

**EUGENE PUBLIC SCHOOLS** LANE COUNTY SCHOOL DISTRICT 4J EUGENE, OREGON

# **PROJECT MANUAL**

# **AWBREY PARK & SPRING CREEK ELEMENTARY SCHOOLS CONCRETE WALK & STORM DRAIN REPLACEMENT 2018**

C.I.P. # 420.109.108 Issue Date: April 30, 2018



Engineer: Roberts Consulting & Engineering, Inc 3220 Tilden Street, Suite A Eugene, OR 97404

### DOCUMENT 00 01 01 TITLE PAGE

# **PROJECT MANUAL:**

Awbrey Park & Spring Creek Elementary Schools Concrete Walk and Storm Drain Replacement 2018 Eugene Public School District 4J Eugene, Oregon C.I.P. Project No. 420.109.108

# **OWNER:**

Eugene School District 4J 715 West 4<sup>th</sup> Ave. Eugene, Oregon 97402 CONTACT: Project Manager, Kirk Gebb (541) 790-7431 Office (541) 790-7420 FAX gebb@4j.lane.edu

# **CIVIL ENGINEER:**

Roberts Consulting & Engineering, Inc 3220 Tilden Street, Suite A
Eugene, OR 97404
Project Engineer: Barbara J. Roberts, P.E. (541) 689-9197 Office bjr@rceinc.net

**DATE: April 30, 2018** 

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# DOCUMENT 00 11 13 INVITATION TO BID

Sealed bids will be received by Amanda Clinton, Facilities Management Assistant, for the AWBREY PARK & SPRING CREEK ELEMENTARY SCHOOLS – CONCRETE WALK & STORM DRAIN REPLACEMENT 2018 project on Tuesday May 15, 2018 until the Deadline for Bid Submission at 2:00 PM, at the Eugene School District 4J Facilities Management Office, 715 West Fourth Avenue, Eugene, Oregon 97402. The Bids will be opened publicly and read aloud immediately after the deadline for submission of bids. Late Bids will not be considered.

Briefly, the work is described as replacing storm drain pipes and concrete walks and curbs, installing manholes, area drains and cleanouts. Installing irrigation piping to existing landscape areas and replanting these areas.

Beginning Monday April 30, 2018 Prime Bidders, Sub-bidders and Suppliers may obtain bidding documents at the following hyperlink: <a href="http://www.4j.lane.edu./bids/">http://www.4j.lane.edu./bids/</a>. Hard copies are not provided by the School District. It is the responsibility of all Prime Bidders, Sub-bidders, and Suppliers to obtain Bidding Documents and all Addenda from the hyperlink.

Bidders and Suppliers may also obtain bidding documents from Central Print and Reprographic Services, 45 West 5th Ave, Eugene, Oregon, by paying the cost of reproduction. It is the responsibility of those obtaining Bidding Documents in this manner to obtain any and all addenda from the hyperlink or the Plan Centers.

Bidding Documents may be examined at the following locations:

Eugene Builder's Exchange, 2460 W. 11th, Eugene, OR 97402

Premier Builders Exchange, 1902 NE 4th Street, Bend, OR 97701

Dodge Data & Analytics, digital only – www.construction.com

Daily Journal of Commerce Plan Center, 921 S.W. Washington St., Suite 210, Portland, OR 97205-2810

Douglas Plan Center, 3076 NE Diamond Lake Blvd, Roseburg, OR 97470

Contractor Plan Center, 5468 SE International Way, Milwaukie, OR 97222

Salem Contractor's Exchange, 2256 Judson Street SE, Salem, OR 97302

Willamette Valley Bid Center, 135 2<sup>nd</sup> Ave. SE, Albany, OR 97321

Or, the office of Roberts Consulting & Engineering 3220 Tilden Street, Eugene OR 97404.

A mandatory pre-bid conference and walk-through has been scheduled for Tuesday May 8, 2018, at 3:00 PM. The location of the conference will be Awbrey Park ES 158 Spring Creek Drive, Eugene, OR 97404. All Prime Bidders wishing to submit a bid are required to attend this conference. Statements made by the District's representatives at the conference are not binding upon the District unless confirmed by Written Addendum. Pre-qualification of bidders is not required.

Each Bid must be submitted on the prescribed form and accompanied by a Surety Bond, Cashiers Check, or Certified Check, executed in favor of Eugene School District 4J, in the amount not less than ten percent (10%) of the total bid, based upon the total bid amount for those items bid upon.

Either with the Bid or within two working hours of the Deadline for Submission of Bids, bidders shall submit, on the form provided, information regarding first-tier subcontractors furnishing labor or labor and materials, as provided in ORS 279C.370. Bids for which disclosure forms are required, but not submitted, will be rejected.

No bid for a construction contract will be received or considered unless the Bidder is registered with the Construction Contractors Board or licensed by the State Landscape Contractors Board at the time the Bid is made, as required by OAR 137-049-0230. [A license to work with asbestos-containing materials under ORS 468A.720 is not required for this project.]

For every bid \$100,000 or greater, all Contractors and Subcontractors shall have a public works bond, in the amount of \$30,000, filed with the Construction Contractors' Board (CCB), before starting work on the project, unless exempt. A copy of the Contractors' BOLI Public Works Bond shall be provided with the executed contract documents.

Each Bid shall contain a statement indicating whether the Bidder is a "resident bidder", as defined in ORS 279A.120.

Each Bid shall contain a statement that the "Contractor agrees to be bound by and will comply with the provisions of ORS 279C.800 through 279C.870 regarding payment of Prevailing Wages".

INVITATION TO BID SECTION 00 11 13 - 1

# DOCUMENT 00 11 13 INVITATION TO BID

Contractor shall certify nondiscrimination in obtaining required subcontractors, in accordance with ORS 279A.110(4).

School District 4J reserves the right to (1) reject any or all Bids not in compliance with all public bidding procedures and requirements, (2) postpone award of the Contract for a period not to exceed sixty (60) days from the date of bid opening, (3) waive informalities in the Bids, (4) select the Bid which appears to be in the best interest of the District, or (5) reject any or all bids.

Date: April 27, 2018

By: Amanda Clinton, Facilities Management Assistant

Published: Register Guard, Daily Journal of Commerce, ORPIN (Oregon Procurement Information Network)

Posted: School District 4J Administration Office

School District 4J Hyperlink: <a href="http://www.4j.lane.edu/bids/">http://www.4j.lane.edu/bids/</a>

200 North Monroe Eugene, OR 97403

INVITATION TO BID SECTION 00 11 13 - 2

# DOCUMENT 00 21 13 INSTRUCTIONS TO BIDDERS

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STANDARD FORM

Instructions to Bidders - AIA Document A701, 1997 Edition, immediately following are part of this Project Manual.

END OF DOCUMENT 00 21 13

# Instructions to Bidders

#### for the following PROJECT:

(Name and location or address)

#### THE OWNER:

(Name, legal status and address)

#### THE ARCHITECT:

(Name, legal status and address)

#### TABLE OF ARTICLES

- 1 DEFINITIONS
- 2 BIDDER'S REPRESENTATIONS
- 3 BIDDING DOCUMENTS
- 4 BIDDING PROCEDURES
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- 6 POST-BID INFORMATION
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- 8 FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR

#### **ADDITIONS AND DELETIONS:**

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An Additions and Deletions Report that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

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

#### ARTICLE 1 DEFINITIONS

- § 1.1 Bidding Documents include the Bidding Requirements and the proposed Contract Documents. The Bidding Requirements consist of the Advertisement or Invitation to Bid, Instructions to Bidders, Supplementary Instructions to Bidders, the bid form, and other sample bidding and contract forms. The proposed Contract Documents consist of the form of Agreement between the Owner and Contractor, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications and all Addenda issued prior to execution of the Contract.
- § 1.2 Definitions set forth in the General Conditions of the Contract for Construction, AIA Document A201, or in other Contract Documents are applicable to the Bidding Documents.
- § 1.3 Addenda are written or graphic instruments issued by the Architect prior to the execution of the Contract which modify or interpret the Bidding Documents by additions, deletions, clarifications or corrections.
- § 1.4 A Bid is a complete and properly executed proposal to do the Work for the sums stipulated therein, submitted in accordance with the Bidding Documents.
- § 1.5 The Base Bid is the sum stated in the Bid for which the Bidder offers to perform the Work described in the Bidding Documents as the base, to which Work may be added or from which Work may be deleted for sums stated in Alternate Bids.
- § 1.6 An Alternate Bid (or Alternate) is an amount stated in the Bid to be added to or deducted from the amount of the Base Bid if the corresponding change in the Work, as described in the Bidding Documents, is accepted.
- § 1.7 A Unit Price is an amount stated in the Bid as a price per unit of measurement for materials, equipment or services or a portion of the Work as described in the Bidding Documents.
- § 1.8 A Bidder is a person or entity who submits a Bid and who meets the requirements set forth in the Bidding Documents.
- § 1.9 A Sub-bidder is a person or entity who submits a bid to a Bidder for materials, equipment or labor for a portion of the Work.

### ARTICLE 2 BIDDER'S REPRESENTATIONS

- § 2.1 The Bidder by making a Bid represents that:
- § 2.1.1 The Bidder has read and understands the Bidding Documents or Contract Documents, to the extent that such documentation relates to the Work for which the Bid is submitted, and for other portions of the Project, if any, being bid concurrently or presently under construction.
- § 2.1.2 The Bid is made in compliance with the Bidding Documents.
- **§ 2.1.3** The Bidder has visited the site, become familiar with local conditions under which the Work is to be performed and has correlated the Bidder's personal observations with the requirements of the proposed Contract Documents.
- § 2.1.4 The Bid is based upon the materials, equipment and systems required by the Bidding Documents without exception.

# ARTICLE 3 BIDDING DOCUMENTS § 3.1 COPIES

- § 3.1.1 Bidders may obtain complete sets of the Bidding Documents from the issuing office designated in the Advertisement or Invitation to Bid in the number and for the deposit sum, if any, stated therein. The deposit will be refunded to Bidders who submit a bona fide Bid and return the Bidding Documents in good condition within ten days after receipt of Bids. The cost of replacement of missing or damaged documents will be deducted from the deposit. A Bidder receiving a Contract award may retain the Bidding Documents and the Bidder's deposit will be refunded.
- § 3.1.2 Bidding Documents will not be issued directly to Sub-bidders unless specifically offered in the Advertisement or Invitation to Bid, or in supplementary instructions to bidders.

- § 3.1.3 Bidders shall use complete sets of Bidding Documents in preparing Bids; neither the Owner nor Architect assumes responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.
- § 3.1.4 The Owner and Architect may make copies of the Bidding Documents available on the above terms for the purpose of obtaining Bids on the Work. No license or grant of use is conferred by issuance of copies of the Bidding Documents.

# § 3.2 INTERPRETATION OR CORRECTION OF BIDDING DOCUMENTS

- § 3.2.1 The Bidder shall carefully study and compare the Bidding Documents with each other, and with other work being bid concurrently or presently under construction to the extent that it relates to the Work for which the Bid is submitted, shall examine the site and local conditions, and shall at once report to the Architect errors, inconsistencies or ambiguities discovered.
- § 3.2.2 Bidders and Sub-bidders requiring clarification or interpretation of the Bidding Documents shall make a written request which shall reach the Architect at least seven days prior to the date for receipt of Bids.
- § 3.2.3 Interpretations, corrections and changes of the Bidding Documents will be made by Addendum. Interpretations, corrections and changes of the Bidding Documents made in any other manner will not be binding, and Bidders shall not rely upon them.

### § 3.3 SUBSTITUTIONS

- § 3.3.1 The materials, products and equipment described in the Bidding Documents establish a standard of required function, dimension, appearance and quality to be met by any proposed substitution.
- § 3.3.2 No substitution will be considered prior to receipt of Bids unless written request for approval has been received by the Architect at least ten days prior to the date for receipt of Bids. Such requests shall include the name of the material or equipment for which it is to be substituted and a complete description of the proposed substitution including drawings, performance and test data, and other information necessary for an evaluation. A statement setting forth changes in other materials, equipment or other portions of the Work, including changes in the work of other contracts that incorporation of the proposed substitution would require, shall be included. The burden of proof of the merit of the proposed substitution is upon the proposer. The Architect's decision of approval or disapproval of a proposed substitution shall be final.
- § 3.3.3 If the Architect approves a proposed substitution prior to receipt of Bids, such approval will be set forth in an Addendum. Bidders shall not rely upon approvals made in any other manner.
- § 3.3.4 No substitutions will be considered after the Contract award unless specifically provided for in the Contract Documents.

### § 3.4 ADDENDA

- § 3.4.1 Addenda will be transmitted to all who are known by the issuing office to have received a complete set of Bidding Documents.
- § 3.4.2 Copies of Addenda will be made available for inspection wherever Bidding Documents are on file for that purpose.
- § 3.4.3 Addenda will be issued no later than four days prior to the date for receipt of Bids except an Addendum withdrawing the request for Bids or one which includes postponement of the date for receipt of Bids.
- § 3.4.4 Each Bidder shall ascertain prior to submitting a Bid that the Bidder has received all Addenda issued, and the Bidder shall acknowledge their receipt in the Bid.

#### ARTICLE 4 BIDDING PROCEDURES

### § 4.1 PREPARATION OF BIDS

§ 4.1.1 Bids shall be submitted on the forms included with the Bidding Documents.

- § 4.1.2 All blanks on the bid form shall be legibly executed in a non-erasable medium.
- § 4.1.3 Sums shall be expressed in both words and figures. In case of discrepancy, the amount written in words shall govern.
- § 4.1.4 Interlineations, alterations and erasures must be initialed by the signer of the Bid.
- § 4.1.5 All requested Alternates shall be bid. If no change in the Base Bid is required, enter "No Change."
- § 4.1.6 Where two or more Bids for designated portions of the Work have been requested, the Bidder may, without forfeiture of the bid security, state the Bidder's refusal to accept award of less than the combination of Bids stipulated by the Bidder. The Bidder shall make no additional stipulations on the bid form nor qualify the Bid in any other manner.
- § 4.1.7 Each copy of the Bid shall state the legal name of the Bidder and the nature of legal form of the Bidder. The Bidder shall provide evidence of legal authority to perform within the jurisdiction of the Work. Each copy shall be signed by the person or persons legally authorized to bind the Bidder to a contract. A Bid by a corporation shall further give the state of incorporation and have the corporate seal affixed. A Bid submitted by an agent shall have a current power of attorney attached certifying the agent's authority to bind the Bidder.

### § 4.2 BID SECURITY

- § 4.2.1 Each Bid shall be accompanied by a bid security in the form and amount required if so stipulated in the Instructions to Bidders. The Bidder pledges to enter into a Contract with the Owner on the terms stated in the Bid and will, if required, furnish bonds covering the faithful performance of the Contract and payment of all obligations arising thereunder. Should the Bidder refuse to enter into such Contract or fail to furnish such bonds if required, the amount of the bid security shall be forfeited to the Owner as liquidated damages, not as a penalty. The amount of the bid security shall not be forfeited to the Owner in the event the Owner fails to comply with Section 6.2.
- § 4.2.2 If a surety bond is required, it shall be written on AIA Document A310, Bid Bond, unless otherwise provided in the Bidding Documents, and the attorney-in-fact who executes the bond on behalf of the surety shall affix to the bond a certified and current copy of the power of attorney.
- § 4.2.3 The Owner will have the right to retain the bid security of Bidders to whom an award is being considered until either (a) the Contract has been executed and bonds, if required, have been furnished, or (b) the specified time has elapsed so that Bids may be withdrawn or (c) all Bids have been rejected.

# § 4.3 SUBMISSION OF BIDS

- § 4.3.1 All copies of the Bid, the bid security, if any, and any other documents required to be submitted with the Bid shall be enclosed in a sealed opaque envelope. The envelope shall be addressed to the party receiving the Bids and shall be identified with the Project name, the Bidder's name and address and, if applicable, the designated portion of the Work for which the Bid is submitted. If the Bid is sent by mail, the sealed envelope shall be enclosed in a separate mailing envelope with the notation "SEALED BID ENCLOSED" on the face thereof.
- § 4.3.2 Bids shall be deposited at the designated location prior to the time and date for receipt of Bids. Bids received after the time and date for receipt of Bids will be returned unopened.
- § 4.3.3 The Bidder shall assume full responsibility for timely delivery at the location designated for receipt of Bids.
- § 4.3.4 Oral, telephonic, telegraphic, facsimile or other electronically transmitted bids will not be considered.

#### § 4.4 MODIFICATION OR WITHDRAWAL OF BID

- § 4.4.1 A Bid may not be modified, withdrawn or canceled by the Bidder during the stipulated time period following the time and date designated for the receipt of Bids, and each Bidder so agrees in submitting a Bid.
- § 4.4.2 Prior to the time and date designated for receipt of Bids, a Bid submitted may be modified or withdrawn by notice to the party receiving Bids at the place designated for receipt of Bids. Such notice shall be in writing over the

signature of the Bidder. Written confirmation over the signature of the Bidder shall be received, and date- and time-stamped by the receiving party on or before the date and time set for receipt of Bids. A change shall be so worded as not to reveal the amount of the original Bid.

- § 4.4.3 Withdrawn Bids may be resubmitted up to the date and time designated for the receipt of Bids provided that they are then fully in conformance with these Instructions to Bidders.
- § 4.4.4 Bid security, if required, shall be in an amount sufficient for the Bid as resubmitted.

# ARTICLE 5 CONSIDERATION OF BIDS § 5.1 OPENING OF BIDS

At the discretion of the Owner, if stipulated in the Advertisement or Invitation to Bid, the properly identified Bids received on time will be publicly opened and will be read aloud. An abstract of the Bids may be made available to Bidders.

# § 5.2 REJECTION OF BIDS

The Owner shall have the right to reject any or all Bids. A Bid not accompanied by a required bid security or by other data required by the Bidding Documents, or a Bid which is in any way incomplete or irregular is subject to rejection.

# § 5.3 ACCEPTANCE OF BID (AWARD)

- § 5.3.1 It is the intent of the Owner to award a Contract to the lowest qualified Bidder provided the Bid has been submitted in accordance with the requirements of the Bidding Documents and does not exceed the funds available. The Owner shall have the right to waive informalities and irregularities in a Bid received and to accept the Bid which, in the Owner's judgment, is in the Owner's own best interests.
- § 5.3.2 The Owner shall have the right to accept Alternates in any order or combination, unless otherwise specifically provided in the Bidding Documents, and to determine the low Bidder on the basis of the sum of the Base Bid and Alternates accepted.

# ARTICLE 6 POST-BID INFORMATION § 6.1 CONTRACTOR'S QUALIFICATION STATEMENT

Bidders to whom award of a Contract is under consideration shall submit to the Architect, upon request, a properly executed AIA Document A305, Contractor's Qualification Statement, unless such a Statement has been previously required and submitted as a prerequisite to the issuance of Bidding Documents.

#### § 6.2 OWNER'S FINANCIAL CAPABILITY

The Owner shall, at the request of the Bidder to whom award of a Contract is under consideration and no later than seven days prior to the expiration of the time for withdrawal of Bids, furnish to the Bidder reasonable evidence that financial arrangements have been made to fulfill the Owner's obligations under the Contract. Unless such reasonable evidence is furnished, the Bidder will not be required to execute the Agreement between the Owner and Contractor.

### § 6.3 SUBMITTALS

- **§ 6.3.1** The Bidder shall, as soon as practicable or as stipulated in the Bidding Documents, after notification of selection for the award of a Contract, furnish to the Owner through the Architect in writing:
  - .1 a designation of the Work to be performed with the Bidder's own forces;
  - .2 names of the manufacturers, products, and the suppliers of principal items or systems of materials and equipment proposed for the Work; and
  - names of persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for the principal portions of the Work.
- § 6.3.2 The Bidder will be required to establish to the satisfaction of the Architect and Owner the reliability and responsibility of the persons or entities proposed to furnish and perform the Work described in the Bidding Documents.
- § 6.3.3 Prior to the execution of the Contract, the Architect will notify the Bidder in writing if either the Owner or Architect, after due investigation, has reasonable objection to a person or entity proposed by the Bidder. If the Owner or Architect has reasonable objection to a proposed person or entity, the Bidder may, at the Bidder's option, (1)

withdraw the Bid or (2) submit an acceptable substitute person or entity with an adjustment in the Base Bid or Alternate Bid to cover the difference in cost occasioned by such substitution. The Owner may accept the adjusted bid price or disqualify the Bidder. In the event of either withdrawal or disqualification, bid security will not be forfeited.

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

# ARTICLE 7 PERFORMANCE BOND AND PAYMENT BOND § 7.1 BOND REQUIREMENTS

- § 7.1.1 If stipulated in the Bidding Documents, the Bidder shall furnish bonds covering the faithful performance of the Contract and payment of all obligations arising thereunder. Bonds may be secured through the Bidder's usual sources.
- § 7.1.2 If the furnishing of such bonds is stipulated in the Bidding Documents, the cost shall be included in the Bid. If the furnishing of such bonds is required after receipt of bids and before execution of the Contract, the cost of such bonds shall be added to the Bid in determining the Contract Sum.
- § 7.1.3 If the Owner requires that bonds be secured from other than the Bidder's usual sources, changes in cost will be adjusted as provided in the Contract Documents.

