership must appear below the signature.
- E. The Bidder's Bid must be signed with ink. All names must be printed or typed below the signature.

## SECTION 00100 - INSTRUCTIONS TO BIDDERS

F. The Bid shall contain an acknowledgment of receipt of all Addenda, the numbers of which shall be filled in on the Bid form. Failure to acknowledge Addenda may render Bid non-responsive and may cause its rejection.

G. The address to which communications regarding the Bid are to be directed must be shown.

**9.0 QUANTITIES OF WORK.** The quantities of WORK, or material, stated in Unit Price items of the Bid are supplied only to give an indication of the general scope of the WORK; the OWNER does not expressly or by implication agree that the actual amount of WORK, or material, will correspond therewith, and reserves the right after award to increase or decrease the amount of any Unit Price item of the WORK by an amount up to and including 25 percent of any Bid item, without a change in the Unit Price, and shall include the right to delete any Bid item in its entirety, or to add additional Bid items up to and including an aggregate total amount not to exceed 25 percent of the Contract Price (see Section 00700 - General Conditions, Article 10 Changes In the WORK).

**10.0 SUBSTITUTE OR "OR-EQUAL" ITEMS.** The procedure for the submittal of substitute or "or-equal" products is specified in Section 01300 - Submittals.

**11.0 SUBMISSION OF BIDS.** The Bid shall be delivered by the time and to the place stipulated in Section 00030 - Notice Inviting Bids. It is the Bidder's sole responsibility to see that its Bid is received in proper time. Oral, telegraphic, emailed, or faxed Bids will not be considered. The envelope enclosing the sealed Bids shall be plainly marked in the upper left-hand corner with the name and address of the Bidder and shall also include the label included in Section 00030 – Notice Inviting Bids. The Bid Security shall be enclosed in the same envelope with the Bid

**12.0 BID SECURITY, BONDS, AND INSURANCE.** Each Bid shall be accompanied by a certified, or cashier's check, or approved Bid Bond in an amount of at least 5 percent of the total Bid price. The "total Bid price" is the amount of the Base Bid, plus the amount of alternate Bids, if any, which total to the maximum amount for which the CONTRACT could be awarded. Said check or Bond shall be made payable to the OWNER and shall be given as a guarantee that the Bidder, if offered the WORK, will enter into an Agreement with the OWNER, and will furnish the necessary insurance certificates, Payment Bond, and Performance Bond; each of said Bonds, if required, and insurance amounts shall be as stated in the Supplementary General Conditions. In case of refusal or failure to enter into said Agreement, the check or Bid Bond, as the case may be, shall be forfeited to the OWNER. If the Bidder elects to furnish a Bid Bond as its Bid security, the Bidder shall use the Bid Bond form bound herein, or one conforming substantially to it in form. Bid Bonds must be accompanied by a legible Power of Attorney.

**13.0 RETURN OF BID SECURITY.** The OWNER will return all Bid security checks (certified or cashier's) accompanying such of the Bids as are not considered in making the award. All other Bid securities will be held until the Agreement has been executed. Following execution of the Agreement, all other Bid security checks will be returned to the respective Bidders whose Bids they accompanied and Bid security bonds will be appropriately discarded.

**14.0 DISCREPANCIES IN BIDS.** In the event there is more than one Pay Item in a Bid Schedule, the Bidder shall furnish a price for all Pay Items in the schedule, and failure to do so may render the Bid non-responsive and cause its rejection. In the event there are Unit Price Pay Items in a Bid Schedule and the "amount" indicated for a Unit Price Bid Item does not equal the product of the Unit Price and quantity, the Unit Price shall govern and the amount will be corrected accordingly, and the Bidder shall be bound by said correction. In the event there is more than one Pay Item in a

## SECTION 00100 - INSTRUCTIONS TO BIDDERS

Bid Schedule and the total indicated for the schedule does not agree with the sum of the prices Bid on the individual items, the prices Bid on the individual items shall govern and the total for the schedule will be corrected accordingly, and the Bidder shall be bound by said correction.

### 15.0 BID MODIFICATIONS AND UNAUTHORIZED ALTERNATIVE BIDS.

- A. Any bidder may deliver a modification to a bid in person, by mail or fax (907-586-4561), provided that such modification is received by the Purchasing Division no later than the deadline for bids. Modifications will be time and date stamped by the Purchasing Division, which will establish the official time of receipt of the modification. The modification must not reveal the bid price but should be in the form of an addition or subtraction or other modification so that the final prices will not be known until the sealed bid is opened.

The Bid modifications shall be provided on the **Bid Modification Form** located at the end of this Section. Submittal of any other form by the vendor may deem the modification unacceptable by the OWNER. **A mail or fax modification should not reveal the Bid price but should provide the addition or subtraction or other modification so that the final prices will not be known by the City and Borough until the sealed Bid is opened.** Submitted Modification forms shall include the modification to the unit price or lump sum amount of each pay item modified.

**FAX DISCLAIMER:** It is the responsibility of the bidder to submit modifications in a timely manner. Bidders' use of a fax machine to modify their bid shall be at bidders' sole risk. The Purchasing Division will attempt to keep the fax machine in good working order but will not be responsible for bid modifications that are late due to mechanical failure, a busy fax machine, or any other cause arising from bidder's use of a fax machine, even if bidder submits a transmission report or provides other confirmation indicating that the bidder transmitted a bid modification prior to the deadline. The City will not be responsible for its failure to receive the modification whether such failure is caused by equipment or human error, or otherwise. Bidders are therefore strongly encouraged to confirm receipt of their bid modification with the Purchasing Division (907-586-5258) prior to deadline.

- B. Conditioned bids, limitations, or provisos attached to the Bid or bid modification will render it unauthorized and cause its rejection as being non-responsive. The completed Bid forms shall be without interlineations, alterations, or erasures in the printed text. All changes shall be initialed by the person signing the Bid. Alternative Bids will not be considered unless called for.

### 16.0 WITHDRAWAL OF BID. Prior to the Deadline for Bids, the Bid may be withdrawn by the Bidder by means of a written request, signed by the Bidder or its properly authorized representative. Such written request must be delivered to the place stipulated in the Notice Inviting Bids for receipt of Bids.

## **SECTION 00100 - INSTRUCTIONS TO BIDDERS**

### **17.0 AWARD OF CONTRACT.**

- A. Award of a contract, if it is awarded, will be on the basis of materials and equipment described in the Drawings or specified in the Technical Specifications and will be made to the lowest responsive, responsible Bidder whose Bid complies with all the requirements prescribed. Unless otherwise specified, any such award will be made within the period stated in the Notice Inviting Bids that the Bids are to remain open. Unless otherwise indicated, a single award will be made for all the Bid items in an individual Bid Schedule.
- B. If the OWNER has elected to advertise this Project with a Base Bid and Alternates, the OWNER may elect to award the contract for the Base Bid, or the Base Bid in combination with one or more Alternates selected by the OWNER. In either case, award shall be made to the responsive, responsible bidder offering the lowest total Bid for the WORK to be awarded.

### **18.0 EXECUTION OF AGREEMENT.**

- A. All Bids of value greater than \$1,000,000 must be approved by the CBJ Assembly. After the CBJ Assembly has approved the award and after the Bid protest period, the OWNER will issue a Notice of Intent to Award to the approved Bidder. The Bidder to whom award is made shall execute a written Agreement with the OWNER on the Agreement form, Section 00500, collect insurance, and shall furnish all certificates and Bonds required by the Contract Documents within 10 Days (calendar) from the date of the Notice of Intent to Award letter.
- B. Failure or refusal to enter into the Agreement as herein provided or to conform to any of the stipulated requirements in connection therewith shall be just cause for annulment of the award and forfeiture of the Bid security. If the lowest responsive, responsible Bidder refuses or fails to execute the Agreement, the OWNER may award the contract to the second lowest responsive, responsible Bidder. If the second lowest responsive, responsible Bidder refuses or fails to execute the Agreement, the OWNER may award the contract to the third lowest responsive, responsible Bidder. On the failure or refusal of such second or third lowest Bidder to execute the Agreement, each such Bidder's Bid securities shall be likewise forfeited to the OWNER.

### **19.0 LIQUIDATED DAMAGES.** Provisions for liquidated damages if any, are set forth in Section 00500 - Agreement.

### **20.0 FILING A PROTEST.**

- A. A Bidder may protest the proposed award of a competitive sealed Bid by the City and Borough of Juneau. The protest shall be executed in accordance with CBJ Ordinance 53.50.062 PROTESTS and CBJ Ordinance 53.50.080 ADMINISTRATION OF PROTEST. The entire text of the CBJ Purchasing Ordinance can be accessed at the CBJ website, <http://www.juneau.org/law/code/Purchasing.pdf>, or call the CBJ Purchasing Division at (907) 586-5258 for a copy of the ordinance.
- B. Late protests shall not be considered by the CBJ Purchasing Officer.

## SECTION 00100 - INSTRUCTIONS TO BIDDERS

- 21.0 JUNEAU BUSINESS SALES AND PERSONAL PROPERTY TAX:** Vendors/merchants conducting business within the City are required by law to register with, and periodically report to, the City for sales and property taxes. CONTRACTORS and Subcontractors must be in good standing with the City prior to award, and prior to any contract renewals, and in any event no later than *ten Days (calendar)* following notification by the City of intent to award. **Good standing** means: all amounts owed to the City are paid in full, including Confession of Judgments; and vendor/merchant is current in reporting (sales tax filings, business personal property declarations). Failure to meet these requirements, if so subject, may be cause for rejection of your bid. To determine if your business is in good standing, or for further information, contact the City Finance Department's Sales Tax Division, at (907) 586-5265, concerning sales tax and/or Treasury Division, at (907) 586-5268, concerning business personal property and real property tax.
- 22.0 PERMITS AND LICENSES.** The CONTRACTOR is responsible for all WORK associated with meeting any local, state, and/or federal permit and licensing requirements.

## SECTION 00100 - INSTRUCTIONS TO BIDDERS

CITY AND BOROUGH OF JUNEAU  
PURCHASING DIVISION  
FAX NO. 907-586-4561

### BID MODIFICATION FORM

Modification Number: \_\_\_\_\_

Note: All modifications shall be made to the original bid amount(s). If more than one Modification form is submitted by any one bidder, changes from all Modification forms submitted will be combined and applied to the original bid. Changes to the modified Bid amounts will be calculated by the OWNER.

PAY ITEM NO.	PAY ITEM DESCRIPTION	MODIFICATIONS TO UNIT PRICE OR LUMP SUM (indicate +/-)

Total Increase or Decrease: \$ \_\_\_\_\_

\_\_\_\_\_  
Name of Bidding Firm

\_\_\_\_\_  
Responsible Party Signature

\_\_\_\_\_  
Printed Name (must be an authorized signatory for Bidding Firm)

END OF SECTION

## SECTION 00300 - BID

**BID TO: THE CITY AND BOROUGH OF JUNEAU**

1. The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with the OWNER in the form included in the Contract Documents (as defined in Article 7 of Section 00500 - Agreement) to perform the WORK as specified or indicated in said Contract Documents entitled

**CCFR-SECTIONAL DOORS AND OPERATORS REPLACEMENT  
CBJ Contract No. E10-219**

2. Bidder accepts all of the terms and conditions of the Contract Documents, including without limitation those in the "Notice Inviting Bids" and "Instructions to Bidders," dealing with the disposition of the Bid Security.
3. This Bid will remain open for the period of time stated in the "Notice Inviting Bids" unless otherwise required by law. Bidder will enter into an Agreement within the time and in the manner required in the "Notice Inviting Bids" and the "Instructions to Bidders," and will furnish insurance certificates, Payment Bond, Performance Bond, and any other documents as may be required by the Contract Documents.
4. Bidder has familiarized itself with the nature and extent of the Contract Documents, WORK, site, locality where the WORK is to be performed, the legal requirements (federal, state and local laws, ordinances, rules, and regulations), and the conditions affecting cost, progress or performance of the WORK and has made such independent investigations as Bidder deems necessary.
5. This Bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; Bidder has not solicited or induced any person, firm or corporation to refrain from bidding; and Bidder has not sought by collusion to obtain for itself any advantage over any other Bidder or over OWNER.
6. To all the foregoing, and including all Bid Schedule and information required of Bidder contained in this Bid Form, said Bidder further agrees to complete the WORK required under the Contract Documents within the Contract Time stipulated in said Contract Documents, and to accept in full payment therefore the Contract Price based on the total bid price(s) named in the aforementioned Bid Schedule.
7. Bidder has examined copies of all the Contract Documents including the following Addenda (receipt of all of which is hereby acknowledged by the Undersigned):

Addenda No.	Date Issued	Addenda No.	Date Issued

**Give number and date of each addenda above. Failure to acknowledge receipt of all Addenda may cause the Bid to be non-responsive and may cause its rejection.**



## SECTION 00300 - BID

8. The Bidder has read this Bid and agrees to the conditions as stated herein by signing his/her signature in the space provided below.

Dated: _____	Bidder: _____ (Company Name)
Alaska CONTRACTOR's Business License No: _____	By: _____ (Signature in Ink)
Alaska CONTRACTOR's License No: _____	Printed Name: _____
Telephone No: _____	Title: _____
Fax No: _____	Address: _____ (Street or P.O. Box)
	_____ (City, State, Zip)

9. TO BE CONSIDERED, ALL BIDDERS MUST COMPLETE AND INCLUDE THE FOLLOWING AT THE TIME OF THE BID OPENING:

- Bid, Section 00300 (includes addenda receipt statement)
- Completed Bid Schedule, Section 00310
- Bid Security (Bid Bond, Section 00320, or by a certified or cashier's check as stipulated in the Notice Inviting Bids, Section 00030)

10. The apparent low Bidder is required to complete and submit the following documents by 4:30 p.m. on the *fifth business day* following the date of the Posting Notice.

- Subcontractor Report, Section 00360

The apparent low Bidder who fails to submit a completed Subcontractor Report within the time specified in Section 00360 – Subcontractor Report will be found to be not a responsible Bidder and may be required to forfeit the Bid security. The OWNER will then consider the next lowest Bidder for award of the contract.

11. The successful Bidder will be required to submit, within *ten Days (calendar)* after the date of the “Notice of Intent to Award” letter, the following executed documents:

- Agreement Forms, Section 00500
- Performance Bond, Section 00610
- Payment Bond, Section 00620
- Certificates of Insurance, (CONTRACTOR) Section 00700 and Section 00800

**END OF SECTION**

## SECTION 00310 - BID SCHEDULE

Bid Schedule for construction of **E10-219 CCFR-SECTIONAL DOORS AND OPERATORS REPLACEMENT**, in accordance with the Contract Documents.

---

**TOTAL BID** - Furnish all labor, equipment and materials for replacement of sectional doors and operators at the Douglas, Juneau, Glacier, Auke Bay, and Lynn Canal fire stations:

Replace existing sectional door operators with trolley or jackshaft types per the specifications. New sectional door operators to have integrated wireless remote control and external antenna. Operators must be compatible with existing Overhead Door Model 591 sectional doors to remain at specified fire stations. Install NEMA-4 weatherproof infra-red sensing eyes and weatherproof three-button door controls at each door. Replace door torsion bars, center couplers, door rollers, door bottom astagal seals, perimeter weather stripping, and balance all doors.

Electrical work includes conduit installation and relocation as required, new 25 Ampere, single-pole breakers and wiring to existing electrical panels.

At Auke Bay and Lynn Canal fire stations only:

Replace existing sectional doors with Overhead Door Model 591 insulated sectional overhead doors or approved equal. New door assemblies to have thermal glass windows in third panel, related hardware and include all accessories for a complete installation.

Electrical work includes conduit installation and relocation as required, new 25 Ampere, single-pole breakers and wiring to existing electrical panels. Mechanical work includes re-routing of existing overhead water piping at Glacier Fire Station to facilitate installation of new jackshaft type operators, conduit and electrical controls and perform all WORK as described in these Contract Documents.

**TOTAL BID** \$ \_\_\_\_\_  
(Price in Figures)

---

**Date:** \_\_\_\_\_ **Bidder:** \_\_\_\_\_  
(Company Name)

**END OF SECTION**

**SECTION 00320 - BID BOND**

KNOW ALL PERSONS BY THESE PRESENTS, that \_\_\_\_\_  
\_\_\_\_\_ as Principal, and \_\_\_\_\_  
as Surety, are held and firmly bound unto **THE CITY AND BOROUGH OF JUNEAU** hereinafter called  
"OWNER," in the sum of \_\_\_\_\_  
\_\_\_\_\_ dollars, (not less than five percent of the total amount of the Bid) for  
the payment of which sum, well and truly to be made, we bind ourselves, our heirs, executors, administrators,  
successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, said Principal has submitted a Bid to said OWNER to perform the WORK required  
under the Bid Schedule of the OWNER's Contract Documents entitled

**CCFR-SECTIONAL DOORS AND OPERATORS REPLACEMENT  
CBJ Contract No. E10-219**

NOW THEREFORE, if said Principal is awarded a contract by said OWNER and, within the time and  
in the manner required in the "Notice Inviting Bids" and the "Instructions to Bidders" enters into a written  
Agreement on the form of Agreement bound with said Contract Documents, furnishes the required certificates  
of insurance, and furnishes the required Performance Bond and Payment Bond, then this obligation shall be  
null and void, otherwise it shall remain in full force and effect. In the event suit is brought upon this bond by  
said OWNER and OWNER prevails, said Surety shall pay all costs incurred by said OWNER in such suit,  
including a reasonable attorney's fee to be fixed by the court.

SIGNED AND SEALED, this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

(SEAL) \_\_\_\_\_  
(Principal)

By: \_\_\_\_\_  
(Signature)

(SEAL) \_\_\_\_\_  
(Surety)

By: \_\_\_\_\_  
(Signature)

**END OF SECTION**

## SECTION 00360 - SUBCONTRACTOR REPORT

### LIST OF SUBCONTRACTORS (AS 36.30.115)

The apparent low Bidder must submit a list of Subcontractors that the Bidder proposes to use in the performance of this contract *on the fifth business day* following the Posting Notice of Bids. If the fifth day falls on a weekend or holiday, the report is due by close of business on the next business Day following the weekend or holiday. The Subcontractor Report list must include each Subcontractor's name, address, location, evidence of valid Alaska Business License, and valid Alaska Contractor's Registration under AS 08.18. *If no Subcontractors are to be utilized in the performance of the WORK, write in ink or type "NONE" on line (1) below*

<u>SUBCONTRACTOR</u>	<sup>1</sup> AK Contractor <u>License No.</u>	<sup>1</sup> <u>Contact Name</u>	<u>Type of</u>	<u>Contract</u>	<input type="checkbox"/> if
<u>ADDRESS</u>	<sup>2</sup> AK Business <u>License No.</u>	<sup>2</sup> <u>Phone No.</u>	<u>Work</u>	<u>Amount</u>	<u>DBE</u>
1. _____ _____ _____	<sup>1</sup> _____ <sup>2</sup> _____	_____ _____	_____ _____	\$ _____	<input type="checkbox"/>
2. _____ _____ _____	<sup>1</sup> _____ <sup>2</sup> _____	_____ _____	_____ _____	\$ _____	<input type="checkbox"/>
3. _____ _____ _____	<sup>1</sup> _____ <sup>2</sup> _____	_____ _____	_____ _____	\$ _____	<input type="checkbox"/>
4. _____ _____ _____	<sup>1</sup> _____ <sup>2</sup> _____	_____ _____	_____ _____	\$ _____	<input type="checkbox"/>

I certify that the above listed Alaska Business License(s) and CONTRACTOR Registration(s), if applicable, were valid at the time Bids were opened for this Project.

\_\_\_\_\_  
CONTRACTOR, Authorized Signature

\_\_\_\_\_  
CONTRACTOR, Printed Name

\_\_\_\_\_  
COMPANY

## **SECTION 00360 - SUBCONTRACTOR REPORT**

- A. A Bidder may replace a listed Subcontractor if the Subcontractor:
1. fails to comply with AS 08.18;
  2. files for bankruptcy or becomes insolvent;
  3. fails to execute a contract with the Bidder involving performance of the WORK for which the Subcontractor was listed and the Bidder acted in good faith;
  4. fails to obtain bonding;
  5. fails to obtain insurance acceptable to the OWNER;
  6. fails to perform the contract with the Bidder involving work for which the Subcontractor was listed;
  7. must be substituted in order for the CONTRACTOR to satisfy required state and federal affirmative action requirements;
  8. refuses to agree or abide with the Bidder's labor agreement; or
  9. is determined by the OWNER not to be responsible.
- B. If a Bidder fails to list a Subcontractor or lists more than one Subcontractor for the same portion of WORK, the Bidder shall be considered to have agreed to perform that portion of WORK without the use of a Subcontractor and to have represented the Bidder to be qualified to perform that WORK.
- C. A Bidder who attempts to circumvent the requirements of this section by listing as a Subcontractor another contractor who, in turn, sublets the majority of the WORK required under the contract violates this section.
- D. If a contract is awarded to a Bidder who violates this section, the OWNER may:
1. cancel the contract; or
  2. after notice and a hearing, assess a penalty on the Bidder in an amount that does not exceed 10 percent of the value of the subcontract at issue.
- E. On the Subcontractor Report, the apparent low Bidder must list any Subcontractors anticipated to perform WORK with a value of greater than one-half of one percent of the intended award amount, or \$2,000, whichever is less.
- F. An apparent low Bidder who fails to submit a completed Subcontractor Report within the time specified in this section will be found to be not a responsible Bidder and may be required to forfeit the Bid security. The OWNER will then consider the next lowest Bidder for award of the contract.

**END OF SECTION**

## SECTION 00500 - AGREEMENT

THIS AGREEMENT is between THE CITY AND BOROUGH OF JUNEAU (hereinafter called OWNER) and \_\_\_\_\_ (hereinafter called CONTRACTOR) OWNER and CONTRACTOR, in consideration of the mutual covenants hereinafter set forth, agree as follows:

### ARTICLE 1. WORK.

CONTRACTOR shall complete the WORK as specified or as indicated under the Bid Schedule of the OWNERS Contract Documents **Contract E10-219, CCFR-SECTIONAL DOORS AND OPERATORS REPLACEMENT.**

The WORK is generally described as follows: This Project consists of replacement of sectional doors and operators at the Douglas, Juneau, Glacier, Auke Bay, and Lynn Canal fire stations:

Replace existing sectional door operators with trolley or jackshaft types per the specifications. New sectional door operators to have integrated wireless remote control and external antenna. Operators must be compatible with existing Overhead Door Model 591 sectional doors to remain at specified fire stations. Install NEMA-4 weatherproof infra-red sensing eyes and weatherproof three-button door controls at each door. Replace door torsion bars, center couplers, door rollers, door bottom astagal seals, perimeter weather stripping, and balance all doors.

Electrical work includes conduit installation and relocation as required, new 25 Ampere, single-pole breakers and wiring to existing electrical panels.

Mechanical work includes re-routing of existing overhead water piping at Glacier Fire Station to facilitate installation of new jackshaft type operators, conduit and electrical controls and perform all WORK as described in these Contract Documents.

At Auke Bay and Lynn Canal fire stations only:

Replace existing sectional doors with Overhead Door Model 591 insulated sectional overhead doors or approved equal. New door assemblies to have thermal glass windows in third panel, related hardware and include all accessories for a complete installation.

Electrical work includes conduit installation and relocation as required, new 25 Ampere, single-pole breakers and wiring to existing electrical panels and perform all WORK as described in these Contract Documents.

The WORK to be paid under this contract shall include the following: Total Bid as shown in Section 00310 - Bid Schedule.

### ARTICLE 2. CONTRACT COMPLETION TIME.

The WORK must be completed as follows:

<b><u>Work Description</u></b>	<b><u>Completion Date</u></b>
Substantial Completion	November 1, 2010
Final Completion	December 1, 2010

## SECTION 00500 - AGREEMENT

### ARTICLE 3. DATE OF AGREEMENT

The date of this agreement will be the date of the last signature on page three of this section.

### ARTICLE 4. LIQUIDATED DAMAGES.

OWNER and the CONTRACTOR recognize that time is of the essence of this Agreement and that the OWNER will suffer financial loss if the WORK is not completed within the time specified in Article 2 herein, plus any extensions thereof allowed in accordance with Article 12 of the General Conditions. They also recognize the delays, expense, and difficulties involved in proving in a legal proceeding the actual damages suffered by the OWNER if the WORK is not completed on time. Accordingly, instead of requiring any such proof, the OWNER and the CONTRACTOR agree that as liquidated damages for delay (but not as a penalty) the CONTRACTOR shall pay the OWNER **\$500.00** for each Day that expires after the completion time(s) specified in Article 2 herein. The amount of liquidated damages specified above is agreed to be a reasonable estimate based on all facts known as of the date of this Agreement.

### ARTICLE 5. CONTRACT PRICE.

OWNER shall pay CONTRACTOR for completion of the WORK in accordance with the Contract Documents in current funds the amount set forth in the Bid Schedule. The CONTRACTOR agrees to accept as full and complete payment for all WORK to be done in this contract for: **CBJ Contract E10-219 CCFR-SECTIONAL DOORS AND OPERATORS REPLACEMENT**, those Lump Sum amounts as set forth in the Bid Schedule in the Contract Documents for this Project.

The total amount of this contract shall be \_\_\_\_\_ (\$ \_\_\_\_\_), except as adjusted in accordance with the provisions of the Contract Documents.

### ARTICLE 6. PAYMENT PROCEDURES.

CONTRACTOR shall submit Applications for Payment in accordance with Article 14 of the General Conditions. Applications for Payment will be processed by the ARCHITECT as provided in the General Conditions.

Progress payments will be paid in full in accordance with Article 14 of the General Conditions until ninety (90) percent of the Contract Price has been paid. The remaining ten (10) percent of the Contract Price may be retained, in accordance with applicable Alaska State Statutes, until final inspection, completion, and acceptance of the Project by the OWNER.

### ARTICLE 7. CONTRACT DOCUMENTS.

The Contract Documents which comprise the entire Agreement between OWNER and CONTRACTOR concerning the WORK consist of this Agreement (pages 00500-1 to 00500-6, inclusive) and the following sections of the Contract Documents:

- Table of Contents (pages 00030-1 to 00030-2, inclusive).
- Notice Inviting Bids (pages 00030-1 to 00030-2, inclusive).
- Instructions to Bidders (pages 00100-1 to 00100-9, inclusive).
- Bid (pages 00300-1 to 00300-2, inclusive).
- Bid Schedule (pages 00310-1, inclusive).

## SECTION 00500 - AGREEMENT

- Bid Bond (page 00320-1, inclusive) or Bid Security.
- Subcontractor Report (pages 00360-1 to 00360-2, inclusive).
- Performance Bond (pages 00610-1 to 00610-2, inclusive).
- Payment Bond (pages 00620-1 to 00620-2, inclusive).
- Insurance Certificate(s).
- General Conditions (pages 00700-1 to 00700-44, inclusive).
- Supplementary General Conditions (pages 00800-1 to 00800-5, inclusive).
- Alaska Labor Standards, Reporting, and Prevailing Wage Determination (page 00830-1).
- Technical Specifications as listed in the Table of Contents.
- Drawings consisting of 5 sheets, as listed in the Table of Contents.
- Addenda numbers \_\_\_\_\_ to \_\_\_\_\_, inclusive.
- Change Orders which may be delivered or issued after the Date of the Agreement and which are not attached hereto.

There are no Contract Documents other than those listed in this Article 7. The Contract Documents may only be amended by Change Order as provided in Paragraph 3.3 of the General Conditions.

### ARTICLE 8. MISCELLANEOUS.

Terms used in this Agreement which are defined in Article 1 of the General Conditions will have the meanings indicated in the General Conditions.

No assignment by a party hereto of any rights under or interests in the Contract Documents will be binding on another party hereto without the written consent of the party sought to be bound; and specifically but without limitation monies that may become due and monies that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

OWNER and CONTRACTOR each binds itself, its partners, successors, assigns and legal representatives to the other party hereto, its partners, successors, assigns and legal representatives in respect of all covenants, agreements and obligations contained in the Contract Documents. This Agreement shall be governed by the laws of the State of Alaska. Jurisdiction shall be in the State of Alaska, First Judicial District.

IN WITNESS WHEREOF, OWNER and CONTRACTOR have caused this Agreement to be executed on the date listed below signed by OWNER.

**OWNER:**

**CONTRACTOR:**

\_\_\_\_\_  
City and Borough of Juneau

\_\_\_\_\_  
(Company Name)

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Signature)

By: Rod Swope, City Manager  
(Printed Name)

By: \_\_\_\_\_  
(Printed Name, Authority or Title)

Date: \_\_\_\_\_

Date: \_\_\_\_\_  
(CONTRACTOR Signature Date)



**SECTION 00500 - AGREEMENT**

OWNER's address for giving notices:

\_\_\_\_\_  
155 South Seward Street

\_\_\_\_\_  
Juneau, Alaska 99801

\_\_\_\_\_  
907-586-0873      907-586-4530  
(Telephone)      (Fax)

CONTRACTOR's address for giving notices:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_  
(Telephone)      (Fax)

\_\_\_\_\_  
(E-mail address)

CONTRACTOR License No. \_\_\_\_\_

SECTION 00500 - AGREEMENT

CERTIFICATE  
(if Corporation)

STATE OF )  
 ) SS:  
COUNTY OF )

I HEREBY CERTIFY that a meeting of the Board of Directors of the  
\_\_\_\_\_ a corporation existing under the laws of  
the State of \_\_\_\_\_, held on \_\_\_\_\_, 20\_\_\_\_, the following resolution  
was duly passed and adopted:

“RESOLVED, that \_\_\_\_\_, as \_\_\_\_\_ President  
of the Corporation, be and is hereby authorized to **execute the Agreement** with the CITY AND  
BOROUGH OF JUNEAU and this corporation and that the execution thereof, attested by the  
Secretary of the Corporation, and with the Corporate Seal affixed, shall be the official act and  
deed of this Corporation.”

I further certify that said resolution is now in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official seal of the  
corporation this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

Secretary

(SEAL)

SECTION 00500 - AGREEMENT

CERTIFICATE  
(if Partnership)

STATE OF                    )  
                                  ) SS:  
COUNTY OF                )

I HEREBY CERTIFY that a meeting of the Partners of the  
\_\_\_\_\_ a partnership existing under the laws of the State  
of \_\_\_\_\_, held on \_\_\_\_\_, 20\_\_\_\_, the following resolution was duly  
passed and adopted:

"RESOLVED, that \_\_\_\_\_, as \_\_\_\_\_ of the Partnership, be and is  
hereby authorized to **execute the Agreement** with the CITY AND BOROUGH OF JUNEAU and  
this partnership and that the execution thereof, attested by the \_\_\_\_\_ shall be  
the official act and deed of this Partnership."

I further certify that said resolution is now in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand this \_\_\_\_\_, day of \_\_\_\_\_,  
20\_\_\_\_\_.

Secretary

(SEAL)

SECTION 00500 - AGREEMENT

CERTIFICATE  
(if Joint Venture)

STATE OF            )  
                          ) SS:  
COUNTY OF        )

I HEREBY CERTIFY that a meeting of the Principals of the  
\_\_\_\_\_ a joint venture existing under the laws of the  
State of \_\_\_\_\_, held on \_\_\_\_\_, 20\_\_\_\_, the following resolution was duly passed and  
adopted:

"RESOLVED, that \_\_\_\_\_, as \_\_\_\_\_ of the  
Joint Venture, be and is hereby authorized to **execute the Agreement** with the CITY AND  
BOROUGH OF JUNEAU and this joint venture and that the execution thereof, attested by the  
\_\_\_\_\_ shall be the official act and deed of this Joint Venture."

I further certify that said resolution is now in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand this \_\_\_\_\_, day of  
\_\_\_\_\_, 20\_\_\_\_\_.

Secretary

(SEAL)

END OF SECTION

**SECTION 00610 - PERFORMANCE BOND**

KNOW ALL PERSONS BY THESE PRESENTS: That we \_\_\_\_\_  
(Name of CONTRACTOR)  
a \_\_\_\_\_  
(Corporation, Partnership, Individual)  
hereinafter called "Principal" and \_\_\_\_\_  
(Surety)  
of \_\_\_\_\_, State of \_\_\_\_\_ hereinafter called the "Surety", are held and firmly bound  
to the CITY AND BOROUGH of JUNEAU, ALASKA hereinafter called "OWNER", for the penal sum  
(Owner) (City and State)  
of \_\_\_\_\_ dollars (\$ \_\_\_\_\_) in  
lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves,  
our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the CONTRACTOR has entered into a  
certain contract with the OWNER, the effective date of which is (CBJ Contracts Office to fill in effective date)  
\_\_\_\_\_, a copy of which is hereto attached and made a part hereof for the construction of:

**CCFR-SECTIONAL DOORS AND OPERATORS REPLACEMENT  
CBJ Contract No. E10-219**

NOW, THEREFORE, if the Principal shall truly and faithfully perform its duties, all the undertakings,  
covenants, terms, conditions, and agreements of said contract during the original term thereof, and any extensions  
thereof, which may be granted by the OWNER, with or without notice to the Surety, and if it shall satisfy all  
claims and demands incurred under such contract, and shall fully indemnify and save harmless the OWNER from  
all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the  
OWNER all outlay and expense which the OWNER may incur in making good any default, then this obligation  
shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety, for value received hereby stipulates and agrees that no  
change, extension of time, alteration or addition to the terms of the contract or to the WORK to be performed  
thereunder or the specifications accompanying the same shall in any wise affect its obligation on this bond, and it  
does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract  
or to the WORK or to the Specifications.

PROVIDED, FURTHER, that no final settlement between the OWNER and the Principal shall abridge  
the right of any beneficiary hereunder, whose claim may be unsatisfied.

**SECTION 00610 - PERFORMANCE BOND**

**CCFR-SECTIONAL DOORS AND OPERATORS REPLACEMENT  
CBJ Contract No. E10-219**

IN WITNESS WHEREOF, this instrument is issued in two (2) identical counterparts, each one of which shall be deemed an original.

**CONTRACTOR:**

By: \_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Printed Name)

\_\_\_\_\_  
(Company Name)

\_\_\_\_\_  
(Street or P.O. Box)

\_\_\_\_\_  
(City, State, Zip Code)

**SURETY:**

By: \_\_\_\_\_  
(Signature of Attorney-in-Fact)

Date Issued: \_\_\_\_\_

\_\_\_\_\_  
(Printed Name)

\_\_\_\_\_  
(Company Name)

\_\_\_\_\_  
(Street or P.O. Box)

\_\_\_\_\_  
(City, State, Zip Code)

**(Affix SURETY'S SEAL)**

**NOTE: If CONTRACTOR is Partnership, all Partners must execute bond.**

**SECTION 00620 - PAYMENT BOND**

KNOW ALL PERSONS BY THESE PRESENTS: That we \_\_\_\_\_  
(Name of CONTRACTOR)

\_\_\_\_\_ a \_\_\_\_\_  
(Corporation, Partnership, Individual)

hereinafter called "Principal" and \_\_\_\_\_  
(Surety)

of \_\_\_\_\_, State of \_\_\_\_\_ hereinafter called the "Surety," are held and

firmly bound to the CITY AND BOROUGH of JUNEAU, ALASKA hereinafter called "OWNER," for the  
(Owner) (City and State)

penal sum of \_\_\_\_\_ Dollars  
(\$ \_\_\_\_\_) in lawful money of the United States, for the payment of which sum well  
and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and  
severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that Whereas, the CONTRACTOR has entered  
into a certain contract with the OWNER, the effective date of which is (CBJ Contracts Office to fill in  
effective date) \_\_\_\_\_, a copy of which is hereto attached and made a part hereof for  
the construction of:

**CCFR-SECTIONAL DOORS AND OPERATORS REPLACEMENT  
CBJ Contract No. E10-219**

NOW, THEREFORE, if the Principal shall promptly make payment to all persons, firms,  
Subcontractors, and corporations furnishing materials for, or performing labor in the prosecution of the  
WORK provided for in such contract, and any authorized extension or modification thereof, including all  
amounts due for materials, lubricants, oil, gasoline, coal and coke, repairs on machinery, equipment and tools,  
consumed or used in connection with the construction of such WORK, and all insurance premiums on said  
work, and for all labor performed in such WORK, whether by Subcontractor or otherwise, then this obligation  
shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety, for value received hereby stipulates and agrees that no  
change, extension of time, alteration or addition to the terms of the contract or to the WORK to be performed  
thereunder or the specifications accompanying the same shall in any wise affect its obligation on this bond,  
and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of  
the contract or to the WORK or to the Specifications.

PROVIDED, FURTHER, that no final settlement between the OWNER and the Principal shall  
abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

**SECTION 00620 - PAYMENT BOND**

**CCFR-SECTIONAL DOORS AND OPERATORS REPLACEMENT  
CBJ Contract No. E10-219**

IN WITNESS WHEREOF, this instrument is issued in two (2) identical counterparts, each one of which shall be deemed an original.

**CONTRACTOR:**

By: \_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Printed Name)

\_\_\_\_\_  
(Company Name)

\_\_\_\_\_  
(Street or P.O. Box)

\_\_\_\_\_  
(City, State, Zip Code)

**SURETY:**

By: \_\_\_\_\_  
(Signature of Attorney-in-Fact)

Date Issued: \_\_\_\_\_

\_\_\_\_\_  
(Printed Name)

\_\_\_\_\_  
(Company Name)

\_\_\_\_\_  
(Street or P.O. Box)

\_\_\_\_\_  
(City, State, Zip Code)

**(Affix SURETY'S SEAL)**

**NOTE: If CONTRACTOR is Partnership, all Partners must execute bond.**



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## **SECTION 00700 - GENERAL CONDITIONS**

### **ARTICLE 1 DEFINITIONS**

Wherever used in these General Conditions or in the Contract Documents the following terms have the meanings indicated which are applicable to both the singular and plural thereof. Where a word is capitalized in the definitions and is found not capitalized in the Contract Documents it has the ordinary dictionary definition.

Addenda - Written or graphic instruments issued prior to the opening of Bids which make additions, deletions, or revisions to the Contract Documents.

Agreement - The written contract between the OWNER and the CONTRACTOR covering the WORK to be performed; other documents are attached to the Agreement and made a part thereof as provided therein.

Application for Payment - The form furnished by the ARCHITECT which is to be used by the CONTRACTOR to request progress or final payment and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

ARCHITECT - The ARCHITECT is the firm or person(s) selected by the City and Borough of Juneau (CBJ) to perform the duties of project inspection and management. CBJ will inform the CONTRACTOR of the identity of the ARCHITECT at or before the Notice to Proceed.

Architect of Record – The individual, partnership, corporation, joint-venture or other legal entity legally responsible for preparation of Design and Construction Documents for the project.

Asbestos - Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.

Bid - The offer or proposal of the Bidder submitted on the prescribed form setting forth the price or prices for the WORK.

Bonds - Bid, Performance, and Payment Bonds and other instruments which protect against loss due to inability or refusal of the CONTRACTOR to perform its contract.

CBJ - City and Borough of Juneau

CBJ Project Manager - The authorized representative of the City and Borough of Juneau Engineering Department, as OWNER, who is responsible for administration of the contract.

Change Order - A document recommended by the ARCHITECT, which is signed by the CONTRACTOR and the OWNER and authorizes an addition, deletion, or revision in the WORK, or an adjustment in the Contract Price or the Contract Time, issued on or after the Effective Date of the Agreement.

Contract Documents - The Table of Contents, Notice Inviting Bids, Instructions to Bidders, Bid Forms (including the Bid, Bid Schedule(s), Information Required of Bidder, Bid Bond, and all required certificates and affidavits), Agreement, Performance Bond, Payment Bond, General Conditions, Supplementary General Conditions, Technical Specifications, Drawings, Permits, and all Addenda, Field Orders and Change Orders executed pursuant to the provisions of the Contract Documents.

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**Contract Price** - The total monies payable by the OWNER to the CONTRACTOR under the terms and conditions of the Contract Documents.

**Contract Time** - The number of successive calendar Days or the specific date stated in the Contract Documents for the completion of the WORK.

**CONTRACTOR** - The individual, partnership, corporation, joint-venture or other legal entity with whom the OWNER has executed the Agreement.

**Day** - A calendar day of 24 hours measured from midnight to the next midnight.

**Defective WORK** - WORK that is unsatisfactory, faulty, or deficient; or that does not conform to the Contract Documents; or that does not meet the requirements of any inspection, reference standard, test, or approval referred to in the Contract Documents; or WORK that has been damaged prior to the ARCHITECT's recommendation of final payment.

**Drawings** - The drawings, plans, maps, profiles, diagrams, and other graphic representations which indicate the character, location, nature, extent, and scope of the WORK and which have been prepared by the Architect of Record and are referred to in the Contract Documents. Shop Drawings are not within the meaning of this paragraph.

**Effective Date of the Agreement** - The date indicated in the Agreement on which it becomes effective, but if no such date is indicated it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.

**Field Order** - A written order issued by the ARCHITECT which may or may not involve a change in the WORK.

**General Requirements** - Division 1 of the Technical Specifications.

**Hazardous Waste** - The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 9603) as amended from time to time.

**Holidays** - The CBJ legal holidays occur on:

- A. New Year's Day - January 1
- B. Martin Luther King's Birthday - Third Monday in January
- C. President's Day - Third Monday in February
- D. Seward's Day - Last Monday in March
- E. Memorial Day - Last Monday in May
- F. Independence Day - July 4
- G. Labor Day - First Monday in September
- H. Alaska Day - October 18
- I. Veteran's Day - November 11
- J. Thanksgiving Day - Fourth Thursday and the following Friday in November
- K. Christmas Day - December 25.

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If any holiday listed above falls on a Saturday, Saturday and the preceding Friday are both legal holidays. If the holiday should fall on a Sunday, Sunday and the following Monday are both legal holidays.

Inspector - The authorized representative of the ARCHITECT assigned to make detailed inspections for conformance to the Contract Documents. Any reference to the Resident Project Representative in this document shall mean the Inspector.

Laws and Regulations; Laws or Regulations - Any and all applicable laws, rules, regulations, ordinances, codes, and/or orders of any and all governmental bodies, agencies, authorities and courts having jurisdiction.

Mechanic's Lien - A form of security, an interest in real property, which is held to secure the payment of an obligation. When referred to in these Contract Documents, "Mechanic's Lien" or "lien" means "Stop Notice".

Milestone - A principal event specified in the Contract Documents relating to an intermediate completion date of a portion of the work, or a period of time within which the portion of the work should be performed prior to Substantial Completion of all the WORK.

Notice of Intent to Award - The written notice by the OWNER to the apparent successful bidder stating that upon compliance by the apparent successful bidder with the requirements listed therein, within the time specified, the OWNER will enter into an Agreement.

Notice of Award - The written notice by the OWNER to the apparent successful bidder stating that the apparent successful bidder has complied with all conditions for award of the contract.