# § 7.2 TIME OF DELIVERY AND FORM OF BONDS

- § 7.2.1 The Bidder shall deliver the required bonds to the Owner not later than three days following the date of execution of the Contract. If the Work is to be commenced prior thereto in response to a letter of intent, the Bidder shall, prior to commencement of the Work, submit evidence satisfactory to the Owner that such bonds will be furnished and delivered in accordance with this Section 7.2.1.
- § 7.2.2 Unless otherwise provided, the bonds shall be written on AIA Document A312, Performance Bond and Payment Bond. Both bonds shall be written in the amount of the Contract Sum.
- § 7.2.3 The bonds shall be dated on or after the date of the Contract.
- § 7.2.4 The Bidder shall require the attorney-in-fact who executes the required bonds on behalf of the surety to affix thereto a certified and current copy of the power of attorney.

### ARTICLE 8 FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR

Unless otherwise required in the Bidding Documents, the Agreement for the Work will be written on AIA Document A101, Standard Form of Agreement Between Owner and Contractor Where the Basis of Payment Is a Stipulated Sum.

### DOCUMENT 00 22 13 SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

#### PART 1 GENERAL

The following Supplementary Instructions to Bidders modify, change from or add to AIA Document A701 Instruction To Bidders, 1997 Edition. Where any Article of the Instructions to Bidders is modified or any paragraph, subparagraph, or clause thereof is modified or deleted by these Supplementary Instructions to Bidders, the unaltered provisions of that Article, paragraph, subparagraph, or clause shall remain in effect.

#### 1.1 ARTICLE 2 BIDDER'S REPRESENTATIONS

- A. Add the following subparagraphs to 2.1.3:
  - 2.1.3.1 Bidders are required to attend any mandatory pre-bid conferences or tours as stated in the Advertisement for Bids. Bidders not attending this pre-bid conference and tour shall be disqualified from bidding. Bidders will be required to sign in at the project site prior to the conference or tour.
  - 2.1.3.2 Bidders are encouraged to visit the site(s) to become familiar with existing conditions. The Owner is not responsible and shall not bear financial burden for oversights made by the Bidder for failure to inspect sites prior to submitting a bid.
  - 2.1.3.3 In all cases, persons wishing to examine the area of work must sign in at the school office prior to visiting the work area. Prior to leaving the school, sign-out at the office is required.
  - 2.1.3.4 If access is required at times when the school office is not staffed, contact the Facilities Office, 541-790-7417, for assistance.
- B. Add the following paragraph 2.1.5:
  - 2.1.5 The Bidder certifies by signing the Bid that the Bidder has a drug-testing program in place for its employees that includes, at a minimum, the following:
  - .1 A written employee drug-testing program,
  - .2 Required drug testing for all new Subject Employees, or alternatively, requiring testing of Subject Employees every six months on a random selection basis,
  - .3 Required testing of a Subject Employee when the Contractor has reasonable cause to believe the Subject Employee is under the influence of drugs, and
  - 4 Required testing of a Subject Employee when the Subject Employee is involved in: (I) an incident causing an injury requiring treatment by a physician, or (ii) an incident resulting in damage to property or equipment.

A drug-testing program that meets the above requirements will be deemed a "Qualifying Employee Drug-testing Program". For purposes of this rule an employee is a "Subject Employee" only if that employee will be working on the Project job site; and

That if awarded the Public Improvement Contract, the Bidder will execute a contract in which the Contractor shall represent and warrant to the District that the Qualifying Employee Drug-testing Program is in place at the time of contract execution and will continue in full force and effect for the duration of the Public Improvement Contract; and that the Contract will condition the Agency's performance obligation upon the Contractor's compliance with this representation and warranty; and

That the Public Improvement Contract shall contain Contractor's covenant requiring each subcontractor providing labor for the Project to:

- .1 Demonstrate to the Contractor that it has a Qualifying Employee Drug-testing Program for the subcontractor's Subject Employees, and represent and warrant to the Contractor that the Qualifying Employee Drug-testing Program is in place at the time of subcontract execution and will continue in full force and effect for the duration of the subcontract; or
- .2 Require the subcontractor's Subject Employees to participate in the Contractor's Qualifying Employee

# DOCUMENT 00 22 13 SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

Drug-testing Program for the duration of the subcontract.

#### 1.2 ARTICLE 3 BIDDING DOCUMENTS

#### A. 3.3 SUBSTITUTIONS

- 1. Add the following:
  - 3.3.2.1 All requests for approval must be submitted in duplicate on "Substitution Request Form". Include a self-addressed stamped envelope. Requests received by Architect less than ten (10) days prior to bid will not be considered.

#### B. 3.4 ADDENDA

- 1. Delete paragraph 3.4.1 and substitute the following:
  - 3.4.1 Addenda will be issued to plan centers listed in the Advertisement for Bids and all firms listed on the Planholder List.

#### 1.3 ARTICLE 4 BIDDING PROCEDURES

### A. 4.1 PREPARATION OF BIDS

- 1. Add the following Paragraphs:
  - 4.1.8 Bidders shall certify to non-collusion practices on the form included as part of the Bid Form, to be submitted with the Bid Form.
  - .1 A Non-Collusion Affidavit is required for any contract awarded pursuant to the bid. According to the Oregon Public Contracts and Purchasing Laws, a public contracting agency may reject any or all bids upon a finding of the agency that it is in the public interest to do so (ORS 279C.395). This agency finds that it is in the public interest to require the completion of this affidavit by potential contractors.
  - .2 The Non-Collusion Affidavit must be executed by the member, officer or employee of the bidder who makes the final decision on prices and the amount quoted in the bid.
  - .3 Bid rigging and other efforts to restrain competition, and the making of false sworn statements in connection with the submission of bids are unlawful and may be subject to criminal prosecution. The person who signs the Affidavit should examine it carefully before signing and assure himself or herself that each statement is true and accurate, making diligent inquiry, as necessary, of all other persons employed by or associated with the bidder with responsibilities for the preparation approval or submission of the bid.
  - .4 In the case of a bid submitted by a joint venture, each party to the venture must be identified in the bid documents, and an Affidavit must be submitted separately on behalf of each party.
  - .5 The term "complementary bid" as used in the Affidavit has the meaning commonly associated with the term in the bidding process, and includes the knowing submission of bids higher than the bid of another firm, any intentionally high or noncompetitive bid, and any other form of bid submitted for the purpose of giving a false appearance of competition.
  - .6 Failure to file an Affidavit in compliance with these instructions will result in disqualification of the bid.
  - 4.1.9 Bidders shall certify to non-discrimination in employment practices on the form, included as part of the Bid Form, to be submitted with the Bid Form. By submitting its bid, the Bidder certifies conformance to the applicable federal acts, executive orders, and Oregon statutes and regulations concerning affirmative action toward equal employment opportunities. All information and reports required by the federal or Oregon state governments having responsibility for the enforcement of such laws shall be supplied to the Owner in compliance with such acts, regulation, and orders.
  - .1 Failure to file an Affidavit in compliance with these instructions will result in disqualification of the

### DOCUMENT 00 22 13 SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

bid.

- 4.1.10 Bidder shall indicate, on the Bid Form where provided, the bidder's status as a "resident" or "non-resident" in accordance with ORS 279C.365 and ORS 279A.120.
- 4.1.11 First-Tier Subcontractor Disclosure:
- .1 Within two working hours after the date and time of the deadline when the bids are due, a Bidder shall submit to the District a disclosure of the first-tier subcontractors that will be furnishing labor or will be furnishing labor and materials in connection with the public improvement; and will have a contract value that is equal to or greater than 5% of the project bid or \$15,000, whichever is greater, or \$350,000, regardless of the percentage of the total project bid.
- .2 The disclosure of first—tier subcontractors shall include the name of each subcontractor, the category of work that the subcontractor would be performing, and the dollar value of each subcontract.
- .3 The first-tier subcontractor disclosure applies only to public improvements with a contract value of more than \$100,000.
- .4 The District will consider the bid of any contractor that does not submit a required subcontractor disclosure to the District to be a non-responsive bid. A non-responsive Bid will not be considered for Award.
- .5 Contractor shall certify that all subcontractors performing Work are registered with the Construction Contractors Board or licensed by the State Landscape Contractors Board in accordance with ORS 701.035 to 701.055 before the subcontractors commence work under the Contract.

#### B. 4.2 BID SECURITY

- 1. Delete paragraphs 4.2.2 and 4.2.3 and substitute the following:
  - 4.2.2 Each Bid shall be accompanied by a surety bond, cashiers check, or certified check, executed in favor of Eugene School District 4J, in the amount not less than ten percent (10%) of the total bid, based upon the total bid amount for those items bid upon. Should the Bidder refuse to enter into such Contract or fail to furnish Performance and Labor and Materials Payment Bonds and Certificates of Insurance as required by the Supplementary Conditions within ten (10) working days after contract forms are provided to the Bidder, the amount of the Bid Security may be forfeited to the Owner as liquidated damages, not as a penalty.
  - .1 The Surety Bond shall be written by a Bonding Company authorized and licensed by the Oregon Insurance Commissioner. The bonding company must be listed on the most current US Government Treasury List, Department Circular 570, or approved PRIOR TO BID SUBMISSION by the Eugene School District 4J's Risk Manager. The Bond shall be on a AIA Document A310, most current edition. The Attorney-in-Fact who executes the Bond on behalf of the Surety shall affix to the Bond, a certified copy of a power of attorney.
  - .2 The Owner will have the right to retain the Bid Security of Bidders until either; a) the Contract has been executed and Bonds have been furnished, or b) the specified time has elapsed so that Bids may be withdrawn, or c) all Bids have been rejected.

#### C. 4.4 MODIFICATION OR WITHDRAWAL OF BID

- 1. Delete paragraph 4.4.1 and substitute the following:
  - 4.4.1 A Bid may not be withdrawn or canceled by the Bidder following the time and date designated for the receipt of bids to the expiration of a 60 day period. The Bid for that sixty days is irrevocable and each Bidder so agrees in submitting a Bid.

### 1.4 ARTICLE 6 POST-BID INFORMATION

A. Delete Paragraph 6.1.

# DOCUMENT 00 22 13 SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

B. Modify paragraph 6.3.1 as follows:

In the first sentence delete the phase "as soon as practicable" and add "within 48 hours."

- C. Add the following:
  - 6.3.1.4 Where asbestos abatement is required, Contractor or appropriate subcontractor shall be licensed by the Department of Environmental Quality to perform "asbestos abatement work", per OAR 340-248-0120, Adopted 1/25/90, and meet requirements of AHERA as specified in the Federal Register, 40 CFR part 763. Bidder shall submit evidence of licensing to Owner.

#### 1.5 ARTICLE 7 PERFORMANCE BOND AND PAYMENT BOND

#### A. 7.1 BOND REQUIREMENTS

- 1. Delete paragraphs 7.1.1, 7.1.2 and 7.1.3 and add the following:
  - 7.1.1 Unless otherwise stated in the solicitation document, prior to execution of the Agreement, the successful Bidder shall furnish a separate Performance Bond and a Labor Bond and Materials Payment Bond that in all respects conform to the requirements of ORS 279C.380 covering faithful performance of the Contract, and the payment of all obligations arising thereunder, each in an amount equal to one hundred percent (100%) of the Contract sum. The duration of the performance bond shall match the length of the project warranty.
  - 7.1.2 Bonds shall be submitted on AIA Document A312, latest edition.
  - 7.1.3 The surety issuing such bonds shall be duly authorized and licensed to issue bonds in the State of Oregon. The bonds shall be executed by an attorney-in-fact, principal or other authorized representative for the surety company, showing the Oregon agent for service, and bears the seal of the surety company. Where the bond is executed by a person outside the state of Oregon, his authority to execute bonds shall be shown. The Bonds shall be fully executed, payable to the Owner.
  - 7.1.4 The cost of furnishing such bonds shall be included in the Bid.

#### B. BOLI Public Works Bond:

1. Add the following:

Pursuant to ORS 279C.836, for any contract awarded where the contract price is \$100,000.00 or greater, the Contractor and every subcontractor shall have a Public Works bond filed with the Construction Contractors Board before starting work on the project. This bond is in addition to performance bond and payment bond requirements. A copy of the Contractor's BOLI Public Works Bond shall be provided with the executed contract.

#### 1.2 TIME OF DELIVERY AND FORM OF BONDS

- A. Delete paragraph 7.2.1 and substitute the following:
  - 7.2.1 The successful Bidder will be provided with contract forms through the Architect. These forms shall be executed and delivered to the Owner, along with Performance Bond and Labor and Material Payment Bond, within ten (10) days after receiving forms.
- B. Add the following article:

### ARTICLE 9 MISCELLANEOUS PROVISIONS

#### 9.1 ADMINISTRATIVE RULES

All bidders are required to comply with the provisions of Oregon Revised Statutes and 4J Board Policy. Attention is directed to ORS 244, Government Ethics; ORS 279A and 279C, Pubic Contracting Code; Oregon Administrative Rules, Chapter 137, Divisions 46, 48 and 49; and 4J Board Policy DJC.

9.2 PROTEST OF BID

# DOCUMENT 00 22 13 SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

Protests of bid specifications or contract terms shall be presented to the Owner in writing five (5) calendar days prior to bid opening. Such protest or request for change shall include the reason for protest or request, and any proposed changes to specifications or terms. No protest against award because of the content of bid specifications or contract terms shall be considered after the deadline established for submitting such protest.

#### 9.3 PROTEST OF AWARD

Any actual bidder or proposer who is adversely affected by the Owner's notice of award of the contract to another bidder or proposer on the same solicitation shall have seventy two (72) hours from the notice of award to submit to the Owner, a written protest of the notice of award. In order to be an adversely affected or aggrieved bidder or proposer with a right to submit a written protest, a bidder or proposer must itself claim to be eligible for award of the contract as the lowest responsible bidder or best proposer and must be next in line for award.

#### 9.4 FINAL AWARD

The written notice of award of the contract shall constitute a final decision of the Owner to award the contract if no written protest of the notice of award is filed with the Owner within the designated time.

END OF DOCUMENT 00 22 13

# **BID FORM DOCUMENT 00 41 13**

BID FOR:	Awbrey Park & Spring Creek Elem Concrete Walk & Storm Drain Repl		CIP Number 420.109.109
Submitted to:	Facilities Management Eugene School District 4J 715 West Fourth Avenue Eugene, Oregon 97402	Bid Deadline:	2:00 PM Tuesday May 15, 2018
Submitted by:	(Company Name)		
perform all work completion occu BASE BID PAC	I proposes to furnish all material, equivalent in strict accordance with the Contracturing on or prior to the dates indicated CKAGE A:  ementary School Concrete Walk & St	et Documents for the lump d:	
Bid:			\$
	(Words)		(Figures)
	d agrees, if awarded the Contract, to sted in Section 01 11 00.	ubstantially complete all I	Base Bid Package A work on or before
Alternates as de	d proposes to ADD TO the Base Bid scribed in the Project Manual, Section NO. 1:	n 01 23 00.	of work relating to the following
Spring Creek El	ementary School Concrete Walk & St	•	
Bid:			\$
The undersigned specified in Section	i agrees, if awarded the Contract, to si	ubstantially complete all A	(Figures) Alternate No. 1 work on or before dates
Bidders shall g and Extended	NIT PRICE ITEMS give unit prices and extended price Prices are included in the Base Bio . The schedule of values shall inc	d/Lump Sum. The quan	tities of Items are estimates, and are

Prices to be used for addition and deduction of quantities in the base bid/Lump Sum. The value of the unused quantities will be deducted and the value of any additional quantities will be added via change order.

The undersigned agrees, if awarded the Contract, to bill the Owner for the following based upon actual units (i.e., per linear foot, per each, per cubic yard) required to complete the project. Estimated Units are based on Part 2 – Project Assumptions of the Project Specifications.

The undersigned understands that the extended Price for each of the Unit Price Items is to be included in the base bid.

The undersigned agrees, if awarded the Contract, to substantially complete all Base Bid work on or before

**BID FORM** 00 41 13 - 1

### BID FORM DOCUMENT 00 41 13

the dates specified in Section 01 11 00.

		Estimated	Unit	Extended	
Iten	n	Quantity	Price	Price	
1.	Concrete walk replacement – Awbrey Park ES	5,102 SF X	\$/CF = \$	5	
2.	Concrete walk replacement – Spring Creek ES	1,184 SF X	\$/CF = \$	\$	
and	The undersigned proposes to furnish all material, equipment, and labor required for the complete project, and to perform all work in strict accordance with the Contract Documents for the lump sum price indicated with completion occurring on or prior to the dates indicated:				
Bid	<u> </u>		_	\$	
	(Words)		(F	igures)	

It is understood that the Base Bid may be adjusted for any alternates in determining the amount of the Contract. Any or all of such Alternates may be accepted or reinstated by the Owner at any time within 60 days from the date of the Contract Award by the Owner, at the respective amounts named herein.

#### **BID SECURITY**

Accompanying herewith is Bid Security, which is not less than ten percent (10%) of the total amount of the Base Bid plus additive alternates.

#### **STIPULATIONS**

The undersigned acknowledges the liquidated damages provision included in the Supplementary Conditions.

The undersigned agrees, if awarded the contract, to comply with the provisions of Oregon Revised Statutes 279C.800 through 279C.870 pertaining to the payment of prevailing rates of wage.

The undersigned agrees if awarded the contract to comply with Oregon Revised Statutes 326.603 giving the Owner authority to obtain fingerprints and criminal records check of Contractors, their employees, and subcontractors providing labor for the Project.

The undersigned agrees, if awarded the Contract, to execute and deliver to the Owner within ten (10) working days after receiving contract forms, a signed Agreement and a satisfactory Performance Bond and Payment Bond each in an amount equal to 100 percent (100%) of the Contract Sum.

For every Agreement of \$100,000 or greater in value, all Contractors and Subcontractors shall have a public works bond in the amount of \$30,000, filed with the Construction Contractors' Board (CCB), in compliance with ORS 279C.836, before starting work on the project unless exempt. Contractor agrees to provide a copy of the Contractor's BOLI Public Works bond with the signed Agreement as Specified in the Supplementary Conditions.

The undersigned agrees that the Bid Security accompanying this proposal is the measure of liquidated damages which the Owner will sustain by the failure of the undersigned to execute and deliver the above named agreement and bonds; and that if the undersigned defaults in executing that agreement within ten (10) days after forms are provided or providing the bonds, then the Bid Security shall become the property of the Owner; but if this proposal is not accepted within sixty (60) days of the time set for the opening of bids, or if the undersigned executes and delivers said agreement and bonds, the Bid Security shall be returned.

By submitting this Bid, the Bidder certifies that the Bidder:

- a) has available the appropriate financial, material, equipment, facility and personnel resources and expertise, or the ability to obtain the resources and expertise, necessary to meet all contractual responsibilities;
- b) has a satisfactory record of past performance;
- c) has a satisfactory record of integrity, and is not disqualified under ORS 279C.440;

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### BID FORM DOCUMENT 00 41 13

d) is qualified legally to contract with the Owner; and

e) will promptly supply all necessary information in connection with any inquiry the Owner may make concerning the responsibility of the Bidder.

Prior to award of a Contract, the Bidder shall submit appropriate documentation to allow the Owner to determine whether or not the Bidder is "responsible" according to the above criteria.

The contractor agrees with the provisions of Oregon Revised Statutes 279C.505, which requires that the contractor shall demonstrate it has established a drug-testing program for employees and will require each subcontractor providing labor for the Project to do the same. The undersigned has received addenda numbers to inclusive and has included their provisions in the above Bid amounts. The undersigned has visited the site to become familiar with conditions under which the Work is to be performed and has correlated the Bidder's personal observations with the requirements of the proposed Contract Documents. The undersigned certifies that the Bidder is a \_\_\_\_\_\_ Bidder under ORS. ("Resident" or "Non-resident", to be filled in by Bidder) Names of Firm: (City) (State) (Zip) Telephone Number: \_\_\_\_\_ FAX Number: \_\_\_\_\_ Email Address: Signed By: Printed Name: OSignature of Authorized Official. If bid is from a partnership, one of the partners must sign bid). Date Signed: Official Capacity: \_\_\_\_\_ If corporation, attest: \_\_\_\_\_\_ Date: \_\_\_\_\_\_ SEAL (If Corporate) Corporation \_\_\_\_ Partnership

Enclosed: Bid Security

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Individual

### BID FORM DOCUMENT 00 41 13

# NON-DISCRIMINATION REQUIREMENT

Contractor certifies that the Contractor has not discriminated against minorities, women or emerging small business enterprises in obtaining any required subcontracts.

The Contractor agrees not to discriminate against any client, employee, or applicant for employment or for services, because of race, color, religion, sex, national origin, physical or mental handicap, sexual orientation or age, unless based upon bona fide occupational qualifications, and that they are otherwise in compliance with all federal, state and local laws prohibiting discrimination, with regard to, but not limited to, the following: Employment upgrading, demotion or transfer; Recruitment or recruitment advertising; Layoffs or termination; Rates of pay or other forms of compensation; Selection for training; Rendition of services. It is further understood that any vendor who is in violation of this clause shall be barred forthwith from receiving awards of any purchase order from the School District, unless a satisfactory showing is made that discriminatory practices have terminated and that a recurrence of such acts is unlikely.

FIRM NAME:		
ADDRESS:		
TELEPHONE:		
BY:	(C	
	(Company or Firm Officer)	
BY:		
	(Type or Print Name)	

BID FORM 00 41 13 – 4

# BID FORM DOCUMENT 00 41 13 NON-COLLUSION AFFIDAVIT

STATE OF)			
County of)			
I state that I am	of _		av av
and that I am authorized to make this affidavir person responsible in my firm for the price(s) I state that:			(Name of Firm) directors, and officers. I am the
(1) The price(s) and amount of this bid h communication or agreement with any other cappendix.			
(2) That neither the price(s) nor the amou amount of this bid, have been disclosed to any not be disclosed before bid opening.	y other firm or person	who is a bidder o	potential bidder, and they will
(3) No attempt has been made or will be contract, or to submit a bid higher than this bid			
form of complementary bid.  (4) The bid of my firm is made in good f			or discussion with, or inducement
from, any firm or person to submit a complem (5)(Name of my Firm)	, its affiliates, s	ubsidiaries, office	ers, directors and
employees are not currently under investigation convicted of or found liable for any act prohibit collusion with respect to bidding on any publical I state that	pited by State or Feder ic contract, except as d	al law in any juris lescribed on the a	sdiction, involving conspiracy or tached appendix.
are material and important, and will be relied submitted. I understand and my firm understa fraudulent concealment from School District	on by School District ands that any misstater	4J in awarding the sent in this affidation.	ne contract(s) for which this bid is vit is and shall be treated as
(Authorized Signature)			
Sworn to and subscribed before me this	_ day of	, 20	
(Notary Pub	olic for Oregon)		
My Commission Expires:			
	FND OF BID FOR	M	
	121812 (21: 12112 FUR	IVI	

BID FORM 00 41 13 – 5

Updated 1/4/18

### DOCUMENT 00 45 22 FIRST-TIER SUBCONTRACTOR DISCLOSURE FORM

**PROJECT:** Awbrey Park & Spring Creek Elementary School CIP NUMBER: 420.109.108 Concrete Walk & Storm Drain Replacement 2018 TO: Amanda Clinton, Facilities Management Assistant Eugene School District 4J 715 West Fourth Avenue Eugene, Oregon 97402 BID SUBMISSION DEADLINE: Date: \_\_\_\_\_\_Time: \_\_\_\_\_ SUBMITTAL REQUIREMENTS Subcontractor disclosure is required on all public improvement contracts greater than \$100,000. This form must be submitted at the location specified in the Invitation to Bid on the advertised bid closing date and within two working hours after the advertised bid closing time. List below the name of each subcontractor that will be furnishing labor or labor and materials, and that is required to be disclosed, the category of work that the subcontractor will be performing, and the dollar value of the subcontract. Enter "NONE" if there are no subcontractors that need to be disclosed. (ATTACH ADDITIONAL SHEETS IF NEEDED.) SUBCONTRACTOR **DOLLAR VALUE CATEGORY OF WORK** The above listed first- tier subcontractor(s) are providing labor, or labor and material, with a Dollar Value equal to or greater than: a) 5% of the total Contract Price, but at least \$15,000. [If the Dollar Value is less than \$15,000 do not list the subcontractor above.] b) \$350,000 regardless of the percentage of the total Contract Price Failure to submit this form by the disclosure deadline will result in a non-responsive bid. A non-responsive bid will not be considered for award Form submitted by (Bidder Name): \_\_\_\_\_ Contact Name:

END OF DOCUMENT 00 45 22

# DOCUMENT 00 52 13 FORM OF AGREEMENT

PART 1 GENERAL

STANDARD FORM

The form of Agreement will be executed on AIA Form A 101, Standard Form of Agreement Between Owner and Contractor, 2007 edition, which is included by reference. The document, as edited by Owner, is available for review at http://www.4j.lane.edu/bids/.

END OF DOCUMENT 00 52 13

# DOCUMENT 00 72 13 GENERAL CONDITIONS

#### PART 1 GENERAL

# STANDARD FORM

General Conditions of the Contract for Construction AIA Document A-201, 2007 edition, immediately following, are part of these specifications.

The Contractor and all Subcontractors shall read and be governed by them.

### CONFLICTS

In the case of conflicts between the General Conditions and these Specifications, the Specifications govern.

END OF DOCUMENT 00 72 13

# General Conditions of the Contract for Construction

#### for the following PROJECT:

(Name and location or address)

#### THE OWNER:

(Name, legal status and address)

#### THE ARCHITECT:

(Name, legal status and address)

#### TABLE OF ARTICLES

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- 2 OWNER
- 3 CONTRACTOR
- 4 ARCHITECT
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- 15 CLAIMS AND DISPUTES

#### **ADDITIONS AND DELETIONS:**

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An Additions and Deletions Report that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

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

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#### ARTICLE 1 GENERAL PROVISIONS

### § 1.1 BASIC DEFINITIONS

# § 1.1.1 THE CONTRACT DOCUMENTS

The Contract Documents are enumerated in the Agreement between the Owner and Contractor (hereinafter the Agreement) and consist of the Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of the Contract, other documents listed in the Agreement and Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive or (4) a written order for a minor change in the Work issued by the Architect. Unless specifically enumerated in the Agreement, the Contract Documents do not include the advertisement or invitation to bid, Instructions to Bidders, sample forms, other information furnished by the Owner in anticipation of receiving bids or proposals, the Contractor's bid or proposal, or portions of Addenda relating to bidding requirements.

# § 1.1.2 THE CONTRACT

The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the Contractor and the Architect or the Architect's consultants, (2) between the Owner and a Subcontractor or a Sub-subcontractor, (3) between the Owner and the Architect or the Architect's consultants or (4) between any persons or entities other than the Owner and the Contractor. The Architect shall, however, be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of the Architect's duties.

### § 1.1.3 THE WORK

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

#### § 1.1.4 THE PROJECT

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

# § 1.1.5 THE DRAWINGS

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

### § 1.1.6 THE SPECIFICATIONS

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

# § 1.1.7 INSTRUMENTS OF SERVICE

Instruments of Service are representations, in any medium of expression now known or later developed, of the tangible and intangible creative work performed by the Architect and the Architect's consultants under their respective professional services agreements. Instruments of Service may include, without limitation, studies, surveys, models, sketches, drawings, specifications, and other similar materials.

#### § 1.1.8 INITIAL DECISION MAKER

The Initial Decision Maker is the person identified in the Agreement to render initial decisions on Claims in accordance with Section 15.2 and certify termination of the Agreement under Section 14.2.2.

#### § 1.2 CORRELATION AND INTENT OF THE CONTRACT DOCUMENTS

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

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- § 1.2.2 Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.
- § 1.2.3 Unless otherwise stated in the Contract Documents, words that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

### § 1.3 CAPITALIZATION

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

### § 1.4 INTERPRETATION

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

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

- § 1.5.1 The Architect and the Architect's consultants shall be deemed the authors and owners of their respective Instruments of Service, including the Drawings and Specifications, and will retain all common law, statutory and other reserved rights, including copyrights. The Contractor, Subcontractors, Sub-subcontractors, and material or equipment suppliers shall not own or claim a copyright in the Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with this Project is not to be construed as publication in derogation of the Architect's or Architect's consultants' reserved rights.
- § 1.5.2 The Contractor, Subcontractors, Sub-subcontractors and material or equipment suppliers are authorized to use and reproduce the Instruments of Service provided to them solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. The Contractor, Subcontractors, Sub-subcontractors, and material or equipment suppliers may not use the Instruments of Service on other projects or for additions to this Project outside the scope of the Work without the specific written consent of the Owner, Architect and the Architect's consultants.

#### § 1.6 TRANSMISSION OF DATA IN DIGITAL FORM

If the parties intend to transmit Instruments of Service or any other information or documentation in digital form, they shall endeavor to establish necessary protocols governing such transmissions, unless otherwise already provided in the Agreement or the Contract Documents.

#### ARTICLE 2 OWNER

# § 2.1 GENERAL

- § 2.1.1 The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Owner shall designate in writing a representative who shall have express authority to bind the Owner with respect to all matters requiring the Owner's approval or authorization. Except as otherwise provided in Section 4.2.1, the Architect does not have such authority. The term "Owner" means the Owner or the Owner's authorized representative.
- § 2.1.2 The Owner shall furnish to the Contractor within fifteen days after receipt of a written request, information necessary and relevant for the Contractor to evaluate, give notice of or enforce mechanic's lien rights. Such information shall include a correct statement of the record legal title to the property on which the Project is located, usually referred to as the site, and the Owner's interest therein.

#### § 2.2 INFORMATION AND SERVICES REQUIRED OF THE OWNER

§ 2.2.1 Prior to commencement of the Work, the Contractor may request in writing that the Owner provide reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract. Thereafter, the Contractor may only request such evidence if (1) the Owner fails to make payments to the Contractor as the Contract Documents require; (2) a change in the Work materially changes the Contract Sum; or (3) the Contractor identifies in writing a reasonable concern regarding the Owner's ability to make payment when due. The Owner shall furnish such evidence as a condition precedent to commencement or continuation of the Work or the

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portion of the Work affected by a material change. After the Owner furnishes the evidence, the Owner shall not materially vary such financial arrangements without prior notice to the Contractor.

- § 2.2.2 Except for permits and fees that are the responsibility of the Contractor under the Contract Documents, including those required under Section 3.7.1, the Owner shall secure and pay for necessary approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities.
- § 2.2.3 The Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the site. The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work.
- § 2.2.4 The Owner shall furnish information or services required of the Owner by the Contract Documents with reasonable promptness. The Owner shall also furnish any other information or services under the Owner's control and relevant to the Contractor's performance of the Work with reasonable promptness after receiving the Contractor's written request for such information or services.
- **§ 2.2.5** Unless otherwise provided in the Contract Documents, the Owner shall furnish to the Contractor one copy of the Contract Documents for purposes of making reproductions pursuant to Section 1.5.2.

## § 2.3 OWNER'S RIGHT TO STOP THE WORK

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

# § 2.4 OWNER'S RIGHT TO CARRY OUT THE WORK

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a ten-day period after receipt of written notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such deficiencies. In such case an appropriate Change Order shall be issued deducting from payments then or thereafter due the Contractor the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Architect's additional services made necessary by such default, neglect or failure. Such action by the Owner and amounts charged to the Contractor are both subject to prior approval of the Architect. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner.

# ARTICLE 3 CONTRACTOR § 3.1 GENERAL

- § 3.1.1 The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Contractor shall be lawfully licensed, if required in the jurisdiction where the Project is located. The Contractor shall designate in writing a representative who shall have express authority to bind the Contractor with respect to all matters under this Contract. The term "Contractor" means the Contractor or the Contractor's authorized representative.
- § 3.1.2 The Contractor shall perform the Work in accordance with the Contract Documents.
- § 3.1.3 The Contractor shall not be relieved of obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Architect in the Architect's administration of the Contract, or by tests, inspections or approvals required or performed by persons or entities other than the Contractor.

### § 3.2 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR

- § 3.2.1 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed and correlated personal observations with requirements of the Contract Documents.
- § 3.2.2 Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 2.2.3, shall take field measurements of any existing conditions related to that portion of the Work, and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Architect any errors, inconsistencies or omissions discovered by or made known to the Contractor as a request for information in such form as the Architect may require. It is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents.
- § 3.2.3 The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, but the Contractor shall promptly report to the Architect any nonconformity discovered by or made known to the Contractor as a request for information in such form as the Architect may require.
- § 3.2.4 If the Contractor believes that additional cost or time is involved because of clarifications or instructions the Architect issues in response to the Contractor's notices or requests for information pursuant to Sections 3.2.2 or 3.2.3, the Contractor shall make Claims as provided in Article 15. If the Contractor fails to perform the obligations of Sections 3.2.2 or 3.2.3, the Contractor shall pay such costs and damages to the Owner as would have been avoided if the Contractor had performed such obligations. If the Contractor performs those obligations, the Contractor shall not be liable to the Owner or Architect for damages resulting from errors, inconsistencies or omissions in the Contract Documents, for differences between field measurements or conditions and the Contract Documents, or for nonconformities of the Contract Documents to applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities.

## § 3.3 SUPERVISION AND CONSTRUCTION PROCEDURES

- § 3.3.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract, unless the Contract Documents give other specific instructions concerning these matters. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences or procedures, the Contractor shall evaluate the jobsite safety thereof and, except as stated below, shall be fully and solely responsible for the jobsite safety of such means, methods, techniques, sequences or procedures may not be safe, the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely written notice to the Owner and Architect and shall not proceed with that portion of the Work without further written instructions from the Architect. If the Contractor is then instructed to proceed with the required means, methods, techniques, sequences or procedures without acceptance of changes proposed by the Contractor, the Owner shall be solely responsible for any loss or damage arising solely from those Owner-required means, methods, techniques, sequences or procedures.
- § 3.3.2 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors.
- § 3.3.3 The Contractor shall be responsible for inspection of portions of Work already performed to determine that such portions are in proper condition to receive subsequent Work.

## § 3.4 LABOR AND MATERIALS

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

- § 3.4.2 Except in the case of minor changes in the Work authorized by the Architect in accordance with Sections 3.12.8 or 7.4, the Contractor may make substitutions only with the consent of the Owner, after evaluation by the Architect and in accordance with a Change Order or Construction Change Directive.
- § 3.4.3 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them.

## § 3.5 WARRANTY

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

## **§ 3.6 TAXES**

The Contractor shall pay sales, consumer, use and similar taxes for the Work provided by the Contractor that are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect.

## § 3.7 PERMITS, FEES, NOTICES AND COMPLIANCE WITH LAWS

- § 3.7.1 Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the building permit as well as for other permits, fees, licenses, and inspections by government agencies necessary for proper execution and completion of the Work that are customarily secured after execution of the Contract and legally required at the time bids are received or negotiations concluded.
- § 3.7.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work.
- § 3.7.3 If the Contractor performs Work knowing it to be contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.
- § 3.7.4 Concealed or Unknown Conditions. If the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature, that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall promptly provide notice to the Owner and the Architect before conditions are disturbed and in no event later than 21 days after first observance of the conditions. The Architect will promptly investigate such conditions and, if the Architect determines that they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend an equitable adjustment in the Contract Sum or Contract Time, or both. If the Architect determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Architect shall promptly notify the Owner and Contractor in writing, stating the reasons. If either party disputes the Architect's determination or recommendation, that party may proceed as provided in Article 15.
- § 3.7.5 If, in the course of the Work, the Contractor encounters human remains or recognizes the existence of burial markers, archaeological sites or wetlands not indicated in the Contract Documents, the Contractor shall immediately suspend any operations that would affect them and shall notify the Owner and Architect. Upon receipt of such notice, the Owner shall promptly take any action necessary to obtain governmental authorization required to resume the operations. The Contractor shall continue to suspend such operations until otherwise instructed by the Owner but shall continue with all other operations that do not affect those remains or features. Requests for adjustments in the Contract Sum and Contract Time arising from the existence of such remains or features may be made as provided in Article 15.

## § 3.8 ALLOWANCES

§ 3.8.1 The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities to whom the Contractor has reasonable objection.

- § 3.8.2 Unless otherwise provided in the Contract Documents,
  - Allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;
  - Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowances; and
  - Whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the allowances under Section 3.8.2.1 and (2) changes in Contractor's costs under Section 3.8.2.2.
- § 3.8.3 Materials and equipment under an allowance shall be selected by the Owner with reasonable promptness.

## § 3.9 SUPERINTENDENT

- § 3.9.1 The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during performance of the Work. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor.
- § 3.9.2 The Contractor, as soon as practicable after award of the Contract, shall furnish in writing to the Owner through the Architect the name and qualifications of a proposed superintendent. The Architect may reply within 14 days to the Contractor in writing stating (1) whether the Owner or the Architect has reasonable objection to the proposed superintendent or (2) that the Architect requires additional time to review. Failure of the Architect to reply within the 14 day period shall constitute notice of no reasonable objection.
- § 3.9.3 The Contractor shall not employ a proposed superintendent to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not change the superintendent without the Owner's consent, which shall not unreasonably be withheld or delayed.

## § 3.10 CONTRACTOR'S CONSTRUCTION SCHEDULES

- § 3.10.1 The Contractor, promptly after being awarded the Contract, shall prepare and submit for the Owner's and Architect's information a Contractor's construction schedule for the Work. The schedule shall not exceed time limits current under the Contract Documents, shall be revised at appropriate intervals as required by the conditions of the Work and Project, shall be related to the entire Project to the extent required by the Contract Documents, and shall provide for expeditious and practicable execution of the Work.
- § 3.10.2 The Contractor shall prepare a submittal schedule, promptly after being awarded the Contract and thereafter as necessary to maintain a current submittal schedule, and shall submit the schedule(s) for the Architect's approval. The Architect's approval shall not unreasonably be delayed or withheld. The submittal schedule shall (1) be coordinated with the Contractor's construction schedule, and (2) allow the Architect reasonable time to review submittals. If the Contractor fails to submit a submittal schedule, the Contractor shall not be entitled to any increase in Contract Sum or extension of Contract Time based on the time required for review of submittals.
- § 3.10.3 The Contractor shall perform the Work in general accordance with the most recent schedules submitted to the Owner and Architect.

#### § 3.11 DOCUMENTS AND SAMPLES AT THE SITE

The Contractor shall maintain at the site for the Owner one copy of the Drawings, Specifications, Addenda, Change Orders and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and one copy of approved Shop Drawings, Product Data, Samples and similar required submittals. These shall be available to the Architect and shall be delivered to the Architect for submittal to the Owner upon completion of the Work as a record of the Work as constructed.

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### § 3.12 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

- § 3.12.1 Shop Drawings are drawings, diagrams, schedules and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-subcontractor, manufacturer, supplier or distributor to illustrate some portion of the Work.
- § 3.12.2 Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.
- § 3.12.3 Samples are physical examples that illustrate materials, equipment or workmanship and establish standards by which the Work will be judged.
- § 3.12.4 Shop Drawings, Product Data, Samples and similar submittals are not Contract Documents. Their purpose is to demonstrate the way by which the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents for those portions of the Work for which the Contract Documents require submittals. Review by the Architect is subject to the limitations of Section 4.2.7. Informational submittals upon which the Architect is not expected to take responsive action may be so identified in the Contract Documents. Submittals that are not required by the Contract Documents may be returned by the Architect without action.
- § 3.12.5 The Contractor shall review for compliance with the Contract Documents, approve and submit to the Architect Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of separate contractors.
- § 3.12.6 By submitting Shop Drawings, Product Data, Samples and similar submittals, the Contractor represents to the Owner and Architect that the Contractor has (1) reviewed and approved them, (2) determined and verified materials, field measurements and field construction criteria related thereto, or will do so and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.
- § 3.12.7 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples or similar submittals until the respective submittal has been approved by the Architect.
- § 3.12.8 The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Architect's approval of Shop Drawings, Product Data, Samples or similar submittals unless the Contractor has specifically informed the Architect in writing of such deviation at the time of submittal and (1) the Architect has given written approval to the specific deviation as a minor change in the Work, or (2) a Change Order or Construction Change Directive has been issued authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples or similar submittals by the Architect's approval thereof.
- § 3.12.9 The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples or similar submittals, to revisions other than those requested by the Architect on previous submittals. In the absence of such written notice, the Architect's approval of a resubmission shall not apply to such revisions.
- § 3.12.10 The Contractor shall not be required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents for a portion of the Work or unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. The Contractor shall not be required to provide professional services in violation of applicable law. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Architect will specify all performance and design criteria that such services must satisfy. The Contractor shall cause such services or certifications to be provided by a properly licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the Architect. The Owner and the Architect shall be entitled to rely upon the adequacy, accuracy and

completeness of the services, certifications and approvals performed or provided by such design professionals, provided the Owner and Architect have specified to the Contractor all performance and design criteria that such services must satisfy. Pursuant to this Section 3.12.10, the Architect will review, approve or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Contractor shall not be responsible for the adequacy of the performance and design criteria specified in the Contract Documents.

## § 3.13 USE OF SITE

The Contractor shall confine operations at the site to areas permitted by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.

# § 3.14 CUTTING AND PATCHING

- § 3.14.1 The Contractor shall be responsible for cutting, fitting or patching required to complete the Work or to make its parts fit together properly. All areas requiring cutting, fitting and patching shall be restored to the condition existing prior to the cutting, fitting and patching, unless otherwise required by the Contract Documents.
- § 3.14.2 The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner or separate contractors by cutting, patching or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter such construction by the Owner or a separate contractor except with written consent of the Owner and of such separate contractor; such consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold from the Owner or a separate contractor the Contractor's consent to cutting or otherwise altering the Work.

## § 3.15 CLEANING UP

- § 3.15.1 The Contractor shall keep the premises and surrounding area free from accumulation of waste materials or rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery and surplus materials from and about the Project.
- § 3.15.2 If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and Owner shall be entitled to reimbursement from the Contractor.