Notice of Completion - A form signed by the ARCHITECT and the CONTRACTOR recommending to the OWNER that the WORK is Substantially Complete and fixing the date of Substantial Completion. After acceptance of the WORK by the OWNER's governing body, the form is signed by the OWNER. This filing starts the 30 day lien filing period on the WORK.

Notice to Proceed - The written notice issued by the OWNER to the CONTRACTOR authorizing the CONTRACTOR to proceed with the WORK and establishing the date of commencement of the Contract Time.

OWNER - The City and Borough of Juneau (CBJ), acting through its legally designated officials, officers, or employees.

Partial Utilization - Use by the OWNER of a substantially completed part of the WORK for the purpose for which it is intended prior to Substantial Completion of all the WORK.

PCB's - Polychlorinated biphenyls.

Petroleum - Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Wastes and crude oils.

Project - The total construction of which the WORK to be provided under the Contract Documents may be the whole, or a part as indicated elsewhere in the Contract Documents.

## **SECTION 00700 - GENERAL CONDITIONS**

Radioactive Material - Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.

Shop Drawings - All drawings, diagrams, illustrations, schedules and other data which are specifically prepared by or for the CONTRACTOR and submitted by the CONTRACTOR, to the ARCHITECT, to illustrate some portion of the WORK.

Specifications - Same definition as for "Technical Specifications" hereinafter.

Stop Notice - A legal remedy for subcontractors and suppliers who contribute to public works, but who are not paid for their work, which secures payment from construction funds possessed by the OWNER. For public property, the Stop Notice remedy is designed to substitute for mechanic's lien rights.

Sub-Consultant - The individual, partnership, corporation, joint-venture or other legal entity having a direct contract with Architect of Record, or with any of its Consultants to furnish services with respect to the Project.

Subcontractor - An individual, partnership, corporation, joint-venture or other legal entity having a direct contract with the CONTRACTOR, or with any of its Subcontractors, for the performance of a part of the WORK at the site.

Substantial Completion - Refers to when the WORK has progressed to the point where, in the opinion of the ARCHITECT as evidenced by Notice of Completion as applicable, it is sufficiently complete, in accordance with the Contract Documents, so that the WORK can be utilized for the purposes for which it is intended; or if no such notice is issued, when final payment is due in accordance with Paragraph 14.8. The terms "substantially complete" and "substantially completed" as applied to any WORK refer to Substantial Completion thereof.

Supplementary General Conditions - The part of the Contract Documents which make additions, deletions, or revisions to these General Conditions.

Supplier - A manufacturer, fabricator, supplier, distributor, material man, or vendor.

Technical Specifications - Divisions 1 through 16 of the Contract Documents consisting of the General Requirements and written technical descriptions of products and execution of the WORK.

Underground Utilities - All pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities which have been installed underground to furnish any of the following services or materials: water, sewage and drainage removal, electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, traffic, or other control systems.

WORK, Work - The entire completed construction or the various separately identifiable parts thereof required to be furnished under the Contract Documents. WORK is the result of performing, or furnishing labor and furnishing and incorporating materials and equipment into the construction, and performing or furnishing services and furnishing documents, all as required by the Contract Documents.



## **SECTION 00700 - GENERAL CONDITIONS**

### **ARTICLE 2 PRELIMINARY MATTERS**

- 2.1 DELIVERY OF BONDS/INSURANCE CERTIFICATES. When the CONTRACTOR delivers the signed Agreements to the OWNER, the CONTRACTOR shall also deliver to the OWNER such Bonds and Insurance Policies and Certificates as the CONTRACTOR may be required to furnish in accordance with the Contract Documents.
- 2.2 COPIES OF DOCUMENTS. The OWNER shall furnish to the CONTRACTOR the required number of copies of the Contract Documents specified in the Supplementary General Conditions.
- 2.3 COMMENCEMENT OF CONTRACT TIME; NOTICE TO PROCEED. The Contract Time will start to run on the commencement date stated in the Notice to Proceed. If no date is stated, Contract Time shall commence upon the date of the Notice to Proceed is issued.
- 2.4 STARTING THE WORK
- A. The CONTRACTOR shall begin to perform the WORK within 10 days after the commencement date stated in the Notice to Proceed, but no WORK shall be done at the site prior to said commencement date.
  - B. Before undertaking each part of the WORK, the CONTRACTOR shall carefully study and compare the Contract Documents and check and verify pertinent figures shown thereon and all applicable field measurements. The CONTRACTOR shall promptly report in writing to the ARCHITECT any conflict, error, or discrepancy which the CONTRACTOR may discover and shall obtain a written interpretation or clarification from the ARCHITECT before proceeding with any WORK affected thereby.
  - C. The CONTRACTOR shall submit to the ARCHITECT for review those documents called for under Section 01300 - CONTRACTOR Submittals in the General Requirements.
- 2.5 PRE-CONSTRUCTION CONFERENCE. The CONTRACTOR is required to attend a Pre-Construction Conference. This conference will be attended by the ARCHITECT and others as appropriate in order to discuss the WORK in accordance with the applicable procedures specified in the General Requirements, Section 01010 - Summary of Work.
- 2.6 FINALIZING CONTRACTOR SUBMITTALS. At least 7 days before submittal of the first Application for Payment a conference attended by the CONTRACTOR, the ARCHITECT and others as appropriate will be held to finalize the initial CONTRACTOR submittals in accordance with the General Requirements. As a minimum the CONTRACTOR's representatives should include its project manager and schedule expert. The CONTRACTOR should plan on this meeting taking no less than 8 hours. If the submittals are not finalized at the end of the meeting, additional meetings will be held so that the submittals can be finalized prior to the submittal of the first Application for Payment. No Application for Payment will be processed until CONTRACTOR submittals are finalized.

## **SECTION 00700 - GENERAL CONDITIONS**

### **ARTICLE 3 CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE**

#### **3.1 INTENT**

- A. The Contract Documents comprise the entire agreement between the OWNER and the CONTRACTOR concerning the WORK. The Contract Documents shall be construed as a whole in accordance with Alaska Law.
- B. It is the intent of the Contract Documents to describe the WORK, functionally complete, to be constructed in accordance with the Contract Documents. Any WORK, materials, or equipment that may reasonably be inferred from the Contract Documents as being required to produce the intended result shall be supplied whether or not specifically called for. When words or phrases which have a well-known technical or construction industry or trade meaning are used to describe WORK, materials, or equipment such words or phrases shall be interpreted in accordance with that meaning, unless a definition has been provided in Article 1 of the General Conditions. Reference to standard specifications, manuals, or codes of any technical society, organization, or association, or to the Laws or Regulations of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids, except as may be otherwise specifically stated. However, no provision of any referenced standard specification, manual, or code (whether or not specifically incorporated by reference in the Contract Documents) shall be effective to change the duties and responsibilities of the ARCHITECT, OWNER, the CONTRACTOR, or the Architect of Record or any of their consultants, agents, or employees from those set forth in the Contract Documents.
- C. If, during the performance of the WORK, CONTRACTOR discovers any conflict, error, ambiguity or discrepancy within the Contract Documents or between the Contract Documents and any provision of any such Law or Regulation applicable to the performance of the WORK or of any such standard, specification, manual or code or of any instruction of any Supplier referred to in paragraph 6.5, the CONTRACTOR shall report it to the ARCHITECT in writing at once, and the CONTRACTOR shall not proceed with the WORK affected thereby (except in an emergency as authorized by the ARCHITECT) until a clarification Field Order, or Change Order to the Contract Documents has been issued.

#### **3.2 ORDER OF PRECEDENCE OF CONTRACT DOCUMENTS**

- A. In resolving conflicts resulting from, errors, or discrepancies in any of the Contract Documents, the order of precedence shall be as follows:
  - 1. Permits from other agencies as may be required by law, excepting the definition of "Permittee" in these permits.
  - 2. Field Orders
  - 3. Change Orders
  - 4. ARCHITECT's written interpretations and clarifications.
  - 5. Agreement
  - 6. Addenda
  - 7. CONTRACTOR's Bid (Bid Form)
  - 8. Supplementary General Conditions
  - 9. Notice Inviting Bids
  - 10. Instructions to Bidders

## **SECTION 00700 - GENERAL CONDITIONS**

11. General Conditions
12. Technical Specifications
13. Drawings

B. 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. Addenda/Change Order drawings govern over contract Drawings
4. Contract Drawings govern over standard details

3.3 **AMENDING AND SUPPLEMENTING CONTRACT DOCUMENTS.** The Contract Documents may be amended to provide for additions, deletions, and revisions in the WORK or to modify the terms and conditions thereof by a Change Order (pursuant to Article 10 CHANGES IN THE WORK).

3.4 **REUSE OF DOCUMENTS.** Neither the CONTRACTOR, nor any Subcontractor or Supplier, nor any other person or organization performing any of the WORK under a contract with the OWNER shall have or acquire any title to or ownership rights in any of the Drawings, Technical Specifications, or other documents used on the WORK, and they shall not reuse any of them on the extensions of the Project or any other project without written consent of the OWNER.

### **ARTICLE 4 AVAILABILITY OF LANDS; PHYSICAL CONDITIONS; REFERENCE POINTS**

4.1 **AVAILABILITY OF LANDS.** The OWNER shall furnish, as indicated in the Contract Documents, the lands upon which the WORK is to be performed, rights-of-way and easements for access thereto, and such other lands which are designated for the use of the CONTRACTOR. Easements for permanent structures or permanent changes in existing facilities will be obtained and paid for by the OWNER, unless otherwise provided in the Contract Documents. Nothing contained in the Contract Documents shall be interpreted as giving the CONTRACTOR exclusive occupancy of the lands or rights-of-way provided. The CONTRACTOR shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment; provided, that the CONTRACTOR shall not enter upon nor use any property not under the control of the OWNER until a written temporary construction easement, lease or other appropriate agreement has been executed by the CONTRACTOR and the property owner, and a copy of said agreement furnished to the ARCHITECT prior to said use; and, neither the OWNER nor the ARCHITECT shall be liable for any claims or damages resulting from the CONTRACTOR's unauthorized trespass or use of any such properties.

#### **4.2 PHYSICAL CONDITIONS - SUBSURFACE AND EXISTING STRUCTURES**

A. **Explorations and Reports.** Reference is made to SGC 4.2 Physical Conditions of the Supplementary General Conditions for identification of those reports of explorations and tests of sub-surface conditions at the site that have been utilized by the Architect of Record in the preparation of the Contract Documents. The CONTRACTOR may rely upon the accuracy of the technical data contained in such reports, however, reports are not to be considered complete or comprehensive and nontechnical data, interpretations, and opinions contained in such reports are not to be relied on by the CONTRACTOR. The CONTRACTOR is responsible for any further explorations or tests that

## SECTION 00700 - GENERAL CONDITIONS

may be necessary and any interpretation, interpolation, or extrapolation that it makes of any information shown in such reports.

- B. Existing Structures. Reference is made to SGC 4.2 Physical Conditions of the Supplementary General Conditions for identification of those drawings of physical conditions in or relating to existing surface and subsurface structures (except Underground Utilities referred to in Paragraph 4.4 herein) which are at or contiguous to the site that have been utilized by the Architect of Record in the preparation of the Contract Documents. The CONTRACTOR may rely upon the accuracy of the technical data contained in such drawings, however, nontechnical data, interpretations, and opinions contained in such drawings are not to be relied on by the CONTRACTOR. The CONTRACTOR is also responsible for any interpretation, interpolation, or extrapolation that it makes of any information shown in such drawings.

### 4.3 DIFFERING SITE CONDITIONS

- A. The CONTRACTOR shall promptly upon discovery (but in no event later than 14 days thereafter) and before the following conditions are disturbed, notify the ARCHITECT, in writing of any:
  - 1. Material that the CONTRACTOR believes may be material that is hazardous waste, as defined in Article 1 of these General Conditions, or asbestos, PCB's, petroleum or any other substance or material posing a threat to human or to the environment.
  - 2. Subsurface or latent physical conditions at the site differing from those indicated.
  - 3. Unknown physical conditions at the site of any unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in WORK of the character provided for in the contract.
- B. The ARCHITECT shall promptly investigate the conditions, and if it finds that the conditions do materially so differ, or do involve hazardous waste, and cause a decrease or increase in the CONTRACTOR's cost of, or the time required for, performance of any part of the WORK shall issue a Change Order under the procedures described in the contract.
- C. In the event that a dispute arises between the ARCHITECT and the CONTRACTOR whether the conditions materially differ, or involved hazardous waste or other materials listed above, or cause a decrease or increase in the CONTRACTOR's cost of, or time required for, performance of any part of the WORK, the CONTRACTOR shall not be excused from any scheduled completion date provided for by the contract, but shall proceed with all WORK to be performed under the contract. The CONTRACTOR shall retain any and all rights provided either by contract or by Law which pertain to the resolution of disputes and protests between the contracting parties.

### 4.4 PHYSICAL CONDITIONS - UNDERGROUND UTILITIES

- A. Indicated. The information and data indicated in the Contract Documents with respect to existing Underground Utilities at or contiguous to the site are based on information and data furnished to the OWNER or the Architect of Record by the owners of such Underground Utilities or by others. Unless it is expressly provided in the Supplementary General Conditions and/or Section 01530 - Protection and Restoration of Existing Facilities, the OWNER and the Architect of Record shall not be responsible for the accuracy or completeness of any such information or data, and the CONTRACTOR shall have full responsibility for reviewing and checking all such information and data, for locating all Underground Utilities indicated in the Contract Documents, for coordination of

## **SECTION 00700 - GENERAL CONDITIONS**

the WORK with the owners of such Underground Utilities during construction, for the safety and protection thereof and repairing any damage thereto resulting from the WORK, the cost of which will be considered as having been included in the Contract Price.

- B. Not Indicated. If an Underground Utility is uncovered or revealed at or contiguous to the site which was not indicated in the Contract Documents and which the CONTRACTOR could not reasonably have been expected to be aware of, the CONTRACTOR shall identify the owner of such Underground Utility and give written notice thereof to that owner and shall notify the ARCHITECT in accordance with the requirements of the Supplementary General Conditions and Section 01530 - Protection and Restoration of Existing Facilities of the General Requirements.

### **4.5 REFERENCE POINTS**

- A. The ARCHITECT will provide one bench mark, near or on the site of the WORK, and will provide two points near or on the site to establish a base line for use by the CONTRACTOR for alignment control. Unless otherwise specified in the General Requirements, the CONTRACTOR shall furnish all other lines, grades, and bench marks required for proper execution of the WORK.
- B. The CONTRACTOR shall preserve all bench marks, stakes, and other survey marks, and in case of their removal or destruction by its own employees or by its subcontractor's employees, the CONTRACTOR shall be responsible for the accurate replacement of such reference points by personnel qualified under the Alaska Statute governing the licensing of architects, engineers, and land surveyors.

### **4.6 USE OF THE CBJ/STATE LEMON CREEK GRAVEL PIT**

- A. On City and Borough of Juneau (CBJ) construction projects, the CBJ may make unclassified material available to CONTRACTORS, from the CBJ/State Lemon Creek gravel pit, at a rate less than charged other customers. CONTRACTORS are not required to use material from the CBJ/State pit and the CBJ makes no guarantee as to the quantity or quality of the available material. For this Project, the price shall be \$1.90 per ton.
- B. CONTRACTORS proposing to use gravel from the CBJ/State pit are required to be in good standing for all amounts owed to the CBJ, for previous gravel operations, prior to submitting a mining plan for approval. CONTRACTORS using the pit must comply with Allowable Use Permit USE 98-00047. Failure to meet these requirements, if so subject, shall be sufficient reason to deny use of the CBJ/State pit as a gravel source. To determine if your company is subject to these requirements, contact the CBJ Engineering Department, Gravel Pit Management, at (907) 586-0883.
- C. CONTRACTORS deciding to use material from the CBJ/State pit shall provide an Individual Mining Plan prepared by a professional engineer registered in the State of Alaska. The Individual Mining Plan must be reviewed and approved by the CBJ, prior to commencing operations within the pit. CONTRACTORS shall also secure a Performance Bond to ensure compliance with contract provisions, including any Individual Mining Plan stipulations. The bond shall remain in full force and effect until a release is obtained from the CBJ.
- D. If CONTRACTOR operations for a Project do not exceed 500 tons of material, the CONTRACTOR will not be required to provide an Individual Mining Plan prepared by an engineer, however, the CONTRACTOR must submit an Individual Mining Plan that is in compliance with Allowable Use

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Permit USE 98-00047 for gravel extraction within the CBJ/State pit. The CONTRACTOR must contact the CBJ Engineering Department for conditions for the extraction.

- E. CONTRACTORS using the CBJ material may do primary dry separation (screening) of materials within the pit. Crushing and washing of material will not be allowed. CONTRACTORS shall account for placement of materials removed from the pit. The CBJ may require CONTRACTORS to cross-check weight tickets, submit to an audit, or participate in other measures required by the CBJ to ensure accountability. Unprocessed overburden removed from the pit will not be weighed. All other material mined will be weighed at the CBJ scale. CONTRACTORS will be responsible for loading and/or screening their own material. If asphalt pavement is removed as part of the WORK, CONTRACTORS shall dispose of the material at a to-be-specified location within the pit area, as directed by the CBJ Gravel Pit Manager, (907) 586-0883.
- F. The gravel pit overhead charge shall be paid to the CBJ by the CONTRACTOR within 60 days after removal of all materials from the pit and prior to requesting and/or receiving final payment. Upon completion of each excavation CONTRACTORS shall notify the CBJ, in writing, in sufficient time to perform a field-compliance examination prior to vacating the pit. Any significant deviation from the stipulations of the Individual Mining Plan identified during the field inspection shall be corrected by the CONTRACTOR prior to release of the bond. A signed release from CBJ will be required prior to releasing the CONTRACTOR's bond.
- G. If asphalt pavement is removed as part of this WORK, the CONTRACTOR shall dispose of the material at the location designated as the Asphalt Storage Facility, or as directed by the ARCHITECT.
- H. The CBJ/State Pit is a seasonal operation. The hours of operation are from 7:00 a.m. to 6:00 p.m., Monday through Friday, from April 1 through October 15 of the year. CONTRACTORS may obtain gravel on weekends, or during the off-season, by applying for a separate agreement with the City and Borough of Juneau Engineering Department. The CONTRACTOR will be responsible for any additional costs incurred during weekend or off-season operations at the gravel pit.
- I. All CONTRACTORS/equipment operators using the CBJ/State Pit shall be in compliance with Federal Mine Safety and Health Administration regulations for quarry and gravel operations.

## **ARTICLE 5 BONDS AND INSURANCE**

### **5.1 PERFORMANCE, PAYMENT, AND OTHER BONDS**

- A. The CONTRACTOR shall furnish Performance and Payment Bonds, each in the amount set forth in the Supplementary General Conditions as security for the faithful performance and payment of all the CONTRACTOR's obligations under the Contract Documents. These bonds shall remain in effect at least until one year after the date of Substantial Completion except as otherwise provided by Law or Regulation or by the Contract Documents. The CONTRACTOR shall also furnish such other Bonds as are required by the Supplementary General Conditions. All Bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Audit Staff, Bureau of Government Financial Operations,

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U.S. Treasury Department. All Bonds signed by an agent must be accompanied by a certified copy of such agent's authority to act.

- B. If the surety on any Bond furnished by the CONTRACTOR is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the WORK is located, the CONTRACTOR shall within 7 days thereafter substitute another Bond and Surety, which must be acceptable to the OWNER.
- C. All Bonds required by the Contract Documents to be purchased and maintained by CONTRACTOR shall be obtained from surety companies that are duly licensed or authorized in the State of Alaska to issue Bonds for the limits so required. Such surety companies shall also meet such additional requirements and qualifications as may be provided in the Supplementary General Conditions.

### 5.2 INSURANCE

- A. The CONTRACTOR shall purchase and maintain the insurance required under this paragraph. Such insurance shall include the specific coverages set out herein and be written for not less than the limits of liability and coverages provided in the Supplementary General Conditions, or required by law, whichever are greater. All insurance shall be maintained continuously during the life of the Agreement up to the date of Final Completion and at all times thereafter when the CONTRACTOR may be correcting, removing, or replacing Defective WORK in accordance with Paragraph 13.6, but the CONTRACTOR's liabilities under this Agreement shall not be deemed limited in any way to the insurance coverage required.
- B. All insurance required by the Contract Documents to be purchased and maintained by the CONTRACTOR shall be obtained from insurance companies that are duly licensed or authorized in the State of Alaska to issue insurance policies for the limits and coverages so required. Such insurance companies shall have a current Best's Rating of at least an "A" (Excellent) general policy holder's rating and a Class VII financial size category and shall also meet such additional requirements and qualifications as may be provided in the Supplementary General Conditions.
- C. The CONTRACTOR shall furnish the OWNER with certificates showing the type, amount, class of operations covered, effective dates and dates of expiration of policies. All of the policies of insurance so required to be purchased and maintained (or the certificates or other evidence thereof) shall contain a provision or endorsement that the coverage afforded will not be cancelled, reduced in coverage, or renewal refused until at least 30 days' prior written notice has been given to the OWNER by certified mail. All such insurance required herein (except for Workers' Compensation and Employer's Liability) shall name the OWNER, its Consultants and subconsultants and their officers, directors, agents, and employees as "additional insureds" under the policies. The CONTRACTOR shall purchase and maintain the following insurance:
  - 1. Workers' Compensation and Employer's Liability. This insurance shall protect the CONTRACTOR against all claims under applicable state workers' compensation laws. The CONTRACTOR shall also be protected against claims for injury, disease, or death of employees which, for any reason, may not fall within the provisions of a Workers' Compensation law. This policy shall include an "all states" endorsement. The CONTRACTOR shall require each Subcontractor similarly to provide Workers' Compensation Insurance for all of the latter's employees to be engaged in such work unless such employees are covered by the protection afforded by the CONTRACTOR's Workers' Compensation Insurance. In case any

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class of employees is not protected, under the Workers' Compensation Statute, the CONTRACTOR shall provide and shall cause each subcontractor to provide adequate employer's liability insurance for the protection of such of its employees as are not otherwise protected.

2. Commercial General Liability. This insurance shall be written in comprehensive form and shall protect the CONTRACTOR against all claims arising from injuries to persons other than its employees or damage to property of the OWNER or others arising out of any act or omission of the CONTRACTOR or its agents, employees, or Subcontractors. The policy shall contain no exclusions for any operations within the scope of this contract.
3. Comprehensive Automobile Liability. This insurance shall be written in comprehensive form and shall protect the CONTRACTOR against all claims for injuries to members of the public and damage to property of others arising from the use of motor vehicles, and shall cover operation on or off the site of all motor vehicles licensed for highway use, whether they are owned, non-owned, or hired. Coverage for hired motor vehicles should include endorsement covering liability assumed under this contract.
4. Subcontractor's Public Liability and Property Damage Insurance and Vehicle Liability Insurance. The CONTRACTOR shall either require each of its Subcontractors to procure and to maintain Subcontractor's Commercial General Liability and Property Damage Insurance and Vehicle Liability Insurance of the type and in the amounts specified in the Supplementary General Conditions or insure the activities of its subcontractors in the CONTRACTOR's own policy, in like amount.
5. Builder's Risk. This insurance shall be of the "all risks" type, shall be written in completed value form, and shall protect the CONTRACTOR, the OWNER, and the ARCHITECT, against risks of damage to buildings, structures, and materials and equipment. The amount of such insurance shall be not less than the insurable value of the WORK at completion. Builder's risk insurance shall provide for losses to be payable to the CONTRACTOR and the OWNER, as their interests may appear. The policy shall contain a provision that in the event of payment for any loss under the coverage provided, the insurance company shall have no rights of recovery against the CONTRACTOR, the OWNER, and the ARCHITECT. The Builder's Risk policy shall insure against all risks of direct physical loss or damage to property from any external cause including flood and earthquake. Allowable exclusions, if any, shall be as specified in the Supplementary General Conditions.

## ARTICLE 6 CONTRACTOR'S RESPONSIBILITIES

### 6.1 SUPERVISION AND SUPERINTENDENCE

- A. The CONTRACTOR shall supervise, inspect, and direct the WORK competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the WORK in accordance with the Contract Documents. The CONTRACTOR shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction and safety precautions and programs incidental thereto. The CONTRACTOR shall be responsible to see that the completed WORK complies accurately with the Contract Documents.
- B. The CONTRACTOR shall designate in writing and keep on the work site at all times during its progress a technically qualified, English-speaking superintendent, who is an employee of the CONTRACTOR and who shall not be replaced without written notice to the OWNER and the



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ARCHITECT. The superintendent will be the CONTRACTOR's representative at the site and shall have authority to act on behalf of the CONTRACTOR. All communications given to the superintendent shall be as binding as if given to the CONTRACTOR. The CONTRACTOR shall issue all its communications to the OWNER through the ARCHITECT and the ARCHITECT only.

- C. The CONTRACTOR's superintendent shall be present at the site of the WORK at all times while WORK is in progress. Failure to observe this requirement shall be considered suspension of the WORK by the CONTRACTOR until such time as such superintendent is again present at the site.

### 6.2 LABOR, MATERIALS, AND EQUIPMENT

- A. The CONTRACTOR shall provide competent, suitably qualified personnel to survey and lay out the WORK and perform construction as required by the Contract Documents. The CONTRACTOR shall furnish, erect, maintain, and remove the construction plant and any temporary works as may be required. The CONTRACTOR shall at all times maintain good discipline and order at the site. Except in connection with the safety or protection of persons or the WORK or property at the site or adjacent thereto, and except as otherwise indicated in the Contract Documents, all WORK at the site shall be performed during regular working hours, and the CONTRACTOR will not permit overtime WORK or the performance of WORK on Saturday, Sunday, or any legal holiday without the OWNER's written consent. The CONTRACTOR shall apply for this consent through the ARCHITECT.
- B. Except as otherwise provided in this Paragraph, the CONTRACTOR shall receive no additional compensation for overtime WORK, i.e., work in excess of 8 hours in any one calendar day or 40 hours in any one calendar week, even though such overtime WORK may be required under emergency conditions and may be ordered by the ARCHITECT in writing. Additional compensation will be paid the CONTRACTOR for overtime WORK only in the event extra WORK is ordered by the ARCHITECT and the Change Order specifically authorizes the use of overtime WORK and then only to such extent as overtime wages are regularly being paid by the CONTRACTOR for overtime WORK of a similar nature in the same locality.
- C. All costs of inspection and testing performed during overtime WORK by the CONTRACTOR which is allowed solely for the convenience of the CONTRACTOR shall be borne by the CONTRACTOR. The ARCHITECT shall have the authority to deduct the cost of all such inspection and testing from any partial payments otherwise due to the CONTRACTOR.
- D. Unless otherwise specified in the Contract Documents, the CONTRACTOR shall furnish and assume full responsibility for all materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, and all other facilities and incidentals necessary for the furnishing, performance, testing, start-up, and completion of the WORK.
- E. All materials and equipment to be incorporated into the WORK shall be of good quality and new, except as otherwise provided in the Contract Documents. All warranties and guarantees specifically called for by the Specifications shall expressly run to the benefit of the OWNER. If required by the ARCHITECT, the CONTRACTOR shall furnish satisfactory evidence (including reports of required tests) as to the kind and quality of materials and equipment. All materials and equipment shall be applied, installed, connected, erected, used, cleaned, and conditioned in accordance with the instructions of the applicable Supplier except as otherwise provided in the Contract Documents; but no provisions of any such instructions will be effective to assign to the ARCHITECT, or any of the

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Architect's of Record consultants, agents, or employees, any duty or authority to supervise or direct the furnishing or performance of the WORK or any duty or authority to undertake responsibility contrary to the provisions of Paragraphs 9.9C and 9.9D.

- F. The CONTRACTOR shall at all times employ sufficient labor and equipment for prosecuting the several classes of WORK to full completion in the manner and time set forth in and required by these specifications. All workers shall have sufficient skill and experience to properly perform the WORK assigned to them. Workers engaged in special WORK, or skilled WORK, shall have sufficient experience in such WORK and in the operation of the equipment required to perform all WORK, properly and satisfactorily.
  - G. Any person employed by the CONTRACTOR or by any SUBCONTRACTOR who, in the opinion of the ARCHITECT, does not perform the WORK in a proper and skillful manner, or is intemperate or disorderly shall, at the written request of the ARCHITECT, be removed forthwith by the CONTRACTOR or Subcontractor employing such person, and shall not be employed again in any portion of the WORK without the approval of the ARCHITECT. Should the CONTRACTOR fail to remove such person or persons as required above, or fail to furnish suitable and sufficient personnel for the proper prosecution of the WORK, the ARCHITECT may suspend the WORK by written notice until such orders are complied with.
- 6.3 ADJUSTING PROGRESS SCHEDULE. The CONTRACTOR shall submit monthly updates of the progress schedule to the ARCHITECT for acceptance in accordance with the provisions in Section 01300 - CONTRACTOR Submittals in the General Requirements.
- 6.4 SUBSTITUTES OR "OR-EQUAL" ITEMS. The CONTRACTOR shall submit proposed substitutes or "or-equal" items in accordance with the provisions in Section 01300 - CONTRACTOR Submittals in the General Requirements.
- 6.5 CONCERNING SUBCONTRACTORS, SUPPLIERS, AND OTHERS. The CONTRACTOR shall be responsible to the OWNER and the ARCHITECT of Record for the acts and omissions of its subcontractors and their employees to the same extent as CONTRACTOR is responsible for the acts and omissions of its own employees. Nothing contained in this Paragraph shall create any contractual relationship between any subcontractor and the OWNER or the ARCHITECT nor relieve the CONTRACTOR of any liability or obligation under the contract.
- 6.6 PERMITS
- A. Unless otherwise provided in the Supplementary General Conditions, the CONTRACTOR shall obtain and pay for all construction permits and licenses from the agencies having jurisdiction, including the furnishing of insurance and Bonds if required by such agencies. The enforcement of such requirements under this contract shall not be made the basis for claims for additional compensation. The OWNER shall assist the CONTRACTOR, when necessary, in obtaining such permits and licenses. The CONTRACTOR shall pay all governmental charges and inspection fees necessary for the prosecution of the WORK, which are applicable at the time of opening of Bids. The CONTRACTOR shall pay all charges of utility owners for connections to the WORK.
  - B. These Contract Documents may require that the WORK be performed within the conditions and/or requirements of local, state and/or federal permits. These permits may be bound within the Contract Documents, included within the Contract Documents by reference, or included as part of the WORK, as designated in this Section. The CONTRACTOR is responsible for completing the WORK required

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for compliance with all permit requirements; this WORK is incidental to other items in the Contract Documents. Any reference to the PERMITTEE in the permits shall mean the CONTRACTOR. If any permits were acquired by the OWNER, this action was done to expedite the start of construction. If the CONTRACTOR does not complete the WORK within the specified permit window, the CONTRACTOR shall be responsible for the permit extension, and for completing any additional requirements placed upon the permit.

- 6.7 **PATENT FEES AND ROYALTIES.** The CONTRACTOR shall pay all license fees and royalties and assume all costs incident to the use in the performance of the WORK or the incorporation in the WORK of any invention, design, process, product, software or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the WORK and if to the actual knowledge of the OWNER or the Architect of Record its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by the OWNER in the Contract Documents. The CONTRACTOR shall indemnify, defend and hold harmless the OWNER and the Architect of Record and anyone directly or indirectly employed by either of them from and against all claims, damages, losses, and expenses (including attorneys' fees and court costs) arising out of any infringement of patent rights or copyrights incident to the use in the performance of the WORK or resulting from the incorporation in the WORK of any invention, design, process, product, or device not specified in the Contract Documents, and shall defend all such claims in connection with any alleged infringement of such rights.
- 6.8 **LAWS AND REGULATIONS.** The CONTRACTOR shall observe and comply with all federal, state, and local laws, ordinances, codes, orders, and regulations which in any manner affect those engaged or employed on the WORK, the materials used in the WORK, or the conduct of the WORK. If any discrepancy or inconsistency should be discovered in this contract in relation to any such law, ordinance, code, order, or regulation, the CONTRACTOR shall report the same in writing to the ARCHITECT. The CONTRACTOR shall indemnify, defend, and hold harmless the OWNER, the Architect of Record, and their officers, agents, and employees against all claims or liability arising from violation of any such law, ordinance, code, order, or regulation, whether by CONTRACTOR or by its employees, Subcontractors, or third parties. Any particular law or regulation specified or referred to elsewhere in the Contract Documents shall not in any way limit the obligation of the CONTRACTOR to comply with all other provisions of federal, state, and local laws and regulations.
- 6.9 **TAXES.** The CONTRACTOR shall pay all sales, consumer, use, and other similar taxes required to be paid by the CONTRACTOR in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the WORK.
- 6.10 **USE OF PREMISES.** The CONTRACTOR shall confine construction equipment, the storage of materials and equipment, and the operations of workers to (1) the Project site, (2) the land and areas identified in and permitted by the Contract Documents, and (3) the other land and areas permitted by Laws and Regulations, rights-of-way, permits, leases and easements. The CONTRACTOR shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof or of any land or areas contiguous thereto, resulting from the performance of the WORK. Should any claim be made against the OWNER or the Architect of Record by any such owner or occupant because of the performance of the WORK, the CONTRACTOR shall promptly attempt to settle with such other party by agreement or otherwise resolve the claim through litigation. The CONTRACTOR shall, to the fullest extent permitted by Laws and Regulations, indemnify, defend, and hold the OWNER and the Architect of Record harmless from and against all claims, damages, losses, and expenses (including, but not limited to, fees of Architect's of Records attorneys, and other

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professionals and court costs) arising directly, indirectly, or consequentially out of any action, legal or equitable, brought by any such owner or occupant against the OWNER, the Architect of Record, their consultants, sub-consultants, and the officers, directors, employees and agents of each and any of them to the extent caused by or based upon the CONTRACTOR's performance of the WORK.

### 6.11 SAFETY AND PROTECTION

- A. The CONTRACTOR shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the WORK. The CONTRACTOR shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:
  - 1. all employees on the WORK and other persons and organizations who may be affected thereby;
  - 2. all the WORK and materials and equipment to be incorporated therein, whether in storage on or off the site; and
  - 3. other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction.
- B. The CONTRACTOR shall comply with all applicable Laws and Regulations whether referred to herein or not) of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury, or loss and shall erect and maintain all necessary safeguards for such safety and protection. The CONTRACTOR shall notify owners of adjacent property and utilities when prosecution of the WORK may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.
- C. The CONTRACTOR shall designate a qualified and experienced safety representative at the site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and program.
- D. Materials that contain hazardous substances or mixtures may be required on the WORK. A Material Safety Data Sheet (MSDS) shall be requested by the CONTRACTOR from the manufacturer of any hazardous product used.
- E. Material usage shall be accomplished with strict adherence to all safety requirements and all manufacturer's warnings and application instructions listed on the Material Safety Data Sheet and on the product container label.
- F. The CONTRACTOR shall be responsible for coordinating communications on any exchange of Material Safety Data Sheets or other hazardous material information that is required to be made available to, or exchanged between, or among, employers at the site in accordance with Laws or Regulations.
- G. The CONTRACTOR shall notify the ARCHITECT if it considers a specified product or its intended usage to be unsafe. This notification must be given to the ARCHITECT prior to the product being ordered, or if provided by some other party, prior to the product being incorporated in the WORK.

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### **6.12 SHOP DRAWINGS AND SAMPLES**

- A. After checking and verifying all field measurements and after complying with applicable procedures specified in the General Requirements, the CONTRACTOR shall submit to the ARCHITECT for review, all Shop Drawings in accordance with Section 01300 - CONTRACTOR Submittals in the General Requirements.
- B. The CONTRACTOR shall also submit to the ARCHITECT for review all samples in accordance with Section 01300 - CONTRACTOR Submittals in the General Requirements.
- C. Before submittal of each Shop Drawing or sample, the CONTRACTOR shall have determined and verified all quantities, dimensions, specified performance criteria, installation requirements, materials, catalog numbers, and similar data with respect thereto and reviewed or coordinated each Shop Drawing or sample with other Shop Drawings and samples and with the requirements of the WORK and the Contract Documents.

### **6.13 CONTINUING THE WORK.** The CONTRACTOR shall carry on the WORK and adhere to the progress schedule during all disputes or disagreements with the OWNER. No WORK shall be delayed or postponed pending resolution of any disputes or disagreements, except as the CONTRACTOR and the OWNER may otherwise agree in writing.

### **6.14 INDEMNIFICATION**

- A. To the fullest extent permitted by Laws and Regulations, the CONTRACTOR shall indemnify, defend, and hold harmless the OWNER, the Architect of Record, their consultants, sub-consultants and the officers, directors, employees, and agents of each and any of them, against and from all claims and liability arising under, by reason of or incidentally to the contract or any performance of the WORK, but not from the sole negligence or willful misconduct of the OWNER, and the Architect of Record. Such indemnification by the CONTRACTOR shall include but not be limited to the following:
  - 1. Liability or claims resulting directly or indirectly from the negligence or carelessness of the CONTRACTOR, its employees, or agents in the performance of the WORK, or in guarding or maintaining the same, or from any improper materials, implements, or appliances used in its construction, or by or on account of any act or omission of the CONTRACTOR, its employees, agents, or third parties;
  - 2. Liability or claims arising directly or indirectly from bodily injury, occupational sickness or disease, or death of the CONTRACTOR's or Subcontractor's own employees engaged in the WORK resulting in actions brought by or on behalf of such employees against the OWNER, or the Architect of Record;
  - 3. Liability or claims arising directly or indirectly from or based on the violation of any law, ordinance, regulation, order, or decree, whether by the CONTRACTOR, its employees, or agents;
  - 4. Liability or claims arising directly or indirectly from the use or manufacture by the CONTRACTOR, its employees, or agents in the performance of this contract of any copyrighted or non-copyrighted composition, secret process, patented or non-patented invention, computer software, article, or appliance, unless otherwise specifically stipulated in this contract.

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5. Liability or claims arising directly or indirectly from the breach of any warranties, whether express or implied, made to the ARCHITECT, OWNER or any other parties by the CONTRACTOR, its employees, or agents;
  6. Liabilities or claims arising directly or indirectly from the willful or criminal misconduct of the CONTRACTOR, its employees, or agents; and,
  7. Liabilities or claims arising directly or indirectly from any breach of the obligations assumed herein by the CONTRACTOR.
- B. The CONTRACTOR shall reimburse the OWNER and the Architect of Record for all costs and expenses, (including but not limited to fees and charges of Architects of Record, attorneys, and other professionals and court costs including all costs of appeals) incurred by the OWNER, and the Architect of Record in enforcing the provisions of this Paragraph 6.14.
- C. The indemnification obligation under this Paragraph 6.14 shall not be limited in any way by any limitation of the amount or type of damages, compensation, or benefits payable by or for the CONTRACTOR or any such Subcontractor or other person or organization under workers' compensation acts, disability benefit acts, or other employee benefit acts.
- 6.15 **CONTRACTOR'S DAILY REPORTS.** The CONTRACTOR shall complete a daily report indicating total manpower for each construction trade, major equipment on site, each Subcontractor's manpower, weather conditions, etc., involved in the performance of the WORK. The daily report shall be completed on forms provided by the ARCHITECT and shall be submitted to the ARCHITECT at the conclusion of each WORK day. The report should comment on the daily progress and status of the WORK within each major component of the WORK. These components will be decided by the ARCHITECT. The CONTRACTOR shall record the name, affiliation, time of arrival and departure, and reason for visit for all visitors to the location of the WORK.
- 6.16 **ASSIGNMENT OF CONTRACT.** The CONTRACTOR shall not assign, sublet, sell, transfer, or otherwise dispose of the contract or any portion thereof, or its right, title, or interest therein, or obligations thereunder, without the written consent of the OWNER except as imposed by law. If the CONTRACTOR violates this provision, the contract may be terminated at the option of the OWNER. In such event, the OWNER shall be relieved of all liability and obligations to the CONTRACTOR and to its assignee or transferee, growing out of such termination.
- 6.17 **CONTRACTOR'S RESPONSIBILITY FOR UTILITY PROPERTY AND SERVICES.** It is understood that any turn-on, or turn-off line locates and any other WORK or assistance necessary by the CBJ Water Utilities Division, will be at the CONTRACTOR's expense unless otherwise stated in the bid documents. All cost must be agreed to prior to any related actions, and will be considered incidental to the Project cost. Billing to the CONTRACTOR will be direct from the CBJ Water Utilities Division.
- 6.18 **OPERATING WATER SYSTEM VALVES**
- A. The CONTRACTOR shall submit a written request, to the ARCHITECT, for approval to operate any valve on any in-service section of the CBJ water system. The request must be submitted at least 24-hours prior to operating any valves. The CBJ Water Utilities Division reserves the right to approve or deny the request. The request shall specifically identify each valve to be operated, the time of operation, and the operation to be performed. The CONTRACTOR shall obtain the written approval of the ARCHITECT for any scheduled operation before operating any valve.

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- B. The CONTRACTOR shall be responsible for all damages, both direct and consequential, to the OWNER or any other party, caused by unauthorized operation of any valve of the CBJ water system.

### **ARTICLE 7 OTHER WORK**

#### **7.1 RELATED WORK AT SITE**

- A. The OWNER may perform other work related to the Project at the site by the OWNER's own forces, have other work performed by utility owners, or let other direct contracts therefor which may contain General Conditions similar to these. If the fact that such other work is to be performed was not noted in the Contract Documents, written notice thereof will be given to the CONTRACTOR prior to starting any such other work.
- B. The CONTRACTOR shall afford each other contractor who is a party to such a direct contract and each utility owner (or the OWNER, if the OWNER is performing the additional work with the OWNER's employees) proper and safe access to the site and a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such work, and shall properly connect and coordinate with their WORK. The CONTRACTOR shall do all cutting, fitting, and patching of the WORK that may be required to make its several parts come together properly and integrate with such other work. The CONTRACTOR shall not endanger any work of others by cutting, excavating, or otherwise altering their work and will only cut or alter their work with the written consent of the ARCHITECT and the others whose work will be affected.
- C. If the proper execution or results of any part of the CONTRACTOR's WORK depends upon the work of any such other contractor or utility owner (or OWNER), the CONTRACTOR shall inspect and report to the ARCHITECT in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for such proper execution and results. The CONTRACTOR's failure to report such delays, defects, or deficiencies will constitute an acceptance of the other work as fit and proper for integration with the CONTRACTOR's WORK except for latent or nonapparent defects and deficiencies in the other work.

- 7.2 COORDINATION. If the OWNER contracts with others for the performance of other work on the Project at the site, the person or organization who will have authority and responsibility for coordination of the activities among the various prime contractors will be identified in the Supplementary General Conditions, and the specific matters to be covered by such authority and responsibility will be itemized and the extent of such authority and responsibilities will be provided in the Supplementary General Conditions.

### **ARTICLE 8 OWNER'S RESPONSIBILITIES**

#### **8.1 COMMUNICATIONS**

- A. The OWNER shall issue all its communications to the CONTRACTOR through the ARCHITECT.
- B. The CONTRACTOR shall issue all its communications to the OWNER through the ARCHITECT.