## § 3.16 ACCESS TO WORK

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

# § 3.17 ROYALTIES, PATENTS AND COPYRIGHTS

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

## § 3.18 INDEMNIFICATION

§ 3.18.1 To the fullest extent permitted by law the Contractor shall indemnify and hold harmless the Owner, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by the negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity that would otherwise exist as to a party or person described in this Section 3.18.

§ 3.18.2 In claims against any person or entity indemnified under this Section 3.18 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under Section 3.18.1 shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts or other employee benefit acts.

## ARTICLE 4 ARCHITECT

## § 4.1 GENERAL

- § 4.1.1 The Owner shall retain an architect lawfully licensed to practice architecture or an entity lawfully practicing architecture in the jurisdiction where the Project is located. That person or entity is identified as the Architect in the Agreement and is referred to throughout the Contract Documents as if singular in number.
- § 4.1.2 Duties, responsibilities and limitations of authority of the Architect as set forth in the Contract Documents shall not be restricted, modified or extended without written consent of the Owner, Contractor and Architect. Consent shall not be unreasonably withheld.
- § 4.1.3 If the employment of the Architect is terminated, the Owner shall employ a successor architect as to whom the Contractor has no reasonable objection and whose status under the Contract Documents shall be that of the Architect.

## § 4.2 ADMINISTRATION OF THE CONTRACT

- § 4.2.1 The Architect will provide administration of the Contract as described in the Contract Documents and will be an Owner's representative during construction until the date the Architect issues the final Certificate for Payment. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents.
- § 4.2.2 The Architect will visit the site at intervals appropriate to the stage of construction, or as otherwise agreed with the Owner, to become generally familiar with the progress and quality of the portion of the Work completed, and to determine in general if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Architect will not have control over, charge of, or responsibility for, the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents, except as provided in Section 3.3.1.
- § 4.2.3 On the basis of the site visits, the Architect will keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and report to the Owner (1) known deviations from the Contract Documents and from the most recent construction schedule submitted by the Contractor, and (2) defects and deficiencies observed in the Work. The Architect will not be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Architect will not have control over or charge of and will not be responsible for acts or omissions of the Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

## § 4.2.4 COMMUNICATIONS FACILITATING CONTRACT ADMINISTRATION

Except as otherwise provided in the Contract Documents or when direct communications have been specially authorized, the Owner and Contractor shall endeavor to communicate with each other through the Architect about matters arising out of or relating to the Contract. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and material suppliers shall be through the Contractor. Communications by and with separate contractors shall be through the Owner.

- § 4.2.5 Based on the Architect's evaluations of the Contractor's Applications for Payment, the Architect will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.
- **§ 4.2.6** The Architect has authority to reject Work that does not conform to the Contract Documents. Whenever the Architect considers it necessary or advisable, the Architect will have authority to require inspection or testing of the Work in accordance with Sections 13.5.2 and 13.5.3, whether or not such Work is fabricated, installed or completed. However, neither this authority of the Architect nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect to the Contractor, Subcontractors, material and equipment suppliers, their agents or employees, or other persons or entities performing portions of the Work.

- § 4.2.7 The Architect will review and approve, or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Architect's action will be taken in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time in the Architect's professional judgment to permit adequate review. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect's review of the Contractor's submittals shall not relieve the Contractor of the obligations under Sections 3.3, 3.5 and 3.12. The Architect's review shall not constitute approval of safety precautions or, unless otherwise specifically stated by the Architect, of any construction means, methods, techniques, sequences or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.
- § 4.2.8 The Architect will prepare Change Orders and Construction Change Directives, and may authorize minor changes in the Work as provided in Section 7.4. The Architect will investigate and make determinations and recommendations regarding concealed and unknown conditions as provided in Section 3.7.4.
- § 4.2.9 The Architect will conduct inspections to determine the date or dates of Substantial Completion and the date of final completion; issue Certificates of Substantial Completion pursuant to Section 9.8; receive and forward to the Owner, for the Owner's review and records, written warranties and related documents required by the Contract and assembled by the Contractor pursuant to Section 9.10; and issue a final Certificate for Payment pursuant to Section 9.10.
- § 4.2.10 If the Owner and Architect agree, the Architect will provide one or more project representatives to assist in carrying out the Architect's responsibilities at the site. The duties, responsibilities and limitations of authority of such project representatives shall be as set forth in an exhibit to be incorporated in the Contract Documents.
- § 4.2.11 The Architect will interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of either the Owner or Contractor. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness.
- § 4.2.12 Interpretations and decisions of the Architect will be consistent with the intent of, and reasonably inferable from, the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and decisions, the Architect will endeavor to secure faithful performance by both Owner and Contractor, will not show partiality to either and will not be liable for results of interpretations or decisions rendered in good faith.
- § 4.2.13 The Architect's decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents.
- § 4.2.14 The Architect will review and respond to requests for information about the Contract Documents. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If appropriate, the Architect will prepare and issue supplemental Drawings and Specifications in response to the requests for information.

# ARTICLE 5 SUBCONTRACTORS

### § 5.1 DEFINITIONS

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

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

§ 5.2.1 Unless otherwise stated in the Contract Documents or the bidding requirements, the Contractor, as soon as practicable after award of the Contract, shall furnish in writing to the Owner through the Architect the names of persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for each principal portion of the Work. The Architect may reply within 14 days to the Contractor in writing stating (1) whether the Owner or the Architect has reasonable objection to any such proposed person or entity or (2) that the Architect requires additional time for review. Failure of the Owner or Architect to reply within the 14-day period shall constitute notice of no reasonable objection.

- § 5.2.2 The Contractor shall not contract with a proposed person or entity to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.
- § 5.2.3 If the Owner or Architect has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner or Architect has no reasonable objection. If the proposed but rejected Subcontractor was reasonably capable of performing the Work, the Contract Sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute Subcontractor's Work. However, no increase in the Contract Sum or Contract Time shall be allowed for such change unless the Contractor has acted promptly and responsively in submitting names as required.
- § 5.2.4 The Contractor shall not substitute a Subcontractor, person or entity previously selected if the Owner or Architect makes reasonable objection to such substitution.

## § 5.3 SUBCONTRACTUAL RELATIONS

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

## § 5.4 CONTINGENT ASSIGNMENT OF SUBCONTRACTS

- § 5.4.1 Each subcontract agreement for a portion of the Work is assigned by the Contractor to the Owner, provided that
  - assignment is effective only after termination of the Contract by the Owner for cause pursuant to Section 14.2 and only for those subcontract agreements that the Owner accepts by notifying the Subcontractor and Contractor in writing; and
  - .2 assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

When the Owner accepts the assignment of a subcontract agreement, the Owner assumes the Contractor's rights and obligations under the subcontract.

- § 5.4.2 Upon such assignment, if the Work has been suspended for more than 30 days, the Subcontractor's compensation shall be equitably adjusted for increases in cost resulting from the suspension.
- § 5.4.3 Upon such assignment to the Owner under this Section 5.4, the Owner may further assign the subcontract to a successor contractor or other entity. If the Owner assigns the subcontract to a successor contractor or other entity, the

Owner shall nevertheless remain legally responsible for all of the successor contractor's obligations under the subcontract.

# ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS § 6.1 OWNER'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS

- § 6.1.1 The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and to award separate contracts in connection with other portions of the Project or other construction or operations on the site under Conditions of the Contract identical or substantially similar to these including those portions related to insurance and waiver of subrogation. If the Contractor claims that delay or additional cost is involved because of such action by the Owner, the Contractor shall make such Claim as provided in Article 15.
- § 6.1.2 When separate contracts are awarded for different portions of the Project or other construction or operations on the site, the term "Contractor" in the Contract Documents in each case shall mean the Contractor who executes each separate Owner-Contractor Agreement.
- § 6.1.3 The Owner shall provide for coordination of the activities of the Owner's own forces and of each separate contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with other separate contractors and the Owner in reviewing their construction schedules. The Contractor shall make any revisions to the construction schedule deemed necessary after a joint review and mutual agreement. The construction schedules shall then constitute the schedules to be used by the Contractor, separate contractors and the Owner until subsequently revised.
- **§ 6.1.4** Unless otherwise provided in the Contract Documents, when the Owner performs construction or operations related to the Project with the Owner's own forces, the Owner shall be deemed to be subject to the same obligations and to have the same rights that apply to the Contractor under the Conditions of the Contract, including, without excluding others, those stated in Article 3, this Article 6 and Articles 10, 11 and 12.

## § 6.2 MUTUAL RESPONSIBILITY

- § 6.2.1 The Contractor shall afford the Owner and separate contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents.
- § 6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner or a separate contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly report to the Architect apparent discrepancies or defects in such other construction that would render it unsuitable for such proper execution and results. Failure of the Contractor so to report shall constitute an acknowledgment that the Owner's or separate contractor's completed or partially completed construction is fit and proper to receive the Contractor's Work, except as to defects not then reasonably discoverable.
- § 6.2.3 The Contractor shall reimburse the Owner for costs the Owner incurs that are payable to a separate contractor because of the Contractor's delays, improperly timed activities or defective construction. The Owner shall be responsible to the Contractor for costs the Contractor incurs because of a separate contractor's delays, improperly timed activities, damage to the Work or defective construction.
- **§ 6.2.4** The Contractor shall promptly remedy damage the Contractor wrongfully causes to completed or partially completed construction or to property of the Owner or separate contractors as provided in Section 10.2.5.
- **§ 6.2.5** The Owner and each separate contractor shall have the same responsibilities for cutting and patching as are described for the Contractor in Section 3.14.

### § 6.3 OWNER'S RIGHT TO CLEAN UP

on 10/23/2014, and is not for resale.

**User Notes:** 

If a dispute arises among the Contractor, separate contractors and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish, the Owner may clean up and the Architect will allocate the cost among those responsible.

### ARTICLE 7 CHANGES IN THE WORK

#### § 7.1 GENERAL

- § 7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, Construction Change Directive or order for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents.
- § 7.1.2 A Change Order shall be based upon agreement among the Owner, Contractor and Architect; a Construction Change Directive requires agreement by the Owner and Architect and may or may not be agreed to by the Contractor; an order for a minor change in the Work may be issued by the Architect alone.
- § 7.1.3 Changes in the Work shall be performed under applicable provisions of the Contract Documents, and the Contractor shall proceed promptly, unless otherwise provided in the Change Order, Construction Change Directive or order for a minor change in the Work.

# § 7.2 CHANGE ORDERS

- § 7.2.1 A Change Order is a written instrument prepared by the Architect and signed by the Owner, Contractor and Architect stating their agreement upon all of the following:
  - .1 The change in the Work;
  - .2 The amount of the adjustment, if any, in the Contract Sum; and
  - .3 The extent of the adjustment, if any, in the Contract Time.

## § 7.3 CONSTRUCTION CHANGE DIRECTIVES

- § 7.3.1 A Construction Change Directive is a written order prepared by the Architect and signed by the Owner and Architect, directing a change in the Work prior to agreement on adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions or other revisions, the Contract Sum and Contract Time being adjusted accordingly.
- § 7.3.2 A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order.
- § 7.3.3 If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:
  - .1 Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
  - .2 Unit prices stated in the Contract Documents or subsequently agreed upon;
  - .3 Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
  - .4 As provided in Section 7.3.7.
- § 7.3.4 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed in a proposed Change Order or Construction Change Directive so that application of such unit prices to quantities of Work proposed will cause substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.
- § 7.3.5 Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Architect of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.
- § 7.3.6 A Construction Change Directive signed by the Contractor indicates the Contractor's agreement therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.
- § 7.3.7 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the Architect shall determine the method and the adjustment on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, an amount

for overhead and profit as set forth in the Agreement, or if no such amount is set forth in the Agreement, a reasonable amount. In such case, and also under Section 7.3.3.3, the Contractor shall keep and present, in such form as the Architect may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.3.7 shall be limited to the following:

- Costs of labor, including social security, old age and unemployment insurance, fringe benefits required by agreement or custom, and workers' compensation insurance;
- .2 Costs of materials, supplies and equipment, including cost of transportation, whether incorporated or
- .3 Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others:
- .4 Costs of premiums for all bonds and insurance, permit fees, and sales, use or similar taxes related to the Work; and
- .5 Additional costs of supervision and field office personnel directly attributable to the change.
- § 7.3.8 The amount of credit to be allowed by the Contractor to the Owner for a deletion or change that results in a net decrease in the Contract Sum shall be actual net cost as confirmed by the Architect. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.
- § 7.3.9 Pending final determination of the total cost of a Construction Change Directive to the Owner, the Contractor may request payment for Work completed under the Construction Change Directive in Applications for Payment. The Architect will make an interim determination for purposes of monthly certification for payment for those costs and certify for payment the amount that the Architect determines, in the Architect's professional judgment, to be reasonably justified. The Architect's interim determination of cost shall adjust the Contract Sum on the same basis as a Change Order, subject to the right of either party to disagree and assert a Claim in accordance with Article 15.
- § 7.3.10 When the Owner and Contractor agree with a determination made by the Architect concerning the adjustments in the Contract Sum and Contract Time, or otherwise reach agreement upon the adjustments, such agreement shall be effective immediately and the Architect will prepare a Change Order. Change Orders may be issued for all or any part of a Construction Change Directive.

## § 7.4 MINOR CHANGES IN THE WORK

The Architect has authority to order minor changes in the Work not involving adjustment in the Contract Sum or extension of the Contract Time and not inconsistent with the intent of the Contract Documents. Such changes will be effected by written order signed by the Architect and shall be binding on the Owner and Contractor.

#### **ARTICLE 8** TIME § 8.1 DEFINITIONS

- § 8.1.1 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.
- § 8.1.2 The date of commencement of the Work is the date established in the Agreement.
- § 8.1.3 The date of Substantial Completion is the date certified by the Architect in accordance with Section 9.8.
- § 8.1.4 The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

## § 8.2 PROGRESS AND COMPLETION

- § 8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement the Contractor confirms that the Contract Time is a reasonable period for performing the Work.
- § 8.2.2 The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, prematurely commence operations on the site or elsewhere prior to the effective date of insurance required by Article 11 to be furnished by the Contractor and Owner. The date of commencement of the Work shall not be changed by the effective date of such insurance.

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§ 8.2.3 The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time.

## § 8.3 DELAYS AND EXTENSIONS OF TIME

- § 8.3.1 If the Contractor is delayed at any time in the commencement or progress of the Work by an act or neglect of the Owner or Architect, or of an employee of either, or of a separate contractor employed by the Owner; or by changes ordered in the Work; or by labor disputes, fire, unusual delay in deliveries, unavoidable casualties or other causes beyond the Contractor's control; or by delay authorized by the Owner pending mediation and arbitration; or by other causes that the Architect determines may justify delay, then the Contract Time shall be extended by Change Order for such reasonable time as the Architect may determine.
- § 8.3.2 Claims relating to time shall be made in accordance with applicable provisions of Article 15.
- § 8.3.3 This Section 8.3 does not preclude recovery of damages for delay by either party under other provisions of the Contract Documents.

# ARTICLE 9 PAYMENTS AND COMPLETION § 9.1 CONTRACT SUM

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

## § 9.2 SCHEDULE OF VALUES

Where the Contract is based on a stipulated sum or Guaranteed Maximum Price, the Contractor shall submit to the Architect, before the first Application for Payment, a schedule of values allocating the entire Contract Sum to the various portions of the Work and prepared in such form and supported by such data to substantiate its accuracy as the Architect may require. This schedule, unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment.

#### § 9.3 APPLICATIONS FOR PAYMENT

- § 9.3.1 At least ten days before the date established for each progress payment, the Contractor shall submit to the Architect an itemized Application for Payment prepared in accordance with the schedule of values, if required under Section 9.2, for completed portions of the Work. Such application shall be notarized, if required, and supported by such data substantiating the Contractor's right to payment as the Owner or Architect may require, such as copies of requisitions from Subcontractors and material suppliers, and shall reflect retainage if provided for in the Contract Documents.
- § 9.3.1.1 As provided in Section 7.3.9, such applications may include requests for payment on account of changes in the Work that have been properly authorized by Construction Change Directives, or by interim determinations of the Architect, but not yet included in Change Orders.
- § 9.3.1.2 Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or material supplier, unless such Work has been performed by others whom the Contractor intends to pay.
- § 9.3.2 Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment suitably stored off the site at a location agreed upon in writing. Payment for materials and equipment stored on or off the site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, and shall include the costs of applicable insurance, storage and transportation to the site for such materials and equipment stored off the site.
- § 9.3.3 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information and belief, be free and clear of liens, claims, security interests or

encumbrances in favor of the Contractor, Subcontractors, material suppliers, or other persons or entities making a claim by reason of having provided labor, materials and equipment relating to the Work.

### § 9.4 CERTIFICATES FOR PAYMENT

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

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

### § 9.5 DECISIONS TO WITHHOLD CERTIFICATION

§ 9.5.1 The Architect may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Architect's opinion the representations to the Owner required by Section 9.4.2 cannot be made. If the Architect is unable to certify payment in the amount of the Application, the Architect will notify the Contractor and Owner as provided in Section 9.4.1. If the Contractor and Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment for the amount for which the Architect is able to make such representations to the Owner. The Architect may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Architect's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from acts and omissions described in Section 3.3.2, because of

- .1 defective Work not remedied;
- .2 third party claims filed or reasonable evidence indicating probable filing of such claims unless security acceptable to the Owner is provided by the Contractor;
- **.3** failure of the Contractor to make payments properly to Subcontractors or for labor, materials or equipment;
- .4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- .5 damage to the Owner or a separate contractor;
- reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; or
- 7 repeated failure to carry out the Work in accordance with the Contract Documents.

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

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

## § 9.6 PROGRESS PAYMENTS

§ 9.6.1 After the Architect has issued a Certificate for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents, and shall so notify the Architect.

- § 9.6.2 The Contractor shall pay each Subcontractor no later than seven days after receipt of payment from the Owner the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner.
- § 9.6.3 The Architect will, on request, furnish to a Subcontractor, if practicable, information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Architect and Owner on account of portions of the Work done by such Subcontractor.
- § 9.6.4 The Owner has the right to request written evidence from the Contractor that the Contractor has properly paid Subcontractors and material and equipment suppliers amounts paid by the Owner to the Contractor for subcontracted Work. If the Contractor fails to furnish such evidence within seven days, the Owner shall have the right to contact Subcontractors to ascertain whether they have been properly paid. Neither the Owner nor Architect shall have an obligation to pay or to see to the payment of money to a Subcontractor, except as may otherwise be required by law.
- § 9.6.5 Contractor payments to material and equipment suppliers shall be treated in a manner similar to that provided in Sections 9.6.2, 9.6.3 and 9.6.4.
- § 9.6.6 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.
- § 9.6.7 Unless the Contractor provides the Owner with a payment bond in the full penal sum of the Contract Sum, payments received by the Contractor for Work properly performed by Subcontractors and suppliers shall be held by the Contractor for those Subcontractors or suppliers who performed Work or furnished materials, or both, under contract with the Contractor for which payment was made by the Owner. Nothing contained herein shall require money to be placed in a separate account and not commingled with money of the Contractor, shall create any fiduciary liability or tort liability on the part of the Contractor for breach of trust or shall entitle any person or entity to an award of punitive damages against the Contractor for breach of the requirements of this provision.

## § 9.7 FAILURE OF PAYMENT

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

## § 9.8 SUBSTANTIAL COMPLETION

- § 9.8.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use.
- § 9.8.2 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the Architect a comprehensive list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.
- § 9.8.3 Upon receipt of the Contractor's list, the Architect will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Architect's inspection discloses any item, whether or not included on the Contractor's list, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work or designated portion thereof for its intended use, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Architect. In such case, the Contractor shall then submit a request for another inspection by the Architect to determine Substantial Completion.

§ 9.8.4 When the Work or designated portion thereof is substantially complete, the Architect will prepare a Certificate of Substantial Completion that shall establish the date of Substantial Completion, shall establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance, and shall fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

§ 9.8.5 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in such Certificate. Upon such acceptance and consent of surety, if any, the Owner shall make payment of retainage applying to such Work or designated portion thereof. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.

## § 9.9 PARTIAL OCCUPANCY OR USE

§ 9.9.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is consented to by the insurer as required under Section 11.3.1.5 and authorized by public authorities having jurisdiction over the Project. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage, if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the Contractor considers a portion substantially complete, the Contractor shall prepare and submit a list to the Architect as provided under Section 9.8.2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. The stage of the progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, by decision of the Architect.

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

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

## § 9.10 FINAL COMPLETION AND FINAL PAYMENT

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

§ 9.10.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Owner, (3) a written statement that the Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment and (5), if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts, releases and waivers of liens, claims, security interests or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien. If such lien remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.