- 8.2 PAYMENTS. The OWNER shall make payments to the CONTRACTOR as provided in Paragraphs 14.5, 14.8, 14.9 and 14.10.

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- 8.3 LANDS, EASEMENTS, AND SURVEYS. The OWNER's duties in respect of providing lands and easements and providing surveys to establish reference points are set forth in Paragraphs 4.1 and 4.5.
- 8.4 CHANGE ORDERS. The OWNER shall execute Change Orders as indicated in Paragraph 10.1F.
- 8.5 INSPECTIONS AND TESTS. The OWNER's responsibility in respect of inspections, tests, and approvals is set forth in Paragraph 13.3.
- 8.6 SUSPENSION OF WORK. In connection with the OWNER's right to stop WORK or suspend WORK, see Paragraphs 13.4 and 15.1.
- 8.7 TERMINATION OF AGREEMENT. Paragraphs 15.2 and 15.3 deal with the OWNER's right to terminate services of the CONTRACTOR.

### **ARTICLE 9 ARCHITECT'S STATUS DURING CONSTRUCTION**

- 9.1 OWNER'S REPRESENTATIVE. The ARCHITECT will be the OWNER's representative during the construction period. The duties and responsibilities and the limitations of authority of the ARCHITECT as the OWNER's representative during construction are set forth in the Contract Documents.
- 9.2 VISITS TO SITE. The ARCHITECT will make visits to the site during construction to observe the progress and quality of the WORK and to determine, in general, if the WORK is proceeding in accordance with the Contract Documents. Exhaustive or continuous on-site inspections to check the quality or quantity of the WORK will not be required of the ARCHITECT. The ARCHITECT will not, during such visits, or as a result of such observations of the CONTRACTOR's WORK in progress, supervise, direct, or have control over the CONTRACTOR's WORK.
- 9.3 PROJECT REPRESENTATION. The ARCHITECT may furnish an Inspector to assist in observing the performance of the WORK. The duties, responsibilities, and limitations of authority of any such Inspector and assistants will be as provided in the Supplementary General Conditions.
- 9.4 CLARIFICATIONS AND INTERPRETATIONS. The ARCHITECT will issue with reasonable promptness such written clarifications or interpretations of the requirements of the Contract Documents (in the form of Drawings or otherwise) as the ARCHITECT may determine necessary, which shall be consistent with or reasonably inferable from the overall intent of the Contract Documents.
- 9.5 AUTHORIZED VARIATIONS IN WORK. The ARCHITECT may authorize variations in the WORK from the requirements of the Contract Documents. These may be accomplished by a Field Order and will require the CONTRACTOR to perform the WORK involved in a manner that minimizes the impact to the WORK and the contract completion date. If the CONTRACTOR believes that a Field Order justifies an increase in the Contract Price or an extension of the Contract Time, the CONTRACTOR may make a claim therefor as provided in Article 11 or 12.
- 9.6 REJECTING OR ACCEPTING DEFECTIVE WORK. The ARCHITECT will have authority to reject or accept WORK which the ARCHITECT believes to be defective and will also have authority



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to require special inspection or testing of the WORK as provided in Paragraph 13.3G, whether or not the WORK is fabricated, installed, or completed.

### **9.7 CONTRACTOR SUBMITTALS, CHANGE ORDERS, AND PAYMENTS**

- A. In accordance with the procedures set forth in the General Requirements, the ARCHITECT will review all CONTRACTOR submittals, including Shop Drawings, samples, substitutes, or "or equal" items, etc., in order to determine if the items covered by the submittals will, after installation or incorporation in the WORK, conform to the requirements of the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. The ARCHITECT's review will not extend to means, methods, techniques, sequences or procedures of construction or to safety precautions or programs incident thereto.
- B. In connection with the ARCHITECT's responsibilities as to Change Orders, see Articles 10, 11, and 12.
- C. In connection with the ARCHITECT's responsibilities in respect of Applications for Payment, see Article 14.

### **9.8 DECISIONS ON DISPUTES**

- A. The ARCHITECT will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the WORK thereunder. Claims, disputes, and other matters relating to the acceptability of the WORK; the interpretation of the requirements of the Contract Documents pertaining to the performance of the WORK; and those claims under Articles 11 and 12 in respect to changes in the Contract Price or Contract Time will be referred initially to the ARCHITECT in writing with a request for formal decision in accordance with this paragraph, which the ARCHITECT will render in writing within 30 days of receipt of the request. Written notice of each such claim, dispute, and other matter will be delivered by the CONTRACTOR to the ARCHITECT promptly (but in no event later than 30 days) after the occurrence of the event giving rise thereto. Written supporting data will be submitted to the ARCHITECT within 60 days after such occurrence unless the ARCHITECT allows an additional period of time to ascertain more accurate data in support of the claim.
- B. The rendering of a decision by the ARCHITECT with respect to any such claim, dispute, or other matter (except any which have been waived by the making or acceptance of final payment as provided in Paragraph 14.12) will be a condition precedent to any exercise by the OWNER or the CONTRACTOR of such rights or remedies as either may otherwise have under the Contract Documents or by Law or Regulations in respect of any such claim, dispute, or other matter.

### **9.9 LIMITATION ON ARCHITECT'S RESPONSIBILITIES**

- A. Neither the ARCHITECT's authority to act under this Article or other provisions of the Contract Documents nor any decision made by the ARCHITECT in good faith either to exercise or not exercise such authority shall give rise to any duty or responsibility of the ARCHITECT to the CONTRACTOR, any Subcontractor, any Supplier, any surety for any of them, or any other person or organization performing any of the WORK.

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- B. Whenever in the Contract Documents the terms "as ordered," "as directed," "as required," "as allowed," "as reviewed," "as approved," or terms of like effect or import are used, or the adjectives "reasonable," "suitable," "acceptable," "proper," or "satisfactory" or adjectives of like effect or import are used to describe a requirement, direction, review, or judgment of the ARCHITECT as to the WORK, it is intended that such requirement, direction, review, or judgment will be solely to evaluate the WORK for compliance with the requirements of the Contract Documents, and conformance with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents, unless there is a specific statement indicating otherwise. The use of any such term or adjective shall not be effective to assign to the ARCHITECT any duty or authority to supervise or direct the performance of the WORK or any duty or authority to undertake responsibility contrary to the provisions of Paragraph 9.9C or 9.9D.
- C. The ARCHITECT will not supervise, direct, control, or have authority over or be responsible for the CONTRACTOR's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of the CONTRACTOR to comply with Laws and Regulations, applicable to the performance of the WORK. The ARCHITECT will not be responsible for the CONTRACTOR's failure to perform the WORK in accordance with the Contract Documents.
- D. The ARCHITECT will not be responsible for the acts or omissions of the CONTRACTOR nor of any Subcontractor, Supplier, or any other person or organization performing any of the WORK.

### **ARTICLE 10 CHANGES IN THE WORK**

#### **10.1 GENERAL**

- A. Without invalidating the Agreement and without notice to any surety, the OWNER may at any time or from time to time, order additions, deletions, or revisions in the WORK; these will be authorized by a written Field Order and/or a Change Order issued by the ARCHITECT.
- B. If the CONTRACTOR believes that it is entitled to an increase or decrease in the Contract Price, or an extension or shortening in the Contract Time as the result of a Field Order, a claim may be made as provided in Articles 11 and 12.
- C. If the OWNER and CONTRACTOR agree on the value of any WORK, or the amount of Contract Time that should be allowed as a result of a Field Order, upon receiving written notice from the ARCHITECT, the CONTRACTOR shall proceed so as to minimize the impact on and delays to the WORK pending the issuance of a Change Order.
- D. If the OWNER and the CONTRACTOR are unable to agree as to the extent, if any, of an increase or decrease in the Contract Price or an extension or shortening of the Contract Time that should be allowed as a result of a Field Order, the ARCHITECT can direct the CONTRACTOR to proceed on the basis of Time and Materials so as to minimize the impact on and delays to the WORK, and a claim may be made therefor as provided in Articles 11 and 12.
- E. The CONTRACTOR shall not be entitled to an increase in the Contract Price nor an extension of the Contract Time with respect to any WORK performed that is not required by the Contract Documents as amended, modified, supplemented by Change Order, except in the case of an emergency and except in the case of uncovering WORK as provided in Paragraph 13.3G.

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- F. The OWNER and the CONTRACTOR shall execute appropriate Change Orders covering:
1. changes in the WORK which are ordered by the OWNER pursuant to Paragraph 10.1A;
  2. changes required because of acceptance of Defective WORK under Paragraph 13.7;
  3. changes in the Contract Price or Contract Time which are agreed to by the parties; or
  4. changes in the Contract Price or Contract Time which embody the substance of any written decision rendered by the ARCHITECT pursuant to Paragraph 9.8.
- G. If notice of any change is required by the provisions of any Bond to be given to a surety, the giving of any such notice will be the CONTRACTOR's responsibility, and the amount of each applicable Bond shall be adjusted accordingly.

### **10.2 ALLOWABLE QUANTITY VARIATIONS**

- A. In the event of an increase or decrease in bid item quantity of a unit price contract, the total amount of WORK actually done or materials or equipment furnished shall be paid for according to the unit price established for such WORK under the Contract Documents, wherever such unit price has been established; provided, that an adjustment in the Contract Price may be made for changes which result in an increase or decrease in excess of 25% of the estimated quantity of any major item of the WORK. Major Item is defined as any bid item amount that is ten percent (10%) or more of the total contract amount.
- B. In the event a part of the WORK is to be entirely eliminated and no lump sum or unit price is named in the Contract Documents to cover such eliminated WORK, the price of the eliminated WORK shall be agreed upon in writing by the OWNER and the CONTRACTOR. If the OWNER and the CONTRACTOR fail to agree upon the price of the eliminated WORK, said price shall be determined in accordance with the provisions of Article 11.

## **ARTICLE 11 CHANGE OF CONTRACT PRICE**

### **11.1 GENERAL**

- A. The Contract Price constitutes the total compensation payable to the CONTRACTOR for performing the WORK. All duties, responsibilities, and obligations assigned to or undertaken by the CONTRACTOR to complete the WORK shall be at its expense without change in the Contract Price.
- B. The Contract Price may only be changed by a Change Order. Any claim for an increase in the Contract Price shall be based on written notice delivered by the CONTRACTOR to the ARCHITECT promptly (but in no event later than 30 days) after the start of the occurrence or the event giving rise to the claim and stating the general nature of the claim. Notice of the amount of the claim with supporting data shall be delivered within 60 days after such occurrence (unless the ARCHITECT allows an additional period of time to ascertain more accurate data in support of the claim) and shall be accompanied by the CONTRACTOR's written statement that the amount claimed covers all known amounts (direct, indirect, and consequential) to which the CONTRACTOR is entitled as a result of said occurrence or event. All claims for adjustment in the Contract Price shall be determined by the ARCHITECT in accordance with Paragraph 9.8A if the OWNER and the CONTRACTOR

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cannot otherwise agree on the amount involved. No claim for an adjustment in the Contract Price will be valid if not submitted in accordance with this Paragraph 11.1B.

C. The value of any WORK covered by a Change Order or of any claim for an increase or decrease in the Contract Price shall be determined in one of the following ways:

1. Where the WORK involved is covered by unit prices contained in the Contract Documents, by application of unit prices to the quantities of the items involved.
2. By mutual acceptance of a lump sum, which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.4.
3. On the basis of the "Cost of WORK" (determined as provided in Paragraphs 11.3) plus a CONTRACTOR's fee for overhead and profit (determined as provided in Paragraph 11.4).

11.2 COSTS RELATING TO WEATHER. The CONTRACTOR shall have no claims against the OWNER for damages for any injury to WORK, materials, or equipment, resulting from the action of the elements. If, however, in the opinion of the ARCHITECT, the CONTRACTOR has made all reasonable efforts to protect the materials, equipment and WORK, the CONTRACTOR may be granted a reasonable extension of Contract Time to make proper repairs, renewals, and replacements of the WORK, materials, or equipment.

### 11.3 COST OF WORK (BASED ON TIME AND MATERIALS)

- A. General. The term "Cost of WORK" means the sum of all costs necessarily incurred and paid by the CONTRACTOR for labor, materials, and equipment in the proper performance of extra WORK. Except as otherwise may be agreed to in writing by the OWNER, such costs shall be in amounts no higher than those prevailing in the locality of the Project; shall include only the following items, and shall not include any of the costs itemized in Paragraph 11.5 EXCLUDED COSTS.
- B. Labor. The costs of labor will be the actual cost for wages prevailing for each craft or type of workers performing the extra WORK at the time the extra WORK is done, plus employer payments of payroll taxes, worker's compensation insurance, liability insurance, health and welfare, pension, vacation, apprenticeship funds, and other direct costs resulting from Federal, State or local laws, as well as assessments or benefits required by lawful collective bargaining agreements. Labor costs for equipment operators and helpers shall be paid only when such costs are not included in the invoice for equipment rental. The labor costs for forepersons shall be proportioned to all of their assigned WORK and only that applicable to extra WORK shall be paid. Non-direct labor costs including superintendence shall be considered part of the mark-up set out in paragraph 11.4.
- C. Materials. The cost of materials reported shall be at invoice or lowest current price at which materials are locally available and delivered to the job in the quantities involved, plus the cost of freight, delivery and storage, subject to the following:
1. Trade discounts available to the purchaser shall be credited to the OWNER notwithstanding the fact that such discounts may not have been taken by the CONTRACTOR.
  2. For materials secured by other than a direct purchase and direct billing to the purchaser, the cost shall be deemed to be the price paid to the actual supplier as determined by the ARCHITECT. Mark-up except for actual costs incurred in the handling of such materials will not be allowed.

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3. Payment for materials from sources owned wholly or in part by the purchaser shall not exceed the price paid by the purchaser for similar materials from said sources on extra WORK items or the current wholesale price for such materials delivered to the WORK site, whichever price is lower.
  4. If in the opinion of the ARCHITECT the cost of material is excessive, or the CONTRACTOR does not furnish satisfactory evidence of the cost of such material, then the cost shall be deemed to be the lowest current wholesale price for the quantity concerned delivered to the WORK site less trade discount. The OWNER reserves the right to furnish materials for the extra WORK and no claim shall be allowed by the CONTRACTOR for costs and profit on such materials.
- D. Equipment. The CONTRACTOR will be paid for the use of equipment at the rental rate listed for such equipment specified in the Supplementary General Conditions. Such rental rate will be used to compute payments for equipment whether the equipment is under the CONTRACTOR's control through direct ownership, leasing, renting, or another method of acquisition. The rental rate to be applied for use of each item of equipment shall be the rate resulting in the least total cost to the OWNER for the total period of use. If it is deemed necessary by the CONTRACTOR to use equipment not listed in the publication specified in the Supplementary General Conditions, an equitable rental rate for the equipment will be established by the ARCHITECT. The CONTRACTOR may furnish cost data which might assist the ARCHITECT in the establishment of the rental rate.
1. All equipment shall, in the opinion of the ARCHITECT, be in good working condition and suitable for the purpose for which the equipment is to be used.
  2. Before construction equipment is used on the extra WORK, the CONTRACTOR shall plainly stencil or stamp an identifying number thereon at a conspicuous location, and shall furnish to the ARCHITECT, in duplicate, a description of the equipment and its identifying number.
  3. Unless otherwise specified, manufacturer's ratings and manufacturer approved modifications shall be used to classify equipment for the determination of applicable rental rates. Equipment which has no direct power unit shall be powered by a unit of at least the minimum rating recommended by the manufacturer.
  4. Individual pieces of equipment or tools having a replacement value of \$200 or less, whether or not consumed by use, shall be considered to be small tools and no payment will be made therefor.
  5. Rental time will not be allowed while equipment is inoperative due to breakdowns.
  6. Equipment. Unless otherwise agreed to in writing, the CONTRACTOR will be paid for the use of equipment at the rental rate listed for such equipment specified in the current edition of the following reference publication: "Rental Rate Blue Book" available on-line at <http://www.equipmentwatch.com/rbbb.htm> or contact Equipment Watch at (800) 669-3282.
- E. Equipment on the WORK Site. The rental time to be paid for equipment on the WORK site shall be the time the equipment is in productive operation on the extra WORK being performed and, in addition, shall include the time required to move the equipment to the location of the extra WORK and return it to the original location or to another location requiring no more time than that required to return it to its original location; except, that moving time will not be paid if the equipment is used on other than the extra WORK, even though located at the site of the extra WORK. Loading and transporting costs will be allowed, in lieu of moving time, when the equipment is moved by means other than its own power, except that no payment will be made for loading and transporting costs when the equipment is used at the site of the extra WORK on other than the extra WORK. The following shall be used in computing the rental time of equipment on the WORK site.

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1. When hourly rates are listed, any part of an hour less than 30 minutes of operation shall be considered to be 1/2-hour of operation, and any part of an hour in excess of 30 minutes will be considered one hour of operation.
  2. When daily rates are listed, any part of a day less than 4 hours operation shall be considered to be 1/2-day of operation. When owner-operated equipment is used to perform extra WORK to be paid for on a time and materials basis, the CONTRACTOR will be paid for the equipment and operator, as set forth in Paragraphs (3), (4), and (5), following.
  3. Payment for the equipment will be made in accordance with the provisions in Paragraph 11.3D, herein.
  4. Payment for the cost of labor and subsistence or travel allowance will be made at the rates paid by the CONTRACTOR to other workers operating similar equipment already on the WORK site, or in the absence of such labor, established by collective bargaining agreements for the type of worker and location of the extra WORK, whether or not the operator is actually covered by such an agreement. A labor surcharge will be added to the cost of labor described herein in accordance with the provisions of Paragraph 11.3B, herein, which surcharge shall constitute full compensation for payments imposed by state and federal laws and all other payments made to or on behalf of workers other than actual wages.
  5. To the direct cost of equipment rental and labor, computed as provided herein, will be added the allowances for equipment rental and labor as provided in Paragraph 11.4, herein.
- F. Specialty WORK. Specialty WORK is defined as that WORK characterized by extraordinary complexity, sophistication, or innovation or a combination of the foregoing attributes which are unique to the construction industry. The following shall apply in making estimates for payment for specialty WORK:
1. Any bid item of WORK to be classified as Specialty WORK shall be listed as such in the Supplementary General Conditions. Specialty WORK shall be performed by an entity especially skilled in the work to be performed. After validation of invoices and determination of market values by the ARCHITECT, invoices for Specialty WORK based upon the current fair market value thereof may be accepted without complete itemization of labor, material, and equipment rental costs.
  2. When the CONTRACTOR is required to perform WORK necessitating special fabrication or machining process in a fabrication or a machine shop facility away from the job site, the charges for that portion of the WORK performed at the off-site facility may, by agreement, be accepted as Specialty WORK and accordingly, the invoices for the WORK may be accepted without detailed itemization.
  3. All invoices for specialty WORK will be adjusted by deducting all trade discounts offered or available, whether the discounts were taken or not. In lieu of the allowances for overhead and profit specified in Paragraph 11.4, herein, an allowance of 5 percent will be added to invoices for specialty WORK.
- G. Sureties. All WORK performed hereunder shall be subject to all of the provisions of the Contract Documents and the CONTRACTOR's sureties shall be bound with reference thereto as under the original Agreement. Copies of all amendments to surety Bonds or supplemental surety Bonds shall be submitted to the OWNER for review prior to the performance of any WORK hereunder.

### 11.4 CONTRACTOR'S FEE

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- A. Extra WORK ordered on the basis of time and materials will be paid for at the actual necessary cost as determined by the ARCHITECT, plus allowances for overhead and profit. The allowance for overhead and profit shall include full compensation for superintendence, Bond and insurance premiums, taxes, field office expense, extended overhead, home office overhead, and all other items of expense or cost not included in the cost of labor, materials, or equipment provided for under Paragraph 11.3. The allowance for overhead and profit will be made in accordance with the following schedule:

### Actual Overhead and Profit Allowance

Labor .....	15 percent
Materials .....	10 percent
Equipment .....	10 percent

To the sum of the costs and mark-ups provided for in this Article, one (1) percent shall be added as compensation for Bonds.

- B. It is understood that labor, materials, and equipment may be furnished by the CONTRACTOR or by the Subcontractor on behalf of the CONTRACTOR. When all or any part of the extra WORK is performed by a Subcontractor, the allowance specified herein shall be applied to the labor, materials, and equipment costs of the Subcontractor, to which the CONTRACTOR may add five (5) percent of the Subcontractor's total cost for the extra WORK. Regardless of the number of hierarchical tiers of Subcontractors, the five (5) percent increase above the Subcontractor's total cost which includes the allowances for overhead and profit specified herein may be applied one time only.

### 11.5 EXCLUDED COSTS.

- A. The term "Cost of the WORK" shall not include any of the following:
1. Payroll costs and other compensation of CONTRACTOR's officers, executives, principals (of partnership and sole proprietorships), general managers, architects, estimators, attorneys' auditors, accountants, purchasing and contracting agents, expenditures, timekeepers, clerks and other personnel employed by CONTRACTOR whether at the site or in CONTRACTOR's principal or a branch office for general administration of the WORK, or not specifically covered by paragraph 11.3, all of which are to be considered administrative costs covered by the CONTRACTOR's fee.
  2. Expenses of CONTRACTOR's principal and branch offices other than CONTRACTOR's office at the site.
  3. Any part of CONTRACTOR's capital expenses, including interest on CONTRACTOR's capital employed for the WORK and charges against CONTRACTOR for delinquent payments.
  4. Cost of premiums for all Bonds and for all insurance whether or not CONTRACTOR is required by the Contract Documents to purchase and maintain the same (except for the cost of premiums covered by paragraph 11.4 above).
  5. Costs due to the negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of Defective WORK, disposal of materials or equipment wrongly supplied and making good any damage to property.
  6. Other overhead or general expense costs of any kind and the cost of any item not specifically and expressly included in paragraph 11.4.

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### ARTICLE 12 CHANGE OF CONTRACT TIME

#### 12.1 GENERAL

- A. The Contract Time may only be changed by a Change Order. Any claim for an extension of the Contract Time (or Milestones) shall be based on written notice delivered by the CONTRACTOR to the ARCHITECT promptly (but in no event later than 30 days) after the occurrence of the event giving rise to the claim and stating the general nature of the claim. Notice of the extent of the claim with supporting data shall be delivered within 60 days after such occurrence (unless the ARCHITECT allows an additional period of time to ascertain more accurate data in support of the claim) and shall be accompanied by the CONTRACTOR's written statement that the adjustment claimed is the entire adjustment to which the CONTRACTOR has reason to believe it is entitled as a result of the occurrence of said event. All claims for adjustment in the Contract Time shall be determined by the ARCHITECT in accordance with Paragraph 9.8 if the OWNER and the CONTRACTOR cannot otherwise agree. No claim for an adjustment in the Contract Time will be valid if not submitted in accordance with the requirements of this paragraph. An increase in Contract Time does not mean that the CONTRACTOR is due an increase in Contract Price. Only Compensable time extensions will result in an increase in Contract Price.
- B. All time limits stated in the Contract Documents are of the essence of the Agreement.
- C. Where CONTRACTOR is prevented from completing any part of the WORK within the Contract Times (or Milestones) due to delay beyond the control of CONTRACTOR, the Contract Times (or Milestones) will be extended in an amount equal to the time lost on the critical path of the Project due to such delay if a claim is made therefor as provided in paragraph 12.1. Delays beyond the control of CONTRACTOR shall include, but not be limited to, acts or neglect by OWNER, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, unprecedented weather conditions or acts of God. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of CONTRACTOR.
- D. Where CONTRACTOR is prevented from completing any part of the WORK within the Contract Times (or Milestones) due to delay beyond the control of both OWNER and CONTRACTOR, an extension of the Contract Times (or Milestones) in an amount equal to the time lost on the critical path of the Project due to such delay shall be CONTRACTOR's sole and exclusive remedy for such delay. In no event shall the OWNER be liable to CONTRACTOR, any Subcontractor, any Supplier, or any other person or organization, or to any surety for or employee or agent of any of them, for damages arising out of or resulting from (i) delays caused by or within the control of CONTRACTOR, or (ii) delays beyond the control of both parties including but not limited to fires, floods, epidemics abnormal weather conditions, acts of God or acts or neglect by utility owners or other contractors performing other work as contemplated by Article 7.

- 12.2 EXTENSIONS OF TIME FOR DELAY DUE TO WEATHER. Contract time may be extended by the ARCHITECT because of delays in completion of the WORK due to unusually severe weather,



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provided that the CONTRACTOR shall, within 10 days of the beginning of any such delay, notify the ARCHITECT in writing of the cause of delay and request an extension of contract time. The ARCHITECT will ascertain the facts and the extent of the delay and extend the time for completing the WORK when, in the ARCHITECT's judgment, the findings of fact justify such an extension. Unprecedented, abnormal, or unusually severe weather will be defined as an event, or events, with a greater than 50-year recurrence interval, as determined by the National Weather Service, or equivalent state or federal agency.

### **ARTICLE 13 WARRANTY AND GUARANTEE; TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK**

- 13.1 **WARRANTY AND GUARANTEE.** The CONTRACTOR warrants and guarantees to the OWNER and the ARCHITECT that all WORK will be in accordance with the Contract Documents and will not be defective. Prompt notice of defects known to the OWNER or ARCHITECT shall be given to the CONTRACTOR. All Defective WORK, whether or not in place, may be rejected, corrected, or accepted as provided in this Article 13.
- 13.2 **ACCESS TO WORK.** The OWNER, ARCHITECT, Architect of Record, their consultants, sub-consultants, other representatives and personnel of OWNER, independent testing laboratories and governmental agencies with jurisdictional interests will have access to the WORK at reasonable times for their observation, inspecting and testing. CONTRACTOR shall provide them proper and safe conditions for such access and advise them of CONTRACTOR's site safety procedures and programs so that they may comply therewith as applicable.
- 13.3 **INSPECTIONS AND TESTS**
- A. The CONTRACTOR shall give the ARCHITECT timely notice of readiness of the WORK for all required inspections, tests, or approvals, and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.
  - B. If Laws or Regulations of any public body having jurisdiction other than the OWNER require any WORK to specifically be inspected, tested, or approved, the CONTRACTOR shall pay all costs in connection therewith. The CONTRACTOR shall also be responsible for and shall pay all costs in connection with any inspection or testing required in connection with the OWNER's or the ARCHITECT's acceptance of a Supplier of materials or equipment proposed as a substitution or (or-equal) to be incorporated in the WORK, or of materials or equipment submitted for review prior to the CONTRACTOR's purchase thereof for incorporation in the WORK. The cost of all inspections, tests, and approvals in addition to the above which are required by the Contract Documents shall be paid by the OWNER (unless otherwise specified).
  - C. The ARCHITECT will make, or have made, such inspections and tests as the ARCHITECT deems necessary to see that the WORK is being accomplished in accordance with the requirements of the Contract Documents. Unless otherwise specified in the Supplementary General Conditions, the cost of such inspection and testing will be borne by the OWNER. In the event such inspections or tests reveal non-compliance with the requirements of the Contract Documents, the CONTRACTOR shall bear the cost of corrective measures deemed necessary by the ARCHITECT, as well as the cost of subsequent re-inspection and retesting. Neither observations by the ARCHITECT nor inspections, tests, or approvals by others shall relieve the CONTRACTOR from the CONTRACTOR's obligation to perform the WORK in accordance with the Contract Documents.

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- D. All inspections, tests, or approvals other than those required by Laws or Regulations of any public body having jurisdiction shall be performed by organizations acceptable to the ARCHITECT and the CONTRACTOR.
  - E. If any WORK (including the work of others anticipated under paragraph 7.1) that is to be inspected, tested, or approved is covered without written concurrence of the ARCHITECT, it must, if requested by the ARCHITECT, be uncovered for observation. Such uncovering shall be at the CONTRACTOR's expense unless the CONTRACTOR has given the ARCHITECT timely notice of the CONTRACTOR's intention to perform such test or to cover the same and the ARCHITECT has not acted with reasonable promptness in response to such notice.
  - F. If any WORK is covered contrary to the written request of the ARCHITECT, it must, if requested by the ARCHITECT, be uncovered for the ARCHITECT's observation and recovered at the CONTRACTOR's expense.
  - G. If the ARCHITECT considers it necessary or advisable that covered WORK be observed by the ARCHITECT or inspected or tested by others, the CONTRACTOR, at the ARCHITECT's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as the ARCHITECT may require, that portion of the WORK in question, furnishing all necessary labor, material, and equipment. If it is found that such WORK is defective, the CONTRACTOR shall bear all direct, indirect, and consequential costs and damages of such uncovering, exposure, observation, inspection, and testing and of satisfactory reconstruction, including but not limited to fees and charges of Architects of Record, attorneys, and other professionals. However, if such WORK is not found to be defective, the CONTRACTOR shall be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, and reconstruction; and, if the parties are unable to agree as to the amount or extent thereof, the CONTRACTOR may make a claim therefor as provided in Articles 11 and 12.
- 13.4 OWNER MAY STOP THE WORK. If the WORK is defective, or the CONTRACTOR fails to perform WORK in such a way that the completed WORK will conform to the Contract Documents, the OWNER may order the CONTRACTOR to stop the WORK, or any portion thereof, until the cause for such order has been eliminated; however, this right of the OWNER to stop the WORK shall not give rise to any duty on the part of the OWNER to exercise this right for the benefit of the CONTRACTOR or any other party.
- 13.5 CORRECTION OR REMOVAL OF DEFECTIVE WORK. If required by the ARCHITECT, the CONTRACTOR shall promptly, either correct all Defective WORK, whether or not fabricated, installed, or completed, or, if the WORK has been rejected by the ARCHITECT, remove it from the site and replace it with non-defective WORK. The CONTRACTOR shall bear all direct, indirect and consequential costs and damages of such correction or removal, including but not limited to fees and charges of Architects of Record, attorneys, and other professionals made necessary thereby.
- 13.6 ONE YEAR CORRECTION PERIOD
- A. If within one year after the date of Substantial Completion or such longer period of time as may be prescribed by Laws or Regulations or by the terms of any applicable special guarantee required by the Contract Documents or by any specific provision of the Contract Documents, any WORK is

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found to be defective, the CONTRACTOR shall promptly, without cost to the OWNER and in accordance with OWNER's written notification, (i) correct such Defective WORK, or, if it has been rejected by the OWNER, remove it from the site and replace it with non-defective WORK, and (ii) satisfactorily correct or remove and replace any damage to other work of others resulting therefrom. If the CONTRACTOR does not promptly comply with such notification, or in an emergency where delay would cause serious risk of loss or damage, the OWNER may have the Defective WORK corrected or the rejected WORK removed and replaced, and all direct, indirect, and consequential costs and damages of such removal and replacement including but not limited to fees and charges of Architects of Record, attorneys and other professionals will be paid by the CONTRACTOR.

- B. Where Defective WORK (and damage to other WORK resulting therefrom) has been corrected, removed or replaced under this paragraph 13.6, the correction period hereunder with respect to such WORK will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

- 13.7 ACCEPTANCE OF DEFECTIVE WORK. If, instead of requiring correction or removal and replacement of Defective WORK, the OWNER prefers to accept the WORK, the OWNER may do so. The CONTRACTOR shall bear all direct, indirect, and consequential costs attributable to the OWNER's evaluation of and determination to accept such Defective WORK. If any such acceptance occurs prior to final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the WORK, and the OWNER shall be entitled to an appropriate decrease in the Contract Price.

### **ARTICLE 14 PAYMENTS TO CONTRACTOR AND COMPLETION**

- 14.1 SCHEDULE OF VALUES (LUMP SUM PRICE BREAKDOWN). The Schedule of Values or lump sum price breakdown established as provided in the General Requirements shall serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to the ARCHITECT.

- 14.2 UNIT PRICE BID SCHEDULE. Progress payments on account of Unit Price WORK will be based on the number of units completed.

- 14.3 APPLICATION FOR PROGRESS PAYMENT

- A. Unless otherwise prescribed by law, on the 25th of each month, the CONTRACTOR shall submit to the ARCHITECT for review, an Application for Payment filled out and signed by the CONTRACTOR covering the WORK completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents.
- B. The Application for Payment shall identify, as a sub-total, the amount of the CONTRACTOR's Total Earnings to Date, plus the Value of Materials Stored at the Site which have not yet been incorporated in the WORK, and less a deductive adjustment for materials installed which were not previously incorporated in the WORK, but for which payment was allowed under the provisions for payment for Materials Stored at the Site, but not yet incorporated in the WORK.
- C. The Net Payment Due the CONTRACTOR shall be the above-mentioned subtotal from which shall be deducted the total amount of all previous payments made to the CONTRACTOR. Progress

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payments will be paid in full in accordance with Article 14 of the General Conditions until 90% of the contract amount has been paid. The remaining 10% of the contract amount shall be retained until:

1. final inspection has been made;
2. completion of the project;
3. acceptance of the project by the OWNER and;
4. the OWNER has received notification from the Alaska Department of Labor that the CONTRACTOR has no outstanding wage/hour violations.

- D. The Value of Materials Stored at the Site shall be an amount equal to the specified percent of the value of such materials as set forth in the Supplementary General Conditions. Said amount shall be based upon the value of all acceptable materials and equipment not incorporated in the WORK but delivered and suitably stored at the Project site or at another location agreed to in writing; provided, each such individual item has a value of more than \$5000 and will become a permanent part of the WORK. The Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that the CONTRACTOR has received the materials and equipment free and clear of all liens, charges, security interests, and encumbrances (which are hereinafter in these General Conditions referred to as "Liens") and evidence that the materials and equipment are covered by appropriate property insurance and other arrangements to protect the OWNER's interest therein, all of which will be satisfactory to the OWNER.

- 14.4 CONTRACTOR'S WARRANTY OF TITLE. The CONTRACTOR warrants and guarantees that title to all WORK, materials, and equipment covered by an Application for Payment, whether incorporated in the WORK or not, will pass to the OWNER no later than the time of payment free and clear of all liens.

### 14.5 REVIEW OF APPLICATIONS FOR PROGRESS PAYMENT

- A. The ARCHITECT will, within seven (7) days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to the OWNER, or return the Application to the CONTRACTOR indicating in writing the ARCHITECT's reasons for refusing to recommend payment. In the later case, the CONTRACTOR may make the necessary corrections and resubmit the Application. If the ARCHITECT still disagrees with a portion of the Application, it will submit the Application recommending the undisputed portion of the Application to the OWNER for review and provide reasons for recommending non-payment of the disputed amount. Thirty days after presentation of the Application for Payment with the ARCHITECT's recommendation, the amount recommended will (subject to the provisions of Paragraph 14.5B) become due and when due will be paid by the OWNER to the CONTRACTOR.
- B. The OWNER may refuse to make payment of the full amount recommended by the ARCHITECT because claims have been made against the OWNER on account of the CONTRACTOR's performance of the WORK or Liens have been filed in connection with the WORK or there are other items entitling the OWNER to a credit against the amount recommended, but the OWNER must give the CONTRACTOR written notice within seven (7) days (with a copy to the ARCHITECT) stating the reasons for such action.

### 14.6 PARTIAL UTILIZATION

## **SECTION 00700 - GENERAL CONDITIONS**

- A. The OWNER shall have the right to utilize or place into service any item of equipment or other usable portion of the WORK prior to completion of the WORK. Whenever the OWNER plans to exercise said right, the CONTRACTOR will be notified in writing by the OWNER, identifying the specific portion or portions of the WORK to be so utilized or otherwise placed into service.
  - B. It shall be understood by the CONTRACTOR that until such written notification is issued, all responsibility for care and maintenance of all of the WORK shall be borne by the CONTRACTOR. Upon issuance of said written notice of partial utilization, the OWNER will accept responsibility for the protection and maintenance of all such items or portions of the WORK described in the written notice.
  - C. The CONTRACTOR shall retain full responsibility for satisfactory completion of the WORK, regardless of whether a portion thereof has been partially utilized by the OWNER and the CONTRACTOR's one year correction period shall commence only after the date of Substantial Completion for the WORK.
- 14.7 SUBSTANTIAL COMPLETION. When the CONTRACTOR considers the WORK ready for its intended use the CONTRACTOR shall notify the OWNER and the ARCHITECT in writing that the WORK is substantially complete. The CONTRACTOR will attach to this request a list of all WORK items that remain to be completed and a request that the ARCHITECT prepare a Notice of Completion. Within a reasonable time thereafter, the OWNER, the CONTRACTOR, and the ARCHITECT shall make an inspection of the WORK to determine the status of completion. If the ARCHITECT does not consider the WORK substantially complete, or the list of remaining WORK items to be comprehensive, the ARCHITECT will notify the CONTRACTOR in writing giving the reasons thereof. If the ARCHITECT considers the WORK substantially complete, the ARCHITECT will prepare and deliver to the OWNER, for its execution and recording, the Notice of Completion signed by the ARCHITECT and CONTRACTOR, which shall fix the date of Substantial Completion.
- 14.8 FINAL APPLICATION FOR PAYMENT. After the CONTRACTOR has completed all of the remaining WORK items referred to in Paragraph 14.7 and delivered all maintenance and operating instructions, schedules, guarantees, Bonds, certificates of inspection, record as-built documents (as provided in the General Requirements) and other documents, all as required by the Contract Documents, and after the ARCHITECT has indicated that the WORK is acceptable, the CONTRACTOR may make application for final payment following the procedure for progress payments. The final Application for Payment shall be accompanied by all documentation called for in the Contract Documents, together with complete and legally effective releases or waivers (satisfactory to the OWNER) of all liens arising out of or filed in connection with the WORK.
- 14.9 FINAL PAYMENT AND ACCEPTANCE
- A. If, on the basis of the ARCHITECT's observation of the WORK during construction and final inspection, and the ARCHITECT's review of the final Application for Payment and accompanying documentation, all as required by the Contract Documents, the ARCHITECT is satisfied that the WORK has been completed and the CONTRACTOR's other obligations under the Contract Documents have been fulfilled, the ARCHITECT will, within 14 days after receipt of the final Application for Payment, indicate in writing the ARCHITECT's recommendation of payment and present the Application to the OWNER for payment.

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- B. After acceptance of the WORK by the OWNER's governing body, the OWNER will make final payment to the CONTRACTOR of the amount remaining after deducting all prior payments and all amounts to be kept or retained under the provisions of the Contract Documents, including the following items:
1. Liquidated damages, as applicable.
  2. Two times the value of outstanding items of correction WORK or punch list items yet uncompleted or uncorrected, as applicable. All such WORK shall be completed or corrected to the satisfaction of the OWNER within the time stated on the Notice of Completion, otherwise the CONTRACTOR does hereby waive any and all claims to all monies withheld by the OWNER to cover the value of all such uncompleted or uncorrected items.

### **14.10 RELEASE OF RETAINAGE AND OTHER DEDUCTIONS**

- A. After executing the necessary documents to initiate the lien period, and not more than 45 days thereafter (based on a 30-day lien filing period and 15-day processing time), the OWNER will release to the CONTRACTOR the retainage funds withheld pursuant to the Agreement, less any deductions to cover pending claims against the OWNER pursuant to Paragraph 14.5B.
- B. After filing of the necessary documents to initiate the lien period, the CONTRACTOR shall have 30 days to complete any outstanding items of correction WORK remaining to be completed or corrected as listed on a final punch list made a part of the Notice of Completion. Upon expiration of the 45 days, referred to in Paragraph 14.10A, the amounts withheld pursuant to the provisions of Paragraph 14.9B herein, for all remaining WORK items will be returned to the CONTRACTOR; provided, that said WORK has been completed or corrected to the satisfaction of the OWNER within said 30 days. Otherwise, the CONTRACTOR does hereby waive any and all claims for all monies withheld by the OWNER under the contract to cover 2 times the value of such remaining uncompleted or uncorrected items.

- 14.11 **CONTRACTOR'S CONTINUING OBLIGATION.** The CONTRACTOR's obligation to perform and complete the WORK in accordance with the Contract Documents shall be absolute. Neither recommendation of any progress or final payment by the ARCHITECT, nor the issuance of a Notice of Completion, nor any payment by the OWNER to the CONTRACTOR under the Contract Documents, nor any use or occupancy of the WORK or any part thereof by the OWNER, nor any act of acceptance by the OWNER nor any failure to do so, nor any review of a Shop Drawing or sample submittal, will constitute an acceptance of WORK not in accordance with the Contract Documents or a release of the CONTRACTOR's obligation to perform the WORK in accordance with the Contract Documents.

- 14.12 **FINAL PAYMENT TERMINATES LIABILITY OF OWNER.** Final payment is defined as the last progress payment made to the CONTRACTOR for earned funds, less monies withheld as applicable, pursuant to Paragraph 14.10A. The acceptance by the CONTRACTOR of the final payment referred to in Paragraph 14.9 herein, shall be a release of the OWNER and its agents from all claims of liability to the CONTRACTOR for anything done or furnished for, or relating to, the WORK or for any act of neglect of the OWNER or of any person relating to or affecting the WORK, except demands against the OWNER for the remainder, if any, of the amounts kept or retained under the provisions of Paragraph 14.9 herein; and excepting pending, unresolved claims filed prior to the date of the Notice of Completion.

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### **ARTICLE 15 SUSPENSION OF WORK AND TERMINATION**

- 15.1 **SUSPENSION OF WORK BY OWNER.** The OWNER, acting through the ARCHITECT, may, at any time and without cause, suspend the WORK or any portion thereof for a period of not more than 90 days by notice in writing to the CONTRACTOR. The CONTRACTOR shall resume the WORK on receipt from the ARCHITECT of a notice of resumption of WORK. The CONTRACTOR shall be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to any suspension if the CONTRACTOR makes an approved claim therefor as provided in Articles 11 and 12.
- 15.2 **TERMINATION OF AGREEMENT BY OWNER (CONTRACTOR DEFAULT)**
- A. In the event of default by the CONTRACTOR, the OWNER may give 10 days written notice to the CONTRACTOR of OWNER's intent to terminate the Agreement and provide the CONTRACTOR an opportunity to remedy the conditions constituting the default. It shall be considered a default by the CONTRACTOR whenever CONTRACTOR shall: (1) declare bankruptcy, become insolvent, or assign its assets for the benefit of its creditors; (2) fail to provide materials or quality of WORK meeting the requirements of the Contract Documents; (3) disregard or violate provisions of the Contract Documents or ARCHITECT's instructions; (4) fail to prosecute the WORK according to the approved progress schedule; or, (5) fail to provide a qualified superintendent, competent workers, or materials or equipment meeting the requirements of the Contract Documents. If the CONTRACTOR fails to remedy the conditions constituting default within the time allowed, the OWNER may then issue the Notice of Termination.
- B. In the event the Agreement is terminated in accordance with Paragraph 15.2A, herein, the OWNER may take possession of the WORK and may complete the WORK by whatever method or means the OWNER may select. The cost of completing the WORK shall be deducted from the balance which would have been due the CONTRACTOR had the Agreement not been terminated and the WORK completed in accordance with the Contract Documents. If such cost exceeds the balance which would have been due, the CONTRACTOR shall pay the excess amount to the OWNER. If such cost is less than the balance which would have been due, the CONTRACTOR shall not have claim to the difference.
- 15.3 **TERMINATION OF AGREEMENT BY OWNER (FOR CONVENIENCE).** The OWNER may terminate the Agreement at any time if it is found that reasons beyond the control of either the OWNER or CONTRACTOR make it impossible or against the OWNER's interests to complete the WORK. In such a case, the CONTRACTOR shall have no claims against the OWNER except: (1) for the value of WORK performed up to the date the Agreement is terminated; and, (2) for the cost of materials and equipment on hand, in transit, or on definite commitment, as of the date the Agreement is terminated, which would be needed in the WORK and which meet the requirements of the Contract Documents. The value of WORK performed and the cost of materials and equipment delivered to the site, as mentioned above, shall be determined by the ARCHITECT in accordance with the procedure prescribed for the making of the final Application for Payment and payment under Paragraphs 14.8 and 14.9.
- 15.4 **TERMINATION OF AGREEMENT BY CONTRACTOR.** The CONTRACTOR may terminate the Agreement upon 10 days written notice to the OWNER, whenever: 1) the WORK has been suspended under the provisions of Paragraph 15.1, herein, for more than 90 consecutive days through no fault or negligence of the CONTRACTOR, and notice to resume WORK or to terminate the

## **SECTION 00700 - GENERAL CONDITIONS**

Agreement has not been received from the OWNER within this time period; or, 2) the OWNER should fail to pay the CONTRACTOR any monies due to the CONTRACTOR in accordance with the terms of the Contract Documents and within 60 days after presentation to the OWNER by the CONTRACTOR of a request therefor, unless within said 10-day period the OWNER shall have remedied the condition upon which the payment delay was based. In the event of such termination, the CONTRACTOR shall have no claims against the OWNER except for those claims specifically enumerated in Paragraph 15.3, herein, and as determined in accordance with the requirements of said paragraph.