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- § 9.10.3 If, after Substantial Completion of the Work, final completion thereof is materially delayed through no fault of the Contractor or by issuance of Change Orders affecting final completion, and the Architect so confirms, the Owner shall, upon application by the Contractor and certification by the Architect, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance for Work not fully completed or corrected is less than retainage stipulated in the Contract Documents, and if bonds have been furnished, the written consent of surety to payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Architect prior to certification of such payment. Such payment shall be made under terms and conditions governing final payment, except that it shall not constitute a waiver of claims.
- § 9.10.4 The making of final payment shall constitute a waiver of Claims by the Owner except those arising from
  - .1 liens, Claims, security interests or encumbrances arising out of the Contract and unsettled;
  - .2 failure of the Work to comply with the requirements of the Contract Documents; or
  - .3 terms of special warranties required by the Contract Documents.
- § 9.10.5 Acceptance of final payment by the Contractor, a Subcontractor or material supplier shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment.

# ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY § 10.1 SAFETY PRECAUTIONS AND PROGRAMS

The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the Contract.

## § 10.2 SAFETY OF PERSONS AND PROPERTY

- § 10.2.1 The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury or loss to
  - .1 employees on the Work and other persons who may be affected thereby;
  - .2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody or control of the Contractor or the Contractor's Subcontractors or Sub-subcontractors; and
  - .3 other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.
- § 10.2.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities bearing on safety of persons or property or their protection from damage, injury or loss.
- § 10.2.3 The Contractor shall erect and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying owners and users of adjacent sites and utilities.
- § 10.2.4 When use or storage of explosives or other hazardous materials or equipment or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel.
- § 10.2.5 The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contract Documents) to property referred to in Sections 10.2.1.2 and 10.2.1.3 caused in whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 10.2.1.2 and 10.2.1.3, except damage or loss attributable to acts or omissions of the Owner or Architect or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 3.18.

- § 10.2.6 The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner and Architect.
- § 10.2.7 The Contractor shall not permit any part of the construction or site to be loaded so as to cause damage or create an unsafe condition.

### § 10.2.8 INJURY OR DAMAGE TO PERSON OR PROPERTY

If either party suffers injury or damage to person or property because of an act or omission of the other party, or of others for whose acts such party is legally responsible, written notice of such injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding 21 days after discovery. The notice shall provide sufficient detail to enable the other party to investigate the matter.

### § 10.3 HAZARDOUS MATERIALS

- § 10.3.1 The Contractor is responsible for compliance with any requirements included in the Contract Documents regarding hazardous materials. If the Contractor encounters a hazardous material or substance not addressed in the Contract Documents and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and report the condition to the Owner and Architect in writing.
- § 10.3.2 Upon receipt of the Contractor's written notice, the Owner shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to cause it to be rendered harmless. Unless otherwise required by the Contract Documents, the Owner shall furnish in writing to the Contractor and Architect the names and qualifications of persons or entities who are to perform tests verifying the presence or absence of such material or substance or who are to perform the task of removal or safe containment of such material or substance. The Contractor and the Architect will promptly reply to the Owner in writing stating whether or not either has reasonable objection to the persons or entities proposed by the Owner. If either the Contractor or Architect has an objection to a person or entity proposed by the Owner, the Owner shall propose another to whom the Contractor and the Architect have no reasonable objection. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time shall be extended appropriately and the Contract Sum shall be increased in the amount of the Contractor's reasonable additional costs of shut-down, delay and start-up.
- § 10.3.3 To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor, Subcontractors, Architect, Architect's consultants and agents and employees of any of them from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work in the affected area if in fact the material or substance presents the risk of bodily injury or death as described in Section 10.3.1 and has not been rendered harmless, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), except to the extent that such damage, loss or expense is due to the fault or negligence of the party seeking indemnity.
- § 10.3.4 The Owner shall not be responsible under this Section 10.3 for materials or substances the Contractor brings to the site unless such materials or substances are required by the Contract Documents. The Owner shall be responsible for materials or substances required by the Contract Documents, except to the extent of the Contractor's fault or negligence in the use and handling of such materials or substances.
- § 10.3.5 The Contractor shall indemnify the Owner for the cost and expense the Owner incurs (1) for remediation of a material or substance the Contractor brings to the site and negligently handles, or (2) where the Contractor fails to perform its obligations under Section 10.3.1, except to the extent that the cost and expense are due to the Owner's fault or negligence.
- § 10.3.6 If, without negligence on the part of the Contractor, the Contractor is held liable by a government agency for the cost of remediation of a hazardous material or substance solely by reason of performing Work as required by the Contract Documents, the Owner shall indemnify the Contractor for all cost and expense thereby incurred.

## § 10.4 EMERGENCIES

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

#### ARTICLE 11 **INSURANCE AND BONDS** § 11.1 CONTRACTOR'S LIABILITY INSURANCE

§ 11.1.1 The Contractor shall purchase from and maintain in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located such insurance as will protect the Contractor from claims set forth below which may arise out of or result from the Contractor's operations and completed operations under the Contract and for which the Contractor may be legally liable, whether such operations be by the Contractor or by a Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

- .1 Claims under workers' compensation, disability benefit and other similar employee benefit acts that are applicable to the Work to be performed;
- .2 Claims for damages because of bodily injury, occupational sickness or disease, or death of the Contractor's employees;
- .3 Claims for damages because of bodily injury, sickness or disease, or death of any person other than the Contractor's employees;
- .4 Claims for damages insured by usual personal injury liability coverage;
- .5 Claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom;
- Claims for damages because of bodily injury, death of a person or property damage arising out of ownership, maintenance or use of a motor vehicle;
- .7 Claims for bodily injury or property damage arising out of completed operations; and
- Claims involving contractual liability insurance applicable to the Contractor's obligations under Section 3.18.

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

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

§ 11.1.4 The Contractor shall cause the commercial liability coverage required by the Contract Documents to include (1) the Owner, the Architect and the Architect's consultants as additional insureds for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's operations; and (2) the Owner as an additional insured for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's completed operations.

## § 11.2 OWNER'S LIABILITY INSURANCE

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

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### § 11.3 PROPERTY INSURANCE

- § 11.3.1 Unless otherwise provided, the Owner shall purchase and maintain, in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located, property insurance written on a builder's risk "all-risk" or equivalent policy form in the amount of the initial Contract Sum, plus value of subsequent Contract Modifications and cost of materials supplied or installed by others, comprising total value for the entire Project at the site on a replacement cost basis without optional deductibles. Such property insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made as provided in Section 9.10 or until no person or entity other than the Owner has an insurable interest in the property required by this Section 11.3 to be covered, whichever is later. This insurance shall include interests of the Owner, the Contractor, Subcontractors and Sub-subcontractors in the Project.
- § 11.3.1.1 Property insurance shall be on an "all-risk" or equivalent policy form and shall include, without limitation, insurance against the perils of fire (with extended coverage) and physical loss or damage including, without duplication of coverage, theft, vandalism, malicious mischief, collapse, earthquake, flood, windstorm, falsework, testing and startup, temporary buildings and debris removal including demolition occasioned by enforcement of any applicable legal requirements, and shall cover reasonable compensation for Architect's and Contractor's services and expenses required as a result of such insured loss.
- § 11.3.1.2 If the Owner does not intend to purchase such property insurance required by the Contract and with all of the coverages in the amount described above, the Owner shall so inform the Contractor in writing prior to commencement of the Work. The Contractor may then effect insurance that will protect the interests of the Contractor, Subcontractors and Sub-subcontractors in the Work, and by appropriate Change Order the cost thereof shall be charged to the Owner. If the Contractor is damaged by the failure or neglect of the Owner to purchase or maintain insurance as described above, without so notifying the Contractor in writing, then the Owner shall bear all reasonable costs properly attributable thereto.
- § 11.3.1.3 If the property insurance requires deductibles, the Owner shall pay costs not covered because of such deductibles.
- § 11.3.1.4 This property insurance shall cover portions of the Work stored off the site, and also portions of the Work in transit.
- § 11.3.1.5 Partial occupancy or use in accordance with Section 9.9 shall not commence until the insurance company or companies providing property insurance have consented to such partial occupancy or use by endorsement or otherwise. The Owner and the Contractor shall take reasonable steps to obtain consent of the insurance company or companies and shall, without mutual written consent, take no action with respect to partial occupancy or use that would cause cancellation, lapse or reduction of insurance.

#### § 11.3.2 BOILER AND MACHINERY INSURANCE

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

## § 11.3.3 LOSS OF USE INSURANCE

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

- § 11.3.4 If the Contractor requests in writing that insurance for risks other than those described herein or other special causes of loss be included in the property insurance policy, the Owner shall, if possible, include such insurance, and the cost thereof shall be charged to the Contractor by appropriate Change Order.
- § 11.3.5 If during the Project construction period the Owner insures properties, real or personal or both, at or adjacent to the site by property insurance under policies separate from those insuring the Project, or if after final payment

property insurance is to be provided on the completed Project through a policy or policies other than those insuring the Project during the construction period, the Owner shall waive all rights in accordance with the terms of Section 11.3.7 for damages caused by fire or other causes of loss covered by this separate property insurance. All separate policies shall provide this waiver of subrogation by endorsement or otherwise.

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

## § 11.3.7 WAIVERS OF SUBROGATION

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

- § 11.3.8 A loss insured under the Owner's property insurance shall be adjusted by the Owner as fiduciary and made payable to the Owner as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause and of Section 11.3.10. The Contractor shall pay Subcontractors their just shares of insurance proceeds received by the Contractor, and by appropriate agreements, written where legally required for validity, shall require Subcontractors to make payments to their Sub-subcontractors in similar manner.
- § 11.3.9 If required in writing by a party in interest, the Owner as fiduciary shall, upon occurrence of an insured loss, give bond for proper performance of the Owner's duties. The cost of required bonds shall be charged against proceeds received as fiduciary. The Owner shall deposit in a separate account proceeds so received, which the Owner shall distribute in accordance with such agreement as the parties in interest may reach, or as determined in accordance with the method of binding dispute resolution selected in the Agreement between the Owner and Contractor. If after such loss no other special agreement is made and unless the Owner terminates the Contract for convenience, replacement of damaged property shall be performed by the Contractor after notification of a Change in the Work in accordance with Article 7.
- § 11.3.10 The Owner as fiduciary shall have power to adjust and settle a loss with insurers unless one of the parties in interest shall object in writing within five days after occurrence of loss to the Owner's exercise of this power; if such objection is made, the dispute shall be resolved in the manner selected by the Owner and Contractor as the method of binding dispute resolution in the Agreement. If the Owner and Contractor have selected arbitration as the method of binding dispute resolution, the Owner as fiduciary shall make settlement with insurers or, in the case of a dispute over distribution of insurance proceeds, in accordance with the directions of the arbitrators.

### § 11.4 PERFORMANCE BOND AND PAYMENT BOND

- § 11.4.1 The Owner shall have the right to require the Contractor to furnish bonds covering faithful performance of the Contract and payment of obligations arising thereunder as stipulated in bidding requirements or specifically required in the Contract Documents on the date of execution of the Contract.
- § 11.4.2 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.

# ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

# § 12.1 UNCOVERING OF WORK

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

§ 12.1.2 If a portion of the Work has been covered that the Architect has not specifically requested to examine prior to its being covered, the Architect may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, costs of uncovering and replacement shall, by appropriate Change Order, be at the Owner's expense. If such Work is not in accordance with the Contract Documents, such costs and the cost of correction shall be at the Contractor's expense unless the condition was caused by the Owner or a separate contractor in which event the Owner shall be responsible for payment of such costs.

## § 12.2 CORRECTION OF WORK

# § 12.2.1 BEFORE OR AFTER SUBSTANTIAL COMPLETION

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

## § 12.2.2 AFTER SUBSTANTIAL COMPLETION

§ 12.2.2.1 In addition to the Contractor's obligations under Section 3.5, if, within one year after the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under Section 9.9.1, or by terms of an applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of written notice from the Owner to do so unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. During the one-year period for correction of Work, if the Owner fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of warranty. If the Contractor fails to correct nonconforming Work within a reasonable time during that period after receipt of notice from the Owner or Architect, the Owner may correct it in accordance with Section

- § 12.2.2.2 The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.
- § 12.2.2.3 The one-year period for correction of Work shall not be extended by corrective Work performed by the Contractor pursuant to this Section 12.2.
- § 12.2.3 The Contractor shall remove from the site portions of the Work that are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.
- § 12.2.4 The Contractor shall bear the cost of correcting destroyed or damaged construction, whether completed or partially completed, of the Owner or separate contractors caused by the Contractor's correction or removal of Work that is not in accordance with the requirements of the Contract Documents.
- § 12.2.5 Nothing contained in this Section 12.2 shall be construed to establish a period of limitation with respect to other obligations the Contractor has under the Contract Documents. Establishment of the one-year period for correction of Work as described in Section 12.2.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

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### § 12.3 ACCEPTANCE OF NONCONFORMING WORK

If the Owner prefers to accept Work that is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Sum will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

# ARTICLE 13 MISCELLANEOUS PROVISIONS

## § 13.1 GOVERNING LAW

The Contract shall be governed by the law of the place where the Project is located except that, if the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 15.4.

## § 13.2 SUCCESSORS AND ASSIGNS

§ 13.2.1 The Owner and Contractor respectively bind themselves, their partners, successors, assigns and legal representatives to covenants, agreements and obligations contained in the Contract Documents. Except as provided in Section 13.2.2, neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make such an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

§ 13.2.2 The Owner may, without consent of the Contractor, assign the Contract to a lender providing construction financing for the Project, if the lender assumes the Owner's rights and obligations under the Contract Documents. The Contractor shall execute all consents reasonably required to facilitate such assignment.

## § 13.3 WRITTEN NOTICE

Written notice shall be deemed to have been duly served if delivered in person to the individual, to a member of the firm or entity, or to an officer of the corporation for which it was intended; or if delivered at, or sent by registered or certified mail or by courier service providing proof of delivery to, the last business address known to the party giving notice.

## § 13.4 RIGHTS AND REMEDIES

§ 13.4.1 Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights and remedies otherwise imposed or available by law.

§ 13.4.2 No action or failure to act by the Owner, Architect or Contractor shall constitute a waiver of a right or duty afforded them under the Contract, nor shall such action or failure to act constitute approval of or acquiescence in a breach there under, except as may be specifically agreed in writing.

### § 13.5 TESTS AND INSPECTIONS

§ 13.5.1 Tests, inspections and approvals of portions of the Work shall be made as required by the Contract Documents and by applicable laws, statutes, ordinances, codes, rules and regulations or lawful orders of public authorities. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections and approvals. The Contractor shall give the Architect timely notice of when and where tests and inspections are to be made so that the Architect may be present for such procedures. The Owner shall bear costs of (1) tests, inspections or approvals that do not become requirements until after bids are received or negotiations concluded, and (2) tests, inspections or approvals where building codes or applicable laws or regulations prohibit the Owner from delegating their cost to the Contractor.

§ 13.5.2 If the Architect, Owner or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection or approval not included under Section 13.5.1, the Architect will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection or approval by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Architect of when and where tests and inspections are to be made so that the Architect may be present for such procedures. Such costs, except as provided in Section 13.5.3, shall be at the Owner's expense.

§ 13.5.3 If such procedures for testing, inspection or approval under Sections 13.5.1 and 13.5.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by

such failure including those of repeated procedures and compensation for the Architect's services and expenses shall be at the Contractor's expense.

- § 13.5.4 Required certificates of testing, inspection or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Architect.
- § 13.5.5 If the Architect is to observe tests, inspections or approvals required by the Contract Documents, the Architect will do so promptly and, where practicable, at the normal place of testing.
- § 13.5.6 Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

## § 13.6 INTEREST

Payments due and unpaid under the Contract Documents shall bear interest from the date payment is due at such rate as the parties may agree upon in writing or, in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.

# § 13.7 TIME LIMITS ON CLAIMS

The Owner and Contractor shall commence all claims and causes of action, whether in contract, tort, breach of warranty or otherwise, against the other arising out of or related to the Contract in accordance with the requirements of the final dispute resolution method selected in the Agreement within the time period specified by applicable law, but in any case not more than 10 years after the date of Substantial Completion of the Work. The Owner and Contractor waive all claims and causes of action not commenced in accordance with this Section 13.7.

#### ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT § 14.1 TERMINATION BY THE CONTRACTOR

- § 14.1.1 The Contractor may terminate the Contract if the Work is stopped for a period of 30 consecutive days through no act or fault of the Contractor or a Subcontractor, Sub-subcontractor or their agents or employees or any other persons or entities performing portions of the Work under direct or indirect contract with the Contractor, for any of the following reasons:
  - .1 Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped;
  - .2 An act of government, such as a declaration of national emergency that requires all Work to be stopped;
  - .3 Because the Architect has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Section 9.4.1, or because the Owner has not made payment on a Certificate for Payment within the time stated in the Contract Documents; or
  - The Owner has failed to furnish to the Contractor promptly, upon the Contractor's request, reasonable evidence as required by Section 2.2.1.
- § 14.1.2 The Contractor may terminate the Contract if, through no act or fault of the Contractor or a Subcontractor, Sub-subcontractor or their agents or employees or any other persons or entities performing portions of the Work under direct or indirect contract with the Contractor, repeated suspensions, delays or interruptions of the entire Work by the Owner as described in Section 14.3 constitute in the aggregate more than 100 percent of the total number of days scheduled for completion, or 120 days in any 365-day period, whichever is less.
- § 14.1.3 If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon seven days' written notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for Work executed, including reasonable overhead and profit, costs incurred by reason of such termination, and damages.
- § 14.1.4 If the Work is stopped for a period of 60 consecutive days through no act or fault of the Contractor or a Subcontractor or their agents or employees or any other persons performing portions of the Work under contract with the Contractor because the Owner has repeatedly failed to fulfill the Owner's obligations under the Contract Documents with respect to matters important to the progress of the Work, the Contractor may, upon seven additional days' written notice to the Owner and the Architect, terminate the Contract and recover from the Owner as provided in Section 14.1.3.

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## § 14.2 TERMINATION BY THE OWNER FOR CAUSE

§ 14.2.1 The Owner may terminate the Contract if the Contractor

- 1 repeatedly refuses or fails to supply enough properly skilled workers or proper materials;
- .2 fails to make payment to Subcontractors for materials or labor in accordance with the respective agreements between the Contractor and the Subcontractors;
- .3 repeatedly disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority; or
- 4 otherwise is guilty of substantial breach of a provision of the Contract Documents.
- § 14.2.2 When any of the above reasons exist, the Owner, upon certification by the Initial Decision Maker that sufficient cause exists to justify such action, may without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven days' written notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:
  - 1 Exclude the Contractor from the site and take possession of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
  - .2 Accept assignment of subcontracts pursuant to Section 5.4; and
  - .3 Finish the Work by whatever reasonable method the Owner may deem expedient. Upon written request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.
- § 14.2.3 When the Owner terminates the Contract for one of the reasons stated in Section 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.
- § 14.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Architect's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall be certified by the Initial Decision Maker, upon application, and this obligation for payment shall survive termination of the Contract.

## § 14.3 SUSPENSION BY THE OWNER FOR CONVENIENCE

- § 14.3.1 The Owner may, without cause, order the Contractor in writing to suspend, delay or interrupt the Work in whole or in part for such period of time as the Owner may determine.
- § 14.3.2 The Contract Sum and Contract Time shall be adjusted for increases in the cost and time caused by suspension, delay or interruption as described in Section 14.3.1. Adjustment of the Contract Sum shall include profit. No adjustment shall be made to the extent
  - .1 that performance is, was or would have been so suspended, delayed or interrupted by another cause for which the Contractor is responsible; or
  - .2 that an equitable adjustment is made or denied under another provision of the Contract.

## § 14.4 TERMINATION BY THE OWNER FOR CONVENIENCE

- § 14.4.1 The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause.
- § 14.4.2 Upon receipt of written notice from the Owner of such termination for the Owner's convenience, the Contractor shall
  - .1 cease operations as directed by the Owner in the notice;
  - .2 take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and
  - .3 except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.
- § 14.4.3 In case of such termination for the Owner's convenience, the Contractor shall be entitled to receive payment for Work executed, and costs incurred by reason of such termination, along with reasonable overhead and profit on the Work not executed.

### ARTICLE 15 CLAIMS AND DISPUTES

§ 15.1 CLAIMS

## § 15.1.1 DEFINITION

A Claim is a demand or assertion by one of the parties seeking, as a matter of right, payment of money, or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. The responsibility to substantiate Claims shall rest with the party making the Claim.

### § 15.1.2 NOTICE OF CLAIMS

Claims by either the Owner or Contractor must be initiated by written notice to the other party and to the Initial Decision Maker with a copy sent to the Architect, if the Architect is not serving as the Initial Decision Maker. Claims by either party must be initiated within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later.

## § 15.1.3 CONTINUING CONTRACT PERFORMANCE

Pending final resolution of a Claim, except as otherwise agreed in writing or as provided in Section 9.7 and Article 14, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents. The Architect will prepare Change Orders and issue Certificates for Payment in accordance with the decisions of the Initial Decision Maker.

## § 15.1.4 CLAIMS FOR ADDITIONAL COST

If the Contractor wishes to make a Claim for an increase in the Contract Sum, written notice as provided herein shall be given before proceeding to execute the Work. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

### § 15.1.5 CLAIMS FOR ADDITIONAL TIME

§ 15.1.5.1 If the Contractor wishes to make a Claim for an increase in the Contract Time, written notice as provided herein shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work. In the case of a continuing delay, only one Claim is necessary.