### **ARTICLE 16 MISCELLANEOUS**

- 16.1 **GIVING NOTICE.** Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or if delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.
- 16.2 **RIGHTS IN AND USE OF MATERIALS FOUND ON THE WORK**
- A. The CONTRACTOR may use on the Project, with ARCHITECT's approval, such stone, gravel, sand, or other material determined suitable by the ARCHITECT, as may be found in the excavation. The CONTRACTOR will be paid for the excavation of such material at the corresponding contract unit price. No additional payment will be made for utilizing the material from excavation as borrow, or select borrow.
  - B. The CONTRACTOR shall replace, at its own expense, with other acceptable material, all of that portion of the excavated material so removed and used which was needed for use on the Project. No charge for the materials so used will be made against the CONTRACTOR except that the CONTRACTOR shall be responsible for payment of any royalties required.
  - C. The CONTRACTOR shall not excavate or remove any material from within the Project location which is not within the grading limits, as indicated by the slope and grade lines, without written authorization from the ARCHITECT.
  - D. In the event the CONTRACTOR has processed materials from OWNER-furnished sources in excess of the quantities required for performance of this contract, including any waste material produced as a by-product, the CBJ may retain possession of such materials without obligation to reimburse the CONTRACTOR for the cost of their production. When such materials are in a stockpile, the ARCHITECT may require: that it remain in stockpile; the CONTRACTOR level such stockpile(s); or that the CONTRACTOR remove such materials and restore the premises to a satisfactory condition at the CONTRACTOR's expense. This provision shall not preclude the CBJ from arranging with the CONTRACTOR to produce material over and above the contract needs, payment for which shall be by written agreement between the CBJ and the CONTRACTOR.
  - E. Unless otherwise provided, the material from any existing old structure may be used temporarily by the CONTRACTOR in the erection of the new structure. Such material shall not be cut or otherwise damaged except with the approval of the ARCHITECT.
- 16.3 **RIGHT TO AUDIT.** If the CONTRACTOR submits a claim to the OWNER for additional compensation, the OWNER shall have the right, as a condition to considering the claim, and as a



## SECTION 00700 - GENERAL CONDITIONS

basis for evaluation of the claim, and until the claim has been settled, to audit the CONTRACTOR's books to the extent they are relevant. This right shall include the right to examine books, records, documents, and other evidence and accounting procedures and practices, sufficient to discover and verify all direct and indirect costs of whatever nature claimed to have been incurred or anticipated to be incurred and for which the claim has been submitted. The right to audit shall include the right to inspect the CONTRACTOR's plants, or such parts thereof, as may be or have been engaged in the performance of the WORK. The CONTRACTOR further agrees that the right to audit encompasses all subcontracts and is binding upon Subcontractors. The rights to examine and inspect herein provided for shall be exercisable through such representatives as the OWNER deems desirable during the CONTRACTOR's normal business hours at the office of the CONTRACTOR. The CONTRACTOR shall make available to the OWNER for auditing, all relevant accounting records and documents, and other financial data, and upon request, shall submit true copies of requested records to the OWNER.

- 16.4 **ARCHAEOLOGICAL OR HISTORICAL DISCOVERIES.** When the CONTRACTOR's operation encounters prehistoric artifacts, burials, remains of dwelling sites, paleontological remains, such as shell heaps, land or sea mammal bones or tusks, or other items of historical significance, the CONTRACTOR shall cease operations immediately and notify the ARCHITECT. No artifacts or specimens shall be further disturbed or removed from the ground and no further operations shall be performed at the site until so directed. Should the ARCHITECT order suspension of the CONTRACTOR's operations in order to protect an archaeological or historical finding, or order the CONTRACTOR to perform extra WORK, such order(s) shall be covered by an appropriate contract change document.
- 16.5 **CONSTRUCTION OVER OR ADJACENT TO NAVIGABLE WATERS.** All WORK over, on, or adjacent to navigable waters shall be so conducted that free navigation of the waterways will not be interfered with and the existing navigable depths will not be impaired, except as allowed by permit issued by the U.S. Coast Guard and/or the U.S. Army Corps of Engineers, as applicable.
- 16.6 **GRATUITY AND CONFLICT OF INTEREST.** The CONTRACTOR agrees to not extend any loan, gratuity or gift of money of any form whatsoever to any employee or elected official of the OWNER, nor will the CONTRACTOR rent or purchase any equipment or materials from any employee or elected official of the OWNER, or to the best of the CONTRACTOR's knowledge, from any agent of any employee or elected official of the OWNER. Before final payment, the CONTRACTOR shall execute and furnish the OWNER an affidavit certifying that the CONTRACTOR has complied with the above provisions of the contract.
- 16.7 **SUITS OF LAW CONCERNING THE WORK**
- A. Should a suit of law be entered into, either by the CONTRACTOR (or the CONTRACTOR's surety) against the OWNER, or by the OWNER against the CONTRACTOR (or the CONTRACTOR's surety), the suit of law shall be tried in the First Judicial District of Alaska.
- B. If one of the questions at issue is the satisfactory performance of the WORK by the CONTRACTOR and should the appropriate court of law judge the WORK of the CONTRACTOR to be unsatisfactory, then the CONTRACTOR (or the CONTRACTOR's surety) shall reimburse the OWNER for all legal and all other expenses (as may be allowed and set by the court) incurred by the OWNER because of the suit of the law and, further, it is agreed that the OWNER may deduct such expense from any sum or sums then, or any that become due the CONTRACTOR under the contract.

## SECTION 00700 - GENERAL CONDITIONS

### 16.8 CERTIFIED PAYROLLS

- A. All CONTRACTORS or Subcontractor who perform work on a public construction contract for the OWNER shall file a Certified Payroll with the Alaska Department of Labor every two weeks. Before the second Friday, each CONTRACTOR and Subcontractor must file Certified Payrolls with Statements of Compliance for the previous two weeks. (Section 14-2-4 ACLA 1949; am Section 4 ch 142 SLA 1972).
- B. In lieu of submitting the State payroll form, the CONTRACTOR's standard payroll form may be submitted, provided it contains the information required by AS 36.05.040 and a statement that the CONTRACTOR is complying with AS 36.10.010.
- C. Any CONTRACTOR or Subcontractor, who performs work on public construction in the State, as defined by AS 36.95.010(3), shall pay not less than the current prevailing rate of wages as issued by the Alaska Department of Labor before the end of the pay period. (AS 36.05.010).

### 16.9 PREVAILING WAGE RATES

- A. Wage rates for Laborers and Mechanics on Public Contracts, AS 36.05.070. The CONTRACTOR, or Subcontractors, shall pay all employees unconditionally and not less than once a week. Wages may not be less than those stated in Paragraph 16.8C, regardless of the contractual relationship between the CONTRACTOR or Subcontractors and laborers, mechanics, or field surveyors. The scale of wages to be paid shall be posted by the CONTRACTOR in a prominent, easily accessible place at the site of the WORK.
- B. Failure to Pay Agreed Wages, AS 36.05.080. If it is found that a laborer, mechanic, or field surveyor employed by the CONTRACTOR or Subcontractor has been, or is being, paid a rate or wages less than the established rate, the OWNER may, by written notice, terminate the CONTRACTOR or Subcontractors right to proceed with the WORK. The OWNER may prosecute the WORK to completion by contract or otherwise, and the CONTRACTOR and sureties will be held liable to the OWNER for excess costs for completing the WORK. (Section 2 ch 52 SLA 1959).
- C. Listing CONTRACTORS Who Violate contracts, AS 36.05.090. In addition, a list giving the names of persons who have disregarded the rights of their employees shall be distributed to all departments of State government and all political subdivisions. No person appearing on this list, and no firm, corporation, partnership or association in which the person has an interest, may WORK as a CONTRACTOR or Subcontractor on a public construction contract for the State, or a political subdivision of the state, until three years after the date of publication of the list. (Section 3 ch 52 SLA 1959; am Section 9 ch 142 SLA).

16.10 EMPLOYMENT REFERENCE. Workers employed in the execution of the contract by the CONTRACTOR or by any Subcontractor under this contract shall not be required or permitted to labor more than 8 hours a day or 40 hours per week in violation of the provisions of the Alaska Wage and Hour Act, Section 23.10.060.

### 16.11 COST REDUCTION INCENTIVE

## **SECTION 00700 - GENERAL CONDITIONS**

- A. At any time within 45 days after the date of the Notice of Award, the CONTRACTOR may submit to the ARCHITECT in writing, proposals for modifying the plans, specifications, or other requirements of this contract for the sole purpose of reducing the total cost of construction. The cost reduction proposal shall not impair in any manner the essential functions or characteristics of the project, including but not limited to, service life, economy of operation, ease of maintenance, desired appearance or design and safety standards.

## **SECTION 00700 - GENERAL CONDITIONS**

- B. The cost reduction proposal shall contain the following information:
1. Description of both the existing contract requirements for performing the WORK and the proposed changes.
  2. An itemization of the contract requirements that must be changed if the proposal is adopted.
  3. A detailed estimate of the time required and the cost of performing the WORK under both the existing contract and the proposed change.
  4. A statement of the date by which the CONTRACTOR must receive the decision from the OWNER on the cost reduction proposal.
  5. The contract items of WORK effected by the proposed changes including any quantity variations.
  6. A description and estimate of costs the OWNER may incur in implementing the proposed changes, such as test and evaluation and operating and support costs.
  7. A prediction of any effects the proposed change would have on future operations and maintenance costs to the OWNER.
- C. The provisions of this section shall not be construed to require the OWNER to consider any cost reduction proposal which may be submitted; nor will the OWNER be liable to the CONTRACTOR for failure to accept or act upon any cost reduction proposal submitted, or for delays to the WORK attributable to the consideration or implementation of any such proposal.
- D. If a cost reduction proposal is similar to a change in the plans or Specifications for the Project under consideration by the OWNER at the time the proposal is submitted, the OWNER will not accept such proposal and reserves the right to make such changes without compensation to the CONTRACTOR under the provisions of this section.
- E. The CONTRACTOR shall continue to perform the WORK in accordance with the requirements of the contract until an executed Change Order incorporating the cost reduction proposal has been issued. If any executed Change Order has not been issued by the date upon which the CONTRACTOR's cost reduction proposal specifies that a decision should be made by the OWNER, in writing, the cost reduction proposal shall be considered rejected.
- F. The OWNER, shall be the sole judge of the acceptability of a cost reduction proposal and of the estimated net savings in Contract Time and construction costs resulting from the adoption of all or any part of such proposal. Should the CONTRACTOR disagree with OWNER's decision on the cost reduction proposal, there is no further consideration. The OWNER reserves the right to make final determination.
- G. If the CONTRACTOR's cost reduction proposal is accepted in whole or in part, such acceptance will be made by a Contract Change Order, which specifically states that the change is executed pursuant to this cost reduction proposal section. Such Change Order shall incorporate the changes in the plans and Specifications which are necessary to permit the cost reduction proposal or such part of it as has been accepted to be put into effect and shall include any conditions upon which the OWNER's approval is based, if such approval is conditional. The Change Order shall also describe the estimated net savings in the cost of performing the WORK attributable to the cost reduction proposal, and shall further provide that the contract cost be adjusted by crediting the OWNER with the estimated net savings amount.

## **SECTION 00700 - GENERAL CONDITIONS**

- H. Acceptance of the cost reduction proposal and performance of the WORK does not extend the time of completion of the contract, unless specifically provided in the Change Order authorizing the use of the submitted proposal. Should the adoption of the cost reduction proposal result in a Contract Time savings, the total Contract Time shall be reduced by an amount equal to the time savings realized.
- I. The amount specified to the CONTRACTOR in the Change Order accepted in the cost reduction proposal shall constitute full compensation for the performance of WORK. No claims for additional costs as a result of the changes specified in the cost reduction proposal shall be allowed.
- J. The OWNER reserves the right to adopt and utilize any approved cost reduction proposal for general use on any contract administered when it is determined suitable for such application. Cost reduction proposals identical, similar, or previously submitted will not be accepted for consideration if acceptance and compensation has previously been approved. The OWNER reserves the right to use all or part of any cost reduction proposal without obligation or compensation of any kind to the CONTRACTOR.
- K. The CONTRACTOR shall bear the costs, if any, to revise all Bonds and insurance requirements for the Project, to include the cost reduction WORK.

**END OF SECTION**

## SECTION 00800 - SUPPLEMENTARY GENERAL CONDITIONS

**GENERAL.** These Supplementary General Conditions make additions, deletions, or revisions to the General Conditions as indicated herein. All provisions which are not so added, deleted, or revised remain in full force and effect. Terms used in these Supplementary General Conditions which are defined in the General Conditions have the meanings assigned to them in the General Conditions.

**SGC 2.2 COPIES OF DOCUMENTS.** *Add* the following:

The OWNER shall furnish to the CONTRACTOR up to ten (10) copies of the Contract Documents. The CBJ Contracts Office shall contact the CONTRACTOR after issuance of Notice of Intent to Award to determine how many copies are needed. Additional quantities of the Contract Documents will be furnished at reproduction cost.

**SGC 4.2 PHYSICAL CONDITIONS - SUBSURFACE AND EXISTING STRUCTURES.** *Add* the following:

- C. In the preparation of the Contract Documents, the Engineer of Record has relied upon field measurements and visual inspection of the existing structures and surface conditions.

*Add* the following SGC 4.6:

**SGC - 4.6 USE OF THE CBJ/STATE LEMON CREEK GRAVEL PIT.** *Add* the following.

The CBJ/State Lemon Creek Gravel Pit is not available for this Project.

*Add* the following SGC 4.7:

**SGC 4.7 USE OF CITY/STATE STABLER'S POINT ROCK QUARRY.** *Add* the following:

The CBJ/State Stabler Point Rock Quarry is not available for this Project.

**SGC 5.1 PERFORMANCE, PAYMENT, AND OTHER BONDS.** The Contractor shall furnish Performance and Payment Bonds in the amount of 100% of the Bid.

**SGC 5.2 INSURANCE AMOUNTS.** The limits of liability for the insurance required by Paragraph 5.2 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations. All certificates of insurance supplied to the OWNER shall state that the OWNER is named as **“Additional Insured for any and all work performed for the City & Borough of Juneau.”** The Additional Insured requirement does not apply to Workers Compensation insurance. NOTE: This requirement has changed. The OWNER no longer requires certificates of insurance referencing project names and contract numbers.

- A. Workers' Compensation: Under Paragraph 5.2C.1 of the General Conditions as in accordance with AS 23.30.045: (Additional Insured requirements not necessary for Workers' Compensation coverage.)

1. State: Statutory
2. Applicable Federal (e.g., Longshore): Statutory

Note: If the WORK called for in the Contract Documents involves work in or on any navigable waters, the CONTRACTOR shall provide Workers' Compensation coverage

## SECTION 00800 - SUPPLEMENTARY GENERAL CONDITIONS

which shall include coverage under the Longshore and Harbor Workers' Compensation Act, the Jones Act, and any other coverage required under Federal or State laws pertaining to workers in or on navigable waters.

### 3. Employer's Liability

Bodily Injury by Accident:	\$100,000.00	Each Accident
Bodily Injury by Disease:	\$100,000.00	Each Employee
Bodily Injury by Disease:	\$500,000.00	Policy Limit

- a. CONTRACTOR agrees to waive all rights of subrogation against the OWNER of Record for work performed under contract.
- b. If CONTRACTOR directly utilizes labor outside of the State of Alaska in the prosecution of the WORK, "Other States" endorsement shall be required as a condition of the contract.

### B. Commercial General Liability: (under Paragraph 5.2C.2 of the General Conditions):

1. General Policy	\$1,000,000.00	Each Occurrence
	\$2,000,000.00	Annual Aggregate
2. Products/Completed Operations	\$1,000,000.00	Each Occurrence
	\$2,000,000.00	Annual Aggregate
3. Personal Injury	\$1,000,000.00	Each Occurrence

### C. Comprehensive Automobile Liability: (under Paragraph 5.2C.3 of the General Conditions) including Owned, Hired, and Non-Owned Vehicles:

1. Combined Single Limit, Bodily Injury and Property Damage \$1,000,000.00

### D. Builders risk does not apply to this Project.

### E. Policies shall also specify insurance provided by CONTRACTOR will be considered primary and not contributory to any other insurance available to the OWNER.

### F. All policies will provide for 30 Days written notice prior to any cancellation or non-renewal of insurance policies required under contract. "Will endeavor" and "but failure to mail such notice shall impose no obligation or liability of any kind upon the Company, its agents or representatives" wording will be deleted from certificates.

### SGC 6.1 SUPERVISION AND SUPERINTENDENCE. *Add* the following:

- D. The CONTRACTOR's superintendent shall attend a weekly progress meeting at the site with the OWNER and/or the ARCHITECT at a time to be mutually agreed upon. The CONTRACTOR's superintendent shall have an operating cellular phone on hand at all times that WORK is performed.

## SECTION 00800 - SUPPLEMENTARY GENERAL CONDITIONS

### **SGC 6.5 CONCERNING SUBCONTRACTORS, SUPPLIERS, AND OTHERS.** *Add* the following:

The CONTRACTOR shall perform not less than 40% of the WORK with its own forces (i.e., without subcontracting). The 40% requirement shall be understood to mean that the CONTRACTOR shall perform, with its own organization, WORK amounting to at least 40% of the original contract amount. The 40% requirement will be calculated based upon the total of the subcontract amounts submitted for Contract Award, and any other information requested by the OWNER from the apparent low Bidder.

### **SGC 6.6 PERMITS.** *Add* the following:

- C. The OWNER shall apply for, and obtain, the necessary building permit for this Project; however, the CONTRACTOR is responsible for scheduling and coordinating all necessary inspections. The CBJ Inspection number is 586-1703. All other provisions of this section remain in effect.
- D. Contractor is responsible for obtaining a Hot Works permit from the CBJ Permit Center, if performing work which requires such a permit. Work requiring a Hot Works Permit includes but is not limited to the following: cutting, welding, Thermit welding, brazing, soldering, grinding, thermal spraying, thawing pipe, installation of torch-applied roof systems or any other similar activity.

### **SGC 6.8 LAWS AND REGULATIONS.** *Add* the following:

The OWNER may, per AS 36.30, audit the CONTRACTOR's or Subcontractor(s) records that are related to the cost or pricing data for this contract, all related Change Orders, and/or contract modifications.

### **SGC 6.15 CONTRACTOR'S DAILY REPORTS.** *Add* the following:

"Weekly summary reports may be completed in lieu of daily reports."

*Add* the following SCG 6.19:

**SGC 6.19 CONTRACTOR'S WORK SCHEDULE LIMITATIONS.** Construction of Buildings and Projects. It is unlawful to operate any pile driver, power shovel, pneumatic hammer, derrick, power hoist, or similar heavy construction equipment before 7:00 a.m. or after 10:00 p.m., Monday through Friday, or before 9:00 a.m. or after 10:00 p.m., Saturday and Sunday, unless a permit shall first be obtained from the City and Borough Building Official. Such permit shall be issued by the Building Official only upon a determination that such operation during hours not otherwise permitted hereunder is necessary and will not result in unreasonable disturbance to surrounding residents.

### **SGC 9.3 PROJECT REPRESENTATION.** *Add* the following:

#### **DUTIES, RESPONSIBILITIES AND LIMITATIONS OF AUTHORITY OF INSPECTOR**

General. The Inspector will act as directed by and under the supervision of the ARCHITECT and will confer with the ARCHITECT regarding its actions. The Inspector's dealings in matters pertaining to the on-site WORK shall, in general, be only with the ARCHITECT and the CONTRACTOR, and dealings with Subcontractors shall only be through or with the full knowledge of the CONTRACTOR. Written communication with the OWNER will be only through or as directed by the ARCHITECT. The ARCHITECT may further delegate the responsibilities and authorities associated with this Project, when such delegation is in writing and notice thereof is provided to the CONTRACTOR.



## SECTION 00800 - SUPPLEMENTARY GENERAL CONDITIONS

**SGC 11.1 GENERAL.** Paragraph B. In the second sentence change the number of days from 30 Days to 7 Days. In the third sentence change the number of days from 60 Days to 14 Days.

**SCG 14.3 APPLICATION FOR PROGRESS PAYMENT.** *Delete* Paragraph C and replace with the following:

- C. The Net Payment Due the CONTRACTOR shall be the above-mentioned subtotal from which shall be deducted the total amount of all previous payments made to the CONTRACTOR. Progress payments will be paid in full in accordance with Article 14 of the General Conditions until 90% of the Contract Price has been paid. The remaining 10% of the contract amount may be withheld until:
1. final inspection has been made;
  2. completion of the Project; and
  3. acceptance of the Project by the OWNER.

**SCG 14.3 APPLICATION FOR PROGRESS PAYMENT.** Paragraph D.

- D. The Value of Materials Stored at the site shall be the amount of 20%.

**SGC 14.9 FINAL PAYMENT AND ACCEPTANCE.** *Add* the following paragraph:

- C. Prior to the final payment the CONTRACTOR shall contact the Alaska Department of Labor and Workforce Development (ADOL) and provide the OWNER with clearance from the ADOL for the CONTRACTOR and all Subcontractors that have worked on the Project. This clearance shall indicate that all Employment Security Taxes have been paid. The following page is a sample form for this purpose. The CONTRACTOR also shall submit a "NOTICE OF COMPLETION OF PUBLIC WORKS" signed by ADOL.

**SGC 16.8 CERTIFIED PAYROLLS.** *Change* paragraph A. to read:

- A. All CONTRACTORS or Subcontractors who perform work on a public construction contract for the OWNER shall file a certified payroll with Alaska Department of Labor. See Section 00830 - Alaska Labor Standards, Reporting, and Prevailing Wage Rate Determination.

*Add* the following SGC 17:

**SGC 17 GENERAL INFORMATION.** This Project is currently funded by the City and Borough of Juneau, Alaska General Sales Tax.

**SECTION 00800 - SUPPLEMENTARY GENERAL CONDITIONS**

**Employment Security Tax Clearance**

Date: \_\_\_\_\_

To: Alaska Department of Labor  
Juneau Field Tax Office  
907-465-2787  
FAX 907-465-2374

From: \_\_\_\_\_

**Subject: CCFR-SECTIONAL DOORS AND OPERATORS REPLACEMENT  
Contract No. E10-219**

Timeframe of Contract \_\_\_\_\_

Please advise whether or not clearance is granted for the following CONTRACTOR or Subcontractor:  
(List only one CONTRACTOR or Subcontractor list per page.)

\_\_\_\_\_  
Name

\_\_\_\_\_  
Address

Per AS 23.20.265 of the Alaska Employment Security Act, this request is for tax liability clearance and release to make final payment for WORK performed under the subject contract. Please send your response to:

Jennifer Mannix, Contract Administrator  
Engineering Department  
155 S. Seward Street  
Juneau, Alaska 99801  
FAX 907-586-4530

- ( ) Tax Clearance is granted.  
( ) Tax Clearance is NOT granted.

Remarks: \_\_\_\_\_

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Title

**END OF SECTION**

**SECTION 00830 - ALASKA LABOR STANDARDS, REPORTING, AND  
PREVAILING WAGE RATE DETERMINATION**

State of Alaska, Department of Labor, Laborers' and Mechanics' Minimum Rates of Pay, AS 36.05.010 and AS 36.05.050, Wage and Hour Administration Pamphlet No. 600, the latest edition published by the State of Alaska, Department of Labor inclusive, are made a part of this contract by reference.

The CONTRACTOR is responsible for contacting the Alaska Department of Labor to determine compliance with current regulations.

Required Reporting During Contract (to be provided by every CONTRACTOR and Subcontractor):

- A. **Certified Payrolls must be submitted every two weeks. Before the second Friday**, each CONTRACTOR and Subcontractor must file Certified Payrolls with Statements of Compliance for the previous two weeks. Indicate "**Start**" on your first payroll, and "**Final**" on your last payroll for this Project. Send to:

<p style="text-align:center"><b><i>Wage and Hour Section</i></b> State of Alaska Department of Labor and Workforce Development Labor Standards and Safety Division      and Wage and Hour Administration P.O. Box 11149 Juneau, AK 99811-1149 907-465-4842</p>	<p style="text-align:center"><b><i>Jennifer Mannix, Contract Administrator</i></b> City and Borough of Juneau 155 S. Seward Street Juneau, AK 99801 (907) 586-0873</p>
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- B. **Within 10 Days of "Notice of Award/Notice to Proceed"** make a list of all Subcontractors. Include their name, address, phone, estimated subcontract amount, and estimated start and finish dates. Send to:

***Wage and Hour Section***  
State of Alaska  
Department of Labor and Workforce Development  
Labor Standards and Safety Division  
Wage and Hour Administration  
P.O. Box 11149  
Juneau, AK 99811-1149

- C. As part of the **final payment request package**, CONTRACTOR must submit a "NOTICE OF COMPLETION OF PUBLIC WORKS" form signed by ADOL personnel.

**END OF SECTION**

## SECTION 01010 - SUMMARY OF WORK

### PART 1 - GENERAL

#### 1.1 GENERAL

- A. The WORK to be performed under this contract shall consist of furnishing all plant, tools, equipment, materials, supplies, and manufactured articles and furnishing all labor, transportation and services, including fuel, power, water, and essential communications, and performing all WORK, or other operations required for the fulfillment of the contract in strict accordance with the Contract Documents. The WORK shall be complete, and all work, materials, and services not expressly indicated or called for in the Contract Documents which may be necessary for the complete and proper construction of the WORK in good faith shall be provided by the CONTRACTOR as though originally so indicated, at no increase in cost to the OWNER.

#### 1.2 WORK COVERED BY CONTRACT DOCUMENTS

- A. **DESCRIPTION OF WORK: CAPITAL CITY FIRE & RESCUE SECTIONAL DOORS AND OPERATORS REPLACEMENT**

**Douglas Fire Station**, 1016 3<sup>rd</sup> Street, Douglas

Note: No sectional doors replaced at this station.

Replace door bottom astragal seals, door rollers and balance all doors. Install NEMA-4 compliant weatherproof infra-red sensing eyes and weather proof wall mounted three button operator controls at each door. Replace existing door operators with ¾ Hp, 115v trolley type operator, without chain hoist option. Door operators to have integrated wireless remote control with external antenna. Provide one hand-held radio control unit for each operator. Install replacement 8'-8" torsion bar and center couplers at each existing door.

New door operators must be fully compatible with existing Overhead Door Model 591 insulated doors.

Electrical work includes re-routing of existing conduits, installation of new electrical conduit, wiring as required with connection to existing electrical panel. Provide four (4) new 25 Ampere, single-pole breakers in existing electrical panelboard to feed new door operators. Field verification of existing conditions is highly recommended.

**Juneau Fire Station**, 820 Glacier Ave.

Note: No sectional doors replaced at this station, except bottom panel at Door #9.

Replace door weather stripping, bottom astragal seals, door rollers and balance all doors. Install NEMA-4 compliant weatherproof infra-red sensing eyes and weather proof wall mounted weatherproof three button operator controls at each door. Replace door operators at all existing doors with ¾ Hp, 115v trolley type operator, without chain hoist option. Door operators to have integrated wireless remote control with external antenna. Provide one hand-held radio control unit for each operator. Replace bottom door panel only at door #9 due to exterior skin de-lamination.

New door operators must be fully compatible with existing Overhead Door Model 591 insulated doors.

## SECTION 01010 - SUMMARY OF WORK

Electrical work includes re-routing of existing conduits, installation of new electrical conduit, wiring as required with connection to existing electrical panel. Provide eleven (11) new 25 Ampere, single-pole breakers in existing electrical panelboard to feed new door operators. Field verification of existing conditions is highly recommended.

### **Glacier Fire Station**, 1700 Crest Ave.

Note: No sectional doors replaced at this station.

Replace door weather stripping, bottom astragal seals, door rollers and balance all doors. Remove thirteen (13) existing 230v 3- phase  $\frac{3}{4}$  HP trolley-style operators and install new  $\frac{3}{4}$  HP, 115v single-phase jackshaft style with chain hoist and integrated wireless remote control with external antenna. Provide one hand held radio control unit for each operator. All operators to be mounted on contractor supplied and installed metal supports between vehicle doors. Replace all existing 7' torsion bars with new 8' torsion bars on the operator side of each door. All doors require NEMA-4 compliant weather proof infra-red sensing eyes between doors and weather proof three button controls.

Operators must be fully compatible with existing Overhead Door Model 591 insulated doors.

Electrical work includes re-routing of existing conduits, installation of new electrical conduit, wiring as required with connection to existing electrical panel. Provide thirteen (13) new 25 Ampere, single-pole breakers in existing electrical panelboard to feed new door operators. Field verification of existing conditions is highly recommended.

Mechanical work includes re-routing of existing overhead water piping to facilitate installation of new jack shaft type operator conduit and electrical controls.

### **Auke Bay Fire Station**, 11900 Glacier Highway

Replace all existing overhead coiling doors with new polyurethane insulated doors with 3" wide tracks, double end styles with glass lites in 3<sup>rd</sup> panel.

Doors #1, 2, 4 and 5 dimensions: 14'-2" x 12'-1"

Door #3 dimension: 12'-2" x 12'-1"

Install weather strip, bottom seal astragals and install NEMA-4 compliant weather proof infra red sensing eyes and weatherproof three button controls. Replace existing operators at all doors with,  $\frac{3}{4}$  Hp, 115v, trolley style operators. Emergency chain hoist operation is NOT required. Balance all doors.

Electrical work includes re-routing of existing conduits, installation of new electrical conduit, wiring as required with connection to existing electrical panel. Provide five (5) new 25 Ampere, single-pole breakers in existing electrical panelboard to feed new door operators. Field verification of existing conditions is highly recommended.

### **Lynn Canal Fire Station** 17900 Glacier Highway

Replace all existing overhead coiling doors with new polyurethane insulated sectional doors with 3" wide tracks, double end styles with thermal glass lites installed across the third horizontal panel from the bottom. Balance all doors.

## SECTION 01010 - SUMMARY OF WORK

Provide weather strip and bottom seal astragals at each door and install NEMA-4 compliant weather proof infra-red sensing eyes and weather proof three button controls. Replace existing operators with ¾ Hp, 115v, trolley style operators. Emergency chain hoist operation is NOT required.

Electrical work includes re-routing of existing conduits, installation of new electrical conduit, wiring as required with connection to existing electrical panel. Provide two (2) new 25 Ampere, single-pole breakers in existing electrical panelboard to feed new door operators. Field verification of existing conditions is highly recommended.

- B. Interior photos of each station are available online at:  
[http://www.juneau.org/engineering\\_ftp/contracts/Contracts.php](http://www.juneau.org/engineering_ftp/contracts/Contracts.php)

### 1.3 CONTRACT METHOD

- A. The WORK, hereunder will be constructed under a Lump Sum contract.

### 1.4 WORK BY OTHERS

- A. The CONTRACTOR's attention is directed to the fact that WORK may be conducted at the site by other contractors during the performance of the WORK under this contract. The CONTRACTOR shall conduct its operations so as to cause a minimum of interference with the work of such other contractors, and shall cooperate fully with such contractors to provide continued safe access to their respective portions of the site, as required to perform work under their respective contracts.

### 1.5 CONTRACTOR USE OF THE PROJECT SITE

- A. The CONTRACTOR's use of the project site shall be limited to its construction operations, including on-site storage of materials, on-site fabrication facilities and field offices.
- B. Limit use of the site and/or premises to construction activities in the areas indicated on the contract drawings; allow for OWNER occupancy and use by Capital City Fire and Rescue (CCFR) personnel at all times.
- C. Contractor to coordinate all construction schedules and activates with the CBJ project manager, CCFR Fire Chief- Eric Mohrmann and individual station chiefs as often as required.
- D. Confine operations to areas within the project limits indicated. Portions of the site beyond the areas in which construction operations are indicated are not to be disturbed.
- E. Keep driveways and entrances serving the premises clear and available to the OWNER, the OWNER'S employees and the public at all times. Do not use these areas for storage of materials and equipment.
- F. Maintain the existing building in a weather tight condition throughout the construction period. Repair damage caused by construction operations. Take all precautions to protect the structure, its occupants and the public during the construction period.

## **SECTION 01010 - SUMMARY OF WORK**

- G. The CONTRACTOR shall cooperate and coordinate with the CBJ PROJECT MANAGER to facilitate the OWNER'S operations and to minimize the interference with the CONTRACTOR'S operations at the same time.

### **1.5 OWNER USE OF THE PROJECT SITE**

- A. The Capital City Fire and Rescue personnel may utilize all or part of the existing site and building during the entire period of construction for the conduct of the Owner's normal operations. The public will have access to the existing site and building during the OWNER'S established building operating hours. In any event, the Owner and public shall be allowed access to the project site and building during the construction period.

### **1.7 PARTIAL UTILIZATION OF THE WORK BY OWNER**

- A. The Owner may choose to utilize overhead coiling doors for CCFR operations as required during non critical replacement work tasks.

### **1.8 PROJECT MEETINGS**

#### **A. Pre-Construction Conference**

1. Prior to the commencement of WORK at the site, a Pre-Construction Conference will be held at a mutually agreed time and place which shall be attended by the CONTRACTOR's Project Supervisor, its superintendent, and its Subcontractors as the CONTRACTOR deems appropriate. Other attendees will be:
  - a. CBJ Chief Architect- Rich Ritter
  - b. CBJ PROJECT MANAGER - Steve Tada
  - c. Capital City Fire and Rescue- Fire Chief- Eric Mohrmann
  - d. Others as requested by CONTRACTOR, or the OWNER.
2. Unless previously submitted to the CBJ PROJECT MANAGER, the CONTRACTOR shall bring to the Pre-Construction Conference one copy each of the following:
  - a. Plan of Operation.
  - b. Project Overview Bar Chart Schedule.
  - c. Procurement schedule of major equip. and materials and items requiring long lead time.
  - d. Shop Drawing/Sample/Substitute or "Or Equal" submittal schedule.
  - e. Name and telephone number of CONTRACTOR's Project Supervisor.
3. The purpose of the Pre-Construction Conference is to designate responsible personnel and establish a working relationship. Matters requiring coordination will be discussed and procedures for handling such matters established.
4. The CONTRACTOR should be prepared to discuss all of the items listed below:
  - a. Status of CONTRACTOR's insurance and bonds.
  - b. CONTRACTOR's tentative schedules.
  - c. Transmittal, review, and distribution of CONTRACTOR's submittals.

## **SECTION 01010 - SUMMARY OF WORK**

- d. Processing applications for payment.
  - e. Maintaining record documents.
  - f. Critical work sequencing.
  - g. Field decisions and Change Orders.
  - h. Use of Project site, office and storage areas, security, cleaning & OWNER's needs.
  - i. Major equipment deliveries and priorities.
  - j. CONTRACTOR's assignments for safety and first aid.
5. The OWNER will preside at the Pre-Construction Conference and will arrange for keeping and distributing the minutes to all persons in attendance.

### **B. Progress Meetings**

- 1. The CONTRACTOR shall schedule and hold regular on-site progress meetings at least weekly and at other times as requested by the CBJ PROJECT MANAGER, or as required by progress of the WORK. The CONTRACTOR, CBJ PROJECT MANAGER, and all Subcontractors active on the site must attend each meeting. CONTRACTOR may at its discretion request attendance by representatives of its suppliers, manufacturers, and other Subcontractors.
- 2. The CBJ PROJECT MANAGER shall preside at the meetings and will arrange for keeping and distributing the minutes. The purpose of the meetings will be to review the progress of the WORK, maintain coordination of efforts, discuss changes in scheduling, and resolve other problems which may develop. During each meeting, the CONTRACTOR is required to present any issues which may impact the WORK, with a view toward resolving these issues expeditiously.

### **PART 2 - PRODUCTS (Not Used)**

### **PART 3 - EXECUTION (Not Used)**

**END OF SECTION**



## **SECTION 01025 - MEASUREMENT AND PAYMENT**

### **PART 1 - GENERAL**

#### **1.1 SCOPE**

- A. Payment for the various items of the Bid Schedule, as further specified herein, shall include all compensation to be received by the CONTRACTOR for furnishing all tools, equipment, supplies, and manufactured articles, and for all labor, operations, and incidentals appurtenant to the items of WORK being described, as necessary to complete the various items of the WORK all in accordance with the requirements of the Contract Documents, including all appurtenances thereto, and including all costs of permits and cost of compliance with the regulations of public agencies having jurisdiction, including Safety and Health Requirements of the Occupational Safety and Health Administration of the U.S. Department of Labor (OSHA).
- B. No separate payment will be made for any item that is not specifically set forth in the Bid Schedule, and all costs therefor shall be included in the prices named in the Bid Schedule for the various appurtenant items of WORK.
- C. In addition to other incidental items of WORK listed elsewhere in the contract, the following items shall also be considered as incidental to other Items of WORK under this contract:
  - 1. Maintenance of all services through Project area, including water, sewer, storm, garbage pickup, mail delivery, other deliveries and emergency vehicles.

#### **1.2 PRICE BASED ON LUMP SUM PAY UNIT**

- A. Measurement for payment for the Lump Sum Pay Unit will be based upon the completion of the entire WORK as a Lump Sum Pay Unit, complete, all in accordance with the requirements of the Contract Documents.
- B. Payment will be made at the amount shown on the Bid Schedule, which payment will constitute full compensation for all WORK.

### **PART 2 - PRODUCTS (Not Used)**

### **PART 3 - EXECUTION (Not Used)**

**END OF SECTION**

## SECTION 01070 - ACRONYMS OF INSTITUTIONS

### PART 1 - GENERAL

#### 1.1 GENERAL

- A. Wherever in these Specifications references are made to the standards, specifications, or other published data of the various international, national, regional, or local organizations, such organizations may be referred to by their acronym or abbreviation only. As a guide to the user of these Specifications, the following acronyms or abbreviations which may appear in these Specifications shall have the meanings indicated herein.

#### 1.2 ACRONYMS

AAMA	Architectural Aluminum Manufacturer's Association
AASHTO	American Association of State Highway and Transportation Officials
AATCC	American Association of Textile Chemists and Colorists
ACI	American Concrete Institute
AFBMA	Anti-Friction Bearing Manufacturer's Association, Inc.
AGMA	American Gear Manufacturer's Association
AHAM	Association of Home Appliance Manufacturers
AI	The Asphalt Institute
AIA	American Institute of Architects
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AITC	American Institute of Timber Construction
AMCA	Air Moving and Conditioning Association
ANS	American Nuclear Society
ANSI	American National Standards Institute, Inc.
APA	American Plywood Association
API	American Petroleum Institute
APWA	American Public Works Association
ASA	Acoustical Society of America
ASAE	American Society of Agricultural Engineers
ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigerating, and Air Conditioning Engineers
ASLE	American Society of Lubricating Engineers
ASME	American Society of Mechanical Engineers
ASQC	American Society for Quality Control
ASSE	American Society of Sanitary Engineers
ASTM	American Society for Testing and Materials
AWPA	American Wood Preservers Association
AWPI	American Wood Preservers Institute
AWS	American Welding Society
AWWA	American Water Works Association
BBC	Basic Building Code, Building Officials and Code Administrators International
BHMA	Builders Hardware Manufacturer's Association
CBJ	City and Borough of Juneau
CBM	Certified Ballast Manufacturers

## SECTION 01070 - ACRONYMS OF INSTITUTIONS

CEMA	Conveyors Equipment Manufacturer's Association
CLFMI	Chain Link Fence Manufacturer's Institute
CMA	Concrete Masonry Association
CRSI	Concrete Reinforcing Steel Institute
DCDMA	Diamond Core Drill Manufacturer's Association
EIA	Electronic Industries Association
ETL	Electrical Test Laboratories
FPL	Forest Products Laboratory
HI	Hydronics Institute
ICBO	International Conference of Building Officials
IEEE	Institute of Electrical and Electronics Engineers
IES	Illuminating Engineering Society
IME	Institute of Makers of Explosives
IOS	International Organization for Standardization
IP	Institute of Petroleum (London)
IPC	Institute of Printed Circuits
IPCEA	Insulated Power Cable Engineers Association
ISA	Instrument Society of America
ITE	Institute of Traffic Engineers
MBMA	Metal Building Manufacturer's Association
MPTA	Mechanical Power Transmission Association
MTI	Marine Testing Institute
NAAMM	National Association of Architectural Metal Manufacturer's
NACE	National Association of Corrosion Engineers
NBS	National Bureau of Standards
NCCLS	National Committee for Clinical Laboratory Standards
NEC	National Electrical Code
NEMA	National Electrical Manufacturer's Association
NFPA	National Fire Protection Association
NFPA	National Forest Products Association
NLGI	National Lubricating Grease Institute
NWMA	National Woodwork Manufacturers Association
OSHA	Occupational Safety and Health Administration
PCA	Portland Cement Association
RIS	Redwood Inspection Service
RWMA	Resistance Welder Manufacturer's Association
SAE	Society of Automotive Engineers
SAMA	Scientific Apparatus Makers Association
SMA	Screen Manufacturers Association
SMACCNA	Sheet Metal and Air Conditioning Contractors National Association
SPIB	Southern Pine Inspection Bureau
SPR	Simplified Practice Recommendation
SSA	Swedish Standards Association
SSBC	Southern Standard Building Code, Southern Building Code Congress
SSPC	Steel Structures Painting Council
SSPWC	Standard Specifications for Public Works Construction
TAPPI	Technical Association of the Pulp and Paper Industry
TFI	The Fertilizer Institute
UBC	Uniform Building Code
UMC	Uniform Mechanical Code

## **SECTION 01070 - ACRONYMS OF INSTITUTIONS**

UPC	Uniform Plumbing Code
UL	Underwriters Laboratories, Inc.
WCLIB	West Coast Lumber Inspection Bureau
WCRSI	Western Concrete Reinforcing Steel Institute
WIC	Woodwork Institute of California
WRI	Wire Reinforcement Institute, Inc.
WWPA	Western Wood Products Association

**PART 2 - PRODUCTS** (Not Used)

**PART 3 - EXECUTION** (Not Used)

**END OF SECTION**

## **SECTION 01090 - REFERENCE STANDARDS AND DEFINITIONS**

### **PART 1 - GENERAL**

#### **1.1 GENERAL**

- A. Titles of Sections and Paragraphs: Captions accompanying Specification sections and paragraphs are for convenience of reference only, and do not form a part of the Specifications.
- B. Applicable Publications: Whenever in these Specifications references are made to published Specifications, codes, standards, or other requirements, it shall be understood that wherever no date is specified, only the latest Specifications, standards, or requirements of the respective issuing agencies which have been published as of the date that the WORK is advertised for bids, shall apply; except to the extent that said standards or requirements may be in conflict with applicable laws, ordinances, or governing codes. No requirements set forth herein or shown on the Drawings shall be waived because of any provision of, or omission from, said standards or requirements.
- C. Specialists, Assignments: In certain instances, Specification text requires (or implies) that specific WORK is to be assigned to specialists or expert entities, who must be engaged for the performance of that WORK. Such assignments shall be recognized as special requirements over which the CONTRACTOR has no choice or option. These requirements shall not be interpreted so as to conflict with the enforcement of building codes and similar regulations governing the WORK; also they are not intended to interfere with local union jurisdiction settlements and similar conventions. Such assignments are intended to establish which party or entity involved in a specific unit of WORK is recognized as "expert" for the indicated construction processes or operations. Nevertheless, the final responsibility for fulfillment of the entire set of contract requirements remains with the CONTRACTOR.

#### **1.2 ABBREVIATIONS AND NAMES**

- A. Where such acronyms or abbreviations are used in the Specifications or other Contract Documents, they mean the recognized name of the trade association, standards-generating organization, authority having jurisdiction, or other entity applicable to the context of the text provision.

#### **1.3 PERMITS, LICENSES, AND CERTIFICATES**

- A. Upon request by the CBJ PROJECT MANAGER, the CONTRACTOR shall 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 on performance of the WORK.

#### **1.4 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS**

- A. Without limiting the generality of other requirements of the Specifications, all WORK specified herein shall conform to or exceed the requirements of applicable codes and the applicable requirements of the following documents.

## **SECTION 01090 - REFERENCE STANDARDS AND DEFINITIONS**

- B. References herein to "Building Code" or "IBC" shall mean International Building Code of the International Conference of Building Officials (ICBO), latest Edition.
- C. Similarly, references to "Mechanical Code" or "Uniform Mechanical Code," "Plumbing Code" or "Uniform Plumbing Code," "Fire Code" or "Uniform Fire Code," shall mean Uniform Mechanical Code, Uniform Plumbing Code and Uniform Fire Code of the International Conference of the Building Officials (ICBO). "Electric Code" or "National Electric Code (NEC)" shall mean the National Electric Code of the National Fire Protection Association (NFPA). The latest edition of the codes as approved by the Municipal Code and used by the local agency as of the date that the WORK is advertised for bids, as adopted by the agency having jurisdiction, shall apply to the WORK herein, including all addenda, modifications, amendments, or other lawful changes thereto.
- D. In case of conflict between codes, reference standards, drawings and the other Contract Documents, the most stringent requirements shall govern. All conflicts shall be brought to the attention of the CBJ PROJECT MANAGER for clarification and directions prior to ordering or providing any materials or furnishing labor. The CONTRACTOR shall bid for the most stringent requirements.
- E. The CONTRACTOR shall construct the WORK specified herein in accordance with the requirements of the Contract Documents and the referenced portions of those referenced codes, standards, and Specifications listed herein.
- F. References herein to "OSHA Regulations for Construction" shall mean Title 29, Part 1926, Construction Safety and Health Regulations, Code of Federal Regulations (OSHA), including all changes and amendments thereto.
- G. References herein to "OSHA Standards" shall mean Title 29, Part 1910, Occupational Safety and Health Standards, Code of Federal Regulations (OSHA), including all changes and amendments thereto.

### **1.5 DEFINITIONS**

- A. The basic contract definitions are included in Section 00700 - General Conditions. The following definitions have the meaning defined in the Technical Portions of the WORK:

Approve - Used in conjunction with action on submittals, applications, and requests, is limited to the CBJ PROJECT MANAGER's duties and responsibilities as stated in the Conditions of the Contract.

Directed - Terms such as "directed," "requested," "authorized," "selected," "approved," "required," and "permitted" mean "directed by the CBJ PROJECT MANAGER," "requested by the CBJ PROJECT MANAGER", and similar phrases.

## **SECTION 01090 - REFERENCE STANDARDS AND DEFINITIONS**

Experienced - Means having a minimum of five previous Projects similar in size to this Project, and being familiar with precautions required and with requirements of the authority having jurisdiction.

Furnish - means to supply and deliver to the site, to unload and unpack ready for assembly, installation, testing, and start-up.

Indicated - is a word used to direct the CONTRACTOR to information contained on the drawings or in the Specifications. Terms such as "shown," "noted," "scheduled," and "specified" also may be used to assist in locating information but no limitation of location is implied or intended.

Install - defines operations at the site including assembly, erection, placing, anchoring, applying, shaping to dimension, finishing, curing, protecting, and cleaning, ready for the OWNER's use.

Installer - A CONTRACTOR or an entity engaged by the CONTRACTOR, as an employee or 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.

Project Site - The space available for construction activities, either exclusively or with others performing other construction on 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.

Provide - is defined as furnish and install, ready for the intended use.

Regulation - Includes laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the WORK.

Testing Laboratories - An independent entity engaged to perform specific inspections or tests at the Project Site or elsewhere, and to report on and, if required, to interpret results of those inspections or tests.

### **PART 2 - PRODUCTS (Not Used)**

### **PART 3 - EXECUTION (Not Used)**

**END OF SECTION**

## **SECTION 01300 - CONTRACTOR SUBMITTALS**

### **PART 1 - GENERAL**

#### **1.1 GENERAL**

- A. Wherever submittals are required hereunder, all such submittals by the CONTRACTOR shall be submitted to the PROJECT MANAGER.
- B. Prior to the Pre-Construction Conference, the CONTRACTOR shall submit the following items to the PROJECT MANAGER for review:
  - 1. A submittal schedule for Shop Drawings, Samples, Product Data, and proposed Substitutes or "Or-Equal" items.
  - 2. A Schedule of Values.
  - 3. A complete progress schedule for all phases of the Project.
  - 4. A list of all permits and licenses (if any) the CONTRACTOR shall obtain indicating the agency required to grant the permit and the expected date of submittal for the permit and required date for receipt of the permit. CBJ shall apply for the Building Permit.
  - 5. Material Safety Data Sheets on products used on the Project.
  - 6. A traffic maintenance plan, as required.
  - 7. A letter designating the CONTRACTOR's Superintendent, defining that person's responsibility and authority.
  - 8. A letter designating the CONTRACTOR's safety representative and the EEO Officer and that person's responsibility and authority.
- C. No payments shall be made to the CONTRACTOR until the above-listed items are submitted in their entirety, as determined by the PROJECT MANAGER.
- D. The CONTRACTOR shall coordinate submittal preparation with performance of construction activities, and with purchasing or fabrication, delivery, other submittals and related activities. Transmit in advance of performance of related activities to avoid delay. Coordinate transmittal of different submittals for related elements so processing will not be delayed by the need to review concurrently for coordination. The PROJECT MANAGER reserves the right to withhold action on a submittal requiring coordination until related submittals are received. No extension of time will be authorized because of failure to transmit submittals sufficiently in advance of the WORK to permit processing.
- E. The CONTRACTOR shall distribute copies of the Construction Schedule, Schedule of Values, and the Submittal Schedule to the PROJECT MANAGER, Subcontractors, and other parties required to comply with scheduled dates. Post copies in the temporary field office. When revisions are made, distribute to the same parties and post in the same locations. Revise and update each Schedule after each meeting or activity, where revisions have been made. Issue the updated Schedules concurrently with report of each meeting.



## SECTION 01300 - CONTRACTOR SUBMITTALS

### 1.2 SUBMITTAL PROCESS

- A. Wherever called for in the Contract Documents, or where required by the PROJECT MANAGER, the CONTRACTOR shall furnish to the PROJECT MANAGER, for review, 5 copies of each submittal. (Owner, Electrical Engineer, Contractor, Subcontractor, Capital City Fire & Rescue)
- B. All submittals shall be accompanied by the CONTRACTOR's standard submittal transmittal form. Any submittal not accompanied by such a form, or where all applicable items on the form are not completed, will be returned for resubmittal.
- 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. 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 PROJECT MANAGER.
- D. Except as may otherwise be provided herein, the PROJECT MANAGER will return prints of each submittal to the CONTRACTOR with its comments noted thereon, within 14 calendar days following their receipt by the PROJECT MANAGER. It is considered reasonable that the CONTRACTOR shall make a complete and acceptable submittal to the PROJECT MANAGER 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 PROJECT MANAGER to review beyond the second submittal. The PROJECT MANAGER's maximum review period for each submittal including all re-submittals will be 14 days per submission.
- E. If 2 copies of a submittal are returned to the CONTRACTOR marked "NO EXCEPTIONS TAKEN," formal revision and resubmission of said submittal will not be required.
- F. If 2 copies of a submittal are returned to the CONTRACTOR marked "MAKE CORRECTIONS NOTED," formal revision shall be made, and resubmission of said submittal will not be required.
- G. If one copy of the submittal is returned to the CONTRACTOR marked "AMEND-RESUBMIT," the CONTRACTOR shall revise said submittal and resubmit the required number of copies of said revised submittal to the PROJECT MANAGER.
- H. If one copy of the submittal is returned to the CONTRACTOR marked "REJECTED-RESUBMIT" the CONTRACTOR shall revise said submittal and resubmit the required number of copies of said revised submittal to the PROJECT MANAGER.
- I. Fabrication of an item may be commenced only after the PROJECT MANAGER has reviewed the pertinent submittal and returned copies to the CONTRACTOR marked either "NO EXCEPTIONS TAKEN" or "MAKE CORRECTIONS NOTED." Corrections indicated on submittal shall be considered as changes necessary to meet the requirements of the Contract Documents and shall not be taken as the basis for changes to the Contract requirements. Only a change order can alter the contract price, time, or requirements.
- J. All CONTRACTOR submittals shall be carefully reviewed by an authorized representative of the CONTRACTOR, prior to submission to the PROJECT MANAGER. Each submittal shall be dated, signed, and certified by the CONTRACTOR, as being correct and in strict conformance with

## **SECTION 01300 - CONTRACTOR SUBMITTALS**

the Contract Documents. No consideration for review by the PROJECT MANAGER of any CONTRACTOR submittal will be made for any items which have not been so certified by the CONTRACTOR. All non-certified submittals will be returned to the CONTRACTOR without action taken by the PROJECT MANAGER, and any delays caused thereby shall be the total responsibility of the CONTRACTOR.

- K. The PROJECT MANAGER's review of CONTRACTOR submittals shall not relieve the CONTRACTOR of the entire 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 submittals. The CONTRACTOR shall be responsible for the dimensions and the design of adequate connections and details.

### **1.3 SUBMITTAL SCHEDULE**

- A. The CONTRACTOR shall coordinate the Submittal Schedule with the list of subcontracts, Schedule of Values and list of products as well as the Construction Schedule. Prepare the Submittal Schedule in chronological order. Identify all submittals required for the completion of the Work. Provide the following information in the Submittal Schedule:
  - 1. Scheduled date for the first submittal.
  - 2. Related Section number.
  - 3. Name of Subcontractor.
  - 4. Description of the construction element covered.
  - 5. Anticipated date of the PROJECT MANAGER's final release or approval.

### **1.4 SHOP DRAWING SUBMITTALS**

- A. The CONTRACTOR shall submit shop Drawings as required with new information, drawn to accurate scale. Indicate deviations from Contract Documents. Do not reproduce Contract Documents or copy standard information as the basis of Shop Drawings.
- B. The Shop Drawings shall include the following information:
  - 1. Dimensions.
  - 2. Identification of products and materials included.
  - 3. Notation of coordination requirements.
  - 4. Notation of dimensions established by field measurement.
  - 5. 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 11" x 17".
- C. The term "Shop Drawings" as used herein shall be understood to include detail design calculations, shop Drawings, fabrication, and installation Drawings, section Drawings, lists, graphs, operating instructions, catalog sheets, data sheets, and similar items.
- D. Do not use shop Drawings without a final stamp indicating action taken in connection with construction.

## SECTION 01300 - CONTRACTOR SUBMITTALS

### 1.5 SAMPLE SUBMITTALS

- A. Whenever in the Specifications samples are required, the CONTRACTOR shall submit not less than 3 samples of each such item or material to the PROJECT MANAGER for acceptance at no additional cost to the OWNER.
- B. Samples, as required herein, shall be submitted for acceptance a minimum of 14 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. The CONTRACTOR shall submit full-size samples, cured and finished as specified, and identical to the product proposed. Mount, display, or package samples to facilitate review. Include the following:
  - 1. Generic description.
  - 2. Source.
  - 3. Product name or name of manufacturer.
  - 4. Compliance with recognized standards.
  - 5. Availability and delivery time.
  - 6. Submit samples for review of kind, color, pattern, and texture, for a final check of these characteristics, and a comparison of these characteristics between the final submittal and the component as delivered and installed. Where variations are inherent in the product, submit multiple units that show limits of the variations.
  - 7. Preliminary Submittals. Where samples are for selection of characteristics from a range of choices, submit a full set of choices for the product. Preliminary submittals will be reviewed and returned indicating selection and other action.
  - 8. Submittals. Except for samples illustrating assembly details, quality of WORK, fabrication techniques, connections, operation and similar characteristics, submit 3 sets; one will be returned marked with the action taken. Maintain a sample set at the Project site, for quality comparisons. Sample sets may be used to obtain final acceptance of the construction associated with each set.
  - 9. Prepare additional sets for Subcontractors, manufacturers, fabricators, installers, and others as required for performance. Show distribution on transmittal forms.
- D. All samples shall be individually and indelibly labeled or tagged, indicating thereon all specified physical characteristics and Supplier's names for identification and submitted to the PROJECT MANAGER for acceptance. Upon receiving acceptance of the PROJECT MANAGER, one set of the samples will be stamped and dated by the PROJECT MANAGER and returned to the CONTRACTOR, and one set of samples will be retained by the PROJECT MANAGER, and one set of samples shall remain at the job site until completion of the WORK.
- E. Unless clearly stated otherwise, it is assumed that all colors and textures of specified items presented in sample submittal are from the manufacturer's standard colors and standard materials, products, or equipment lines. If the samples represent non-standard colors, materials, products or equipment lines, and their selection will require an increase in Contract Time or Price, the CONTRACTOR will clearly indicate this on the transmittal page of the submittal.

## **SECTION 01300 - CONTRACTOR SUBMITTALS**

### **1.6 PRODUCT DATA SUBMITTALS**

- A. The CONTRACTOR shall collect all the Product Data into a single submittal for each element or system. Mark each copy to show applicable choices and options. Where Product Data includes information on several products, some of which are not required, mark copies to indicate the applicable information. Include the following information:
1. Manufacturer's printed recommendations.
  2. Compliance with recognized trade association standards.
  3. Compliance with recognized testing agency standards.
  4. Application of testing agency labels and seals.
  5. Notation of dimensions verified by field measurement.
  6. Notation of coordination requirements.
  7. Preliminary Submittal: Submit a preliminary single-copy where selection of options is required.
  8. Furnish copies of final submittal to installers, and others required for performance of construction activities. Show distribution on transmittal forms. Do not proceed with installation until an approved copy of Product Data is in the installer's possession. Do not permit use of unmarked copies of Product Data in connection with construction.

### **1.7 PROPOSED SUBSTITUTE OR "OR EQUAL" ITEM SUBMITTALS**

- A. Whenever materials or equipment are specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the naming of the item is intended to establish the type, function, and quality required. If the name is followed by the words "or-equal" indicating that a substitution is permitted, materials or equipment of other Suppliers may be accepted by the PROJECT MANAGER if sufficient information is submitted by the CONTRACTOR to allow the PROJECT MANAGER to determine that the material or equipment proposed is equivalent or equal to that named, subject to the following requirements:
1. The burden of proof as to the type, function, and quality of any such substitute material or equipment shall be upon the CONTRACTOR.
  2. The PROJECT MANAGER will be the sole judge as to the type, function, and quality of any such substitute material or equipment and the PROJECT MANAGER's decision shall be final.
  3. The PROJECT MANAGER may require the CONTRACTOR, to furnish at the CONTRACTOR's expense, additional data about the proposed substitute.
  4. The OWNER may require the CONTRACTOR to furnish at the CONTRACTOR's expense a special performance guarantee or other surety with respect to any substitute.
  5. Acceptance by the PROJECT MANAGER of a substitute item proposed by the CONTRACTOR shall not relieve the CONTRACTOR of the responsibility for full compliance with the Contract Documents and for adequacy of the substitute item.
  6. The CONTRACTOR shall be responsible for resultant changes and all additional costs which the accepted substitution requires in the CONTRACTOR's WORK, the WORK of its Subcontractors and of other contractors, and shall effect such changes without cost to the OWNER. This shall include the cost for redesign and claims of other contractor(s) affected by the resulting change.
- B. The procedure for review by the PROJECT MANAGER will include the following:

## SECTION 01300 - CONTRACTOR SUBMITTALS

1. If the CONTRACTOR wishes to furnish or use a substitute item of material or equipment, the CONTRACTOR shall make written application to the PROJECT MANAGER on the "Substitution Request Form" for acceptance thereof.
  2. Unless otherwise provided by law or authorized in writing by the PROJECT MANAGER, the "Substitution Request Form(s)" shall be submitted within the 14-day period after Notice of Award/Notice To Proceed.
  3. Wherever a proposed substitute material or equipment has not been submitted within said 14-day period, or wherever the submission of a proposed substitute material or equipment has been judged to be unacceptable by the PROJECT MANAGER, the CONTRACTOR shall provide material or equipment named in the Contract Documents.
  4. The CONTRACTOR shall certify that the proposed substitute will perform adequately the functions and achieve the results called for by the general design, be similar and of equal substance to that specified, and be suited to the same use as that specified.
  5. The PROJECT MANAGER will be allowed a reasonable time within which to evaluate each proposed substitute. In no case will this reasonable time period be less than 14 days.
  6. As applicable, no shop Drawing submittals will be made for a substitute item nor will any substitute item be ordered, installed, or utilized without the PROJECT MANAGER's prior written acceptance of the CONTRACTOR's "Substitution Request Form" which will be evidenced by a Change Order.
- C. The CONTRACTOR's application using the "Substitution Request Forms" shall contain the following statements and/or information which shall be considered by the PROJECT MANAGER in evaluating the proposed substitution when one or more of the following conditions are satisfied, as determined by the PROJECT MANAGER; otherwise, requests will be returned without action except to record non-compliance with these requirements.
1. Extensive revisions to the Contract Documents are not required.
  2. Proposed changes are in keeping with the general intent of the Contract Documents.
  3. The request is timely, fully documented, and properly submitted.
  4. The request is directly related to an "or equal" clause or similar language in the Contract Documents.
  5. The specified product or method of construction cannot be provided within the contract time. The request will not be considered if the product or method cannot be provided as a result of the CONTRACTOR's failure to pursue the WORK promptly, or to coordinate activities properly.
  6. The specified product or method of construction cannot receive necessary approval by a governing authority, and the requested substitution can be approved.
  7. A substantial advantage is offered to the OWNER, in terms of cost, time, energy conservation, or other considerations of merit, after deducting off-setting responsibilities the OWNER may be required to bear. Additional responsibilities for the OWNER may include additional compensation to the PROJECT MANAGER of Record for redesign and evaluation services, increased cost of other construction by the OWNER, or separate contractors, and similar considerations.
  8. The specified product or method of construction cannot be provided in a manner that is compatible with other materials, and where the CONTRACTOR certifies that the substitution will overcome the incompatibility.
  9. The specified product or method of construction cannot be coordinated with other materials, and where the CONTRACTOR certifies that the proposed substitution can be coordinated.
  10. The specified product or method of construction cannot provide a warranty required by the contract documents and where the CONTRACTOR certifies that the proposed substitution

## SECTION 01300 - CONTRACTOR SUBMITTALS

- provide the required warranty.
11. The evaluation and acceptance of the proposed substitute will not prejudice the CONTRACTOR's achievement of substantial completion on time.
  12. Available maintenance, repair, and replacement service and its estimated cost will be indicated.
  13. Whether or not incorporation or use of the substitute in connection with the WORK is subject to payment of any license fee or royalty.
  14. Itemized estimate of all costs that will result directly or indirectly from acceptance of such substitute, including cost of redesign and claims of other contractors affected by the resulting change.
- D. The CONTRACTOR's submittal and PROJECT MANAGER's acceptance of Shop Drawings, Product Data or Samples that relate to construction activities not complying with the contract documents does not constitute an acceptable or valid request for substitution, nor does it constitute approval.

### 1.8 SCHEDULE OF VALUES

- A. For Lump Sum Pay Unit contracts, the CONTRACTOR shall submit a Schedule of Values to the PROJECT MANAGER. The Schedule of Values shall list the cost breakdown of the Lump Sum Pay Unit contract and shall be coordinated with the construction schedule.
1. Correlate line items in the Schedule of Values with other schedules and forms.
  2. Use the Contract Document's Table of Contents as a guide to establish the format for the Schedule of Values.
  3. Include Record Drawings as a line item.

### 1.9 PROGRESS SCHEDULE

- A. The progress schedule shall be in Bar Chart or Critical Path Method (CPM) form, as required by the PROJECT MANAGER.
- B. The progress schedule shall show the order in which the CONTRACTOR proposes to carry out the WORK and the contemplated date on which the CONTRACTOR and its Subcontractors will start and finish each of the salient features of the WORK, including any scheduled periods of shutdown. The schedule shall also indicate any anticipated periods of multiple-shift work.
- C. Upon substantial changes to the CONTRACTOR's progress schedule of WORK or upon request of the PROJECT MANAGER, the CONTRACTOR shall submit a revised progress schedule(s) in the form required. Such revised schedule(s) shall conform with the Contract Time and take into account delays which may have been encountered in the performance of the WORK. In submitting a revised schedule, the CONTRACTOR shall state specifically the reason for the revision and the adjustments made in the schedule or methods of operation to ensure the completion of all the WORK within the Contract Time.

## **SECTION 01300 - CONTRACTOR SUBMITTALS**

### **1.10 RECORD DRAWING SUBMITTAL**

- A. The CONTRACTOR shall keep and maintain, at the job site, one record set of Drawings. On these, it 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. Copies of the record Drawings shall be submitted to the PROJECT MANAGER prior to the Notice of Substantial Completion by the PROJECT MANAGER.
- C. Final payment will not be acted upon until the CONTRACTOR prepared record Drawings have been delivered to the PROJECT MANAGER.

### **PART 2 - PRODUCTS (Not Used)**

### **PART 3 - EXECUTION (Not Used)**

(Substitution Request Form – Next Page)

## SECTION 01300 - CONTRACTOR SUBMITTALS

### CBJ Engineering Department SUBSTITUTION REQUEST FORM

TO: \_\_\_\_\_ Project: \_\_\_\_\_

CBJ Contract No. \_\_\_\_\_

**SPECIFIED ITEM:** \_\_\_\_\_

Section	Page	Paragraph	Description
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The undersigned requests consideration of the following:

**PROPOSED SUBSTITUTION:** \_\_\_\_\_

Attached data includes product description, Specifications, Drawings, photographs, performance and test data adequate for evaluation of the request. Applicable portions of the data are clearly identified.

The undersigned states that the following paragraphs, unless modified on attachments, are correct:

1. The proposed substitution does not affect dimensions shown on Drawings and will not require a change in any of the Contract Documents.
2. The undersigned will pay for changes to the design, including engineering design, detailing, and construction costs caused by the requested substitution which is estimated to be \$\_\_\_\_\_.
3. The proposed substitution will have no adverse affect on other contractors, the construction schedule (specifically the date of substantial completion), or specified warranty requirements.
4. Maintenance and service parts will be locally available for the proposed substitution.
5. The incorporation or use of the substitute in connection with the WORK is not subject to payment of any license fee or royalty.

The undersigned further states that the function, appearance, and quality of the Proposed Substitution are equivalent or superior to the specified item.

Submitted by CONTRACTOR (date): \_\_\_\_\_ PROJECT MANAGER Review (date): \_\_\_\_\_

Signature: \_\_\_\_\_ By: \_\_\_\_\_

Print Name: \_\_\_\_\_ Decision by CBJ:

Firm: \_\_\_\_\_ ☐ Accepted ☐ Accepted as Noted

Title: \_\_\_\_\_ ☐ Not Accepted ☐ Received Too Late

Telephone: \_\_\_\_\_

Attachments: \_\_\_\_\_ Signature: \_\_\_\_\_

The use of this substitution is not authorized until accepted by the PROJECT MANAGER.

**END OF SECTION**



## **SECTION 01301 - SCHEDULE OF VALUES**

### **PART 1 - GENERAL**

#### **1.1 THE REQUIREMENT**

- A. This Section defines the process whereby the Schedule of Values (Lump Sum Pay Unit price breakdown) shall be developed and ultimately incorporated into the cost loading function of the overall Project Schedule – in written chronological format.

#### **1.2 RELATED WORK SPECIFIED ELSEWHERE**

- A. Section 01010 - Summary of WORK.

#### **1.3 PRELIMINARY SCHEDULE OF VALUES**

- A. The Schedule of Values shall be developed in two (2) steps independent but parallel with the development of the Project Schedule activities and logic. The steps shall be as follows:
  - 1. The CONTRACTOR shall submit a preliminary Schedule of Values for the major components of the WORK at the Preconstruction Conference as specified and referenced in Section 01010 -Summary of WORK. The listing shall include, at a minimum, the proposed value for the major WORK components.
  - 2. The CONTRACTOR and PROJECT MANAGER shall meet and jointly review the preliminary Schedule of Values and make any adjustments in value allocations necessary, if in the opinion of the PROJECT MANAGER, allocation adjustments are necessary to establish fair and reasonable allocation of values for the major WORK components. Front end loading will not be permitted. The PROJECT MANAGER may require inclusion of other major WORK components not included in the above listing if, in the opinion of the PROJECT MANAGER, such additional components are appropriate. This review and any necessary revisions shall be completed within 15 Days from the date of Notice To Proceed.

#### **1.4 DETAILED SCHEDULE OF VALUES**

- A. The CONTRACTOR shall prepare and submit a detailed Schedule of Values to the PROJECT MANAGER within 30 Days from the date of the Notice To Proceed. The detailed Schedule of Values shall be based on the accepted preliminary Schedule of Values for major WORK components. Because the ultimate requirement is to develop a detailed Schedule of Values sufficient to determine appropriate monthly progress payment amounts through cost loading of the CPM Schedule activities, sufficient detailed breakdown shall be provided to meet this requirement. The PROJECT MANAGER shall be the sole judge of acceptable numbers, details and description of values established. If, in the opinion of the PROJECT MANAGER, a greater number of Schedule of Values items than proposed by the CONTRACTOR is necessary, the CONTRACTOR shall add the additional items so identified by the PROJECT MANAGER.

## **SECTION 01301 - SCHEDULE OF VALUES**

- B. The minimum detail of breakdown of the major WORK components is indicated below. Greater detail shall be provided as directed by the PROJECT MANAGER.

Mobilization, Safety and Staging, Demolition, Steel, Sheetmetal, Sub Contractors, Insurance and Bonding, Office, Submittals, DOL Fees, Equipment, Demobilization, Close out

The CONTRACTOR and PROJECT MANAGER shall meet and jointly review the detailed Schedule of Values within 35 Days from the Notice to Proceed. The value allocations and extent of detail shall be reviewed to determine any necessary adjustments to the values and to determine if sufficient detail has been proposed to provide cost loading of the Project Schedule. Any adjustments deemed necessary to the value allocation or level of detail shall be made by the CONTRACTOR and a revised detailed Schedule of Values shall be submitted within 40 Days from the date of Notice to Proceed.

### **1.5 CHANGES TO SCHEDULE OF VALUES**

- A. Changes to the Project schedule which adds activities not included in the original schedule but included in the original WORK (schedule omissions) shall have values assigned as approved by the PROJECT MANAGER. Other activity values shall be reduced to provide equal value adjustment increases for added activities as approved by the PROJECT MANAGER.
- B. In the event that the CONTRACTOR and PROJECT MANAGER agree to make adjustments to the original Schedule of Values because of inequities discovered in the original accepted detailed Schedule of Values, increases and equal decreases to values for activities may be made.

### **1.6 LIQUIDATED DAMAGES**

- A. If any submittal that is required by this Section is determined by the PROJECT MANAGER to be incomplete or is submitted later than set out herein, the OWNER will suffer financial loss and the CONTRACTOR will be assessed liquidated damages as required by Article 4 of the Section 00500 - Agreement.

## **PART 2 - PRODUCTS (Not Used)**

## **PART 3 - EXECUTION (Not Used)**

**END OF SECTION**

## **SECTION 01310 - PROGRESS SCHEDULES**

### **PART 1 - GENERAL**

#### **1.1 REQUIREMENTS INCLUDED.**

- A. Procedures for preparation and submittal of construction progress schedules and periodic schedule updating.

#### **1.2 RELATED REQUIREMENTS**

- A. Section 01010 - Summary of WORK.
- B. Section 01300 - CONTRACTOR Submittals.
- C. Section 01301 - Schedule of Values.

#### **1.3 FORMAT**

- A. Prepare schedules as a horizontal bar chart with separate bar for each major portion of WORK or operations, identifying first work day of each week.
- B. Sequence of listings shall reflect the chronological order of the start of each item of WORK and encompass those items as noted in the table of contents of this Project manual.
- C. Scale and spacing shall be such as to provide for notations and revisions.
- D. Minimum sheet size of 11 x 17 inches, unless approved otherwise by the PROJECT MANAGER.

#### **1.4 CONTENT**

- A. Show complete sequence of construction by activity, with dates for beginning and completion of each element of construction.
- B. Identify each item by Specification section number.
- C. Identify WORK of separate stages and other logically grouped activities.
- D. Provide sub-schedules to define critical portions of entire schedule.
- E. Show accumulated percentage of completion of each item, and total percentage of WORK completed, as of the mid and final days of each month.
- F. Provide separate schedules of submittal dates for Shop Drawings, product data, and samples, including products specified under alternate bids, and dates reviewed submittals will be required from the Project PROJECT MANAGER. Show decision dates for selection of finishes and options, where appropriate.
- G. Show delivery dates for materials and products.

## **SECTION 01310 - PROGRESS SCHEDULES**

- H. Coordinate and display cost allocation requirements of Section 01301 - Schedule of Values, prior to the CONTRACTOR's initial application for payment.

### **1.5 REVISIONS TO SCHEDULES**

- A. Indicate progress of each activity to date of submittal, and projected completion date of each activity.
- B. Identify activities modified since previous submittal, major changes in scope, and other identifiable changes.
- C. Provide narrative report to define problem areas, anticipated delays, and impact on schedule. Report corrective action taken, or proposed, and its effect including the effect of changes on schedules of separate Subcontractors.
- D. When submitting a revised schedule, CONTRACTOR shall state specifically the reason for the revision and the adjustments made in the schedule or methods of operation to ensure the completion of all the WORK within the Contract time.

### **1.6 SUBMITTALS**

- A. Prior to the Pre-Construction Meeting submit two sets of initial schedules in accordance with Section 01300 - CONTRACTOR Submittals. After review, resubmit required revised data within ten days, modified to accommodate revisions recommended by the Project PROJECT MANAGER.
- B. Submit progress schedules reflecting the progress to date and anticipated in the future with each Application for Payment. Upon substantial changes to the CONTRACTOR's progress schedule of WORK, or upon request of the Project PROJECT MANAGER, the CONTRACTOR shall submit the revised progress schedule(s) in the form required.
- C. Submit under transmittal letter specified in Section 01300 - CONTRACTOR Submittals.

### **1.7 DISTRIBUTION**

- A. Distribute copies of reviewed schedules to job site file, Subcontractors, suppliers, and other concerned entities.
- B. Instruct recipients to promptly report, in writing, problems anticipated by projections shown in schedules.

## **PART 2 - PRODUCTS (Not Used)**

## **PART 3 - EXECUTION (Not Used)**

**END OF SECTION**

## **SECTION 01311 - CPM CONSTRUCTION SCHEDULE**

### **PART 1 - GENERAL**

#### **1.1 GENERAL**

- A. The scheduling of the WORK under the contract shall be performed by the CONTRACTOR in accordance with the requirements of this Section. The development of the schedule, the cost loading of the schedule, monthly payment request requisitions and Project status reporting requirements of the contract shall employ computerized Critical Path Method (CPM) scheduling. The CPM Schedule shall be cost loaded based on the schedule of values as approved by the ARCHITECT in accordance with the requirements of Section 01301 - Schedule of Values. The CPM Schedule and all reports should be prepared with Primavera, MS Project 2003, or other software approved by the ARCHITECT with substantially similar functions.

#### **1.2 QUALIFICATIONS**

- A. Within **14** calendar days after the date of the Notice of Intent to Award letter, the CONTRACTOR shall provide a statement which verifies that the CONTRACTOR has in-house capability qualified to use CPM technique and the approved software, or that the CONTRACTOR will employ a CPM consultant so qualified. In either event the statement shall identify the individual who will perform the CPM scheduling. Capability shall be verified by description of construction Projects on which the individual has successfully applied computerized CPM and shall include at least two projects of similar nature, scope and valued at not less than one-half the expected cost of this Project.

#### **1.3 INITIAL SCHEDULE SUBMITTALS**

- A. The CONTRACTOR shall submit a project overview bar chart schedule at the Pre-Construction Conference as specified below:
  - 1. Project Overview Bar Chart: The overview bar chart shall indicate the major components of the Project WORK and the sequence relations between major components and subdivisions of major components. The overview bar chart shall indicate the relationships and time frames in which the various components of the WORK will be made substantially complete and placed into service in order to meet the Project milestones. Planned durations and start dates shall be indicated for each WORK item.

#### **1.4 CPM SCHEDULE SUBMITTALS**

- A. Original CPM Schedule Submittal: Within **15** days after the Notice to Proceed letter, the CONTRACTOR shall submit for review by the ARCHITECT a hard copy of the CPM Network Schedule. The CONTRACTOR's attention is directed to the requirement that the schedule shall contain sufficient detail and information to cost load the CPM schedule in accordance with the approved schedule of values as specified under Section 01301 - Schedule of Values. Each installation and side WORK activity shall have been cost loaded as specified.

## SECTION 01311 - CPM CONSTRUCTION SCHEDULE

- B. Acceptance: The acceptance of the CONTRACTOR's schedule by the ARCHITECT and OWNER will be based solely upon the schedules compliance with the contract requirements. By way of the CONTRACTOR assigning activity durations and proposing the sequence of the WORK, the CONTRACTOR agrees to utilize sufficient and necessary management and other resources to perform the WORK in accordance with the schedule. Upon submittal of a schedule update, the updated schedule shall be considered the "current" Project schedule.
- C. Submission of a CONTRACTOR's Progress Schedule to the OWNER or ARCHITECT shall not relieve the CONTRACTOR of its total responsibility for scheduling sequencing and pursuing the WORK to comply with the requirements of the Contract Documents, including adverse effects such as delays resulting from ill-timed WORK.
- D. Monthly Updates and Periodic CPM Schedule Submittals: Following the acceptance of the CONTRACTOR's Initial Construction Schedule, the CONTRACTOR shall monitor the progress of the WORK and adjust the schedule each month to reflect actual progress and any changes in planned future activities. Each schedule update submitted must be complete including all information requested in the original CPM schedule. Each update should continue to show all WORK activities including those already completed. These computer activities should accurately reflect the "As Built" information by indicating when the WORK was actually started and completed.
- E. Neither the submission nor the updating of the CONTRACTOR's original schedule submittal nor the submission, updating, change or revision of any other report, curve, schedule or narrative submitted to the OWNER by the CONTRACTOR under this contract, nor the OWNER's review or acceptance of any such report, curve, schedule or narrative shall have the effect of amending, or modifying, in any way, the contract completion date or milestone dates or of modifying or limiting in any way the CONTRACTOR's obligations under this contract. Only a signed, fully executed Change Order can modify these contractual obligations.

### 1.5 CHANGE ORDERS

- A. Upon approval of a Change Order, or upon receipt by the CONTRACTOR of authorization to proceed with additional WORK, the change shall be reflected in the next submittal of the CPM schedule by the CONTRACTOR. The CONTRACTOR shall utilize a sub-network in the schedule depicting the changed WORK and its effect on other activities. This sub-network shall be tied to the main network with the appropriate logic so that a true analysis of the Critical Path can be made.

### 1.6 CPM SCHEDULE FLOAT

- A. Float Time: Float time shall be as follows:
  - 1. Definition: Unless otherwise provided herein, float as referenced in these documents is total float. Total float is the period of time measured by the number of working days each noncritical path activity may be delayed before it and its succeeding activities become part of the critical path. If a noncritical path activity is delayed beyond its float period, that activity then becomes part of the critical path and controls the end date of the Project. Thus, the delay of a noncritical path activity beyond its float period will cause delay to the Project itself.
  - 2. Float Ownership. Neither the OWNER nor the CONTRACTOR own the float time. The Project owns the float time. As such, liability for delay for the Project completion date rests

## SECTION 01311 - CPM CONSTRUCTION SCHEDULE

with the party actually causing delay to the Project completion date. For example, if Party A uses some, but not all of the float time and Party B later uses the remainder of the float time as well as additional time beyond the float time, then Party B shall be liable for the costs associated with the time that represents a delay to the Project's completion data. Party A would not be responsible for any costs since it did not consume all of the float time and additional float time remained, therefore, the Project's completion date was unaffected.

### 1.7 SCHEDULE REPORTS (FORMAT)

- A. Schedule Reports: Schedule Reports shall be prepared based on the Construction Schedule, and shall include the following minimum data for each activity:

1. Activity Numbers, and Responsibility Codes.
2. Estimated Activity Duration.
3. Activity Description.
4. Activity's Percent Complete.
5. Early Start Date (Calendar Dated).
6. Early Finish Date (Calendar Dated).
7. Late Start Date (Calendar Dated).
8. Late Finish Date (Calendar Dated).
9. Status (Whether Critical).
10. Total Float for Each Activity.
11. Free Float for Each Activity.
12. Cost Value for Each Activity.

- B. Project Information: Each Schedule Report shall be prefaced with the following summary data.

1. Project Name.
2. CONTRACTOR.
3. Type of Tabulation.
4. Project Duration.
5. Contract Completion Date (revised to reflect time extensions).
6. The Commencement Date Stated in the Noticed to Proceed.
7. The Data Date and Plot Date of the Network Diagram.
8. If an update, cite the new schedule completion date.

### 1.8 PROJECT STATUS REPORTING

- A. In addition to the submittal requirements for the CPM scheduling identified in this Section, the CONTRACTOR shall provide monthly Project status reports (Overview Bar Chart and a written narrative report) to be submitted in conjunction with the revised CPM Schedules as specified in paragraph 1.5(D). Status reporting shall be in the form specified below.
- B. The CONTRACTOR shall prepare and submit monthly an Overview Bar Chart schedule of the major Project components. The overview bar chart schedule shall be a summary of the current CPM schedule (original and as updated and adjusted throughout the entire construction period). It shall be limited to not more than four sheets which shall not exceed 36-inch by 60-inch. The major Project components shall be represented as time bars which shall be subdivided into various types of WORK including but not limited to demolition, excavation and earthwork, yard piping, concrete

## SECTION 01311 - CPM CONSTRUCTION SCHEDULE

construction, mechanical, electrical and instrumentation installations. Major components shall include each new structure by area designation, sitework, modifications to existing structures, tie-ins to existing facilities and plant start-ups.

- C. Each major component and subdivision shall be accurately time scale plotted consistent with the Project overview bar chart specified in Article 1.4 above. It shall represent the same status indicated by early start and finish activity information contained in the latest update of the CPM schedule. In addition, a percent complete shall be indicated for each major component and subdivision. The initial submittal of the overview bar chart schedule shall be made at the time that the revised original CPM schedule is submitted to the ARCHITECT (65 days from the commencement date stated in the Notice to Proceed). The CONTRACTOR shall amend the overview schedule to include any additional detail required by the ARCHITECT. The CONTRACTOR shall include any additional information requested by the ARCHITECT at any time during the construction of the WORK.
- D. The CONTRACTOR shall provide written narrative reports of the status of the Project for submission to the ARCHITECT as noted in paragraph 1.9.(A) of this Section. Written status reports shall include:
  - 1. The status of major Project components (percent complete, amount of time, ahead or behind schedule) and an explanation of how the Project will be brought back on schedule if delays have occurred.
  - 2. The progress made on critical activities indicated on the CPM schedule.
  - 3. Explanations for any lack of WORK on critical path activities planned to be progressed during the last month.
  - 4. Explanations for any schedule changes, including changes to the logic or to activity durations.
  - 5. A list of the critical activities scheduled to be performed in the next two month period.
  - 6. The status of major material and equipment procurement.
  - 7. The value of materials and equipment properly stored at the site but not yet incorporated into the WORK-in-place.
  - 8. Any delays encountered during the reporting period.
  - 9. An assessment of inclement weather delays and impacts to the progress of the WORK.
- E. The CONTRACTOR may include any other information pertinent to the status of the Project. The CONTRACTOR shall include additional status information required by the ARCHITECT.

### 1.9 INCLEMENT WEATHER PROVISIONS OF THE SCHEDULE

- A. CONTRACTOR's construction schedule shall include at least 100 lost normal WORK days on the CPM schedule's critical path due to inclement weather. Lost normal WORK days shall be determined as specified in Section 00800 - Supplemental General Conditions.

### 1.10 LIQUIDATED DAMAGES

- A. If any submittal required by this Section is determined by the ARCHITECT to be incomplete or is submitted later than required, the OWNER will suffer financial loss and accordingly liquidated



## **SECTION 01311 - CPM CONSTRUCTION SCHEDULE**

damages will be assessed against the CONTRACTOR in accordance with Article 4 in Section 00500 - Agreement.