§ 15.1.5.2 If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated and had an adverse effect on the scheduled construction.

### § 15.1.6 CLAIMS FOR CONSEQUENTIAL DAMAGES

The Contractor and Owner waive Claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes

- .1 damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and
- damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit except anticipated profit arising directly from the Work.

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 14. Nothing contained in this Section 15.1.6 shall be deemed to preclude an award of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

## § 15.2 INITIAL DECISION

§ 15.2.1 Claims, excluding those arising under Sections 10.3, 10.4, 11.3.9, and 11.3.10, shall be referred to the Initial Decision Maker for initial decision. The Architect will serve as the Initial Decision Maker, unless otherwise indicated in the Agreement. Except for those Claims excluded by this Section 15.2.1, an initial decision shall be required as a condition precedent to mediation of any Claim arising prior to the date final payment is due, unless 30 days have passed after the Claim has been referred to the Initial Decision Maker with no decision having been rendered. Unless the Initial Decision Maker and all affected parties agree, the Initial Decision Maker will not decide disputes between the Contractor and persons or entities other than the Owner.

- § 15.2.2 The Initial Decision Maker will review Claims and within ten days of the receipt of a Claim take one or more of the following actions: (1) request additional supporting data from the claimant or a response with supporting data from the other party, (2) reject the Claim in whole or in part, (3) approve the Claim, (4) suggest a compromise, or (5) advise the parties that the Initial Decision Maker is unable to resolve the Claim if the Initial Decision Maker lacks sufficient information to evaluate the merits of the Claim or if the Initial Decision Maker concludes that, in the Initial Decision Maker's sole discretion, it would be inappropriate for the Initial Decision Maker to resolve the Claim.
- § 15.2.3 In evaluating Claims, the Initial Decision Maker may, but shall not be obligated to, consult with or seek information from either party or from persons with special knowledge or expertise who may assist the Initial Decision Maker in rendering a decision. The Initial Decision Maker may request the Owner to authorize retention of such persons at the Owner's expense.
- § 15.2.4 If the Initial Decision Maker requests a party to provide a response to a Claim or to furnish additional supporting data, such party shall respond, within ten days after receipt of such request, and shall either (1) provide a response on the requested supporting data, (2) advise the Initial Decision Maker when the response or supporting data will be furnished or (3) advise the Initial Decision Maker that no supporting data will be furnished. Upon receipt of the response or supporting data, if any, the Initial Decision Maker will either reject or approve the Claim in whole or in part.
- § 15.2.5 The Initial Decision Maker will render an initial decision approving or rejecting the Claim, or indicating that the Initial Decision Maker is unable to resolve the Claim. This initial decision shall (1) be in writing; (2) state the reasons therefor; and (3) notify the parties and the Architect, if the Architect is not serving as the Initial Decision Maker, of any change in the Contract Sum or Contract Time or both. The initial decision shall be final and binding on the parties but subject to mediation and, if the parties fail to resolve their dispute through mediation, to binding dispute resolution.
- § 15.2.6 Either party may file for mediation of an initial decision at any time, subject to the terms of Section 15.2.6.1.
- § 15.2.6.1 Either party may, within 30 days from the date of an initial decision, demand in writing that the other party file for mediation within 60 days of the initial decision. If such a demand is made and the party receiving the demand fails to file for mediation within the time required, then both parties waive their rights to mediate or pursue binding dispute resolution proceedings with respect to the initial decision.
- § 15.2.7 In the event of a Claim against the Contractor, the Owner may, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Contractor's default, the Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.
- § 15.2.8 If a Claim relates to or is the subject of a mechanic's lien, the party asserting such Claim may proceed in accordance with applicable law to comply with the lien notice or filing deadlines.

#### § 15.3 MEDIATION

- § 15.3.1 Claims, disputes, or other matters in controversy arising out of or related to the Contract except those waived as provided for in Sections 9.10.4, 9.10.5, and 15.1.6 shall be subject to mediation as a condition precedent to binding dispute resolution.
- § 15.3.2 The parties shall endeavor to resolve their Claims by mediation which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Mediation Procedures in effect on the date of the Agreement. A request for mediation shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the mediation. The request may be made concurrently with the filing of binding dispute resolution proceedings but, in such event, mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order. If an arbitration is stayed pursuant to this Section 15.3.2, the parties may nonetheless proceed to the selection of the arbitrator(s) and agree upon a schedule for later proceedings.

§ 15.3.3 The parties shall share the mediator's fee and any filing fees equally. The mediation shall be held in the place where the Project is located, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof.

### § 15.4 ARBITRATION

- § 15.4.1 If the parties have selected arbitration as the method for binding dispute resolution in the Agreement, any Claim subject to, but not resolved by, mediation shall be subject to arbitration which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules in effect on the date of the Agreement. A demand for arbitration shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the arbitration. The party filing a notice of demand for arbitration must assert in the demand all Claims then known to that party on which arbitration is permitted to be demanded.
- § 15.4.1.1 A demand for arbitration shall be made no earlier than concurrently with the filing of a request for mediation, but in no event shall it be made after the date when the institution of legal or equitable proceedings based on the Claim would be barred by the applicable statute of limitations. For statute of limitations purposes, receipt of a written demand for arbitration by the person or entity administering the arbitration shall constitute the institution of legal or equitable proceedings based on the Claim.
- § 15.4.2 The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.
- § 15.4.3 The foregoing agreement to arbitrate and other agreements to arbitrate with an additional person or entity duly consented to by parties to the Agreement shall be specifically enforceable under applicable law in any court having jurisdiction thereof.

# § 15.4.4 CONSOLIDATION OR JOINDER

- § 15.4.4.1 Either party, at its sole discretion, may consolidate an arbitration conducted under this Agreement with any other arbitration to which it is a party provided that (1) the arbitration agreement governing the other arbitration permits consolidation, (2) the arbitrations to be consolidated substantially involve common questions of law or fact, and (3) the arbitrations employ materially similar procedural rules and methods for selecting arbitrator(s).
- § 15.4.4.2 Either party, at its sole discretion, may include by joinder persons or entities substantially involved in a common question of law or fact whose presence is required if complete relief is to be accorded in arbitration, provided that the party sought to be joined consents in writing to such joinder. Consent to arbitration involving an additional person or entity shall not constitute consent to arbitration of any claim, dispute or other matter in question not described in the written consent.
- § 15.4.4.3 The Owner and Contractor grant to any person or entity made a party to an arbitration conducted under this Section 15.4, whether by joinder or consolidation, the same rights of joinder and consolidation as the Owner and Contractor under this Agreement.

## DOCUMENT 00 73 00 SUPPLEMENTARY CONDITIONS FOR GENERAL CONDITIONS FOR THE CONTRACT FOR CONSTRUCTION

#### PART 1 GENERAL

The following supplements modify, change, delete from or add to AIA Document A201, General Conditions of the Contract for Construction 2007 Edition. Where any part of the AIA General Conditions is amended, voided, or superseded by the Supplementary Conditions, the unaltered provisions shall remain in effect.

### 1.1 ARTICLE 1 GENERAL PROVISIONS

#### A. BASIC DEFINITIONS

1. Add the following Subparagraphs:

### 1.1.9 ARCHITECT/ENGINEER

Where the term ARCHITECT is used in the Bidding documents, Contract documents, Addenda, Change Orders or other documents related to this contract it shall be defined as either "Architect" or "Engineer" depending upon which design professional has prepared the document in question. When the project has been designed and initiated under the direction of a licensed engineer, the term ENGINEER shall be substituted for the term "Architect" throughout all documents.

### 1.1.10 MISCELLANEOUS DEFINITIONS

- .1 "Provide:" Furnish and install, or furnish labor and materials required for installation, ready for use and in accordance with the Contract Documents.
- .2 "As shown:" As indicated, as detailed, as noted, or words of similar import refer to Contract Documents.
- .3 "Selected:" As selected by the Architect.
- .4 "Approved: "Approved by Architect.
- .5 "For Approval: "For the Architect's approval.

## B. CORRELATION AND INTENT OF THE CONTRACT DOCUMENTS

- 1. Add the following to Subparagraph 1.2.1:
  - 1.2.1.1 In the event of conflicts or discrepancies among the Contract Documents, interpretations will be based on the following priorities.
  - 1. The Agreement.
  - 2. Addenda, with those of later date having precedence over those of earlier date.
  - 3. The Supplementary Conditions.
  - 4. The General Conditions of the Contract for Construction.
  - 5. Division 1 of the Specifications.
  - 6. Drawings and Divisions 2- 49 of the Specifications.

In the case of conflicts or discrepancies between Drawings and Divisions 2- 49 of the Specifications or within either Document not clarified by Addendum, the Architect will determine which takes precedence in accordance with Subparagraph 4.2.11.

- 2. Add the following Subparagraphs:
  - 1.2.4 If work is required in such a manner to make it impossible to produce first class work or should discrepancies appear among Contract Documents, request interpretation before proceeding with work. If Contractor fails to make such request, the Contractor will thereafter be expected to carry out work in

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satisfactory manner.

- 1.2.5 Reference to codes, standard specifications, or other standards means and intends latest edition of such documents and/or adopted as of bid date. Where brand name products are specified and no installation instructions given herein, install product in accordance with the manufacturer's specifications and instructions, latest edition.
- 1.2.6 No provision of any reference standard specification, manual or code shall change the privileges or responsibilities of Owner, Architect, or Contractor, or any of their consultants, agents or employees from those set forth in the Contract Documents, nor shall it be effective to assign to Architect, or any of Architect's 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 provision of the Contract Documents.
- 1.2.7 Sections of Division 1, General Requirements govern the execution of all sections of the specifications.

#### 1.2 ARTICLE 2 OWNER

#### A. 2.1 GENERAL

- 1. Add the following Subparagraph:
  - 2.1.3 The Owner is the Eugene School District 4J, 200 North Monroe Street, Eugene, Oregon 97402, (541) 790-7417.

The Owner's representative is Kirk Gebb, 541-790-7431, 715 West Fourth Avenue, Eugene, OR 97402.

#### B. INFORMATION AND SERVICES REQUIRED OF THE OWNER

- 1. Delete Subparagraph 2.2.5 and substitute the following:
  - 2.2.5 The Contractor will be furnished free of charge up to 3 copies of the Contract Documents. The Owner will furnish additional copies requested by the Contractor at the cost of reproduction, postage and handling.

### 1.3 ARTICLE 3 CONTRACTOR

#### A. 3.1 GENERAL

1. Delete the second sentence to Subparagraph 3.1.1, and add the following:

The Contractor and each subcontractor shall maintain for the duration of the Project a registration with the Oregon State Construction Contractor's Board.

- 2. Add the following Subparagraph 3.1.4
  - 3.1.4 The Contractor is required to demonstrate that an employee drug testing program is in place.
- 3. Add the following Subparagraph 3.1.5
  - 3.1.5 The Contractor certifies that the Contractor is not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in this Contract by any Federal department or agency. If requested by the Eugene 4J School District, the Contractor shall complete a Certification Regarding Debarment, Suspension, Ineligibility, and Voluntary Exclusion form. Any such form completed by the Contractor for this Contract shall be incorporated into this Contract by reference.

## B. 3.2 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR

1. Delete the last sentence to Subparagraph 3.2.4, and add the following:

If the Contractor performs those obligations, the Contractor shall not be liable to the Owner or Architect

## DOCUMENT 00 73 00 SUPPLEMENTARY CONDITIONS

for damages resulting from errors, inconsistencies or omissions in the Contract Documents, for differences between field measurements or conditions and the Contract Documents, unless the Contractor recognized such error, inconsistency, omission or difference and knowingly failed to report it to the Architect.

#### C. 3.3 SUPERVISION AND CONSTRUCTION PROCEDURES

- 1. Add the following Subparagraphs:
  - 3.3.4 The Contractor shall review with all Subcontractors, construction means, methods and materials to be used to verify their compliance with all safety standards and laws and be responsible for compliance with same to insure safe, hazard free conditions for all persons visiting or working on the entire project.
  - 3.3.5 The Contractor shall comply with the provisions of Oregon Revised Statutes and 4J Board Policy. Attention is directed to ORS 279A and 279C, Public Contracting Code.

#### D. 3.4 LABOR AND MATERIALS

- 1. Add the following Subparagraphs:
  - 3.4.4 PAYMENT OF LABORERS AND MATERIALMEN, CONTRIBUTIONS TO INDUSTRIAL ACCIDENT FUND, LIENS AND WITHHOLDING TAXES: The Contractor shall: (1) Make payment promptly, as due, to all persons supplying to such contractor labor or material for the prosecution of the Work provided for in such contract. (2) Pay all contributions or amounts due the Industrial Accident Fund from such Contractor or subcontractor incurred in the performance of the contract. (3) Not permit any lien or claim to be filed or prosecuted against the state, county, school district, municipality, municipal corporation or subdivision thereof, on account of any labor or material furnished. (4) Pay to the Department of Revenue all sums withheld from employees pursuant to ORS 316.167.
  - 3.4.5 HOURS OF LABOR: No person shall be employed for more than ten hours in any one day, or 40 hours in any one week, except in the cases of necessity, emergency, or where the public policy absolutely requires it, and in such cases the person so employed shall be paid at least time and a half of the regular pay for all time worked.
    - .1 For all overtime in excess of eight hours a day or 40 hours in any one week when the work week is five consecutive days, Monday through Friday; or
    - .2 For all overtime in excess of 10 hours a day or 40 hours in any one week when the work week is four consecutive days, Monday through Friday; and
    - .3 For all work performed on Saturday and on any legal holiday specified in ORS 279C.540.
    - .4 Worker claims for overtime, in order to be considered, must be filed with the Contractor within 90 days from the completion of the contract, in accordance with ORS 279C.545.

The Contractor shall give notice to employees who work on a public contract in writing, either at the time of hire or before commencement of work on the contract, or by posting a notice in a location frequented by employees, of the number of hours per day and days per week the employees may be required to work.

3.4.6 PAYMENT FOR MEDICAL CARE AND PROVIDING WORKERS' COMPENSATION: The Contractor shall promptly, as due, make payment to any person, co-partnership, association or corporation, furnishing medical, surgical and hospital care or other needed care and attention, incident to sickness or injury, to the employees of such Contractor, of all sums which the Contractor agrees to pay for such services and all moneys and sums which the Contractor collected or deducted from the wages of employees pursuant to any law, contract or agreement for the purpose of providing or paying for such service. All employers working under this contract are subject employers and must comply with ORS 656.017.

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- 3.4.7 PREVAILING WAGE RATES: When the total price of the Project is \$50,000 or more, each worker in each trade or occupation employed in the performance of this Contract either by the contractor, subcontractor or other person doing or contracting to do contracting for the whole or any part of the Work on the Contract shall be paid not less than the applicable state prevailing rate of wage. This provision applies to all contracts, regardless of the price of the individual contract, as long as the combined price of all contracts awarded on the Project is \$50,000 or more.
- a. The existing BOLI prevailing rates of wage in effect at the time the specifications are first advertised for bid solicitations is the applicable rate. Refer to Section 00 73 43.
- b. The Owner will pay the public works fee to Oregon Bureau of Labor and Industries.
- c. Certification of rate or wage by Contractor or Subcontractor (ORS 279C.845):
  - .1 The contractor or the contractor's surety and every subcontractor or the subcontractor's surety shall file certified statements with the public agency in writing, on a form prescribed by the Commissioner of the Bureau of Labor and Industries, certifying the hourly rate of wage paid each worker whom the contractor or the subcontractor has employed upon the public works, and further certifying that no worker employed upon the public works has been paid less than the applicable state prevailing rate of wage or less than the minimum hourly rate of wage specified in the contract. The certificate and statement shall be verified by the oath of the contractor or the contractor's surety or subcontractor or the subcontractor's surety that the contractor or subcontractor has read the statement and certificate and knows the contents thereof and that the same is true to the contractor or subcontractor's knowledge. The certified statements shall set out accurately and completely the payroll records for the prior week, including the name and address of each worker, the worker's correct classification, rate of pay, daily and weekly number of hours worked, deductions made, and actual wages paid.
  - .2 If the Contractor does not file certified payroll as required (at least once per month) the Owner will withhold 25% of the amounts due the Contractor, in addition to any other required retainage.
  - .3 If a first-tier Subcontractor does not file certified payroll reports as required, the prime Contractor shall withhold 25% of amounts due the first-tier Subcontractor.
  - .4 Each certified statement required by subsection (1) of this section shall be delivered or mailed by the contractor or subcontractor to the public contracting agency. Certified statements shall be submitted to the public contracting agency once a month by the fifth business day of the following month, for each week workers are employed. Information submitted on certified statements may be used only to ensure compliance with the provisions of ORS 279C.800 to 279C.870.
  - .5 Each contractor or subcontractor shall preserve the certified statements for a period of three years from the date of completion of the contract.
  - .6 Certified statements received by a public agency are public records subject to the provisions of ORS 192.410 to 192.505. As such, they must be made available upon request.
- 3.4.8 PAYMENT OF CLAIMS BY PUBLIC OFFICERS: If the Contractor fails, neglects or refuses to make prompt payment of any claims for labor or services furnished to the Contractor or a subcontractor by any person in connection with this Contract as such claim becomes due, the Owner may pay such claim and charge the amount of the payment against funds due or to become due the Contractor by reason of this Contract.
- 3.4.9 PAYMENT FOR MEDICAL CARE AND PROVIDING WORKERS' COMPENSATION: The Contractor shall promptly, as due, make payment to any person, co-partnership, association or corporation, furnishing medical, surgical and hospital care or other needed care and attention, incident to sickness or injury, to the employees of such Contractor, of all sums which the Contractor agrees to pay for such services and all moneys and sums which the Contractor collected or deducted from the wages of employees pursuant to any law, contract or agreement for the purpose of providing or paying

## DOCUMENT 00 73 00 SUPPLEMENTARY CONDITIONS

for such service.

3.4.10 Any person owed for labor or material by a subcontractor or Contractor may file a complaint with the Construction Contractors Board in accordance with ORS 279C.515(3).

#### E. 3.7 PERMITS, FEES AND NOTICES

- 1. Delete Subparagraph 3.7.1, and substitute the following:
- 3.7.1 The OWNER will pay the plan check fee, building permit fee, and systems development charges directly to the authority having jurisdiction

The CONTRACTOR shall pay for all other permits, fees, licenses and inspections necessary for the proper execution and completion of the Work which are customarily secured after execution of the Contract and which are legally required when bids are received or negotiations concluded. The Contractor shall pick up permits and call for inspections through final inspection, as required by the City Building Department.

## F. 3.12 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

1. Add the following to Subparagraph 3.12.5:

Submittals which are not marked as reviewed for compliance with the Contract Documents and approved by the Contractor may be returned by the Architect without action.

2. Add the following to Subparagraph 3.12.9:

Shop drawings that are submitted to the Architect for review do not constitute "in writing" unless it is brought to the attention of the Architect, in written form, that specific changes are being suggested. In any event, changes to the contract documents by means of shop drawings become the responsibility of the person initiating such changes.

## G. 3.18 INDEMNIFICATION

1. Delete Subparagraph 3.18.1, and substitute the following:

13.18.1 To the fullest extent of the law, the Contractor will defend, indemnify, hold harmless and reimburse the Eugene School District 4J (including its officers, board members, agents, and employees) from all claims, demands, suits, actions, penalties, and damage expenses, for liability of any kind including attorney's fees. To the extent that death or bodily injury to persons or damage to property arises out of the fault of the Contractor, the Contractor's indemnity obligation exists only to the extent that the death or bodily injury to persons or damage to property arises out of the fault of the Contractor, or the fault of the Contractor's agents, representatives or subcontractors, contributed to or caused such damage, whether or not such incidents are contributed to or caused in any part by Eugene School District 4J.

### 1.4 ARTICLE 4 ARCHITECT

## A. 4.1 GENERAL

- 1. Modify Paragraph 4.1.1
  - a. In the first sentence delete "shall retain" and insert "may have retained" in it's place.
  - b. Add sentence: "The term "Architect" means the Architect or the Architect's authorized representative."
- 2. Add the following to Subparagraph 4.1.2:

Written consent of the Contractor shall only apply to those items which directly or indirectly affect the work of the Contractor.

3. Add the following Subparagraph:

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In the first sentence delete "shall" and insert "may" in its place.

- 4. Add the following Subparagraph:
  - 4.1.4 The Architect is defined as:

Roberts Consulting & Engineering, 3220 Tilden Street, Eugene, OR 97404, 541-689-9197.