**PART 2 - PRODUCTS** (Not Used)

**PART 3 - EXECUTION** (Not Used)

**END OF SECTION**

## **SECTION 01400 - QUALITY CONTROL**

### **PART 1 - GENERAL**

#### **1.1 DEFINITION**

- A. Specific quality control requirements for the WORK are indicated throughout the Contract Documents. The requirements of this Section are primarily related to performance of the WORK beyond furnishing of manufactured products. The term "Quality Control" includes inspection, sampling and testing, and associated requirements.

#### **1.2 INSPECTION AT PLACE OF MANUFACTURE**

- A. Unless otherwise indicated, all products, materials, and equipment shall be subject to inspection by the PROJECT MANAGER at the place of manufacture.
- B. The presence of the PROJECT MANAGER at the place of manufacturer, however, shall not relieve the CONTRACTOR of the responsibility for furnishing products, materials, and equipment which comply 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 PROJECT MANAGER.

#### **1.3 SAMPLING AND TESTING**

- A. Unless otherwise indicated, all sampling and testing shall be in accordance with the methods prescribed in the current standards of the ASTM, ATM, and AASHTO 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 sampling and testing which, in the opinion of the PROJECT MANAGER will insure the OWNER that the quality of the WORK is in full accord with the Contract Documents.
- B. Any waiver by the OWNER 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 requirements of the Contract Documents.
- C. Notwithstanding the existence of such waiver, the PROJECT MANAGER reserves the right to make independent investigations and tests, and failure of any portion of the WORK to meet any of the requirements of the Contract Documents, shall be reasonable cause for the PROJECT MANAGER to require the removal or correction and reconstruction of any such WORK in accordance with the General Conditions.

## **SECTION 01400 - QUALITY CONTROL**

### **1.4 INSPECTION AND TESTING LABORATORY SERVICE**

- A. Inspection and testing laboratory service shall comply with the following:
1. The OWNER will appoint, employ, and pay for services of an independent firm to perform inspection and testing or will perform inspection and testing itself.
  2. The PROJECT MANAGER will perform inspections as specified in individual Specification sections.
  3. Reports will be submitted by the independent firm to the PROJECT MANAGER in duplicate, indicating observations and results of tests and indicating compliance or non-compliance with Contract Documents.
  4. The CONTRACTOR shall cooperate with the PROJECT MANAGER or independent firm and furnish samples of materials, design mix, equipment, tools, storage and assistance as requested.
  5. The CONTRACTOR shall notify PROJECT MANAGER 24-hours prior to the expected time for operations requiring inspection and laboratory testing services.
  6. Retesting required because of non-conformance to specified requirements shall be performed by the same independent firm on instructions by the PROJECT MANAGER. The CONTRACTOR shall bear all costs from such re-testing at no additional cost to the OWNER.
  7. For samples and tests required for CONTRACTOR's use, the CONTRACTOR shall make arrangements with an independent firm for payment and scheduling of testing. The cost of sampling and testing for the CONTRACTOR's use shall be included in the Contract Price.

### **PART 2 - PRODUCTS (Not Used)**

### **PART 3 - EXECUTION**

#### **3.1 INSTALLATION**

- A. Inspection: The CONTRACTOR shall inspect materials or equipment upon the arrival on the job site and immediately prior to installation, and reject damaged and defective items.
- B. Measurements: The CONTRACTOR shall verify measurements and dimensions of the WORK, as an integral step of starting each installation.
- C. Manufacturer's Instructions: Where installations include manufactured products, the CONTRACTOR shall comply with manufacturer's applicable instructions and recommendations for installation, to whatever extent these are more explicit or more stringent than applicable requirements indicated in Contract Documents.

**END OF SECTION**

## **SECTION 01505 - MOBILIZATION**

### **PART 1 - GENERAL**

#### **1.1 GENERAL**

- A. Mobilization shall include moving all plant and equipment onto the site; furnishing and erecting plants, temporary buildings, and other construction facilities; implementing security requirements, all as required for the proper performance and completion of the WORK. Mobilization shall include the following principal items:
1. Moving all the CONTRACTOR's plant and equipment required for operations onto the site.
  2. Providing all on-site communication facilities, including radios and cellular phones.
  4. Obtaining all required permits.
  5. Having all OSHA required notices and establishment of safety programs.
  6. Having the CONTRACTOR's superintendent at the jobsite during all major operations.
  7. Submitting initial submittals.

#### **1.2 PAYMENT FOR MOBILIZATION**

- A. The CONTRACTOR's attention is directed to the condition that no payment for Mobilization, or any part thereof, will be approved for payment under the Contract until all Mobilization items listed above have been completed as specified.
- B. As soon as practicable, after receipt of Notice to Proceed, the CONTRACTOR shall submit a breakdown showing the estimated value of each major component of Mobilization to the PROJECT MANAGER for approval. When approved by the PROJECT MANAGER, the breakdown will be the basis for initial progress payments in which Mobilization is included.

### **PART 2 - PRODUCTS (Not Used)**

### **PART 3 - EXECUTION (Not Used)**

**END OF SECTION**

## **SECTION 01510 - TEMPORARY UTILITIES**

### **PART 1 - GENERAL**

#### **1.1 GENERAL REQUIREMENTS**

- A. Types. The types of utility services required for general temporary use at the Project site include the following:

Water service (potable for certain uses)  
Sanitary sewer  
Electric power service

#### **1.2 JOB CONDITIONS**

- A. Scheduled Uses. The CONTRACTOR shall, in conjunction with establishment of the job progress schedule, establish a schedule for implementation and termination of service for each temporary utility or facility, at the earliest feasible time, and when acceptable to the OWNER and the CBJ PROJECT MANAGER, change over from use of temporary utility service to permanent service.

### **PART 2 - PRODUCTS**

#### **2.1 MATERIALS**

- A. The CONTRACTOR shall provide either new or used materials and equipment, which are in substantially undamaged condition and without significant deterioration and which are recognized in the construction industry, by compliance with appropriate standards, as being suitable for intended use in each case. Where a portion of temporary utility is provided for CONTRACTOR by utility company, the CONTRACTOR shall provide remainder with matching and compatible materials and equipment and comply with recommendations of utility company.

### **PART 3 - EXECUTION**

#### **3.1 INSTALLATION OF TEMPORARY UTILITY SERVICES**

- A. General. Wherever feasible, the CONTRACTOR shall engage the utility company to install temporary service to Project, or as a minimum, to make connection to existing utility service; locate services where they will not interfere with total Project construction WORK, including installation of permanent utility services; and maintain temporary services as installed for required period of use; and relocate, modify or extend as necessary from time to time during that period as required to accommodate total Project construction WORK.

- B. Approval of Electrical Connections. All temporary connections for electricity shall be subject to

## **SECTION 01510 - TEMPORARY UTILITIES**

approval of the CBJ PROJECT MANAGER and the power company representative, and shall be removed in like manner at the CONTRACTOR's expense prior to final acceptance of the WORK.

- C. Separation of Circuits. Unless otherwise permitted by the CBJ PROJECT MANAGER, circuits separate from lighting circuits shall be used for all power purposes.
- D. Construction Wiring. All wiring for temporary electric light and power shall be properly installed and maintained and shall be securely fastened in place. All electrical facilities shall conform to the requirements of Subpart K of the OSHA Safety and Health Standards for Construction.

### **3.2 INSTALLATION OF POWER DISTRIBUTION SYSTEM**

- A. Power. The CONTRACTOR shall provide all necessary power required for its operations under the contract, and shall provide and maintain all temporary power lines required to perform the WORK in a safe and satisfactory manner.
- B. Temporary Power Distribution. The CONTRACTOR shall provide a weatherproof, grounded, temporary power distribution system sufficient to accommodate performance of entire WORK of Project, including, but not necessarily limited to, temporary electrical heating where indicated, operation of test equipment and test operation of building equipment and systems which cannot be delayed until permanent power connections are operable, temporary operation of other temporary facilities, including permanent equipment and systems which must be placed in operation prior to use of permanent power connections (pumps, HVAC equipment, elevators, and similar equipment), and power for temporary operation of existing facilities (if any) at the site during change-over to new permanent power system. Provide circuits of adequate size and proper power characteristics for each use; run circuit wiring generally overhead, and rise vertically in locations where it will be least exposed to possible damage from construction operations, and result in least interference with performance of the WORK; provide rigid steel conduit or equivalent raceways for wiring which must be exposed on grade, floors, decks, or other recognized exposures to damage or abuse.

### **3.3 INSTALLATION OF LIGHTING**

- A. 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.
- B. Temporary Lighting. The CONTRACTOR shall provide a general, weatherproof, grounded temporary lighting system in every area of construction WORK, as soon as overhead floor/roof deck structure has been installed; and provide sufficient illumination for safe WORK and traffic conditions; and run circuit wiring generally overhead, and rise vertically in locations where it will be least exposed to possible damage from construction operations on grade, floors, decks, or other recognized areas of possible damage or abuse.

## **SECTION 01510 - TEMPORARY UTILITIES**

### **3.4 WATER SUPPLY**

- A. General. Water connection to the construction work limits will be provided by the Owner.
- C. The CONTRACTOR shall be solely responsible for the adequate functioning of its water supply system and shall be solely liable for any claims arising from the use of same, including discharge or waste of water therefrom.
- D. Water Connections. The CONTRACTOR shall not make connection to, or draw water from, any fire hydrant or pipeline without first obtaining permission of the authority having jurisdiction over the use of said fire hydrant or pipeline and from the agency owning the affected water system. For each such connection made, the CONTRACTOR shall first attach to the fire hydrant or pipeline a valve and a meter, if required by the said authority, of a size and type acceptable to said authority and agency. The CONTRACTOR shall pay all permit and water charges.

### **3.5 INSTALLATION OF SANITARY FACILITIES**

- A. Toilet Facilities. Will be provided by Owner. Contractor can utilize restrooms located within each Fire Station during contractor's work hours. Cleanliness of this facility will be maintained, or access to restroom by the Contractor will be terminated by Owner.

### **3.6 INSTALLATION OF FIRE PROTECTION**

- A. Fire Protection. The construction plant 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 Subpart F of the OSHA Standards for Construction.

### **3.7 INSTALLATION OF COMMUNICATIONS**

- A. Telephone Services. The CONTRACTOR shall provide and maintain telephone or cell phone service for the duration of the Construction.

**END OF SECTION**

## **SECTION 01530 - PROTECTION AND RESTORATION OF EXISTING FACILITIES**

### **PART 1 - GENERAL**

#### **1.1 GENERAL**

- A. The CONTRACTOR shall protect all existing utilities and improvements not designated for removal and shall restore damaged or temporarily relocated utilities and improvements to a condition equal to or better than they were prior to such damage or temporary relocation, all in accordance with requirements of the Contract Documents.

#### **1.2 RIGHTS-OF-WAY**

- A. The CONTRACTOR shall not do any WORK that would affect any oil, gas, sewer, or water pipeline; any telephone, telegraph, or electric transmission line; any fence; or any other structure, nor shall the CONTRACTOR enter upon the rights-of-way involved until notified by the ARCHITECT that the OWNER has secured authority therefor from the proper party. After authority has been obtained, the CONTRACTOR shall give said party due notice of its intention to begin WORK, if required by said party, and shall remove, shore, support or otherwise protect such pipeline, transmission line, ditch, fence, or structure or replace the same. When two or more contracts are being executed at one time on the same or adjacent land in such manner that work on one contract may interfere with that on another, the OWNER shall determine the sequence and order of the WORK. When the territory of one contract is the necessary or convenient means of access for the execution of another contract, such privilege of access or any other reasonable privilege may be granted by the OWNER to the CONTRACTOR so desiring, to the extent, amount, in the manner, and at the times permitted.
- B. No such decision as to the method or time of conducting the WORK or the use of territory shall be made the basis of any claim for delay or damage, except as provided for temporary suspension of the WORK in Article 15 of the General Conditions of the Contract.

#### **1.3 PROTECTION OF SURVEY MONUMENTS, STREET, AND/OR ROADWAY MARKERS**

- A. The CONTRACTOR shall not destroy, remove, or otherwise disturb any existing survey markers or other existing street or roadway markers without proper authorization. No pavement breaking or excavation shall be started until all survey or other permanent marker points that will be disturbed by the construction operations have been properly referenced. All survey monuments, markers or points disturbed by the CONTRACTOR shall be accurately re-established, at the CONTRACTOR's expense unless provided for elsewhere in the Contract, after all street or roadway resurfacing has been completed. Re-establishment of all survey monuments shall be by a registered Alaskan Land Surveyor.

#### **1.4 RESTORATION OF PAVEMENT**

- A. General: All paved areas including asphaltic concrete berms cut or damaged during construction shall be replaced with similar materials and of equal thickness to match the existing adjacent undisturbed areas, except where specific resurfacing requirements have been called for in the



## **SECTION 01530 - PROTECTION AND RESTORATION OF EXISTING FACILITIES**

Contract Documents or in the requirements of the agency issuing the permit. All temporary and permanent pavement shall conform to the requirements of the affected pavement owner. All pavements which are subject to partial removal shall be neatly saw cut in straight lines.

- B. Temporary Resurfacing: Wherever required by the public authorities having jurisdiction, the CONTRACTOR shall place temporary surfacing promptly after backfilling and shall maintain such surfacing for the period of time fixed by said authorities before proceeding with the final restoration of improvements.
- C. Permanent Resurfacing: In order to obtain a satisfactory junction with adjacent surfaces, the CONTRACTOR shall saw cut back and trim the edge so as to provide a clean, sound, vertical joint before permanent replacement of an excavated or damaged portion of pavement. Damaged edges of pavement along excavations and elsewhere shall be trimmed back by saw cutting in straight lines. All pavement restoration and other facilities restoration shall be constructed to finish grades compatible with adjacent undisturbed pavement.
- D. Restoration of Sidewalks or Private Driveways: Wherever sidewalks or private roads have been removed for purposes of construction, the CONTRACTOR shall place suitable temporary sidewalks or roadways promptly after backfilling and shall maintain them in satisfactory condition for the period of time fixed by the authorities having jurisdiction over the affected portions before proceeding with the final restoration or, if no such period of times is so fixed, the CONTRACTOR shall maintain said temporary sidewalks or roadways until the final restoration thereof has been made.

### **1.5 EXISTING UTILITIES AND IMPROVEMENTS**

- A. General: The CONTRACTOR shall protect all Underground Utilities and other improvements which may be impaired during construction operations. It shall be the CONTRACTOR's responsibility to ascertain the actual location of all existing utilities and other improvements that will be encountered in its construction operations, and to see that such utilities or other improvements are adequately protected from damage due to such operations. The CONTRACTOR shall take all possible precautions for the protection of unforeseen utility lines to provide for uninterrupted service and to provide such special protection as may be necessary.
- B. Utilities to be Moved: In case it shall be necessary to move the property of any public utility or franchise holder, such utility company or franchise holder will, upon request of the CONTRACTOR, be notified by the OWNER to move such property within a specified reasonable time. When utility lines that are to be removed are encountered within the area of operations, the CONTRACTOR shall notify the ARCHITECT a sufficient time in advance for the necessary measures to be taken to prevent interruption of service.
- C. Where the proper completion of the WORK requires the temporary or permanent removal and/or relocation of an existing utility or other improvement which is indicated, the CONTRACTOR shall remove and, without unnecessary delay, temporarily replace or relocate such utility or improvement in a manner satisfactory to the ARCHITECT and the owner of the facility. In all cases of such temporary removal or relocation, restoration to former location shall be accomplished by the CONTRACTOR in a manner that will restore or replace the utility or improvement as nearly as possible to its former locations and to as good or better condition than found prior to removal.

## **SECTION 01530 - PROTECTION AND RESTORATION OF EXISTING FACILITIES**

- D. **OWNER's Right of Access:** The right is reserved to the OWNER and to the owners of public utilities and franchises to enter at any time upon any public street, alley, right-of-way, or easement for the purpose of making changes in their property made necessary by the WORK of this Contract.
- E. **Underground Utilities Indicated:** Existing utility lines that are indicated or the locations of which are made known to the CONTRACTOR prior to excavation and that are to be retained, and all utility lines that are constructed during excavation operations shall be protected from damage during excavation and backfilling and, if damaged, shall be immediately repaired or replaced by the CONTRACTOR.
- F. **Underground Utilities Not Indicated:** In the event that the CONTRACTOR damages any existing utility lines that are not indicated or the locations of which are not made known to the CONTRACTOR prior to excavation, a written report thereof shall be made immediately to the ARCHITECT. If directed by the ARCHITECT, repairs shall be made by the CONTRACTOR under the provisions for changes and extra WORK contained in Articles 10, 11, and 12 of the General Conditions.
- G. **All costs of locating, repairing damage not due to failure of the CONTRACTOR to exercise reasonable care, and removing or relocating such utility facilities not shown in the Contract Documents with reasonable accuracy, and for equipment on the Project which was actually working on that portion of the WORK which was interrupted or idled by removal or relocation of such utility facilities, and which was necessarily idled during such WORK will be paid for as extra WORK in accordance with the provisions of Articles 10, 11, and 12 of the General Conditions.**
- H. **Approval of Repairs:** All repairs to a damaged utility or improvement are subject to inspection and approval by an authorized representative of the utility or improvement owner before being concealed by backfill or other work.
- I. **Maintaining in Service:** All oil and gasoline pipelines, power, and telephone or the communication cable ducts, gas and water mains, irrigation lines, sewer lines, storm drain lines, poles, and overhead power and communication wires and cables encountered along the line of the WORK shall remain continuously in service during all the operations under the Contract, unless other arrangements satisfactory to the ARCHITECT are made with the owner of said pipelines, duct, main, irrigation line, sewer, storm drain, pole, or wire or cable. The CONTRACTOR shall be responsible for and shall repair all damage due to its operations, and the provisions of this Section shall not be abated even in the event such damage occurs after backfilling or is not discovered until after completion of the backfilling.

### **PART 2 - PRODUCTS (Not Used)**

### **PART 3 - EXECUTION (Not Used)**

## **END OF SECTION**

## **SECTION 01550 - SITE ACCESS AND STORAGE**

### **PART 1 - GENERAL**

#### **1.1 CONTRACTOR'S WORK AND STORAGE AREA**

- A. The CONTRACTOR shall be allowed limited areas for on-site storage necessary for the proper execution of the WORK. Such areas will be authorized by the OWNER at the Pre-Construction conference.
- B. The CONTRACTOR shall construct and use a separate storage area for hazardous materials used in constructing the WORK

#### **1.2 CONTRACTOR'S WORK AND STORAGE AREA**

- A. The CONTRACTOR shall be allowed limited areas for non-hazardous on-site storage necessary for the proper execution of the WORK. Such areas will be authorized by the OWNER at the Pre-Construction conference.
- B. Should the CONTRACTOR find it necessary to use any additional land for its camp or for other purposes during the construction of the WORK, it shall provide for the use of such lands at its own expense.
- C. The CONTRACTOR shall not store materials, tools, or equipment in areas to be occupied by the public unless specifically authorized by the OWNER.

#### **1.3 PARKING**

- A. The CONTRACTOR shall direct its employees to park in areas at the site as directed by the the CCFR Fire Chief, or station chief.
- B. Traffic and parking areas available to the public shall be maintained in a sound condition, free of excavated material, construction equipment, mud, and construction materials. The CONTRACTOR shall repair breaks, potholes, low areas which collect standing water, and other deficiencies that are the result of the CONTRACTOR's WORK.

### **PART - 2 PRODUCTS (Not Used)**

### **PART 3 - EXECUTION (Not Used)**

**END OF SECTION**

## **SECTION 01560 - TEMPORARY ENVIRONMENTAL CONTROLS**

### **PART 1 - GENERAL**

#### **1.1 RUBBISH CONTROL**

- A. During the progress of the WORK, the CONTRACTOR shall keep the site of the WORK and other areas used by it in a neat and 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. The CONTRACTOR shall also keep its haul roads free from dirt, rubbish, and unnecessary obstructions resulting from its operations. Disposal of all rubbish and surplus materials shall be off the site of construction in accordance with local codes and ordinances governing locations and methods of disposal, and in conformance with all applicable safety laws, and to the particular requirements of Part 1926 of the OSHA Safety and Health Standards for Construction.

#### **1.2 SANITATION- NOT USED**

#### **1.3 CHEMICALS**

- A. All chemicals used during Project construction or furnished for Project operation, whether defoliant, soil sterilant, herbicide, pesticide, disinfectant, polymer, reactant or of other classification, shall show approval of either the U.S. Environmental Protection Agency or the U.S. Department of Agriculture. Use of all such chemicals and disposal of residues shall be in strict accordance with the printed instructions of the manufacturer. In addition, see the requirements set forth in paragraph 6.11 of the General Conditions.

### **PART 2 - PRODUCTS (Not Used)**

### **PART 3 - EXECUTION (Not Used)**

**END OF SECTION**

## **SECTION 01600 - MATERIALS AND EQUIPMENT**

### **PART 1 - GENERAL**

#### **1.1 GENERAL**

- A. The word "Products," as used herein, is defined to include purchased items for incorporation into the WORK, regardless of whether specifically purchased for Project or taken from CONTRACTOR's stock of previously purchased products. The word "Materials," is defined as products which must be substantially cut, shaped, worked, mixed, finished, refined, or otherwise fabricated, processed, installed, or applied to form units of work. The word "Equipment" is defined as products with operational parts, regardless of whether motorized or manually operated, and particularly including products with service connections (wiring, piping, and other like items). Definitions in this paragraph are not intended to negate the meaning of other terms used in Contract Documents, including "specialties," "systems," "structure," "finishes," "accessories," "furnishings," "special construction," and similar terms, which are self-explanatory and have recognized meanings in the construction industry.
- B. Neither "Products" nor "Materials" nor "Equipment" includes machinery and equipment used for preparation, fabrication, conveying and erection of the WORK.

#### **1.2 QUALITY ASSURANCE**

- A. Source Limitations: To the greatest extent possible for each unit of work, the CONTRACTOR shall provide products, materials, or equipment of a singular generic kind from a single source.
- B. Compatibility of Options: Where more than one choice is available as options for CONTRACTOR's selection of a product, material, or equipment, the CONTRACTOR shall select an option which is compatible with other products, materials, or equipment already selected. Compatibility is a basic general requirement of product/material selections.

#### **1.3 PRODUCT DELIVERY-STORAGE-HANDLING**

- A. The CONTRACTOR shall deliver, handle, and store products in accordance with manufacturer's written recommendations and by methods and means which will prevent damage, deterioration, and loss including theft. Delivery schedules shall be controlled to minimize long-term storage of products at site and overcrowding of construction spaces. In particular, the CONTRACTOR shall ensure minimum holding or storage times for products recognized to be flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other sources of loss.

#### **1.4 TRANSPORTATION AND HANDLING**

- A. Products shall be transported by methods to avoid product damage and shall be delivered in undamaged condition in manufacturer's unopened containers or packaging.
- B. The CONTRACTOR shall provide equipment and personnel to handle products, materials, and equipment by methods to prevent soiling and damage.

## **SECTION 01600 - MATERIALS AND EQUIPMENT**

- C. The CONTRACTOR shall provide additional protection during handling to prevent marring and otherwise damaging products, packaging, and surrounding surfaces.

### **1.5 STORAGE AND PROTECTION**

- A. Products shall be stored in accordance with manufacturer's written instructions, with seals and labels intact and legible. Sensitive products shall be stored in weather-tight climate controlled enclosures and temperature and humidity ranges shall be maintained within tolerances required by manufacturer's written instructions.
- B. For exterior storage of fabricated products, they shall be placed on sloped supports above ground. Products subject to deterioration shall be covered with impervious sheet covering; ventilation shall be provided to avoid condensation.
- C. Loose granular materials shall be stored on solid surfaces in a well-drained area and shall be prevented from mixing with foreign matter.
- D. Storage shall be arranged to provide access for inspection. The CONTRACTOR shall periodically inspect to assure products are undamaged and are maintained under required conditions.
- E. Storage shall be arranged in a manner to provide access for maintenance of stored items and for inspection.

### **1.6 MAINTENANCE OF STORAGE**

- A. Stored products shall be periodically inspected on a scheduled basis. The CONTRACTOR shall maintain a log of inspections and shall make said log available on request.
- B. The CONTRACTOR shall verify that storage facilities comply with manufacturer's product storage requirements.
- C. The CONTRACTOR shall verify that manufacturer-required environmental conditions are maintained continually.
- D. The CONTRACTOR shall verify that surfaces of products exposed to the elements are not adversely affected and that any weathering of finishes does not occur.
- E. For mechanical and electrical equipment, the CONTRACTOR shall provide a copy of the manufacturer's service instructions with each item and the exterior of the package shall contain notice that instructions are included.
- F. Products shall be serviced on a regularly scheduled basis, and a log of services shall be maintained and submitted as a record document prior to acceptance by the OWNER in accordance with the Contract Documents.

## **SECTION 01600 - MATERIALS AND EQUIPMENT**

### **1.7 PROPOSED SUBSTITUTES OR "OR-EQUAL" ITEM SUBMITTAL**

- A. Whenever materials or equipment are specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the naming of the item is intended to establish the type, function, and quality required. If the name is followed by the words "or-equal" indicating that a substitution is permitted, materials or equipment of other Suppliers may be accepted by the ELECTRICAL OR MECHANICAL ENGINEER OF RECORD if sufficient information is submitted by the CONTRACTOR to allow the ELECTRICAL OR MECHANICAL ENGINEER OF RECORD to determine that the material or equipment proposed is equivalent or equal to that named, subject to the following requirements:
1. The burden of proof as to the type, function, and quality of any such substitute material or equipment shall be upon the CONTRACTOR.
  2. The ELECTRICAL OR MECHANICAL ENGINEER OF RECORD will be the sole judge as to the type, function, and quality of any such substitute material or equipment and the ELECTRICAL OR MECHANICAL ENGINEER OF RECORD's decision shall be final.
  3. The ELECTRICAL OR MECHANICAL ENGINEER OF RECORD may require the CONTRACTOR to furnish at the CONTRACTOR's expense additional data about the proposed substitute.
  4. The OWNER may require the CONTRACTOR to furnish at the CONTRACTOR's expense a special performance guarantee or other surety with respect to any substitute.
  5. Acceptance by the ELECTRICAL OR MECHANICAL ENGINEER OF RECORD of a substitute item proposed by the CONTRACTOR shall not relieve the CONTRACTOR of the responsibility for full compliance with the Contract Documents and for adequacy of the substitute item.
  6. The CONTRACTOR shall be responsible for resultant changes and all additional costs which the accepted substitution requires in the CONTRACTOR's WORK, the WORK of its Subcontractors and of other contractors, and shall effect such changes without cost to the OWNER.
- B. The procedure for review by the ELECTRICAL OR MECHANICAL ENGINEER OF RECORD will include the following:
1. If the CONTRACTOR wishes to furnish or use a substitute item of material or equipment, the CONTRACTOR shall make written application to the ELECTRICAL OR MECHANICAL ENGINEER OF RECORD on the "Substitution Request Form" for acceptance thereof.
  2. Unless otherwise provided by law or authorized in writing by the ELECTRICAL OR MECHANICAL ENGINEER OF RECORD, the "Substitution Request Form(s)" shall be submitted within the 35-day period after award of the contract.
  3. Wherever a proposed substitute material or equipment has not been submitted within said 35-day period, or wherever the submission of a proposed substitute material or equipment has been judged to be unacceptable by the ELECTRICAL OR MECHANICAL ENGINEER OF RECORD, the CONTRACTOR shall provide material or equipment named in the Contract Documents.
  4. The CONTRACTOR shall certify that the proposed substitute will perform adequately the functions and achieve the results called for by the general design, be similar and of equal substance to that specified, and be suited to the same use as that specified.

## **SECTION 01600 - MATERIALS AND EQUIPMENT**

5. The ELECTRICAL OR MECHANICAL ENGINEER OF RECORD will be allowed a reasonable time within which to evaluate each proposed substitute. In no case will this reasonable time period be less than 30 days.
  6. As applicable, no shop drawing submittals will be made for a substitute item nor will any substitute item be ordered, installed, or utilized without the ELECTRICAL OR MECHANICAL ENGINEER OF RECORD's prior written acceptance of the CONTRACTOR's "Substitution Request Form" which will be evidenced by a Change Order.
  7. The ELECTRICAL OR MECHANICAL ENGINEER OF RECORD will record the time required by the ELECTRICAL OR MECHANICAL ENGINEER OF RECORD in evaluating substitutions proposed by the CONTRACTOR and in making changes in the Contract Documents occasioned thereby. Whether or not the ELECTRICAL OR MECHANICAL ENGINEER OF RECORD accepts a proposed substitute, the CONTRACTOR shall reimburse the OWNER for the charges of the ELECTRICAL OR MECHANICAL ENGINEER OF RECORD for evaluating each proposed substitute.
- C. The CONTRACTOR's application using the "Substitution Request Forms" shall contain the following statements and/or information which shall be considered by the ELECTRICAL OR MECHANICAL ENGINEER OF RECORD in evaluating the proposed substitution:
1. The evaluation and acceptance of the proposed substitute will not prejudice the CONTRACTOR's achievement of substantial completion on time.
  2. Whether or not acceptance of the substitute for use in the WORK will require a change in any of the Contract Documents to adopt the design to the proposed substitute.
  3. Whether or not incorporation or use of the substitute in connection with the WORK is subject to payment of any license fee or royalty.
  4. All variations of the proposed substitute for that specified will be identified.
  5. Available maintenance, repair, and replacement service and its estimated cost will be indicated.
  6. Itemized estimate of all costs that will result directly or indirectly from acceptance of such substitute, including cost of redesign and claims of other contractors affected by the resulting change.

### **PART 2 - PRODUCTS (Not Used)**

### **PART 3 - EXECUTION (Not Used)**

## **END OF SECTION**



## **SECTION 01700 - PROJECT CLOSEOUT**

### **PART 1 - GENERAL**

#### **1.1 CLOSEOUT TIMETABLE**

- A. The CONTRACTOR shall establish dates for equipment testing, acceptance periods, and on-site instructional periods (as required under the contract). Such dates shall be established not less than one week prior to beginning any of the foregoing items, to allow the OWNER and the Electrical and Mechanical Engineers of record and their authorized representative's sufficient time to schedule attendance at such activities.

#### **1.2 SUBSTANTIAL COMPLETION**

- A. Before requesting inspection for certification of Substantial Completion, complete the following:
  - 1. In the Application for Payment that coincides with the date Substantial Completion is claimed, show 100 percent completion for the portion of the WORK claimed substantially complete.
  - 2. Submit specific warranties, workmanship bonds, maintenance agreements, final certifications and similar documents.
  - 3. Submit record Drawings, maintenance manuals, damage or settlement survey, property survey, and similar record information.
  - 4. Changeover permanent locks and transmit keys to the PROJECT MANAGER.
  - 5. Complete start-up testing of systems, and instruction of CBJ Maintenance personnel. Remove temporary facilities from the site, along with construction tools, mock-ups, and similar elements.
  - 6. Complete final clean-up. Touch-up and repair and restore marred exposed finishes.

#### **1.3 INSPECTION PROCEDURES**

- A. Upon receipt of a request for inspection for Substantial Completion, the PROJECT MANAGER will proceed and advise the CONTRACTOR of unfilled requirements. The PROJECT MANAGER will prepare the Certificate of Substantial Completion following inspection, or advise the CONTRACTOR of construction that must be completed or corrected before the certificate will be issued.
- B. The PROJECT MANAGER and Engineers of Record will reinspect the WORK upon receipt of notice by the CONTRACTOR that the WORK has been completed, except items whose completion has been delayed because of circumstances acceptable to the PROJECT MANAGER. If reinspection is requested and the CONTRACTOR has not completed all punch list items, the cost of that inspection will be paid by the CONTRACTOR. Upon completion of reinspection, the PROJECT MANAGER will prepare a certificate of final acceptance, or advise the CONTRACTOR of WORK that is incomplete or of obligations that have not been fulfilled but are required for final acceptance. If necessary, reinspection will be repeated.
- C. The PROJECT MANAGER will repeat inspection when requested and assured by the CONTRACTOR that the WORK has been substantially completed.

## **SECTION 01700 - PROJECT CLOSEOUT**

- D. Results of the completed inspection will form the basis of requirements for final acceptance.

### **1.4 FINAL ACCEPTANCE**

- A. Before requesting inspection for certification of final acceptance and final payment, complete and submit the following:
  - 1. Submit final payment request.
  - 2. Submit a final Change Order request.
  - 3. Submit a copy of the final inspection list stating that each item has been completed or otherwise resolved for acceptance.
  - 4. Submit final meter readings for utilities, a record of stored fuel, and similar data as of Substantial Completion.
  - 5. Submit consent of surety to final payment.
  - 6. Submit evidence of continuing insurance coverage complying with insurance requirements.
  - 7. Submit those items listed under Article 1.5 of this section as they apply.
  - 8. Written guarantees, where required.
  - 9. Maintenance stock items; spare parts; special tools, where required.
  - 10. Certificates of inspection and acceptance by local governing agencies having jurisdiction.
  - 11. Releases from all parties who are entitled to claims against the subject Project, property, or improvement pursuant to the provisions of law.
  - 12. Completed Certificate of Compliance and Release for the CONTRACTOR involved in the WORK. This form is included at the end of this section.
  - 13. Before final payment can be made, the CONTRACTOR shall supply a copy of the "Notice of Completion of Public Works" form approved by Wage and Hour Administration of the Labor Standards and Safety Division of the Alaska Department of Labor and Workforce Development.
  - 14. Alaska Department of Labor Employment Security Tax clearance letter from Section 00800.
  - 15. Submit Items 12, 13 and 14 to Jennifer Mannix, Contract Administrator.
  - 16. Keys, labeled to location and use.
  - 17. List of extra materials required by contract documents and information of where items are stored.

### **1.5 FINAL SUBMITTALS**

- A. Record Document Submittals: Do not use Record Documents for construction purposes; protect from loss in a secure location; provide access to Record Documents for the PROJECT MANAGER's reference.
- B. Record Drawings: Maintain a clean, undamaged set of blue or blackline prints of Contract Drawings and Shop Drawings (this includes Architectural, Structural/Civil, Mechanical and Electrical). Mark-up these Drawings to show the actual installation. Mark whichever Drawing is most capable of showing conditions accurately. Give particular attention to concealed elements that would be difficult to measure and record at a later date. Organize record Drawing sheets into manageable sets, bind with durable paper cover sheets, and print suitable titles, dates and other identification on the cover. Record Drawings shall be kept current with the WORK's progress and will be checked prior to each payment.

## SECTION 01700 - PROJECT CLOSEOUT

- C. Record Specifications: Maintain one copy of the Contract Documents, including Addenda. Mark to show variations in actual WORK performed in comparison with the specifications and modifications. Give particular attention to substitutions, selection of options and similar information on elements that are concealed or cannot be readily discerned later by direct observation. Note related record Drawing information and product data. Upon completion of the WORK, submit record Specifications to the PROJECT MANAGER for the OWNER's records.
- D. Maintenance Manuals: Organize maintenance data into sets of manageable size. Bind in individual heavy-duty 2-inch (maximum), 3-ring vinyl-covered binders, with pocket folders for folded sheet information. Mark identification on front and spine of each binder. Include the following information:
  - 1. Emergency instructions.
  - 2. Spare parts list.
  - 3. Copies of warranties.
  - 4. Recommended "turn around" cycles.
  - 5. Inspection procedures.
  - 6. Shop Drawings and product data.
- D. Operating and Maintenance Instructions: Arrange for the installer of equipment that requires regular maintenance to meet with CBJ personnel to provide instruction in proper operation and maintenance. Include a detailed review of maintenance manuals, agreements, warranties and bonds. As part of instruction for operating equipment, demonstrate all necessary safety procedures.
- E. Before final payment can be made, the CONTRACTOR shall supply a copy of the "Notice of Completion of Public Works" form approved by Wage and Hour Administration of the Labor Standards and Safety Division of the Alaska Department of Labor and Workforce Development.
- F. Before final payment the CONTRACTOR shall provide the OWNER with clearance from the Alaska Department of Labor and Workforce Development for the CONTRACTOR and all Subcontractors that have worked on the Project. This clearance shall indicate that all Employment Security Taxes have been paid. A sample form for this purpose is at the end of section 00800 – Supplementary General Conditions.

### 1.6 MAINTENANCE AND GUARANTEE

- A. The CONTRACTOR shall comply with the maintenance and guarantee requirements contained in Article 13 of the General Conditions.
- B. Replacement of earth fill or backfill, where it has settled below the required finish elevations, 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.

## **SECTION 01700 - PROJECT CLOSEOUT**

- 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 replacements promptly, the OWNER reserves the right to do the WORK and the CONTRACTOR and its surety shall be liable to the OWNER for the cost thereof.

### **PART 2 - MATERIALS** (Not Used)

### **PART 3 - EXECUTION** (Not Used)

## SECTION 01700 - PROJECT CLOSEOUT

### COMPLIANCE CERTIFICATE AND RELEASE FORM

PROJECT: CCFR- OVERHEAD DOOR & OPERATORS REPLACEMENT  
CONTRACT NO: E10-219

The CONTRACTOR must complete and submit this to the Contract Administrator. The CONTRACTOR shall complete this form with respect to the entire contract.

Completed forms must be submitted upon completion of the Project. All requirements and submittals must be met before final payment will be made to the CONTRACTOR.

*I certify that the following and any referenced attachments are true:*

- All WORK has been performed, materials supplied, and requirements met in accordance with the applicable plans, specifications, and Contract Documents.
- All suppliers and Subcontractors have been paid in full with no claims for labor, materials, or other services outstanding. If all Subcontractors and suppliers are not paid in full, please explain on a separate sheet.
- All employees have been paid not less than the current prevailing wage rates set by the State of Alaska (or U.S. Department of Labor, as applicable).
- All equal employment opportunity, certified payroll and other reports have been filed in accordance with the prime contract.
- The Contract Administrator was advised and approved of all Subcontractors before WORK was performed and has approved any substitutions, additions or deletions of Subcontractors.
- All DBE firms listed as a precondition of the prime contract award must have performed a commercially useful function in order for the work to count to a DBE goal. All DBE firms performed the WORK stated and have received at least the amount claimed for credit in the Contract Documents.
- All DBE Subcontractors must attach a signed statement of the payment amount received, the nature of WORK performed, whether any balance is outstanding, and indicate that no rebates are involved.
- If the amount paid is less than the amount originally claimed for DBE credit, the CONTRACTOR has attached approval from the Contract Administrator for underutilization.

*I understand it is unlawful to misrepresent information in order to receive a payment which would otherwise be withheld if these conditions were not met. I am an authorized agent of this firm and sign this freely and voluntarily. The foregoing statements are true and apply to the following project contractor.*

\_\_\_\_\_  
Firm Name Capacity: CONTRACTOR

\_\_\_\_\_  
Signed Printed Name and Title Date

Return completed form to: Jennifer Mannix, Contract Administrator, City and Borough of Juneau, 155 South Seward Street, Juneau, AK 99801. Call (907) 586-0873 if we can be of further assistance or if you have any questions.

**END OF SECTION**

## **SECTION 01704 - FINAL CLEAN-UP AND SITE RESTORATION**

### **PART 1 - GENERAL**

#### **1.1 DESCRIPTION**

- A. The WORK under this Section includes providing all supervision, labor, materials, tools and equipment necessary for final clean-up and restoration of all areas disturbed by construction activities, to a condition equal to, or better than, before construction started. This does not include clean-up or restoration incidental to, or directly provided for by other construction items.

### **PART 2 - PRODUCTS**

#### **2.1 MATERIALS**

- A. Any materials required shall conform to the appropriate Section of these Specifications.

### **PART 3 - EXECUTION**

#### **3.1 GENERAL**

- A. The CONTRACTOR shall promptly remove from the vicinity of the completed WORK and all sites disturbed by the construction, all rubbish and debris, unused materials, concrete forms, construction equipment, and temporary structures and facilities used during construction and shall grade the sites so that no standing water is evident. Final acceptance of the WORK by the OWNER will be withheld until the CONTRACTOR has satisfactorily complied with the foregoing requirements for final clean-up of the Project site.
- B. If the CONTRACTOR has obtained material from the CBJ/State pit, the excavated area shall be cleaned up and any stipulations required by the Individual Mining Plan shall be completed. The gravel pit overhead charge shall be paid to CBJ within 60 days after removal of material from the pit.

#### **3.2 FINAL CLEANING OF BUILDINGS**

- A. The CONTRACTOR shall employ experienced workers for final cleaning. Clean each surface to the condition expected in a commercial building cleaning and maintenance program. Complete the following before requesting inspection for certification of Substantial Completion:
  - 1. Remove labels that are not permanent labels.
  - 2. Clean transparent materials. Remove glazing compound. Replace chipped or broken glass.
  - 3. Clean exposed 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. Vacuum carpeted surfaces.

## **SECTION 01704 - FINAL CLEAN-UP AND SITE RESTORATION**

4. Wipe surfaces of mechanical and electrical equipment. Remove excess lubrication. Clean plumbing fixtures to a sanitary condition. Clean light fixtures and lamps.
5. Clean the site of rubbish, litter and other foreign substances. Sweep paved areas, remove stains, spills and other foreign deposits. Rake grounds that are neither paved nor planted, to a smooth even-textured surface.
6. Remove temporary protection and facilities.
7. Comply with regulations of authorities having jurisdiction and safety standards for cleaning. Remove waste materials from the site and dispose of in a lawful manner.

**END OF SECTION**

## **SECTION 01731 – CUTTING AND PATCHING**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

#### **1.2 SUMMARY**

- A. This Section includes procedural requirements for cutting and patching.
- B. Related Sections include the following:
  - 1. Divisions 2 through 16 Sections for specific requirements and limitations applicable to cutting and patching individual parts of the Work.

#### **1.3 DEFINITIONS**

- A. Cutting: Removal of in-place construction necessary to permit installation or performance of other Work.
- B. Patching: Fitting and repair work required to restore surfaces to original conditions after installation of other Work.

#### **1.4 SUBMITTALS**

- A. Cutting and Patching Proposal: Submit a proposal describing procedures at least seven days before the time cutting and patching will be performed, requesting approval to proceed. Include the following information:
  - 1. Extent: Describe cutting and patching, show how they will be performed, and indicate why they cannot be avoided.
  - 2. Changes to In-Place Construction: Describe anticipated results. Include changes to structural elements and operating components as well as changes in building's appearance and other significant visual elements.
  - 3. Products: List products to be used and firms or entities that will perform the Work.
  - 4. Dates: Indicate when cutting and patching will be performed.
  - 5. Utility Services and Mechanical/Electrical Systems: List services/systems that cutting and patching procedures will disturb or affect. List services/systems that will be relocated and those that will be temporarily out of service. Indicate how long services/systems will be disrupted.
  - 6. Owner's On-Site Representative's Approval: Obtain approval of cutting and patching proposal before cutting and patching. Approval does not waive right to later require removal and replacement of unsatisfactory work.



## SECTION 01731 – CUTTING AND PATCHING

### 1.5 QUALITY ASSURANCE

- A. Structural Elements: Do not cut and patch structural elements in a manner that could change their load-carrying capacity or load-deflection ratio.
- B. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety. Operating elements include the following:
  - 1. Primary operational systems and equipment.
  - 2. Air or smoke barriers.
  - 3. Fire-suppression systems.
  - 4. Mechanical systems piping and ducts that are NOT in the Project Work Scope.
  - 5. Electrical wiring systems.
- C. Miscellaneous Elements: Do not cut and patch miscellaneous elements or related components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety. Miscellaneous elements include the following:
  - 1. Water, moisture, or vapor barriers.
  - 2. Membranes and flashings.
  - 3. Exterior curtain-wall construction.
  - 4. Equipment supports.
  - 5. Piping, ductwork, vessels, and equipment.
- D. Visual Requirements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in Architect's and Owner's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- A. General: Comply with requirements specified in other Sections.
- B. In-Place Materials: Use materials identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.
  - 1. If identical materials are unavailable or cannot be used, use materials that, when installed, will match the visual and functional performance of in-place materials.

## **SECTION 01731 – CUTTING AND PATCHING**

### **PART 3 - EXECUTION**

#### **3.1 EXAMINATION**

- A. Examine surfaces to be cut and patched and conditions under which cutting and patching are to be performed.
  - 1. Compatibility: Before patching, verify compatibility with and suitability of substrates, including compatibility with in-place finishes or primers.
  - 2. Proceed with installation only after unsafe or unsatisfactory conditions have been corrected.

#### **3.2 PREPARATION**

- A. Temporary Support: Provide temporary support of Work to be cut.
- B. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.
- C. Adjoining Areas: Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.

#### **3.3 PERFORMANCE**

- A. General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
  - 1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.
- B. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
  - 1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
  - 2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
  - 3. Concrete and Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
  - 4. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
  - 5. Proceed with patching after construction operations requiring cutting are complete.

## **SECTION 01731 – CUTTING AND PATCHING**

- C. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other Work. Patch with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other Sections.
  - 1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate integrity of installation.
  - 2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
    - a. Clean piping, conduit, and similar features before applying paint or other finishing materials.
    - b. Restore damaged pipe covering to its original condition.
  - 3. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition.
- D. Cleaning: Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty, and similar materials.

**END OF SECTION**

## **SECTION 01732 – SELECTIVE DEMOLITION**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

#### **1.2 SUMMARY**

- A. This Section includes the following:
  - 1. Demolition and removal of selected portions of a building.
  - 2. Repair procedures for selective demolition operations.
- B. Related Sections include the following:
  - 1. Section 01010 - Summary of Work for use of the premises.
  - 2. Section 01731 - Cutting and Patching for cutting and patching procedures for selective demolition operations.

#### **1.3 DEFINITIONS**

- A. Remove: Detach items from existing construction and legally dispose of them off-site, unless indicated to be removed and salvaged or removed and reinstalled.
- B. Remove and Salvage: Detach items from existing construction and deliver them to OWNER ready for reuse.
- C. Remove and Reinstall: Detach items from existing construction, prepare them for reuse, and reinstall them where indicated.
- D. Existing to Remain: Existing items of construction that are not to be removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

#### **1.4 MATERIALS OWNERSHIP**

- A. Except for items or materials indicated to be reused, salvaged, reinstalled, or otherwise indicated to remain OWNER's property, demolished materials shall become CONTRACTOR's property and shall be removed from Project site.

#### **1.5 SUBMITTALS**

- A. Proposed Dust-Control and Noise-Control Measures: Submit statement or drawing that indicates the measures proposed for use, proposed locations, and proposed time frame for their operation. Identify options if proposed measures are later determined to be inadequate.

## **SECTION 01732 – SELECTIVE DEMOLITION**

- B. Schedule of Selective Demolition Activities: Indicate the following:
1. Detailed sequence of selective demolition and removal WORK, with starting and ending dates for each activity. Ensure OWNER's on-site operations are uninterrupted.
  2. Interruption of utility services.
  3. Coordination for shutoff, capping, and continuation of utility services.
  4. Use of elevator and stairs.
  5. Locations of temporary partitions and means of egress.
  6. Coordination of OWNER's continuing occupancy of portions of existing building and of OWNER's partial occupancy of completed WORK.
- C. Inventory: After selective demolition is complete, submit a list of items that have been removed and salvaged.
- D. Predemolition Photographs or Videotape: Show existing conditions of adjoining construction and site improvements, including finish surfaces, that might be misconstrued as damage caused by selective demolition operations. Submit before WORK begins.
- E. Landfill Records: Indicate receipt and acceptance of hazardous wastes by a landfill facility licensed to accept hazardous wastes.

### **1.6 QUALITY ASSURANCE**

- A. Demolition Firm Qualifications: An experienced firm that has specialized in demolition work similar in material and extent to that indicated for this Project.
- B. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- C. Standards: Comply with ANSI A10.6 and NFPA 241.
- D. Predemolition Conference: Conduct conference at Project site to comply with requirements in Division 1. Review methods and procedures related to selective demolition including, but not limited to, the following:
1. Inspect and discuss condition of construction to be selectively demolished.
  2. Review structural load limitations of existing structure.
  3. Review and finalize selective demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.
  4. Review requirements of WORK performed by other trades that rely on substrates exposed by selective demolition operations.

### **1.7 PROJECT CONDITIONS**

- A. OWNER will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so OWNER's operations will not be disrupted. Provide not less than 48 hours notice to OWNER of activities that will affect OWNER's operations.

## **SECTION 01732 – SELECTIVE DEMOLITION**

- B. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities.
  - 1. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from authorities having jurisdiction.
- C. OWNER assumes no responsibility for condition of areas to be selectively demolished.
  - 1. Conditions existing at time of inspection for bidding purpose will be maintained by OWNER as far as practical.
- D. Storage or sale of removed items or materials on-site will not be permitted.
- E. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
  - 1. Maintain fire-protection facilities in service during selective demolition operations.

## **PART 2 - PRODUCTS**

### **2.1 REPAIR MATERIALS**

- A. Use repair materials identical to existing materials.
  - 1. If identical materials are unavailable or cannot be used for exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible.
  - 2. Use materials whose installed performance equals or surpasses that of existing materials.
- B. Comply with material and installation requirements specified in individual Specification Sections.

## **PART 3 - EXECUTION**

### **3.1 EXAMINATION**

- A. Verify that utilities have been disconnected and capped.
- B. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.
- C. Inventory and record the condition of items to be removed and salvaged.
- D. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to ARCHITECT.
- E. Perform surveys as the WORK progresses to detect hazards resulting from selective demolition activities.

## **SECTION 01732 – SELECTIVE DEMOLITION**

### **3.2 UTILITY SERVICES**

- A. Existing Utilities: Maintain services indicated to remain and protect them against damage during selective demolition operations.
- B. Do not interrupt existing utilities serving occupied or operating facilities unless authorized in writing by OWNER and authorities having jurisdiction. Provide temporary services during interruptions to existing utilities, as acceptable to OWNER and to authorities having jurisdiction.
  - 1. Provide at least 72 hours notice to OWNER if shutdown of service is required during changeover.
- C. Utility Requirements: Locate, identify, disconnect, and seal or cap off indicated utilities serving areas to be selectively demolished.
  - 1. Arrange to shut off indicated utilities with utility companies.
  - 2. If utility services are required to be removed, relocated, or abandoned, before proceeding with selective demolition provide temporary utilities that bypass area of selective demolition and that maintain continuity of service to other parts of building.
  - 3. Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit after bypassing.

### **3.3 PREPARATION**

- A. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
- B. Temporary Facilities: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent facilities to remain.
  - 1. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.
  - 2. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.
  - 3. Cover and protect furniture, furnishings, and equipment that have not been removed.
- C. Temporary Shoring: Provide and maintain interior shoring, bracing, or structural support to preserve stability and prevent movement, settlement, or collapse of construction to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.

### **3.4 POLLUTION CONTROLS**

- A. Disposal: Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

## **SECTION 01732 – SELECTIVE DEMOLITION**

- B. Cleaning: Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

### **3.5 SELECTIVE DEMOLITION**

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the WORK within limitations of governing regulations and as follows:
  - 1. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.
  - 2. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
  - 3. Do not use cutting torches.
  - 4. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
  - 5. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
  - 6. Dispose of demolished items and materials promptly.
  - 7. Return elements of construction and surfaces that are to remain to condition existing before selective demolition operations began.
- B. Existing Facilities: Comply with OWNER's requirements for using and protecting elevators, stairs, walkways, loading docks, building entries, and other building facilities during selective demolition operations.
- C. Removed and Salvaged Items: Comply with the following:
  - 1. Transport items to OWNER's storage area designated by OWNER.
  - 2. Protect items from damage during transport and storage.
- D. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by ARCHITECT, items may be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations after selective demolition operations are complete.

### **3.6 PATCHING AND REPAIRS**

- A. General: Promptly repair damage to adjacent construction caused by selective demolition operations.
- B. Repairs: Where repairs to existing surfaces are required, patch to produce surfaces suitable for new materials.



## **SECTION 01732 – SELECTIVE DEMOLITION**

- C. Finishes: Restore exposed finishes of patched areas and extend restoration into adjoining construction in a manner that eliminates evidence of patching and refinishing.

### **3.7 DISPOSAL OF DEMOLISHED MATERIALS**

- A. General: Promptly dispose of demolished materials. Do not allow demolished materials to accumulate on-site.
- B. Burning: Do not burn demolished materials.
- C. Disposal: Transport demolished materials off OWNER's property and legally dispose of them.

**END OF SECTION**

## SECTION 01810 – TESTING, COMMISSIONING AND TRAINING

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. This Section specifies the installation, testing, commissioning and training for equipment, systems, and appurtenances.
- B. Install equipment, systems and appurtenances furnished under this Contract in accordance with the details shown and specified in the Contract Documents and with the manufacturer's requirements. Bring to the attention of the Owner any manufacturer's installation recommendations that are in conflict with specific requirements of this Contract Document. The Owner will review and approve any changes and suggested solutions as necessary.

#### 1.2 QUALITY ASSURANCE

- A. Install testing Equipment and apparatus with personnel trained in the trades and professions required to assure competent workmanship.
- B. Supervise the installation of specific Equipment testing items specified to be accomplished by factory-trained installation specialists furnished or certified by the Equipment manufacturers.
- C. Document the skills and training of workers engaged in the installation of testing Equipment.

#### 1.3 SUBMITTALS

- A. Procedures: Section 01300.
- B. 60 days after Notice to Proceed a listing of all individual component and system testing to be performed
- C. Testing submittals:
  - 1. Preoperational test phase.
  - 2. Component test phase.
  - 3. System test phase.
  - 4. Operational test phase: An update of System Test Packages with Operational Test Phase results and evaluations as related to other Systems, facilities, or contracts
  - 5. Commissioning: Completed System Test Package documentation.
- D. Testing reports.
  - 1. By component
  - 2. By system

## SECTION 01810 – TESTING, COMMISSIONING AND TRAINING

### E. Training Program

1. Listing of all individual equipment and systems
2. Training Plans
3. Documentation of training performed

### 1.4 1.04 TESTING

#### A. General requirements:

1. Test equipment and partially complete or fully completed portions of the work included in this Contract to prove compliance with the Contract requirements to the satisfaction of the Owner. Unless otherwise specified, costs of testing, including temporary facilities and connections, shall be borne by the Contractor. For the purpose of this Section, equipment shall mean mechanical, electrical, instrumentation, or other devices with one or more moving parts or devices requiring an electrical, pneumatic or hydraulic connection.
2. No tests specified herein shall be applied until the item to be tested has been inspected and the Owner has given approval for the application of such test.
3. Tests and inspection shall include:
  - a. The delivery acceptance test and inspections.
  - b. The installed tests and inspections.
  - c. The operational testing of completed sections of the work.
  - d. The commissioning of completed sections of the work by Commissioning Agent hired by the Owner.
4. Tests and inspections, unless otherwise specified or accepted, shall be in accordance with the recognized standards of the industry. Coordinate scheduling and performance of tests with involved subcontractors and suppliers.
5. Proof of satisfactory fulfillment of the delivery acceptance test and inspection requirements shall consist of either tests and inspections carried out in the Owner's presence, or certificates or reports of tests and inspections carried out by approved persons or organizations. Provide and use forms which include test information and the specified operational parameters. Use forms, that in content and otherwise, are acceptable to the Owner.
6. Maintain a master test log book which shall cover tests including piping, equipment, electrical, and instrumentation. Provide with loose leaf pages which shall be copied weekly after updating for transmittal to the Owner.

#### B. Delivery acceptance tests and inspections: At the Contractor's expense for equipment specified herein, include the following:

1. Inspection of items delivered at the site or to an authorized place of storage to demonstrate that such items are of the specified quality and workmanship and are in good order and condition at the time of delivery.
2. Inspections may require the removal of coverings, containers or crates as necessary to permit the Owner to conduct the inspection. Should the Owner find, in its opinion, indication of damage or deficient quality of workmanship, provide the necessary

## SECTION 01810 – TESTING, COMMISSIONING AND TRAINING

documentation or conduct such tests deemed necessary by the Owner to demonstrate compliance.

3. Test of items at the place of manufacture during or on completion of manufacture, comprising of hydraulic pressure tests, electric and instrumentation subsystems tests, performance and operating tests and inspections. Perform in accordance with the relevant standards of the industry or as detailed in these Specifications.

### C. Installed tests and inspections:

1. General: Test equipment to the satisfaction of the Owner before a facility is put into operation. Tests shall be as specified herein and shall be made to determine whether the equipment has been properly assembled, aligned, adjusted and connected. Changes, adjustments or replacements required to make the equipment operate as specified shall be carried out by the Contractor as part of the work.

#### 2. Procedures:

##### a. General:

- 1) Prior to receipt of progress payments in excess of 60 percent of the lump sum bid for the work, submit to the Owner five copies of details of the installed tests and inspection procedures the Contractor proposes to adopt for testing and start-up of equipment to be operated singly and together, excepting when such procedures have been covered in the Specifications.
- 2) The procedures shall be divided into two distinct stages: pre-operation checkout and operational testing. Testing procedures shall be designed to duplicate, as nearly as possible, conditions of operation and shall be carefully selected to ensure that the equipment is not damaged. Once the Owner has reviewed the testing procedures, the Contractor shall produce checkout, alignment, adjustment and calibration signoff forms for each item of equipment. The forms shall be used in the field by the Contractor and the Owner jointly to ensure that each item of electrical, mechanical, and instrumentation equipment has been properly installed and tested. The Contractor is advised that failure to observe these precautions may place the acceptability of the subject equipment in question.

- b. Pre-operation checkout: The installed tests and inspection procedures shall incorporate requirements of the Specifications and shall proceed in a logical, step-wise sequence to ensure that equipment has been properly serviced, aligned, connected, calibrated and adjusted prior to operation.

##### c. Operational testing:

- 1) Once affected equipment has been subjected to the required pre-operational checkout procedures and the Project Representative has witnessed and has not found deficiencies in that portion of the work, individual systems may be started and operated under simulated operating conditions to determine as nearly as possible whether the equipment and systems meet the requirements of the Specifications. When testing requires the availability of auxiliary systems such as electrical power, compressed air, control air, or instrumentation which have not yet been placed in service, provide acceptable substitute sources, capable of meeting the requirements of the machine, device or system, at no additional cost to the City and Borough of

## SECTION 01810 – TESTING, COMMISSIONING AND TRAINING

Juneau. Disposal methods for test media shall be subject to review by the Owner.

- 2) If under test, a portion of the work should fail to fulfill the Contract requirements and is adjusted, altered, renewed or replaced, tests on that portion when so adjusted, altered, removed or replaced, together with other portions of the work affected, shall, if so required by the Owner, be repeated within reasonable time and in accordance with the specified conditions.
- 3) Once simulated operation has been completed, equipment shall be checked for loose connections, unusual movement or other indications of improper operating characteristics. Deficiencies shall be corrected to the satisfaction of the Owner. Machines or devices that exhibit unusual or unacceptable operating characteristics shall be disassembled and inspected. They shall then be repaired or removed from the site and replaced at no cost to the City and Borough of Juneau.
- 4) Test results shall be within the tolerances set forth in the detailed specification sections of this Contract Document. If no tolerances have been specified, test results shall conform to tolerances established by recognized industry practice.
- 5) Where doubt, dispute, or difference arises between the Owner and the Contractor regarding test results, or the methods or equipment used in the performance of such test, the Owner may order the test to be repeated. If the repeat test, using such modified methods or equipment as the Owner may require, substantially confirms the previous test, then costs in connection with the repeated test will be paid by the Owner, otherwise the costs shall be borne by the Contractor. Where the results of an installed test fail to comply with the Contract requirements for such test, then such repeat tests as may be necessary to achieve the Contract requirements shall be made by the Contractor at the Contractor's expense.
- 6) Unless otherwise specified, provide at no expense to the City and Borough of Juneau, power, fuel, compressed air supplies, labor and all other necessary items and work required to complete the tests and inspection specified herein.

### 1.5 COMMISSIONING – NOT USED

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- A. Conform to the requirements of this Contract and the recommendations of the equipment manufacturers.
- B. Testing:
  1. Provide gages, meters, recorders and monitors as required by the Owner to supplement or augment the instrumentation system provided under this Contract to properly demonstrate that equipment fully satisfies the requirements of this Contract. Devices employed for the purpose of measuring the performance of the facility's equipment and systems shall

## SECTION 01810 – TESTING, COMMISSIONING AND TRAINING

be specifically selected to be consistent with the variables to be monitored. Instruments shall be recently calibrated, and the Contractor shall be prepared to demonstrate, through calibration, the accuracy of instruments employed for testing purposes. Calibration procedures shall be in accordance with applicable standards of ASTM, ISA and IEEE. The adequacy of gages, meters, recorders and monitors shall be subject to review of the Owner.

2. Records:
  - a. Provide signoff forms for installed and operational testing to be accomplished under this Contract. Produce in quadruplicate. Provide for each item of mechanical, electrical and instrumentation equipment provided or installed under this Contract. Forms shall contain provisions for recording relevant performance data for original testing and not less than 3 retests. Separate sections shall be provided to record values for the pre-operation checkout, initials of representatives of the equipment manufacturers, the Contractor and the Owner.
  - b. Maintain a master file of equipment signoff sheets, which shall be available for inspection by the Owner. Upon completion of testing, the Contractor shall furnish the Owner with the original and 2 copies of the signoff sheet for each equipment item.

### PART 3 - EXECUTION

#### 3.1 OPERATIONAL TESTING

- A. Testing shall proceed on a step-by-step basis in accordance with the Contractor's written testing procedures. The Contractor's testing work shall be accomplished under the direction of the Contractor's Coordinator whose sole responsibility shall be the orderly, systematic testing of equipment, systems, structures and the complete facility as a unit. Each individual step in the procedures shall be witnessed by the Project Representative, or delegated alternate.
- B. During the operational testing period, equipment and systems in operation shall be operated to the greatest extent practicable, at conditions, which represent the full range of applicable operating parameters.

#### 3.2 TRAINING

- A. Training of the City and Borough of Juneau's personnel shall be done by the Contractor's and/or manufacturer's representatives.
- B. During the phase of pre-operational testing of equipment and systems, make available experienced factory-trained representatives of the manufacturers of the various pieces of equipment, to train the City and Borough of Juneau's personnel in the operation and maintenance thereof. Work with the Owner to schedule the training.
- C. Training shall cover the following systems:

## SECTION 01810 – TESTING, COMMISSIONING AND TRAINING

### 1. Section 08361, SECTIONAL OVERHEAD DOORS & OPERATORS

#### D. General Outline for Training Presentations

##### 1. Familiarization

- a. Provide overview of design intent.
- b. Show catalog, parts lists, drawings, etc., in the plant files and O&M manuals.
- c. Review the installation of the specific equipment items.
- d. Demonstrate the unit and show that the Specifications have been met.
- e. Review of control drawings and schematics.
- f. Discuss interaction of building occupants with the system.
- g. Answer questions.

##### 2. Safety

- a. Point out health and safety references.
- b. Discuss proper precautions around equipment.

##### 3. Operation

- a. Point out reference literature.
- b. Explain all modes of operation (including emergency mode, Start-up, normal operation, unoccupied operation, seasonal changeover, manual operation, controls set-up and programming, troubleshooting and alarms).
- c. Discuss and demonstrate adjustments and optimizing methods for energy conservation.
- d. Test City and Borough of Juneau's personnel on proper use of the equipment, by letting them operate it.

##### 4. Preventive Maintenance (PM)

- a. Pass out PM list including:
  - 1) Reference material.
  - 2) Daily, weekly, monthly, quarterly, semi-annual and annual jobs.
- b. Show how to perform PM jobs.
- c. Show City and Borough of Juneau's personnel what to look for as indicators of equipment problems.

##### 5. Corrective Maintenance

- a. List possible problems.
- b. Discuss repairs - point out special problems.
- c. Open up equipment and demonstrate procedures, where practical.

##### 6. Parts

- a. Review spare parts list and show how to use parts list and order parts.

## SECTION 01810 – TESTING, COMMISSIONING AND TRAINING

- b. Check over spare parts on hand. Make recommendations.
  - c. Provide recommendations for spare parts inventory.
- 7. Local Representatives
  - a. Provide names, addresses, phone numbers for ordering parts.
  - b. Provide names, addresses, phone numbers for service representatives.
  - c. Provide names, addresses, phone numbers, and procedures for obtaining emergency assistance.
  - d. Review the process to initiate guarantee response.

END OF SECTION 01810



## SECTION 05500 – METAL FABRICATIONS

### PART 1 – GENERAL

#### 1.1 SUMMARY

A. Section Includes:

1. Miscellaneous steel framing and supports.
2. Miscellaneous steel trim.
3. Metal bollards.

B. Products furnished, but not installed, under this Section:

1. Loose steel lintels.
2. Anchor bolts, steel pipe sleeves, slotted-channel inserts, and wedge-type inserts indicated to be cast into concrete or built into unit masonry.
3. Steel weld plates and angles for casting into concrete.

#### 1.2 PERFORMANCE REQUIREMENTS

A. Delegated Design: Design ladders, including comprehensive engineering analysis by a qualified professional engineer, using performance requirements and design criteria indicated.

B. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes acting on exterior metal fabrications by preventing buckling, opening of joints, overstressing of components, failure of connections, and other detrimental effects.

1. Temperature Change: 120 deg F (67 deg C), ambient; 180 deg F (100 deg C), material surfaces.

#### 1.3 SUBMITTALS

A. Shop Drawings: Show fabrication and installation details for metal fabrications.

1. Include plans, elevations, sections, and details of metal fabrications and their connections. Show anchorage and accessory items.

B. Delegated-Design Submittal: For installed products indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

### PART 2 – PRODUCTS

## SECTION 05500 – METAL FABRICATIONS

### 2.1 METALS, GENERAL

- A. Metal Surfaces, General: Provide materials with smooth, flat surfaces without blemishes.

### 2.2 FERROUS METALS

- A. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M.
- B. Stainless-Steel Bars and Shapes: ASTM A 276 Type 316L.
- C. Rolled-Steel Floor Plate: ASTM A 786/A 786M, rolled from plate complying with ASTM A 36/A 36M or ASTM A 283/A 283M, Grade C or D.
- D. Steel Tubing: ASTM A 500, cold-formed steel tubing.
- E. Steel Pipe: ASTM A 53/A 53M, standard weight (Schedule 40) unless otherwise indicated.

### 2.3 FASTENERS

- A. General: Unless otherwise indicated, provide Type 316 stainless-steel fasteners for exterior use and zinc-plated fasteners with coating complying with ASTM B 633 or ASTM F 1941 (ASTM F 1941M), Class Fe/Zn 5, at exterior walls.
  - 1. Provide stainless-steel fasteners for fastening aluminum.
  - 2. Provide stainless-steel fasteners for fastening stainless steel.
- B. Cast-in-Place Anchors in Concrete: Either threaded type or wedge type unless otherwise indicated; galvanized ferrous castings, either ASTM A 47/A 47M malleable iron or ASTM A 27/A 27M cast steel. Provide bolts, washers, and shims as needed, all hot-dip galvanized per ASTM F 2329.
- C. Post-Installed Anchors: chemical anchors.
  - 1. Material for Interior Locations: Carbon-steel components zinc plated to comply with ASTM B 633 or ASTM F 1941 (ASTM F 1941M), Class Fe/Zn 5, unless otherwise indicated.
  - 2. Material for Exterior Locations and Where Stainless Steel is indicated: Alloy Group 2 (A4) stainless-steel bolts, ASTM F 593 (ASTM F 738M), and nuts, ASTM F 594 (ASTM F 836M).
- D. Slotted-Channel Inserts: Cold-formed, hot-dip galvanized-steel box channels (struts) complying with MFMA-4, 1-5/8 by 7/8 inches (41 by 22 mm) by length indicated with anchor straps or studs not less than 3 inches (75mm) long at not more than 8 inches (200 mm) o.c. Provide with temporary filler and tee-head bolts, complete with washers and nuts, all zinc-plated to comply with ASTM B 633, Class Fe/Zn 5, as needed for fastening to inserts.

## SECTION 05500 – METAL FABRICATIONS

### MISCELLANEOUS MATERIALS

- A. Shop Primers: Provide primers that comply with Division 9 painting Sections.
- B. Galvanizing Repair Paint: High-zinc-dust-content paint complying with SSPC-Paint 20 and compatible with paints specified to be used over it.
- C. Bituminous Paint: Cold-applied asphalt emulsion complying with ASTM D 1187.
- D. Nonshrink, Nonmetallic Grout: Factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C 1107. Provide grout specifically recommended by manufacturer for interior and exterior applications.
- E. Concrete: Comply with requirements in Division 3 Section “Cast-in-Place Concrete” for normal-weight, air-entrained, concrete with a minimum 28-day compressive strength of 3000 psi (20 MPa).

### 2.4 FABRICATION, GENERAL

- A. Shop Assembly: Preassemble items in the shop to greatest extent possible. Use connections that maintain structural value of joined pieces.
- B. Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges. Remove sharp or rough areas on exposed surfaces.
- C. Weld corners and seams continuously to comply with the following:
  - 1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
  - 2. Obtain fusion without undercut or overlap.
  - 3. Remove welding flux immediately.
  - 4. At exposed connections, finish exposed welds and surfaces smooth and blended.
- D. Form exposed connections with hairline joints, flush and smooth, using concealed fasteners or welds where possible. Locate joints where least conspicuous.
- E. Fabricate seams and other connections that will be exposed to weather in a manner to exclude water. Provide weep holes where water may accumulate.
- F. Where units are indicated to be cast into concrete or built into masonry, equip with integrally welded steel strap anchors not less than 24 inches (600 mm) o.c.

### 2.5 MISCELLANEOUS FRAMING AND SUPPORTS

- A. General: Provide steel framing and supports not specified in other Sections as needed to complete the Work.

## SECTION 05500 – METAL FABRICATIONS

- B. Fabricate units from steel shapes, plates, and bars of welded construction unless otherwise indicated. Fabricate to sizes, shapes, and profiles indicated and as necessary to receive adjacent construction.

### 2.6 METAL BOLLARDS

- A. Fabricate metal bollards from Schedule 80 steel pipe.
- B. Prime bollards with primer specified in Division 9 Section “High-Performance Coatings”.

### 2.7 FINISHES, GENERAL

- A. Comply with NAAMM’s “Metal Finishes Manual for Architectural and Metal Products” for recommendations for applying and designating finishes.
- B. Finish metal fabrications after assembly.

### 2.8 STEEL AND IRON FINISHES

- A. Galvanizing: Hot-dip galvanize items as indicated to comply with ASTM A 153/A 153M steel and iron hardware and with ASTM A 123/A 123M for other steel and iron products.
- B. Shop prime iron and steel items not indicated to be galvanized unless they are to be embedded in concrete, or masonry, or unless otherwise indicated.
- C. Preparation for Shop Priming: Prepare surfaces to comply with SSPC-SP 6/NACE No. 3, “Commercial Blast Cleaning.”

## PART 3 – EXECUTION

### 3.1 INSTALLATION, GENERAL

- A. Cutting, Fitting, and Placement: Perform cutting, drilling, and fitting required for installing metal fabrications. Set metal fabrications accurately in locations, alignment, and elevation; with edges and surfaces level, plumb, true, and free of rack; and measured from established lines and levels.
- B. Fit exposed connections accurately together to form hairline joints. Weld connections that are not to be left as exposed joints but cannot be shop welded because of shipping size limitations. Do not weld, cut, or abrade surfaces of exterior units that have been hot-dip galvanized after fabrication and are for bolted or screwed field connections.
- C. Field Welding: Comply with the following requirements:

## SECTION 05500 – METAL FABRICATIONS

1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
  2. Obtain fusion without undercut or overlap.
  3. Remove welding flux immediately.
  4. At exposed connections, finish exposed welds and surfaces smooth and blended.
- B. Fastening to In-Place Construction: Provide anchorage devices and fasteners where metal fabrications are required to be fastened to in-place construction.
- C. Provide temporary bracing or anchors in formwork for items that are to be built into concrete, masonry, or similar construction.

### 3.2 INSTALLING METAL BOLLARDS

- A. Fill bollards solidly with concrete and allow concrete to cure seven days before installing.
- B. Anchor bollards in place with concrete footings. Place concrete and vibrate or tamp for consolidation. Support and brace bollards in position until concrete has cured.
- C. Fill bollards solidly with concrete, mounding top surface to shed water.

### 3.3 ADJUSTING AND CLEANING

- A. Touchup Painting: Immediately after erection, clean field welds, bolted connections, and abraded areas. Paint uncoated and abraded areas with the same material as used for shop painting to comply with SSPC-PA 1 for touching up shop-painted surfaces.
- B. Galvanized Surfaces: Clean field welds, bolted connections, and abraded areas and repair galvanizing to comply with ASTM A 780.

END OF SECTION 05500

## SECTION 08361-SECTIONAL OVERHEAD DOORS

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. Section includes electrically operated sectional doors.
- B. Related Section:
  - 1. Division 5 Section "Metal Fabrications" for miscellaneous steel supports.
  - 2. Division 16- Electrical

#### 1.2 PERFORMANCE REQUIREMENTS

- A. General Performance: Sectional doors shall meet performance requirements specified without failure due to defective manufacture, fabrication, installation, or other defects in construction and without requiring temporary installation of reinforcing components.
- B. Delegated Design: Design sectional doors, including comprehensive engineering analysis by a qualified professional engineer, using performance requirements and design criteria indicated.
- C. Structural Performance: Exterior sectional doors shall withstand the effects of gravity loads, and the following loads and stresses within limits and under conditions indicated according to ASCE/SEI 7.
  - 1. Wind Loads: 37 psf , minimum 100 mph
- D. Air Infiltration: Maximum rate not more than indicated when tested according to ASTM E 283.
  - 1. Air Infiltration: Maximum rate of 0.08 cfm/sq. ft. at 15 and 25 mph.
- E. Windborne-Debris-Impact-Resistance Performance: Provide glazed sectional doors that pass large-missile-impact and cyclic-pressure tests when tested according to ASTM E 1886 and ASTM E 1996.
- F. Seismic Performance: Sectional doors shall withstand the effects of earthquake motions determined according to ASCE/SEI 7.
  - 1. Building Occupancy Category IV, Seismic Design Category D, Soil Site Class D, I = 1.0

#### 1.3 SUBMITTALS

- A. Product Data: For each type and size of sectional door and accessory.

## **SECTION 08361-SECTIONAL OVERHEAD DOORS**

- B. Shop Drawings: For each installation and for special components not dimensioned or detailed in manufacturer's product data. Include plans, elevations, sections, details, and attachments to other work.
- C. Samples: For each exposed product and for each color and texture specified.
- D. Delegated-Design Submittal: For sectional doors indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.
- E. Seismic Qualification Certificates: For sectional doors, accessories, and components, from manufacturer.
- F. Maintenance data.
- G. Warranties: Sample of special warranties.

### **1.4 QUALITY ASSURANCE**

- A. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for both installation and maintenance of units required for this Project.
- B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- C. Standard for Sectional Doors: Fabricate sectional doors to comply with DASMA 102 unless otherwise indicated. Operators to comply with UL325 (2010) requirements.

### **1.5 WARRANTY**

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of sectional doors that fail in materials or workmanship within specified warranty period.
  - 1. Warranty Period: Five years from date of Substantial Completion.
- B. Special Finish Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components that show evidence of deterioration of factory-applied finishes within specified warranty period.
  - 1. Warranty Period: 10 years from date of Substantial Completion.

## **PART 2 - PRODUCTS**

### **2.1 STEEL DOOR SECTIONS**

- A. Exterior Section Faces and Frames: Fabricate from manufacturer's standard zinc-coated (galvanized), cold-rolled, steel sheet.

## SECTION 08361-SECTIONAL OVERHEAD DOORS

1. Roll horizontal meeting edges to a continuous, interlocking, keyed, rabbeted, shiplap, or tongue-in-groove weathertight seal, with a reinforcing flange return.
  2. For insulated doors, provide sections with continuous thermal-break construction, separating the exterior and interior faces of door.
- B. Section Ends and Intermediate Stiles: Enclose open ends of sections with channel end stiles formed from galvanized-steel sheet welded to door section. Provide intermediate stiles formed from galvanized-steel sheet, cut to door section profile, and welded in place. Space stiles not more than 48 inches apart.
- C. Reinforce bottom section with a continuous channel or angle conforming to bottom-section profile and allowing installation of astragal.
- D. Reinforce sections with continuous horizontal and diagonal reinforcement, as required to stiffen door and for wind loading. Provide galvanized-steel bars, struts, trusses, or strip steel, formed to depth and bolted or welded in place. Ensure that reinforcement does not obstruct vision lites.
- E. Provide reinforcement for hardware attachment.
- F. Thermal Insulation: Insulate interior of steel sections with door manufacturer's standard CFC-free Polyurethane insulation, with maximum flame-spread and smoke-developed indexes of 75 and 450, respectively, according to ASTM E 84. Enclose insulation completely within steel sections that incorporate the following interior facing material, with no exposed insulation:
1. Interior Facing Material: Zinc-coated (galvanized), cold-rolled, commercial steel (CS) sheet.

### 2.2 TRACKS, SUPPORTS, AND ACCESSORIES

- A. Tracks: Manufacturer's standard, galvanized-steel track system of configuration indicated, sized for door size and weight, designed for lift type indicated and all existing or required clearances. Provide complete track assembly including brackets, bracing, and reinforcement for rigid support of ball-bearing roller guides for required door type and size. Slot vertical sections of track spaced 2 inches apart for door-drop safety device. Slope tracks at proper angle from vertical or design tracks to ensure tight closure at jambs when door unit is closed.
- B. Track Reinforcement and Supports: Galvanized-steel track reinforcement and support members. Secure, reinforce, and support tracks as required for door size and weight to provide strength and rigidity without sag, sway, and vibration during opening and closing of doors.
- C. Weatherseals and Astragals: Replaceable, adjustable, continuous, compressible weather-stripping gaskets of flexible vinyl, rubber, or neoprene fitted to bottom and top of sectional door unless otherwise indicated.
- D. Windows: Manufacturer's thermal window units of type and size arranged horizontally in the third (3<sup>rd</sup>) panel from the bottom of the door. Provide removable stops of same material as door-section frames.



## **SECTION 08361-SECTIONAL OVERHEAD DOORS**

### **2.3 HARDWARE**

- A. General: Provide heavy-duty, corrosion-resistant hardware, with hot-dip galvanized, stainless-steel, or other corrosion-resistant fasteners, to suit door type.
- B. Hinges: Heavy-duty, galvanized-steel hinges at each end stile and at each intermediate stile, according to manufacturer's written recommendations for door size. Attach hinges to door sections through stiles and rails.
- C. Rollers: Heavy-duty rollers with steel ball-bearings in case-hardened steel races, mounted with varying projections to suit slope of track. Provide 3-inch diameter roller tires for 3-inch- wide track.
- D. Push/Pull Handles: For push-up or emergency-operated doors, provide galvanized-steel lifting handles on each side of door.

### **2.4 COUNTERBALANCE MECHANISM**

- A. Torsion Spring: Counterbalance mechanism consisting of adjustable-tension torsion springs mounted on torsion shaft made of steel tube or solid steel. Provide springs designed for number of operation cycles indicated.
- B. Cable Drums and Shaft for Doors: Cast-aluminum or gray-iron casting cable drums mounted on torsion shaft and grooved to receive door-lifting cables as door is raised. Mount counterbalance mechanism with manufacturer's standard ball-bearing brackets at each end of torsion shaft.
- C. Cables: Galvanized-steel lifting cables.
- D. Cable Safety Device: Include, on each side-edge of door, a device designed to automatically stop door if either lifting cable breaks.
- E. Bracket: Provide anchor support bracket as required to connect stationary end of spring to the wall and to level the shaft and prevent sag.
- F. Provide a spring bumper at each horizontal track to cushion door at end of opening operation.

### **2.5 ELECTRIC DOOR OPERATORS**

- A. General: Electric door operator assembly of size and capacity recommended and provided by door manufacturer for door specified, with electric motor and factory-prewired motor controls, starter, gear-reduction unit, solenoid-operated brake, clutch, remote-control stations, integrated wireless remote control control devices, integral gearing for locking door, and accessories required for proper operation.
- B. Electric door operator to have integral remote radio-control feature and external mounted antenna for activation of doors within CCFR vehicles, inside and outside of each fire station. Provide remote control device for each electric door operator installed and one (1) programmable spare remote control unit per fire station.
  - 1. Comply with NFPA 70 and UL325 (2010).
  - 2. Provide control equipment complying with NEMA ICS 1, NEMA ICS 2, and NEMA ICS 6; with NFPA 70, Class 2 control circuit, maximum 24-V ac or dc.

## SECTION 08361-SECTIONAL OVERHEAD DOORS

- C. Usage Classification: Electric operator and components capable of operating for not less than number of cycles per hour indicated for each door. (25,000 cycles)
- D. Door-Operator Type: Unit of type indicated, consisting of electric motor, gears, pulleys, belts, sprockets, chains, and controls needed to operate door and meet required usage classification.
- E. Electric Motors: Comply with NEMA designation, temperature rating, service factor, enclosure type unless otherwise indicated.
  - 1. Motor Type and Controller: Reversible motor and controller (disconnect switch) for motor exposure indicated.
  - 2. Motor Size: Provide with large enough to start, accelerate, and operate door in either direction from any position, at a speed not less than 8 in./sec. and not more than 12 in./sec., without exceeding nameplate ratings or service factor.
  - 3. Operating Controls, Controllers (Disconnect Switches), Wiring Devices, and Wiring: Manufacturer's standard unless otherwise indicated.
- F. Non Contact Obstruction Detection Device: Equip each motorized door with indicated external automatic safety sensor capable of protecting full width of door opening. Activation of device immediately stops and reverses downward door travel.
  - 1. Weatherproof photo eye system: NEMA 4 rated weatherproof safety photo eye system with an operating and sensing range of 45 feet. Sensing beam to be non-visible and mounted at optimal height above vehicle bay floors to sense each type of vehicle and apparatus used by Capital City Fire and Rescue.
- G. Post or Wall Mounted Weatherproof Remote-Control Station: Momentary-contact, weatherproof three-button control station with push-button controls labeled "Open," "Close," and "Stop." Weatherproof three button remote control station shall be equipped with integral maintenance alert system, programmable to user determined number of door operation cycles and with flashing LED indicator light.
  - 1. Interior units, full-guarded, surface-mounted, heavy-duty weatherproof type, NEMA ICS 6, Type 4 enclosure.
- H. Emergency Manual Operation: Equip each electrically powered door with capability for emergency manual operation. Design manual mechanism so required force for door operation does not exceed 25 lbf.
- I. Emergency Operation Disconnect Device: Equip operator with hand-operated disconnect mechanism for automatically engaging manual operator and releasing brake for emergency manual operation while disconnecting motor without affecting timing of limit switch. Mount mechanism so it is accessible from floor level. Include interlock device to automatically prevent motor from operating when emergency operator is engaged.
- J. Motor Removal: Design operator so motor may be removed without disturbing limit-switch adjustment and without affecting emergency manual operation.
- K. Audible and Visual Signals: Audible alarm and visual indicator lights in compliance with regulatory requirements for accessibility.

## SECTION 08361-SECTIONAL OVERHEAD DOORS

### 2.6 OVERHEAD SECTIONAL DOORS

- A. Sectional Door: Sectional door formed with hinged sections.
  - 1. Basis-of-Design Product: Subject to compliance with requirements, provide Overhead Door Company Thermacore 591 or comparable product by one of the following:
    - a. C.H.I. Overhead Doors. (Basis of Design)
    - b. Raynor.
    - c. Wayne-Dalton Corp.
- B. Operation Cycles: Not less than 25,000.
- C. R-Value: 14.5 minimum.
- D. Steel Sections: Zinc-coated (galvanized) steel sheet, formed into sections 1-5/8-inch thick.
  - 1. Exterior-Face Surface: Grooved.
  - 2. Interior Facing Material: Zinc-coated (galvanized) steel sheet.
- E. Track Configuration: High-lift track or as required to match existing conditions.
- F. Weatherseals: Fitted to bottom and top and around entire perimeter of door. Provide combination bottom weatherseal and sensor edge.
- G. Windows: Manufacturer's thermal glazing located in the third (3<sup>rd</sup>) panel from bottom of door.
- H. **Jackshaft-Type Electric Door Operator:** Glacier Fire Station only
  - 1. Basis of Design: Overhead Door Company, H-75-11-L Jackshaft type operator with emergency chain hoist, weatherproof 3 button control, integral radio control with external antenna. 3/4 Horsepower, 115V, Single Phase.
  - 2. Usage Classification: Industrial duty, up to 80 cycles per hour.
  - 3. Operator Type: Jackshaft
  - 4. Motor Exposure: Interior, clean, and dry.
  - 5. Emergency Manual Operation: Chain hoist.
  - 6. Obstruction-Detection Device: Liftmaster CPS-LN4 weatherproof (NEMA 4) infra red sensing eyes or approved equal.
- I. **Trolley-Type Electric Door Operator:** Douglas, Juneau, Auke Bay & Lynn Canal Fire Stations
  - 1. Basis of Design: Overhead Door Company, T-75-11-L Trolley type operator, weatherproof 3 button control, integral radio control and external antenna. 3/4 horsepower, 115V, Single Phase.
  - 2. Usage Classification: Industrial duty, up to 80 cycles per hour.
  - 3. Operator Type: Trolley
  - 4. Motor Exposure: Interior, clean, and dry.
  - 5. Emergency Manual Operation: No emergency chain hoist is required.  
Obstruction-Detection Device: Liftmaster CPS-LN4 weatherproof (NEMA 4) infra red sensing eyes of approved equal.