#### B. 4.2 ADMINISTRATION OF THE CONTRACT

1. Add the following sentence to 4.2.1:

The architect may be retained to administer the Contract through the specified period for correction of the Work described in Section 12.2

- 2. Add the following to Subparagraph 4.2.4:
  - 4.2.4.1 The Owner may communicate directly with the Contractor when necessary or appropriate. The Owner may give direction to the Contractor in matters related to access to the site, coordination with Owner's occupancy and use by the public, use of parking and staging areas, use of potentially hazardous products, drug and alcohol policy, no smoking policy, appropriate dress and behavior, safety requirements and safe work practices, where appropriate. The Owner will advise the Architect regarding any communication with or direction given to the Contractor.
  - 4.2.4.2 Representatives of the Owner, Contractor and Architect shall meet periodically at mutually agreed-upon intervals for the purpose of establishing procedures to facilitate cooperation, communication and timely responses among the participants. By participating in this arrangement, the parties do not intend to create additional contractual obligations or modify the legal relationships which may otherwise exist. Nothing in this agreement shall give the Architect the authority to make decisions or give direction without the Owner's concurrence.
- 3. Add the following to Subparagraph 4.2.9:
  - 4.2.9.1 The Architect will make one inspection for the determination of Substantial Completion and one for determination of Final Acceptance. Such inspections will be made only after receipt of written notification of readiness for such inspections from Contractor.
  - 4.2.9.2 Should additional inspections beyond those listed in 4.2.9.1 be required due to Contractor's failure to satisfactorily complete all work, the Contractor shall become responsible for all costs incurred by the Owner in conjunction with required re-inspections. A deductive Change Order shall be prepared using the following hourly rates as the basis for calculating the amounts to be deducted:

Architect/Engineer: \$100 per hour District 4J Personnel: \$75 per hour

- 4.2.9.3 The amount to be deducted from the Contract shall be calculated by multiplying the hours expended in additional inspections and documentation by the hourly rates listed in 4.2.9.2.
- 4. Add the following sentence to Subparagraph 4.2.11:

The architect's response will be within 10 days of receipt of written requests from the Owner or Contractor.

- 5. Delete Subparagraph 4.2.13, and substitute the following:
  - 4.2.13 Decisions on matters related to aesthetic effect will be made collaboratively between the Owner and the Architect. The final decision shall be the Owner's, if consistent with the intent expressed in the Contract Documents.
- 6. Add the following sentence to Subparagraph 4.2.14

The architect's response will be within 10 days of receipt of written requests from the Owner or Contractor.

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### 1.5 ARTICLE 5 SUBCONTRACTORS

#### A. 5.3 SUBCONTRACTUAL RELATIONS

- 1. Add the following Subparagraphs:
  - 5.3.1 The Contractor shall include in each subcontract for property or services entered into by the Contractor and a subcontractor, including a material supplier, for the purpose of performing a construction contract:
  - .1 A payment clause that obligates the Contractor to pay the subcontractor for satisfactory performance under its subcontract within 10 days out of such amounts as are paid to the Contractor by the owner under such contract; and
  - .2 An interest penalty clause that obligates the Contractor to pay to the subcontractor an interest penalty on amounts due in the case of each payment not made in accordance with the payment clause included in the subcontract pursuant to paragraph .1 of this section for the period beginning on the day after the required payment date and ending on the date on which payment of the amount due is made; computed at the rate specified in ORS 279C.580.
  - 5.3.2 The Contractor shall include in each of its subcontracts, for the purpose of performance of such contract condition, a provision requiring the subcontractor to include a payment clause and an interest penalty clause conforming to the requirements of Subparagraph 5.3.1 in each of its subcontracts and to require each of its subcontractors to include such clauses in their subcontracts with each lower-tier subcontractor or supplier.

#### 1.6 ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

No modifications.

#### 1.7 ARTICLE 7 CHANGES IN THE WORK

#### A. 7.1 GENERAL

- 1. Paragraph 7.1.2, delete the following: "an order for minor changes in the Work can be issued by the Architect alone".
- 2. Add the following Subparagraph 7.1.4 to Paragraph 7.1:
  - 7.1.4 The combined overhead and profit included in the total cost or credit to the Owner of a change in the Work shall not exceed that stated in 7.1.4.4 below. In no case shall the Contractor's or Subcontractors individual overhead and profit request exceed the following schedule:
  - .1 For the Contractor, for Work performed by the Contractor's own forces, 15 percent of the cost.
  - .2 For the Contractor, for Work performed by the Contractor's Subcontractors, 10 percent of the amount due the Subcontractors.
  - .3 For each Subcontractor involved, for Work performed by that Subcontractor's own forces, 10 percent of the cost.
  - .4 The **Base Cost** to which overhead and profit is to be applied shall be determined in accordance with Subparagraph 7.3.7., articles .1, .2, .3, .4, and .5. To this **Base Cost** is added the applicable overhead and profit. In no case shall the combined overhead and profit (including all Contractor and Subcontractor(s) overhead and profit) exceed 25 percent of this **Base Cost**.
  - .5 In order to facilitate checking of quotations for extras or credits, all proposals, except those so minor that their propriety can be seen by inspection, shall be accompanied by a complete itemization of costs including those applicable costs from paragraph 7.3.7, .1 .5, and Subcontractor and Contractor overhead and profit as applicable.
  - .6 Cost of preparing change order shall not be included in cost of Change Order.

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- 3. Add the following Subparagraph 7.1.5 to Paragraph 7.1:
  - 7.1.5 A Change Order providing a net CREDIT to the Owner shall include a credit for overhead and profit based on the following schedule:
  - .1 For the Contractor, 5 percent of the Cost to be credited.
  - .2 For each Subcontractor, 5 percent of the Cost to be credited.
  - .3 For each Sub-subcontractor, 5 percent of the Cost to be credited.
  - .4 All other provisions of Subparagraph 7.1.4 shall apply to Credit Change Orders.

#### B. 7.3 CONSTRUCTION CHANGE DIRECTIVES

1. Add the following to Subparagraph 7.3.1:

For the purposes of this Agreement, The Owner's "CHANGE REQUEST/PROCEED ORDER" may be substituted for and used interchangeably with "CONSTRUCTION CHANGE DIRECTIVE".

2. Modify Subparagraph 7.3.7 as follows:

In the first sentence, delete the words "a reasonable amount." and substitute "an amount for overhead and profit in accordance with Paragraph 7.1.4 or 7.1.5."

- 3. Delete Subparagraph 7.3.7.1 and substitute the following:
  - 7.3.7.1 The maximum allowable hourly wage rate for Changes to the Work shall be the appropriate Base Wage Rate plus Fringe Rate as listed for each occupation in the Prevailing Wage Rate for Public Works Contracts in Oregon manual issued by the Oregon Bureau of Industries; multiplied by 1.25. An amount for Overhead and Profit may be added in accordance with Paragraph 7.1.4 or 7.1.5. The contractor's "shop rates" shall not exceed the cost of their "field rates," as calculated in this subsection.
- 4. Delete 7.3.7.3, and substitute the following:
  - 7.3.7.3 Rental costs of machinery and equipment, exclusive of hand tools and motor vehicles, when rented from the Contractor or others;
- 5. Change the first sentence of Subparagraph 7.3.8 to read as follows:

The amount of credit to be allowed by the Contractor to the Owner for a deletion or change that results in a net decrease in the Contract Sum shall be actual net cost, including overhead and profit according to the schedule in Subparagraph 7.1.5 above.

6. Change the first sentence of Subparagraph 7.3.9 to read as follows:

Pending final determination of the total cost of a Construction Change Directive to the Owner, the Contractor may request payment for Work completed under the Construction Change Directive in the Application for Payment accompanied by an executed Change Order indicating the parties' agreement with part or all of such costs.

#### 1.8 ARTICLE 8 TIME

#### A. 8.2 PROGRESS AND COMPLETION

- 1. Add the following Subparagraph 8.2.4
  - 8.2.4 The Contractor agrees that said work shall be executed regularly, diligently, at such a rate of progress as will insure Substantial Completion thereof within the time specified. It is expressly understood and agreed by and between the Contractor and the Owner that the time for the completion of the work described herein is reasonable taking into consideration the average climatic range and usual industrial conditions prevailing in this locality.
- 1.9 ARTICLE 9 PAYMENT AND COMPLETION

## DOCUMENT 00 73 00 SUPPLEMENTARY CONDITIONS

### A. 9.2 SCHEDULE OF VALUES

- 1. Revise the first sentence of Subparagraph 9.2 to read as follows:
  - ".... the Contractor shall submit to the Architect and the Owner,...."
- 2. Add the following sentence to Paragraph 9.2:

Submit on AIA Document A703, latest edition.

#### B. 9.3 APPLICATIONS FOR PAYMENT

1. Add the following sentence to Subparagraph 9.3.1:

The form of Application for Payment shall be a notarized AIA Document G702, Application and Certification for Payment, supported by AIA Document G703, Continuation Sheet.

- 2. Delete Clause 9.3.1.1, and substitute the following:
  - 9.3.1.1 As provided in Section 7.3.9, such applications may include requests for payment on account of changes in the Work that have been properly authorized by Construction Change Directives, accompanied by an executed Change Order.

#### C. 9.5 DECISIONS TO WITHHOLD CERTIFICATION

1. Delete Subparagraph 9.5.3.

### D. 9.6 PROGRESS PAYMENTS

- 1. Add the following Clause to Subparagraph 9.6.1:
  - 9.6.1.1 After the Architect has issued a certificate for payment and it has been approved by the Owner, the Owner will pay the Contractor 95 percent (95%) of the total value of material and labor incorporated into the project as indicated on the Application for Payment less the aggregate of previous payments. Progress schedule update shall accompany each payment request.
  - 9.6.1.2 Payment will be made within fifteen (15) days of approval of the Application for Payment by School District 4J ("Progress Payment Due Date").
  - 9.6.1.3 The first Application for Payment and each subsequent Application for Payment will not be considered complete unless it is accompanied by the certified payroll for the contractor and all subcontractors requesting payment.
- 2. Add the following Subparagraph to Paragraph 9.6:
  - 9.6.8 In lieu of cash retainage to be held by the Owner, the Contractor may select one of the following options:
  - .1 The Contractor may deposit bonds or securities with the Owner or in any bank or trust company to be held for the benefit of the Owner. In such event, the Owner shall reduce the retainage in an equal amount to the value of the bonds and securities.
  - .2 Upon written request of the Contractor, the Owner will deposit any amounts withheld as retainage in an interest-bearing account in a bank, savings bank, trust company or savings association for the benefit of the Owner. Interest earned shall accrue to the Contractor.
  - .3 If the Owner incurs additional costs as a result of the exercise of any of the options for retainage described herein, the Owner may recover such costs from the Contractor by reduction of final payment.

#### E 9 8 SUBSTANTIAL COMPLETION

- 1. Delete Subparagraph 9.8.1 and substitute the following:
  - 9.8.1 Substantial Completion is the stage in the progress of the Work when the Work or designated

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portion thereof is sufficiently complete in accordance with the Contract Documents so the Owner can fully occupy and fully utilize the Work for its intended use with only minor corrective work remaining which can be accomplished without disruption of the occupants.

- 2. Delete the last two sentences to Subparagraph 9.8.5 and add the following:
  - 9.8.5 Upon Substantial Completion of the Work, the Contractor may submit an application for payment in accordance with Subparagraph 9.3.1 in an amount sufficient to increase the total payments to ninety-five percent (95%) of the Contract Sum, less such amounts as the Architect determines for incomplete Work or unsettled claims.

## F. 9.10 FINAL COMPLETION AND FINAL PAYMENT

- 1. Modify Item (2) in Subparagraph 9.10.2 to read:
  - (2) A certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect, (3) a .....
- 2. Add the following Subparagraph to Paragraph 9.10:
  - 9.10.6 The Contractor shall not permit any lien or claim to be filed or prosecuted against the Owner on account of any labor or material furnished in connection with the Work.
- G. Add the following Paragraphs to Article 9:
  - 1. 9.11 LIQUIDATED DAMAGES
    - 9.11.1 The Owner will suffer financial loss if the Work is not Substantially Complete, as defined in Article 9.8.1 above, on the dates specified in Section 01 11 00. The Contractor and the Contractor's surety shall be liable for and shall pay the Owner the sum hereinafter stipulated as fixed, agreed, and liquidated damages for each calendar day of delay until the date established in the Certificate of Substantial Completion.

The agreed amount of liquidated damages is \$500 per each calendar day. The amount of liquidated damages may be reduced in cases of partial occupancy, at the sole discretion of the Owner.

### 2. 9.12 AGENCY PAYMENT FOR UNPAID LABOR OR SUPPLIES

- 9.12.1 Contract incomplete. If the Contract is still in force, the Agency may, in accordance with ORS 279C.515, pay a valid claim to the Entity furnishing the labor or services, and charge the amount against payments due or to become due to the Contractor under the Contract. If an Agency chooses to make such a payment as provided in 279C.515, the Contractor and the Contractor's surety shall not be relieved from liability for unpaid claims.
- 9.12.2. Contract completed. If the Contract has been completed and all funds disbursed to the prime Contractor, all claims shall be referred to the Contractor's surety for resolution. The Agency shall not make payments to subcontractors or suppliers for Work already paid for by the Agency.

## 1.10 ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

#### A. 10.1 SAFETY PRECAUTIONS AND PROGRAMS

1. Add the following sentence to Article 10.1

Where asbestos abatement is part of the Work, the Contractor or appropriate subcontractor shall be licensed by the Department of Environmental Quality to perform "asbestos abatement work", OAR 340-248-0120, Adopted January 25, 1990, and meet requirements of AHERA, as specified in Federal Register 40CFR, Part 763.

### B. 10.3 HAZARDOUS MATERIALS

- 1. Delete Subparagraph 10.3.3.
- 1.11 ARTICLE 11 INSURANCE AND BONDS

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## A. 11.1 CONTRACTOR'S LIABILITY INSURANCE

- 1. Modify the second sentence of Subparagraph 11.1.2 as follows:
  - a. Delete the following: "....and, with respect to the Contractor's completed operations coverage, until the expiration of the period for correction of Work or for such other period for maintenance of coverage as specified in the Contract Documents."
- 2. Add the following Clause to Subparagraph 11.1.2:
  - .1. The Contractor shall provide and maintain in force for the duration of this agreement, the following:
    - .1 General Insurance:

The Contractor shall maintain in force for the duration of this agreement a Umbrella Insurance Policy with the limits not less than \$5,000,000, a Commercial General Liability, Automobile Liability (owned, non-owned and hired) Insurance policy(s) written on an occurrence basis with limits not less than \$1,000,000 per occurrence and \$2,000,000 in the aggregated naming the District, its employees, officials and agents as an additional insured as respects to work or services performed under this agreement. This insurance will be primary to any insurance the District may carry on its own.

.2 Professional Liability / Errors and Omissions Coverage:

To the extent that the Contractor accepts deferred design or design/build responsibilities, the Contractor shall purchase and maintain Professional Liability / Errors and Omissions insurance, or cause that those Subcontractors providing design services do, in the amount of \$5,000,000 each claim/per project aggregate.

.3 Workers' Compensation:

Contractor shall provide and maintain workers' compensation coverage for its employees, officers, agents, or partners, as required by applicable workers' compensation laws.

.4 Evidence of Coverage:

Evidence of the above coverages issued by a company satisfactory to the District shall be provided to the District by way of a certificate of insurance before any work or services commence. A 30-day notice of cancellation or material change in coverage clause shall be included. It is the Contractor's obligation to provide the 30 days notice if not done so by the Contractor's insurance company(s). Failure to maintain the proper insurance shall be grounds for immediate termination of this Agreement.

.5 Subcontractors:

The Contractor shall require all subcontractors to provide and maintain general liability, auto liability, professional liability (as applicable) and Workers' Compensation insurance with coverage's equivalent to those required of the General Contractor in this Agreement. The Contractor shall require certificates of insurance from all subcontractors as evidence of coverage.

.6 Exceptions or Waivers:

Any exception or waiver of these requirements shall be subject to review and written approval from the Eugene School District Risk Manager.

- 3. Delete the second sentence of Subparagraph 11.1.3
- 4. Add the following sentences to Subparagraph 11.1.3:

The Contractor shall provide written notification to the Owner of the cancellation or expiration of any

## DOCUMENT 00 73 00 SUPPLEMENTARY CONDITIONS

insurance required by Section 11.1. The Contractor shall provide such written notice within five (5) business days of the date the Contractor is first aware of the cancellation of expiration, or is first aware that the cancellation or expiration is threatened or otherwise may occur, whichever comes first.

#### B. 11.3 PROPERTY INSURANCE

- 1. Modify the first sentence of Subparagraph 11.3.1 as follows:
  - a. Delete "Unless otherwise provided, the Owner" and substitute "The Contractor".
  - b. Modify the last sentence by adding "Architect," after the word "Owner".
- 2. Add the following to Clause 11.3.1.1:

The form of policy for this coverage shall be Completed Value. If the Owner is damaged by the failure of the Contractor to maintain such insurance, then the Contractor shall bear all reasonable costs properly attributed thereto.

- 3. Delete Clause 11.3.1.2.
- 4. Modify Clause 11.3.1.3 by substituting "Contractor" for "Owner".
- 5. Delete Clause 11.3.1.4.
- 6. Modify the first sentence of Subparagraph 11.3.2 to read: "The Owner, at the Owner's option, may purchase...".
- 7. Delete Subparagraph 11.3.4.
- 8. Delete Subparagraph 11.3.6, and substitute the following:
  - 11.3.6 Evidence of the above coverages issued by a company satisfactory to the District shall be provided to the District by way of a certificate of insurance before any work or services commence. The Contractor shall provide written notification to the Owner of the cancellation or expiration of any insurance required by Section 11.3. The Contractor shall provide such written notice within five (5) business days of the date the Contractor is first aware of the cancellation or expiration, or is first aware that the cancellation or expiration is threatened or otherwise may occur, whichever comes first. Failure to maintain the proper insurance shall be grounds for immediate termination of this Agreement.
- 9. Modify 11.3.7 by substituting "Contractor" for "Owner" at the end of the first sentence.
- 10. Modify the first sentence of Subparagraph 11.3.8 to read as follows:
  - 11.3.8 A loss insured under the Contractor's property insurance shall be adjusted by the Contractor as fiduciary and made payable to the Contractor and Owner, as their interests may appear, subject to requirements of any applicable mortgagee clause.
- 11. Delete Subparagraph 11.3.9.
- 12. Modify the first sentence of Subparagraph 11.3.10 by substituting "Contractor" for "Owner" the first two times it occurs. Modify the last sentence by substituting "Contractor" for "Owner" the second time it occurs.
- 13. Add the following Subparagraph:

## 11.3.11 EQUIPMENT AND MATERIAL:

The Contractor shall be responsible for any loss, damage, or destruction of Contractor's own property, equipment, and materials used in conjunction with the Work.

#### C 11 4 PERFORMANCE BOND AND PAYMENT BOND

- 1. Delete 11.4.1 and 11.4.2 and substitute the following:
  - 11.4.1 Unless otherwise stated in the solicitation document, prior to execution of the Agreement, the

## DOCUMENT 00 73 00 SUPPLEMENTARY CONDITIONS

Bidder shall furnish separate bonds that in all respects conform to the requirements of ORS 279C.380 covering the faithful performance of the Contract, and the payment of all obligations arising thereunder, each in an amount equal to one hundred percent (100%) of the Contract sum. The duration of the performance bond shall match the length of the project warranty.

- 11.4.2 The surety issuing such bonds shall be duly authorized and licensed to issue bonds in the State of Oregon. The bonds shall be executed by an Attorney-in-fact, principal or other authorized representative for the surety company, showing the Oregon agent for service, and bears the seal of the surety company. Where the bond is executed by a person outside the state of Oregon, his authority to execute bond shall be shown.
- 11.4.3 Bonds are to be obtained through a company that is on the US Government Treasury list for approved sureties and/or approved by the Owner's Risk Manager.
- 11.4.4 Bonds shall be submitted on AIA Document A312, latest edition.
- 11.4.5 The cost of furnishing such bonds shall be included in the bid.
- 11.4.6 The Contractor shall deliver the required bonds to the Owner with the signed Agreement to:

Kirk Gebb Facilities Management Office Eugene Public School District 4J 715 West Fourth Eugene, Oregon 97402

- 11.4.7 The Contractor shall require the Attorney-in-fact who executes the required bonds on behalf of the surety to affix thereto a certified and current copy of their power of attorney.
- D. Add the following Paragraphs to Article 11:
  - 1. 11.5 PUBLIC WORKS BOND:
    - 11.5.1 Pursuant to ORS 279C.836, for any contract awarded where the contract price is \$100,000 or greater, the Contractor and every subcontractor shall have a Public Works bond, in the amount of \$30,000 filed with the Construction Contractors Board (CCB) before starting work on the project unless exempt. This bond is in addition to performance bond and payment bond requirements. A copy of the Contractor's State of Oregon Statutory Public Works Bond shall be provided with the executed contract documents.
    - 11.5.2 Contractor shall include in every subcontract a provision requiring their Subcontractors to have a public works bond filed with the CCB before starting work on the project, unless exempt. Contractors shall verify that all of their subcontractors have filed a public works bond with the CCB.
- 1.12 ARTICLE 12 UNCOVERING AND CORRECTION OF WORK
- A. 12.2 AFTER SUBSTANTIAL COMPLETION
  - 1. Add the following sentence to Clause 12.2.2.1:

The correction period relating to faulty products and workmanship will begin on the date appearing on the Certificate of Substantial Completion, or if a Certificate of Substantial Completion is not issued, on the date appearing on the Final Certificate of Payment to the Contractor, whichever is earlier. The Owner's use of the project will not alter the warranty period herein defined.