## **SECTION 08361-SECTIONAL OVERHEAD DOORS**

### **J. Door Finish:**

1. Kynar or Powder-Coated Finish: Minimum 1 prime coat and 1 finish coat. Color and gloss as selected by Owner from manufacturer's full range.
2. Finish of Interior Facing Material: Finish to be same as exterior system. Color and gloss as selected by Owner from manufacturer's full range.

## **PART 3 - EXECUTION**

### **3.1 INSTALLATION**

- A. Install sectional doors and operating equipment complete with necessary hardware, anchors, inserts, hangers, and equipment supports; according to manufacturer's written instructions and as specified.
- B. Tracks: Provide sway bracing, diagonal bracing, and reinforcement as required for rigid installation of track and door-operating equipment. Repair galvanized coating on tracks according to ASTM A 780.
- C. Adjust hardware and moving parts to function smoothly so that doors operate easily, free of warp, twist, or distortion. Adjust doors and seals to provide weathertight fit around entire perimeter.

### **3.2 DEMONSTRATION and O&M MANUALS**

- A. Engage a factory-authorized service representative to train Capital City Fire and Rescue personnel and the owner's maintenance personnel to adjust, operate, and maintain sectional doors. Provide written operations and maintenance manuals in quantities and format per the contract.

**END OF SECTION 08361**

## SECTION 16000 - GENERAL PROVISIONS

### SECTION 16000 - GENERAL PROVISIONS

#### PART 1 – GENERAL

##### 1.1 DEFINITIONS

Accepted/Approved:	Shall mean accepted by the Engineer.
Engineer:	Shall mean the Engineer responsible for these electrical documents, or a specifically authorized representative.
Furnish:	Shall mean deliver to the Project site.
Install:	Shall mean build into the Work, including connections and all parts considered incidental to a complete and operational installation.
Provide:	Shall mean furnish and install complete.
Work or Project:	Shall mean all Work required by the Contract Agreement.

##### 1.2 ABBREVIATIONS AND INITIALS

- A. Any or all of the following may appear in the Contract Documents, and shall be applied per the following explanations.

AC	Alternating Current (60 HZ unless otherwise noted)
AFF	Above Finished Floor
AIC	Amperes Interrupting Capacity (RMS Symmetrical)
ANSI	American National Standards Institute
AWG	American Wire Gauge Size
EMT	Electrical Metallic Tubing
ETL	Electrical Testing Laboratory
FM	Factory Mutual
GND	Ground
HZ	Frequency in Cycles per Second
HP	Horsepower
IBC	International Building Code
NEC	National Electrical Code
NECA	National Electrical Contractors Association Inc.
NEMA	National Electrical Manufacturers Association
NFPA	National Fire Protection Association
OSHA	Occupational Safety and Health Administration
RSC	Rigid Steel Conduit
UL	Underwriters Laboratories
VAC, VDC	Volts, AC or DC, respectively

##### 1.3 COORDINATION

## **SECTION 16000 - GENERAL PROVISIONS**

- A. The Electrical Sub-Contractor shall review the Contract Documents of the other trades on the Project, and shall coordinate the installation of electrical features with the Work of all other trades. In areas such as the garage bays and mechanical room, where conflicts are likely with structural, mechanical, or other features, the electrical installation shall be performed after the other trades, and arranged to eliminate conflicts.

### **1.4 INDEPENDENT TESTING**

- A. All electrical materials and equipment shall, where applicable, be listed or labeled by a nationally recognized independent testing agency such as Underwriters Laboratories or Factory Mutual.

### **1.5 SERVICE INTERRUPTIONS**

- A. All work covered by this Contract shall be performed on de-energized circuits. Where such would deprive the Owner of existing service, the Contractor shall give at least 24 hours advance notice of the outage.

END OF SECTION 16000

## **SECTION 16010 - SCOPE OF WORK**

### **SECTION 16010 - SCOPE OF WORK**

#### **PART 1 – GENERAL**

##### **1.1 GENERAL REQUIREMENTS**

- A. This Project requires the demolition of existing and installation of new electrical operators, in accordance with these Contract Specifications, for existing new garage doors in the five Capital City Fire and Rescue (CCFR) facilities in the City and Borough of Juneau, Alaska.

##### **1.2 DESCRIPTION OF BASIC SERVICES**

- A. Demolition: In each of the facilities the Contractor will remove of the existing overhead door branch circuitry (unless being reused), controls, operators and associated electrical equipment and connections.
- B. New Work: In each of the facilities the Contractor will provide (as required) new branch circuitry, new overcurrent devices (circuit breakers), connections to the new overhead door operators, connections to the push-button controls, connections to the new safety eyes, connections to the new antennas, all new interconnections of the above to provide proper functioning of the systems and any programming or set-up of the devices to establish reliable operation for the CCFR personnel.
- C. Distribution: Utilize the existing panelboard(s) in each facility to serve the new door operators. Each panelboard is shown on the Contract Drawings. Equip each panelboard with circuit breakers, as required, to serve the new loads. All feeder and branch circuits shall be run in metallic conduit with separate equipment grounding conductors.
- D. Equipment: Provide electrical connection to all equipment specified herein to complete the installation of the new overhead door operators and associated controls. Include disconnects, overcurrent protection, flexible connections, access and guards as required by the equipment, these Specifications and pertinent codes.

##### **1.3 DESCRIPTION OF INDIVIDUAL CCFR FACILITY REQUIREMENTS**

###### **A. DOUGLAS FIRE STATION**

- 1. Demolition: Remove the existing overhead door operators (total of four), all controls and safeties, and associated electrical conduit, boxes, conductors and hardware to prepare for the new installation. All the electrical installation not being reused shall be removed in entirety.
- 2. New Work: Provide new raceways and boxes, as required, from the existing panelboard or retained existing conduit system to the new operator locations. Provide four (4) new 25 ampere, single-pole circuit breakers in the existing panelboard to feed the new operators. Provide two (2) individual #12 AWG conductors, plus ground, from the panelboard or retained existing wiring system to each new operator. Connect each new circuit to the new

## **SECTION 16010 - SCOPE OF WORK**

operator as appropriate. Ensure inclusion of a manual disconnect switch for each application. Provide a new panelboard schedule to reflect any changes to the circuitry.

Provide mounting and connection of the four furnished three-button weatherproof controllers and four infra-red safety eyes (NEMA 4 installation). Confirm correct operation of all newly installed equipment via the push-button controllers and the wireless remote controls.

### **B. JUNEAU FIRE STATION**

1. Demolition: Remove the existing overhead door operators (total of eleven), all controls and safeties, and associated electrical conduit, boxes, conductors and hardware to prepare for the new installation. All the electrical installation not being reused shall be removed in entirety.
2. New Work: Provide new raceways and boxes, as required, from the existing panelboard or retained existing conduit system to the new operator locations. Provide eleven (11) new 25 ampere, single-pole circuit breakers in the existing panelboard to feed the new operators. Provide two (2) individual #12 AWG conductors, plus ground, from the panelboard or retained existing wiring system to each new operator. Connect each circuit to the new operator as appropriate. Ensure inclusion of a manual disconnect switch for each application. Provide a new panelboard schedule to reflect any changes to the circuitry.

Provide mounting and connection of the eleven furnished three-button weatherproof controllers and eleven infra-red safety eyes (NEMA 4 installation). Confirm correct operation of all newly installed equipment via the push-button controllers and the wireless remote controls.

### **C. GLACIER FIRE STATION**

1. Demolition: Remove the existing overhead door operators (total of thirteen), all controls and safeties, and associated electrical conduit, boxes, conductors and hardware to prepare for the new installation. Remove the existing three-pole circuit breakers in the existing panelboards associated with the existing door operators. Turn over the breakers to CBJ maintenance personnel as spares. All the electrical installation not being reused shall be removed in entirety.
2. New Work: Provide new raceways and boxes, as required, from the existing panelboards or retained existing conduit systems to the new operator locations. Provide thirteen (13) new 25 ampere, single-pole circuit breakers in the existing panelboards to feed the new operators. Provide two (2) individual #12 AWG conductors, plus ground, from the panelboard or retained existing wiring system to each new operator. Connect each circuit to the new operator as appropriate. Ensure inclusion of a manual disconnect switch for each application. Provide a new panelboard schedule to reflect the changes to the circuitry.

Provide mounting and connection of the thirteen furnished three-button weatherproof controllers and thirteen infra-red safety eyes (NEMA 4 installation). Confirm correct operation of all newly installed equipment via the push-button controllers and the wireless remote controls.

### **D. AUKE BAY FIRE STATION**



## SECTION 16010 - SCOPE OF WORK

1. Demolition: Remove the existing overhead door operators (total of five), all controls and safeties, and associated electrical conduit, boxes, conductors and hardware to prepare for the new installation. All of the electrical installation not being reused shall be removed in entirety.
2. New Work: Provide new raceways and boxes, as required, from the existing panelboard or retained existing conduit system to the new operator locations. Provide five (5) new 25 ampere, single-pole circuit breakers in the existing panelboard to feed the new operators. Provide two (2) individual #12 AWG conductors, plus ground, from the panelboard or retained existing wiring system to each new operator. Connect each circuit to the new operator as appropriate. Ensure inclusion of a manual disconnect switch for each application. Provide a new panelboard schedule to reflect any changes to the circuitry.

Provide mounting and connection of the five furnished three-button weatherproof controllers and five infra-red safety eyes (NEMA 4 installation). Confirm correct operation of all newly installed equipment via the push-button controllers and the wireless remote controls.

### E. LYNN CANAL FIRE STATION

1. Demolition: Remove the existing overhead door operators (total of two), all controls and safeties, and associated electrical conduit, boxes, conductors and hardware to prepare for the new installation. Remove the existing multi-pole circuit breakers in the existing panelboard associated with the existing door operators. Turn over the breakers to CBJ maintenance personnel as spares. All of the electrical installation not being reused shall be removed in entirety.
2. New Work: Provide new raceways and boxes, as required, from the existing panelboard or retained existing conduit system to the new operator locations. Provide two (2) new 25 ampere, single-pole circuit breakers in the existing panelboard to feed the new operators. Provide two (2) individual #12 AWG conductors, plus ground, from the panelboard or retained existing wiring system to each new operator. Connect each circuit to the new operator as appropriate. Ensure inclusion of a manual disconnect switch for each application. Provide a new panelboard schedule to reflect the changes to the circuitry.

Provide mounting and connection of the two furnished three-button weatherproof controllers and two infra-red safety eyes (NEMA 4 installation). Confirm correct operation of all newly installed equipment via the push-button controllers and the wireless remote controls.

### 1.4 COORDINATION

- A. The electrical contractor shall review the Contract Documents of other trades involved and shall coordinate the installation of electrical features with the Work of all other trades. In areas such as the garage bays and mechanical rooms, where conflicts are likely, the electrical installation shall be performed after the other trades and arranged to eliminate conflicts.

END OF SECTION 16010

## SECTION 16012 - SUBMITTALS

### SECTION 16012 - SUBMITTALS

#### PART 1 – GENERAL

##### 1.1 CATALOG CUTS

- A. Prior to the purchase of any materials or equipment, the Contractor shall submit to the Engineer, for acceptance, data completely describing all items intended for use in the work. This data shall include the manufacturer and identifying number or nomenclature; the manufacturer's published data as to size, capacity, power requirements and dimensions; and such other information as necessary to properly describe each item. Catalog cuts fulfilling these requirements will be considered appropriate for this application.
- B. Such "commodity" items as those covered by Sections 16110, 16120, 16130, 16190, and 16450 need not be submitted if they are being provided exactly as specified, and are so certified in the Index section of the submittal.

##### 1.2 QUANTITY

- A. The number of copies to be submitted and the number of copies that will be returned with the Engineer's action noted thereon will be as set forth in the General and/or Special Conditions to the contract, or as modified at the Pre-construction Conference.

##### 1.3 CONTRACTOR'S CERTIFICATION

- A. Each submittal shall contain a certification stating that the Electrical Sub-Contractor has reviewed the list and that the items proposed conform to the contract requirements. Said certification shall be signed by the individual under whose Alaska Electrical Administrator's license the Work will be performed, and a copy of the license shall be included in the submittals.

##### 1.4 SUBMITTAL PACKAGE

- A. Electrical submittals shall be provided in essentially one submittal package. With prior consent from the Engineer, long lead-time items may be submitted prior to the remainder of the package. Also with prior consent from the Engineer, delayed items may be submitted later, if so listed in the Index.
- B. All submittal materials shall be collated into complete sets, and if more than six pages long shall be bound by one of the following methods:
  - 1. Two-hole binder, such as "Pressboard", with cloth reinforced hinges and "Acco" type metal prong fasteners.
  - 2. Three ring binders with vinyl covers.

- C. Each book shall be labeled with the Project name, Contractor's name and Electrical

## **SECTION 16012 - SUBMITTALS**

Subcontractor's name.

- D. The first page(s) of each book shall be a complete index, including any items "PREVIOUSLY SUBMITTED" or "TO BE SUBMITTED LATER." Said index shall be in order of the Specifications and shall list the applicable section with appropriate page numbers.
- E. Markings that the Contractor or its supplier adds to printed materials (such as catalog cuts) shall be made in a color other than red.

### **1.5 CORRECTIONS**

- A. Where corrections are noted on the submittals by the Engineer, the Contractor shall take appropriate corrective actions, including forwarding the corrections to his supplier(s). Where re-submittal is required, the supplier(s) shall provide new sheets as necessary, to acknowledge that the corrections have been implemented into the materials order for the project.

END OF SECTION 16012

## **SECTION 16020 - WORK INCLUDED**

### **SECTION 16020 - WORK INCLUDED**

#### **PART 1 – GENERAL**

##### **1.1 MATERIAL**

- A. Provide all Work as described in these Specifications for a complete, safe, and functional installation. Unless otherwise noted, all materials shall be of new manufacture, American-made, of the manufacturer's standard construction for the application. The omission of express reference to any part, supplies, services, or facilities necessary for or incidental to a complete installation shall not be construed as a release from furnishing such items. Any deviations from the installation described in these Specifications, due to a particular manufacturer's requirements, shall be made without additional cost to the Owner.

##### **1.2 INSTALLATION**

- A. All materials shall be installed in a neat, orderly, and secure fashion, as required by these Specifications and commonly recognized standards of good workmanship, for which the Engineer's judgment shall be final. In addition to the access and clearance requirements of the NEC, all items normally considered to be factory or field-serviceable shall be installed in such a manner as to be easily and safely accessible and removable without dismantling surrounding construction.

##### **1.3 WIRING OF UTILIZATION EQUIPMENT**

- A. Where equipment arrangement varies from that described in these Specifications, making necessary additional disconnect switches in order to comply with the NEC, such disconnects shall be provided at no additional cost to the Owner. Prior to ordering materials or performing installation, the Electrical Subcontractor shall verify the sizes, configurations, and locations of all equipment, to ensure that all required connections are correctly provided.

##### **1.4 REPAIR OF EXISTING FEATURES**

- A. Where existing or previously completed building surfaces or other features must be cut, penetrated, or otherwise altered for installation of electrical features, such work shall be carefully laid out and performed, and any subsequent patching or repairs shall be performed by skilled mechanics of the trades involved, at no additional cost to the Owner.

## **SECTION 16020 - WORK INCLUDED**

### **1.5 WORK INCIDENTAL TO SUBSTITUTIONS**

- A. When substitutions for specified methods or materials alter the relationship between the Work actually required and that called for by the Contract Specifications, the Contractor shall bear responsibility for all expenses incurred by any necessary revisions, including the Work of other trades.

### **1.6 PROTECTION AND CLEANING**

- A. All electrical materials and equipment shall, both in shipment and during construction Work, be protected against water, dust, debris, overspray, or any other contamination or damage, whether environmental or as a result of handling or construction work. Damaged items shall be replaced or repaired to original manufactured condition, at no additional cost to the Owner. All construction dust, debris, overspray, scrap and surplus materials, etc. resulting from this work shall be cleared away, leaving the installation completely clean.

**END OF SECTION 16020**

## **SECTION 16025 - CODES AND FEES**

### **SECTION 16025 - CODES AND FEES**

#### **PART 1 – GENERAL**

##### **1.1 CODES**

A. All Work shall comply with the latest editions of:

1. The National Electrical Code (NEC).
2. The National Electrical Safety Code (NESC).
3. The NFPA Codes.
4. OSHA Regulations.
5. The International Building Code (IBC).
6. The International Fire Code (IFC).
7. Americans with Disabilities Act Accessibility Guidelines (ADAAG)
8. Previous editions of the above, where required by Federal, State or Local laws or regulations.
9. All applicable Federal, State, and Local laws and regulations.

##### **1.2 WAIVERS & INTERPRETATIONS**

A. Where the authority having jurisdiction grants waivers or less stringent interpretations of the foregoing, they shall not constitute a release from strict application of these requirements, unless specifically accepted by the Engineer.

##### **1.3 PERMITS AND FEES**

A. Unless specifically stated otherwise elsewhere within the Contract Documents, the Contractor shall obtain and pay for all permits required for the Work in this Division.

##### **1.4 OTHER STANDARDS**

A. Unless otherwise noted or specified, all materials and work shall be in conformance with the applicable standards of the following organizations:

1. American National Standards Institute (ANSI).
2. American Society for Testing and Materials (ASTM).
3. Institute of Electrical and Electronic Engineers (IEEE).
4. National Electrical Contractors Association (NECA).
5. National Electrical Manufacturers' Association (NEMA).
6. Underwriters Laboratories (UL) or Factory Mutual (FM).

END OF SECTION 16025

## **SECTION 16030 - TESTS AND INSPECTIONS**

### **SECTION 16030 - TESTS AND INSPECTIONS**

#### **PART 1 – GENERAL**

##### **1.1 SCOPE**

- A. In addition to any tests required elsewhere in these Specifications, the Engineer may require appropriate tests and/or uncovering of any electrical features whose integrity he has reason to doubt. Such tests may include, but are not limited to, continuity, circuit resistance, and insulation resistance of circuits and equipment, including wires, cables, and grounding. Where such tests or uncovering are required, the Contractor shall furnish all personnel, equipment, and services necessary to conduct the tests, and/or uncovering and subsequent reconstruction.
- B. In addition to any inspections required elsewhere in these specifications or requested by the Owner, the Engineer may conduct periodic inspections of the work as deemed appropriate. For all inspections, the Contractor shall make available qualified electrical personnel to answer questions, demonstrate operation of completed features of the Work, provide safe access to enclosures, and the like.
- C. All tests, uncovering of Work and subsequent reconstruction, and inspection assistance described in the foregoing shall be provided at no additional cost, regardless of whether or not defects in the Work are discovered in the course of such actions. For all Work covered by this Division, this requirement shall take precedence over any related provisions in the General Conditions or other parts of these Specifications.
- D. The Contractor shall schedule all tests and inspections at least three working days in advance of the desired time, and will not be entitled to any additional compensation or time extension for delays caused by inability of the Engineer or his representative to be available at the desired time.

**END OF SECTION 16030**

## **SECTION 16031 - SYSTEM DEMONSTRATIONS**

### **SECTION 16031 - SYSTEM DEMONSTRATIONS**

#### **PART 1 – GENERAL**

##### **1.1 DEMONSTRATIONS**

- A. At a mutually agreed-upon time, as close as possible to the time of Beneficial Occupancy of the Project by the Owner, the Contractor shall instruct the Owner's maintenance personnel in the proper operation and maintenance of the electrical system.
- B. The demonstrations shall cover the operation of all controls, protective devices, and the like, including emergency procedures.
- C. The demonstrations shall involve all relevant systems including the electrical distribution system, the lighting system and all controls.
- D. The demonstrations shall cover all preventive maintenance items that the Owner's personnel should routinely perform and shall continue for the length of time necessary to familiarize the Owner's personnel with the required items specified above.

##### **1.2 DOCUMENTATION**

- A. Upon completion of the demonstrations, the Contractor shall prepare a written statement for the Owner's signature, attesting to the fact that the demonstrations were successfully completed and all equipment performed properly. A signed copy of this statement shall be bound into each copy of the Operation and Maintenance Manuals.

**END OF SECTION 16031**



## **SECTION 16032 - O&M MANUALS AND AS-BUILT DRAWINGS**

### **SECTION 16032 - O&M MANUALS AND AS-BUILT DRAWINGS**

#### **PART 1 – GENERAL**

##### **1.1 OPERATION AND MAINTENANCE MANUALS**

- A. The Electrical Subcontractor shall submit for review five (5) copies of Operation and Maintenance Manuals (hereinafter called "O&M MANUALS") for the Project. These manuals shall be bound as specified for Submittals.
- B. Each manual shall include all information covered by the final accepted submittals, modified as necessary to reflect the final as-built condition. Each manual shall provide complete listings of repair and replacement parts for all equipment, and names and addresses of the suppliers from which the equipment was obtained.
- C. Each manual shall include complete listing of all equipment that may require periodic servicing, with recommended schedules and complete instructions for performing said servicing. Service instructions shall include complete narrative descriptions and illustrations as necessary to thoroughly describe all service operations.

##### **1.2 AS-BUILT DRAWINGS**

- A. The Electrical Subcontractor shall at all times keep a current set of Contract Drawings on the Project site. This set shall be kept in good condition, and shall be neatly and accurately marked to show the as-built condition of the electrical installation. Of particular importance are the precise locations of any concealed features such as conductors, raceways and junction boxes.
- B. The field-marked set of drawings described above shall be available to the Engineer or his authorized representative for checking at every inspection.
- C. Upon completion of the Project, the field-marked set of drawings shall be forwarded to the Engineer. These, along with any supplementary drawings, sketches, notes or other materials needed to completely describe the as-built condition of the electrical installation, shall be used to develop a final set of reproducible As-Built Drawings of the Project. After review by the Contractor these drawings shall be submitted to the Engineer and Owner for final approval.
- D. Failure to comply with any of the preceding provisions, discrepancies discovered in field inspection, or any other irregularity that casts doubt on the accuracy of the as-built drawings may subject the Electrical Subcontractor to forfeiture of payment.

END OF SECTION 16032

## **SECTION 16040 - IDENTIFICATION**

### **SECTION 16040 - IDENTIFICATION**

#### **PART 1 – GENERAL**

##### **1.1 EQUIPMENT LABELING**

- A. Panelboards, disconnect switches, push-buttons, selector switches, switches, circuit breakers and the like shall be labeled with laminated plastic labels engraved with white letters on black background. Lettering shall be block style, 1/4" tall, except where space limitations, drawing notes, or other requirements dictate otherwise. Labels shall be secured with pop rivets or fasteners per Section 16190 – Fastening Hardware. Adhesive attachment is not acceptable. Temporary markings will not be permitted to remain on equipment; they shall be removed, and any defaced finishes repaired to match original manufactured condition.

##### **1.2 CIRCUIT DIRECTORY**

- A. All existing panelboards with circuit revisions from this Work shall have new and accurate typed circuit directory cards (panel schedules). Provide schedules of the two-column type, with odd numbers down the left and even numbers down the right. Ensure inclusion of all spare circuit breakers and blank spaces.

##### **1.3 TERMINAL STRIPS**

- A. Terminals on strips shall be numbered with indelible markings on special strips designed for the purpose and a diagram or typed directory shall be provided in the terminal enclosure to identify the origin, function, and destination of each conductor in the enclosure.

##### **1.4 CONDUCTORS**

- A. All conductors in pull or junction boxes or other enclosures shall be permanently and legibly tagged or labeled with panel and circuit numbers or other data that clearly identifies their origin, function, and destination.

**END OF SECTION 16040**

## **SECTION 16110 - RACEWAYS**

### **SECTION 16110 - RACEWAYS**

#### **PART 1 – GENERAL**

##### **1.1 SUBMITTAL REQUIREMENTS**

- A. Provide submittal data, per Section 16012 - Submittals, for all raceways, fittings and appurtenances, unless items are provided as specified and are so certified.

##### **1.2 APPLICATIONS**

- A. All conductors shall be run in Electrical Metallic Tubing (EMT), unless otherwise noted.
- B. The final connection to any motor equipment, or equipment which may require position adjustment after installation, shall be made through a slack section of flexible metal conduit 18" to 36" long. For such connections to equipment in the garage bays or other damp, wet or exterior locations or in mechanical rooms, the flex shall be oil-resistant liquidtight.

#### **PART 2 - PRODUCTS**

##### **2.1 CONDUIT AND TUBING**

- A. Electrical Metallic Tubing shall be galvanized with smooth interior; Allied Tube & Conduit, J & L, Triangle, Youngstown, or accepted equal; made up with compression or set-screw fittings. Connectors shall have insulated throats.
- B. Flexible Metal Conduit shall be Greenfield type, made of interlocking galvanized steel armor; Triangle, Rome, National Electric, or accepted equal.
- C. Liquidtight Flexible Metal Conduit shall have a flexible galvanized steel spiral core with a flexible outer jacket of PVC, resistant to water, oil, grease, corrosive agents, and abrasion; Carol, Anaconda, or accepted equal. If used without a separate equipment grounding conductor, liquidtight flexible conduit shall have a continuous copper ground wire integral to its construction and shall be made up with fittings listed for grounding.

#### **PART 3 - EXECUTION**

##### **3.1 LAYOUT**

- A. Raceways shall be concealed, except in the garage bays and mechanical rooms, unless otherwise noted. Exposed raceways shall be run square with the building lines. Concealed raceways may be run in direct lines where practical.

##### **3.2 SIZING**

## SECTION 16110 - RACEWAYS

- A. Unless otherwise noted or directed by the Engineer, branch circuit raceways shall be sized per the NEC tables as follows.

1. Raceways for THW and XHHW conductors: sized for THW.
2. Raceways for THHN or THWN conductors: sized for XHHW.

### 3.3 INSTALLATION

- A. Structural members shall not be cut, drilled, or notched for raceways or other electrical features unless specifically accepted by the Engineer.
- B. All raceways running from a warm area to a cold area shall be securely sealed inside the warm end with ductseal, a silicone compound not harmful to the wire insulation, or accepted equal.

### 3.4 ASSEMBLY

- A. Conduit joints shall be cut square, reamed smooth, and cleaned of burrs, cutting oil, cuttings, and other foreign materials prior to assembly. Ends shall be capped to prevent entrance of foreign materials during construction.
- B. Raceways shall be physically and electrically continuous from enclosure to enclosure. All joints shall be wrench-tight and free of foreign materials. For conduits of one-inch trade size and larger, bushings shall be of the insulated type.
- C. Bends, offsets, and saddles shall be made with factory elbows and fittings, or field made with listed benders, to not less than NEC required radii. Use of conduit bodies having the "LL" or LR" configurations is not permitted unless specifically called for or accepted.
- D. Raceways shall be securely fastened in place at NEC required intervals and at each elbow by means of malleable one-hole straps, clamps where necessary, two-hole sheet metal straps, or other accepted devices; all with fastening hardware per Section 16190. Wire shall not be used for fastening raceways.

END OF SECTION 16110

## SECTION 16120 - WIRE AND CABLE

### SECTION 16120 - WIRE AND CABLE

#### PART 1 – GENERAL

##### 1.1 SCOPE

- A. Provide power wire and cable as specified herein. All wire and cable shall be of types, specifications, and applications recognized by the NEC.
- B. Signal and other specialized conductors shall be as specified in the Section describing the particular system on which they are applied.

##### 1.2 SUBMITTAL REQUIREMENTS

- A. Provide submittal data, per Section 16012 - Submittals, for all wire and cable, unless items are provided as specified and are so certified.

#### PART 2 - PRODUCTS

##### 2.1 CONDUCTORS

- A. All branch circuit conductors shall be copper, #12 AWG minimum. Conductors #8 AWG and larger shall be stranded; conductors #10 AWG or smaller may be solid or stranded.

##### 2.2 INSULATION TYPES

- A. Branch circuit conductors shall be 600 volt insulated and shall have type THHN/THWN or XHHW-2 insulation. Outdoors or other cold location conductors shall have type XHHW-2 insulation. Nylon-jacketed conductors shall not be used in any location subject to ambient temperatures below 32° F.

#### PART 3 - EXECUTION

##### 3.1 INSTALLATION

- A. Branch circuit conductors shall be #12 AWG copper, unless indicated otherwise. On any 120 volt, 20 ampere circuit over 100 feet (actual measured one-way distance) from panelboard to the equipment served, use #10 conductors for the entire circuit. Where field conditions dictate circuit routings that increase conductor lengths beyond what would be expected from the layout, they shall be submitted to the Engineer for acceptance.
- B. All conductor connections shall be made up securely with solderless pressure connectors such as

## SECTION 16120 - WIRE AND CABLE

wirenuts, set screw lugs, split-bolts, "wing nuts", or suitable crimp fittings. Live spring connectors that cannot be tightened to a point where conductor deformation occurs are specifically prohibited. Each wirenut-type connector shall not contain more than four conductors, regardless of size.

- C. Flexible cords shall be connected to equipment, boxes, or other enclosures only by means of cordgrip bodies or other strain relief fittings specifically designed for the purpose. Nonmetallic cable clamps are specifically forbidden for this use.
- D. Where conductors or connectors are to be connected to metal surfaces, the surface shall first be scraped free of any paint, oxide, or other non-conductive substances.

### 3.2 COLOR CODING

- A. Conductors shall be color coded by factory pigmentation of the insulation or by wrapping the ends with colored tape in all enclosures. White and green conductors may never be phase taped for any use other than neutral and ground, respectively. Color coding throughout the entire installation shall be as follows:

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

### 3.3 SEPARATION OF SYSTEMS

- A. Wiring of different voltage levels, frequency, current characteristics or functions shall not share the same raceways or enclosures unless permitted by the Engineer, or inherently necessary for correct system function.

END OF SECTION 16120

## **SECTION 16130 - OUTLET BOXES**

### **SECTION 16130 - OUTLET BOXES**

#### **PART 1 – GENERAL**

##### **1.1 SCOPE**

- A. Provide outlet boxes for connection of branch circuits to fixtures and devices as specified herein.

##### **1.2 SUBMITTAL REQUIREMENTS**

- A. Provide submittal data, per Section 16012 - Submittals, for all outlet boxes, unless items are provided as specified and are so certified.

#### **PART 2 - PRODUCTS**

##### **2.1 MANUFACTURERS**

- A. Metal boxes shall be the products of Racor, Steel City, Appleton or accepted equal.

##### **2.2 TYPES AND SIZES**

- A. Boxes shall be 4" square, galvanized sheet steel, deep-type (2-1/8" nominal) unless space limitations require shallower. Provide solid ganged boxes for more than two devices.

#### **PART 3 - EXECUTION**

##### **3.1 INSTALLATION**

- A. Outlet boxes shall be installed plumb with, and securely fastened to the structural framing of, the surrounding construction. Recessed boxes shall have plaster rings such that the device cover plates are tight to the wall or ceiling finish.

END OF SECTION 16130

## SECTION 16131 - PULL AND JUNCTION BOXES

### SECTION 16131 - PULL AND JUNCTION BOXES

#### PART 1 – GENERAL

##### 1.1 PULLBOXES

- A. Provide pullboxes where necessary to facilitate conductor installation or to redirect raceway runs, as further specified herein. At the minimum, raceway runs shall have a pullbox every 100 feet or after every 270° of bends, whichever comes first.

##### 1.2 JUNCTION BOXES

- A. Where necessary in raceway or cable systems to tap, terminate, facilitate conductor installation or redirect raceway runs, provide junction boxes as specified herein.

##### 1.3 SUBMITTAL REQUIREMENTS

- A. Provide submittal data, per Section 16012 - Submittals, for all pull and junction boxes.

#### PART 2 - PRODUCTS

##### 2.1 SIZES

- A. Unless otherwise noted or specified, pull and junction boxes shall be sized according to NEC requirements for the number, size, and entry configuration of the conduits and conductors entering them.

##### 2.2 BRANCH CIRCUITS

- A. Unless otherwise noted or specified, pull and junction boxes for branch circuit raceways shall be outlet boxes as specified in Section 16130, with matching blank covers.

#### PART 3 - EXECUTION

##### 3.1 INSTALLATION

- A. Pull and junction boxes shall not be installed in visible locations in finished areas unless specifically called for or accepted by the Engineer. Pull and junction boxes shall be securely fastened to the building structure by means independent of the raceways entering them.

##### 3.2 AS-BUILT DRAWINGS



## **SECTION 16131 - PULL AND JUNCTION BOXES**

- A. Pull and junction box locations shall be accurately shown on the as-built drawings.

END OF SECTION 16131

## **SECTION 16150 - MOTORS**

### **SECTION 16150 - MOTORS**

#### **PART 1 - GENERAL**

##### **1.1 SCOPE**

- A. Motors are furnished with the driven equipment, under other Divisions of these Specifications, unless otherwise noted. Complete connection shall be provided under this Division.

#### **PART 2 - PRODUCTS**

##### **2.1 VOLTAGES**

- A. Motors smaller than 1/2 HP shall be designed for operation at 115 VAC (nominal), single-phase, and shall have integral thermal overload protection.

##### **2.2 OTHER CHARACTERISTICS**

- A. Motor housings shall be open drip-proof, TEFC, or explosion proof, as appropriate for the use intended and the environment where installed, or as noted.
- B. Unless otherwise noted or specifically accepted by the Engineer, motors shall be only Code Letters "B" through "E".
- C. All motors shall draw no more than nameplate amperage (not service factor amperage) when operating driven equipment within both the mechanical and electrical design parameters for this project.

**END OF SECTION 16150**

## **SECTION 16160 - MOTOR STARTERS**

### **SECTION 16160 - MOTOR STARTERS**

#### **PART 1 - GENERAL**

##### **1.1 SCOPE**

- A. Provide motor starters as required. Where others furnish motor starters as part of mechanical equipment, refer to Specification Section 16020 for connection requirements.

##### **1.2 SUBMITTAL REQUIREMENTS**

- A. Provide submittal data, per Section 16012, for all motor starters. Include manufacturer's table(s) for sizing overload thermal units.

#### **PART 2 - PRODUCTS**

##### **2.1 MANUAL MOTOR START SWITCHES**

- A. Manual motor starters/switches shall be Square D Class 2510 or accepted equal, with red pilot light, overload protection with reset capability, and toggle handle with guard/lock-off hasp.

#### **PART 3 - EXECUTION**

##### **3.1 INSTALLATION**

- A. Install motor starters and motor controllers in locations as required and utilize fastening hardware as specified herein. Ensure adequate operational and code required clearances are maintained. Install the correct number and size of overload devices to comply with equipment requirements.

**END OF SECTION 16160**

## **SECTION 16170 - DISCONNECTS**

### **SECTION 16170 - DISCONNECTS**

#### **PART 1 - GENERAL**

##### **1.1 SCOPE**

- A. Provide disconnect switches for motors and other circuits, as specified herein.

##### **1.2 SUBMITTAL REQUIREMENTS**

- A. Provide submittal data, per Section 16012, for all disconnect switches.

#### **PART 2 - PRODUCTS**

##### **2.1 DISCONNECT SWITCHES, GENERAL**

- A. Unless otherwise noted, disconnect switches shall have the proper NEMA enclosure to suit the location. Each disconnect shall be rated for the proper voltage to suit the circuit. Motor disconnects shall be sized according to their standard, not maximum, ratings.
- B. Provide each disconnect with quick-make/quick-break mechanisms to disconnect all ungrounded conductors. Switch handle positions shall be marked to indicate the ON and OFF conditions. Handles shall be capable of being locked in the OFF or open position.
- C. Disconnects shall be heavy duty rated switches. Fusible switches shall be suitable for use with "Class R" rejection feature fuses, unless otherwise noted. Where disconnects are not readily accessible, they shall be of the non-fusible type, and fusible protection for the circuit shall be provided in an accessible location.

#### **PART 3 - EXECUTION**

##### **3.1 INSTALLATION**

- A. Install disconnects in locations as required and utilize fastening hardware as specified herein. Ensure adequate operational and code required clearances are maintained. Install the correct number and size of fuses to comply with equipment requirements.

END OF SECTION 16170

## SECTION 16180 - OVERCURRENT DEVICES

### SECTION 16180 - OVERCURRENT DEVICES

#### PART 1 - GENERAL

##### 1.1 SCOPE

- A. Provide fuses and circuit breakers of the correct sizes and types as called for and further specified herein.

##### 1.2 SUBMITTAL REQUIREMENTS

- A. Provide submittal data, per Section 16012, for each circuit breaker and fuse.

##### 1.3 SPARE FUSES

- A. Provide three spare fuses of each size and type used in the project.

#### PART 2 - PRODUCTS

##### 2.1 FUSES

- A. Fuses shall be Bussman or accepted equals by Reliance or Shawmut, of the correct voltage rating for the circuit where used. In motor disconnect switches provide Class RK1, dual-element time-delay type, sized to suit the motor **nameplate** full load current in accordance with the manufacturer's recommendations for overload and single-phasing protection.

##### 2.2 CIRCUIT BREAKERS

- A. Unless otherwise noted, circuit breakers shall be molded-case thermal-magnetic type, with size, number of poles, and interrupting capacity as required. Ampere rating shall be clearly visible, even when the breaker is installed in its appropriate enclosure. Voltage rating shall suit the voltage of the system on which each breaker is used.
- B. Each breaker pole shall provide both instantaneous and inverse-time tripping, with a tripped condition clearly indicated. Include a common tripping tie to any other poles of the same breaker. Handle-ties are not acceptable.
- C. Breakers shall be operated by a toggle handle and shall have a quick-make, quick-break, over-center switching mechanism that includes a trip-free feature such that the contacts cannot be held closed against tripping currents.
- D. Circuit breakers shall be labeled or listed by an independent testing laboratory, and shall conform to the latest NEMA Standards.

## **SECTION 16180 - OVERCURRENT DEVICES**

### **PART 3 - EXECUTION**

#### **3.1 MARKING**

- A. The correct size and type of fuse for each fusible switch shall be plainly and legibly marked with an indelible marker inside the cover of each fusible switch enclosure,

#### **3.2 INSTALLATION**

- A. Install fuses and circuit breakers in the appropriate housings specified or provided.

**END OF SECTION 16180**

## **SECTION 16190 - FASTENING HARDWARE**

### **SECTION 16190 - FASTENING HARDWARE**

#### **PART 1 - GENERAL**

##### **1.1 SCOPE**

- A. Furnish and install all fasteners and other hardware necessary for the proper, secure installation of all electrical features.

##### **1.2 SUBMITTAL REQUIREMENTS**

- A. Provide submittal data, per Section 16012, for all fastening hardware, unless items are provided as specified and are so certified.

#### **PART 2 - PRODUCTS**

##### **2.1 FASTENERS**

- A. Raceway supports, boxes, and other electrical features shall be securely fastened by wood screws or sheet metal screws on wooden surfaces, toggle bolts on hollow masonry units, expansion bolts on concrete or brick, and machine screws or welded threaded studs on steel work. Threaded studs driven by a powder charge and provided with a lock washer, flat washer, and nut(s) are acceptable in place of expansion bolts or machine or wood screws.

##### **2.2 ASSOCIATED HARDWARE**

- A. All fasteners shall be provided with flat washers. All fasteners having non-tapered threads (such as machine screws) shall also be provided with a lock washer under the bolt head or nut, whichever is turned in the process of tightening. Fasteners through resilient materials shall have stop sleeves. Nuts, washers, and sleeves shall be of the same material and finish as the fastener to which they are applied.

##### **2.3 TOOLING**

- A. Bolts shall have Hex or Allen heads. Screws shall have straight-slotted, Phillips, or Allen heads. Screws with square-socket heads are permitted only for fastening raceways or other features that the Owner would normally not be expected to have to change during the life of the facility. Their use on enclosures or other assemblies that might eventually require Owner access is specifically prohibited.

##### **2.4 HARDWARE COMPOSITIONS AND FINISHES**

## **SECTION 16190 - FASTENING HARDWARE**

- A. In heated indoor areas, all threaded fasteners and associated hardware shall be steel, with a zinc or cadmium-plated finish. Where liquidtight flex conduit is installed on wood construction in outdoor, damp, or corrosive environments; fasteners shall be made of monel or a stainless steel alloy suitable for marine environments. Fasteners on steel construction in outdoor, damp, or corrosive environments shall be of the largest trade size that will fit the item being fastened, shall have the coarsest threads commercially available in that size, and shall be hot-dip galvanized steel. Zinc electroplate will be acceptable only in the smaller sizes where hot-dip galvanized is not commercially available.

### **2.5 STRUT**

- A. U-channel strut for use in heated indoor areas shall be steel. For installations that will not be finish painted, the factory finish shall be galvanized. For outdoor installation of galvanized conduits and boxes, strut shall be steel, with hot-dip galvanized finish. All field-cut ends and other breaks in the finish shall be thoroughly treated with cold galvanized touch-up compound (Z.R.C. or accepted equal).

## **PART 3 - EXECUTION**

### **3.1 INSTALLATION**

- A. All fasteners shall be tightened to within secure limits for the size of fastener and material(s) fastened. For critical applications, a torque wrench shall be used to tighten the fasteners to the manufacturer's recommended value.

END OF SECTION 16190



## SECTION 16450 - GROUNDING

### SECTION 16450 - GROUNDING

#### PART 1 - GENERAL

##### 1.1 SCOPE

- A. All metal raceways, enclosures, other electrical equipment, as well as non-electrical equipment that may pick up harmful potentials from the electrical system, shall be bonded and grounded as required by the NEC and these Specifications.

##### 1.2 SUBMITTAL REQUIREMENTS

- A. Provide submittal data, per Section 16012, for all grounding equipment, unless items are provided as specified and are so certified.

#### PART 2 - PRODUCTS

##### 2.1 CONDUCTORS

- A. All grounding conductors and bonding jumpers shall be copper, sized according to the NEC. Where separate equipment grounding conductors are called for, they shall be green insulated where run with branch circuits, and bare where run with feeders.

##### 2.2 CONNECTIONS

- A. Clamps, lugs, connectors, bonding bushings, and all other such grounding and bonding items shall be labeled or listed for the purpose; shall be made (both body and hardware) of hot-dip galvanized steel, bronze, or other corrosion-resistant alloy (except bushing throats shall be plastic); and shall be the products of O.Z. Gedney, Thomas & Betts, Raco, or accepted equals.

#### PART 3 - EXECUTION

##### 3.1 CONCEALED CONNECTIONS

- A. Permanent grounding connections, where permitted by the NEC to be concealed, shall not be so concealed until inspected and accepted by the Engineer or authorized representative. Failure to comply with this requirement will make the Contractor liable for any expenses incurred in the process of re-exposing the connections for inspection, and subsequent repair and patching of the concealing construction, including the work of other trades.

##### 3.2 CONCENTRIC AND ECCENTRIC KNOCKOUTS

## **SECTION 16450 - GROUNDING**

- A. In addition to the NEC requirements for service equipment, metal raceways throughout the project shall be provided with bonding bushings and NEC-sized bonding jumpers where they enter enclosures through concentric or eccentric knockouts, reducing washers, or other arrangements that may be disturbed by relative movement between raceway and enclosure.

### **3.3 FORBIDDEN METHODS**

- A. Connection to the grounded circuit conductor (neutral) will not be permitted as a method of bonding or providing equipment grounding, even where otherwise permitted by the NEC.

END OF SECTION 16450