2. Add the following sentence to Clause 12.2.2.2:

The correction periods specified are an extension of the one-year correction period called for in the General Conditions and are in addition to any guaranty bond called for elsewhere.

- 1.13 ARTICLE 13 MISCELLANEOUS PROVISIONS
- A. 13.1 GOVERNING LAW

## DOCUMENT 00 73 00 SUPPLEMENTARY CONDITIONS

- 1. Change Paragraph 13.1 to read as follows:
  - 3.1 The Contract shall be governed by the law of the place where the Project is located.
- B. Add the following Subparagraph 13.1.1:
  - 13.1.1 Contractor shall be in compliance with the Oregon Department of Revenue tax certification rules including OAR 150-305.385 (6)-A, (6)-B, (6)-C and (7).
- C. Revise Subparagraph 13.2.1 as follows:

Delete last two sentences, and replace with:

Contractor shall not assign, sell, dispose of, or transfer rights, nor delegate duties under the contract, either in whole or in part, without the Contracting Agency's prior written consent. Unless otherwise agreed by the Contracting Agency in writing, such consent shall not relieve the Contractor of any obligations under the contract. Any assignee or transferee shall be considered the agent of the Contractor and be bound to abide by all provisions of the contract. If the Contracting Agency consents in writing to an assignment, sale, disposal or transfer of the Contractor's rights or delegation of Contractor's duties, the Contractor and its surety, if any, shall remain liable to the Contracting Agency for complete performance of the contract as if no such assignment, sale, disposal, transfer or delegation had occurred unless the Contracting Agency otherwise agrees in writing, in accordance with ORS 279A.065.

- D. Delete Subparagraph 13.2.2
- E. Add the following Paragraphs to Article 13:
  - 1. 13.8 ENVIRONMENTAL AND NATURAL RESOURCES LAWS AND RULES
    - 13.8.1 The Contractor and subcontractors shall comply with federal, state, and local ordinances and regulations dealing with prevention of pollution and preservation of natural resources that affect Work of this project.
    - 13.8.2 Pursuant to ORS 279C.525, If the Contractor is delayed or must undertake additional work by reason of existing regulation or ordinances of agencies not cited in the Contract Documents or due to the enactment of new or the amendment of existing statutes, ordinances, or regulations relating to the prevention of environmental pollution and the preservation of natural resources occurring after the Bid Date, the Owner will grant a time extension and issue a change order setting forth the additional work that must be undertaken. The change order shall not invalidate the contract and there shall be, in addition to a reasonable extension of the Contract time, a reasonable adjustment in the Contract price to compensate the successful bidder for all costs and expenses incurred, including overhead and profits, as a result of such delay or additional work.

### 2. 13.9 FOREIGN CONTRACTORS

In the event this Contract is awarded to a Contractor not domiciled in or registered to do business in the State of Oregon and the contract price exceeds \$10,000, the Contractor shall promptly report to the Department of Revenue the total price, terms of payment, length of contract, and such other information as the Department of Revenue may require before final payment can be received on the public contract. The Owner will satisfy itself that the requirement of this subsection has been complied with before it issues a Final Payment.

- 3. 13.10 EQUAL OPPORTUNITY
  - 13.10.1 The Contractor shall maintain policies of employment as follows:
  - 13.10.1.1 The Contractor and the Contractor's subcontractors shall not discriminate against any employee or applicant for employment because of race, religion, color, sex or national origin. The

## DOCUMENT 00 73 00 SUPPLEMENTARY CONDITIONS

Contractor shall take affirmative action to insure that applicants are employed, and that employees are treated during employment without regard to their race, religion, color, sex, national origin, physical or mental handicap, sexual orientation or age, unless based upon bona fide occupational qualifications; and that they are otherwise in compliance with all federal, state and local laws prohibiting discrimination. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. It is further understood that any vendor who is in violation of this clause shall be barred forthwith from receiving awards of any purchase order from the School District, unless a satisfactory showing is made that discriminatory practices have terminated and that a recurrence of such acts is unlikely. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the policies of nondiscrimination.

13.10.1.2 The Contractor and the Contractor's subcontractors shall, in all solicitations or advertisements for employees placed by them or on their behalf, state that all qualified applicants will receive consideration for employment without regard to race, religion, color, sex or national origin.

### 4. 13.11 DRUG-TESTING PROGRAM

13.11.1 The contractor agrees with the provisions of Oregon Revised Statutes 279C.505, which requires that the contractor shall demonstrate it has established a drug-testing program for employees and will require each subcontractor providing labor for the Project to do the same.

## 1.14 ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

No modifications.

#### 1.15 ARTICLE 15 CLAIMS AND DISPUTES

#### A. 15 CLAIMS AND DISPUTES

1. Add the following to Clause 15.1.5.2

Abnormal weather conditions for the purposes of this agreement are defined as conditions more extreme than any conditions experienced within the general vicinity of the site for each project for a comparable period at any time within the past ten years.

2. Delete Subparagraph 15.1.6.

#### B. 15.2 INITIAL DECISION

1. Modify Subparagraph 15.2.1 as follows:

In the third sentence, change "30 days" to read "10 days" and add the following: The Initial Decision Maker shall review all submitted claims and render decisions as soon as possible.

2. Modify Clause 15.2.6.1 as follows:

In the first sentence, change the "30 days and "60 days" to read "10 days" and "30 days" respectively.

#### C. 15.3 MEDIATION

1. Delete Paragraph 15.3 MEDIATION, and substitute the following:

### 15.3 MEDIATION AND ARBITRATION

15.3.1 Parties shall attempt to resolve all disputes at the lowest possible level. Both parties to this Agreement agree to provide other resources and personnel to negotiate and find resolution to disputes that cannot be resolved at the Project Manager level. As a next step, claims, disputes or other matters in question between the parties to this Agreement arising out of or relating to this Agreement or breach thereof shall be determined by mediation, arbitration or litigation. Disputes shall be initially submitted to mediation by a mediator chosen by the parties. The cost of mediation shall be borne equally by the parties. If the parties are unable to agree upon a mediator within five days or if mediation fails to resolve

## DOCUMENT 00 73 00 SUPPLEMENTARY CONDITIONS

the dispute, either party may request that the dispute be submitted to arbitration before a single arbitrator agreed to by the parties in an additional five days. If both parties agree to arbitration but are unable to agree upon an arbitrator, each party shall select an arbitrator, the arbitrators so chosen shall select a third, and the decision of a majority of the arbitrators shall be final, binding the parties, and any judgment may be entered thereon. Unless the parties mutually agree otherwise, any arbitration proceeding shall be conducted in accordance with the currently in effect Construction Industry Arbitration Rules of the American Arbitration Association.

Notwithstanding the above, the Owner may, at the Owner's sole discretion, elect to resolve disputes in excess of \$50,000 by litigation, if mediation is not successful.

15.3.2 In the event of arbitration or litigation arising out of the execution of this Agreement, the prevailing party shall be entitled to recover from the adverse party, reasonable attorney fees and costs for the arbitration proceedings, trial court or any appellate proceeding, in the amount determined by the arbitrator or the court, as appropriate.

For the purposes of the above provisions referring to attorney fees and related costs, the prevailing party in an arbitration proceeding or trial shall be a claimant who receives an award or damages in excess of the adverse party's pretrial or prehearing offer made at least 10 days before trial or hearing. If the claimant receives an award of damages no greater than the adverse party's pretrial or prehearing offer, the adverse party shall be deemed to be the prevailing party. In the event both sides are awarded damages, the prevailing party shall be the party who recovers the net award, provided the recovery exceeds the adverse party's pretrial or prehearing offer. If the claimant net recovery is no greater than the adverse party's pretrial or prehearing offer, the adverse party shall be deemed the prevailing party.

### D. 15.4 ARBITRATION

1. Delete Paragraph 15.4 ARBITRATION.

END OF DOCUMENT 00 73 00

## DOCUMENT 00 73 43 PREVAILING WAGE RATES

### PART 1 GENERAL

The Prevailing Wage Rates dated January 1, 2018, including any subsequent corrections or amendments issued by the Oregon Bureau of Labor and Industries, are included as a portion of the Contract Documents by reference. Copies are available for review at the office of Facilities Management, School District 4J, and can be viewed on line at www.boli.state.or.us. Click on Prevailing Wages, then PWR Rate Publications, and then Prevailing Wage Rates for Public Works Contracts in Oregon (subject only to state law).

END OF DOCUMENT 00 73 43

## SUMMARY OF WORK SECTION 01 11 00

## PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

### 1.2 WORK COVERED BY CONTRACT DOCUMENTS

- A. Project Identification: Awbrey Park & Spring Creek Elementary Schools Concrete Walk and Storm Drain Replacement. Briefly, the work is described as replacing storm drain pipes and concrete walks and curbs, installing manholes, area drains and cleanouts. Installing irrigation piping to existing landscape areas and replanting these areas.
  - 1. Project Location: Awbrey Park Elementary School, 158 Spring Creek Drive, Eugene, Oregon 97404. Spring Creek Elementary School, 560 Irvington Drive, Eugene, OR 97404.
  - 2. Owner: Eugene School District 4J, 715 West Fourth Avenue, Eugene, OR 97402.
- B. Architect Identification: The Contract Documents, dated April 30, 2018, were prepared for Project by Roberts Consulting & Engineering, 3220 Tilden Street, Suite A, Eugene, OR 97404.
- C. Project Manager: Kirk Gebb has been appointed by Owner to serve as Project Coordinator.

### 1.3 CONTRACT

A. Project will be constructed under general construction contract. AIA A201.

## 1.4 WORK SEQUENCE

- A. Do not commence Work until after execution of Agreement and receipt of Notice-to-Proceed from Owner. Awbrey Park and Spring Creek Elementary Schools will be available to begin work June 18, 2018.
- B. Perform work in order to achieve Substantial Completion by Sunday, August 12, 2018.
- C. Achieve Final Completion by Wednesday August 29, 2018.

### 1.5 USE OF PREMISES

A. Work Area Access: Some buildings will be occupied during work. Access to the work area will be available on a week-day basis from approximately 7:00 am to 4:00 pm. Coordinate all other work hour schedules with Owner so as not to interfere with Owner's use of the buildings.

## SUMMARY OF WORK SECTION 01 11 00

- B. Limit use of the premises to construction activities in areas indicated; allow for Owner occupancy and use by the public, subject to approval by a District Safety Specialist.
- C. Site Access: Maintain drives and building entrances and exits clear and protected at all times to Owner's, employees, and public access and for use by emergency personnel. Do not use these areas for parking or storage. Schedule deliveries to minimize space and time requirements for storage of materials at site.
- D. Parking: Contractor may use existing site areas within disturbance limits, as indicated on Drawings, and south parking lot.
- E. Contractor Staging Areas: Limit staging to within disturbance limits as indicated on Drawings and as coordinated in the field with the owner.
- F. Construction Operations: Limited to within disturbance limits indicated on Drawings.

## 1.6 WORK UNDER SEPERATE CONTRACTS

Not Used

### 1.7 FUTURE WORK

Not Used

### 1.8 PRODUCTS ORDERED IN ADVANCE

Not Used

#### 1.9 OWNER-FURNISHED PRODUCTS

Not Used

### 1.10 MISCELLANEOUS PROVISIONS

### A. DRUG AND ALCOHOL POLICY

1. The possession, use, or distribution of illicit drugs and alcohol on school premises is prohibited. Prescription medications brought to the project site shall be in the original container bearing the name of the drug, the name of the physician and the prescribed dosage.

## B. USE OF TOBACCO PRODUCTS

1. Smoking and the other use of tobacco products is prohibited on all school district property pursuant to OAR 581-021-0110.

### C. SAFETY REQUIREMENTS

1. Safety must not be sacrificed for the sake of productivity or expedience. Safety of students, staff, and the public is critical. Take all reasonable precautions to prevent endangerment or injury. Advise and coordinate operations with the school office.

## SUMMARY OF WORK SECTION 01 11 00

- 2. All contractors who perform work on District property, and their employees, are expected to know the District's expectations for safe work and to adhere to those expectations.
- 3. Contractor's are to adhere to the regulations of Oregon OSHA for all projects within the School District.

### D. GENERAL SAFE WORK PRACTICES

- 1. Students, public and school staff shall not be put at risk by the activities of contractors or their employees.
- 2. Safe vehicle operation rules are to be followed at all times. These include positioning vehicles to minimize the necessity of backing and providing a "spotter", someone who will make sure that people do not run into the path of a vehicle when driving on a playground or field that is occupied by students.
- 3. Tools shall never be left out when an unsecured work area is vacated.
- 4. Ladders and scaffolding will be taken down when an unsecured work area is vacated.
- 5. Open holes and other tripping hazards shall be fenced or barricaded when an unsecured work area is vacated.
- 6. Operations resulting in vapors, emissions or flying objects shall be conducted in such a way as to prevent exposure to any unprotected parties or property.
- 7. "Secured Work Area" is defined as an area having a perimeter cyclone fence at least 6 feet in height, with gates which close and lock so that no casual entrance is possible by unauthorized adults or children.
- 8. Contractor to follow all OR-OSHA rules for Confined Spaces, where applicable.

## E. COMMUNICATIONS REGARDING UNSAFE PRACTICES

- 1. Upon perceiving a problem, the District will immediately communicate the concern to the Contractor or Contractor's representative on the work site.
- 2. If agreement on correction of unsafe conditions cannot be reached, the concerns of the District shall prevail and safety concerns shall be addressed in accordance with the District requirements.

## F. ELECTRICAL PANELS - LOCKOUT/TAGOUT

1. Contractor shall implement a Lockout/Tag-out program for his employees who take equipment out of service or place equipment back into service. Contractor shall review the District's Energy Control Program prior to commencing work. Rules applying to this procedure are Oregon Occupational Safety and Health Code OAR 437, Division 2, Subdivision J, General Environmental Controls Lockout/Tag-out (1919.147), or latest edition.

## G. ARC FLASH – ELECTRICAL SAFETY

1. Contractor shall comply with NFPA 70E (Electrical Safety in the Workplace), current edition. Contractor shall comply with Oregon OSHA 1910.137 (Personal Protective Equipment). The Contractor shall review with the School District Project Manager the 'Eugene School District Electrical Safety Program' before any work commences. The Contractor shall comply with all 'Arc Flash' and 'Electrical Safety' protocols referenced in any and all NFPA, OSHA, OROSHA, NEC, NESC, UL, IBC, IFC and ANSI documents (current editions).

## SUMMARY OF WORK SECTION 01 11 00

### H. POTENTIALLY HAZARDOUS PRODUCTS

- 1. The District attempts to maintain a safe and healthy environment for students and staff. The Contractor is therefore required to follow District guidelines controlling the use of potentially hazardous products and to use these products in a safe manner. Guidelines include the use of materials (adhesives, coatings, carpeting, etc.) which are known to emit little or no airborne pollutants.
- 2. MSDS information is required for all potentially hazardous products. The Project Manager and a District Safety Specialist will review these and determine what, if any, mitigation procedures will be required.
- 3. Contractor is to maintain and post copies of all MSDS information at the project site and adhere to the required controls.
- 4. Contractor is to ensure that work area by students and teachers is restricted. The District will provide signage appropriate for this purpose. The Contractor is to construct and maintain appropriate barriers. This shall include provision of physical separation barriers between "construction" and "occupied" spaces.

#### I. ASBESTOS CONTAINING MATERIALS WARNING

- 1. Asbestos containing materials are known to exist in areas of the Work. The Contractor shall not, in any way, disturb materials which are known to contain asbestos, assumed to contain asbestos, or otherwise have not been tested and confirmed to be asbestos free.
- 2. Where access to concealed spaces is required, or it is necessary to disturb building materials such as for drilling of holes, cutting, etc., notify the Owner so that proper investigation and/or removal procedures are followed.
- 3. Prior to commencing Work, the Contractor shall meet with the District Safety Specialist and review the Owner's Asbestos Management Plan for the locations of asbestos-containing materials and/or materials assumed to contain asbestos. After reviewing the Owner's Asbestos Management Plan, the Contractor is required to sign Form 01 11 00A, Asbestos-containing Materials Notification Statement, provided at the end of this Section.
- 4. Contractor must not install any asbestos-containing materials when performing the Work of this project. At the completion of the Work, Contractor will be required to furnish a statement stating that no asbestos-containing materials were installed during the course of the Work. Refer to Sample Form 01 11 00B at the end of this Section.

## J. FULL TIME SUPERINTENDENT DISCLOSURE STATEMENT

1. Prior to or in conjunction with the Preconstruction Conference, the Contractor shall submit the disclosure statement which identifies the Full Time Superintendent for this Project. The form for this statement, Form 01 11 00C, is provided at the end of this Section.

## SUMMARY OF WORK SECTION 01 11 00

## PART 2 - PRODUCTS (Not Used)

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

PART 4 - SCHEDULE OF PRODUCTS ORDERED IN ADVANCE

**PART 5 - ASBESTOS FORMS** 

## SUMMARY OF WORK SECTION 01 11 00

#### Form 01 11 00A

# ASBESTOS-CONTAINING MATERIALS NOTIFICATION STATEMENT FOR CONTRACTORS

This form must be completed and signed by the Contractor prior to beginning work in any Eugene School District 4J building.

The presence of known and assumed asbestos containing materials is documented in the AHERA Management Plan for each building. Copies of the AHERA Management Plan are available in the main office of each building and in the Facilities Management Office at 715 West Fourth Avenue, Eugene, Oregon. The District Asbestos Specialist must be informed of the Contractor's activities in each building prior to the start of work so that the Contractor can be informed on how to use the AHERA Management Plan and to determine if any asbestos-containing materials are likely to be impacted by the work of the Contractor.

The Contractor is responsible for notifying all employees and subcontractors of the presence of asbestos in the building. The Contractor shall not disturb known or assumed asbestos-containing materials. If the Contractor discovers suspected asbestos-containing materials that have not been identified, the Contractor must stop any work impacting the suspected materials and notify the District Asbestos Specialist so that the material can be sampled. Any asbestos-containing materials that must be removed to allow the Contractor to complete the Contractor's work will be removed by the District under separate contract. If the Contractor disturbs asbestos-containing materials, the Contractor will be responsible for the cost of the cleanup and decontamination.

I (Print Name of Representative)	Representing (Business Name)
have been notified of the location of the Alknown or assumed asbestos-containing ma	HERA Management Plan and agree to avoid impacting al terials in the performance of the Work.
Signature of Representative	 Date
Work Site	

## SUMMARY OF WORK SECTION 01 11 00

### Form 01 11 00B

The Environmental Protection Agency (AHERA) rules require the School District obtain a signed statement from the Site Superintendent that, to the best of his/her knowledge, no asbestos-containing building materials were installed during the Work. Therefore, the following statement must be submitted on the Contractors letterhead prior to Project Closeout.

## **SAMPLE FORM**

(To be submitted on the Contractor's letterhead)

## ASBESTOS-CONTAINING MATERIALS STATEMENT

**EUGENE SCHOOL DISTRICT 4J** 

(Name of Project and CIP Number)
We the undersigned, (Name of Company), hereby warrant that to the best of our knowledge all materials furnished for the above referenced project contain 0% asbestos.
(Name of Construction Company)
(Signature and Date)
Printed Name
Job Title

END OF SECTION 01 11 00

## SUMMARY OF WORK SECTION 01 11 00

## Form 01 11 00 C FULL TIME SUPERINTENDENT DISCLOSURE STATEMENT

Prior to or in conjunction with the Preconstruction Conference, the Contractor shall submit this disclosure statement which identifies the Full Time Superintendent for this Project.

Project Title: AWBREY PARK & SPRING CREEK ELEMENTARY SCHOOLS

CONCRETE WALK & STORM DRAIN REPLACEMENT 2018

Eugene School District 4J

Eugene, Oregon CIP No. 420.109.108

## **CONTRACTOR INFORMATION**

Company Name:			
Company Address:			
City, State, Zip:			
List below the name, address, t for the full time Superintenden		e FAX numbers	s and e-mail address (if available)
Superintendent's Name:			-
Address: (if different from Contractor's)			-
Phone:	_ Fax: _ e-mail		
The undersigned acknowledges throughout this project.			vide a full-time superintendent
Signature:	Authorized Signature		
Printed Name:	Authorized Signature		
Title:			
Signature Notarized by:			
Subscribed and sworn before	ore me this	day of	, 20
Notary Public:	Signature		
My commission expires:	Signature		

## UNIT PRICES SECTION 01 22 00

## 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 administrative and procedural requirements for unit prices.
- B. Related Sections include the following:
  - 1. Division 1 Section 01 25 00 "Contract Modification Procedures" for procedures for submitting and handling Change Orders.
  - 2. Division 1 Section 01 40 00 "Quality Requirements" for general testing and inspecting requirements.
  - 3. Division 32 Section "Concrete Walks, Pavement, Curbs and Gutters" for procedures for measurement and payment for concrete walk.

## 1.3 DEFINITIONS

A. Unit price is an amount proposed by bidders, stated on the Bid Form, **as** a price per unit of measurement for materials or services added to or deducted from the Contract Sum by appropriate modification, if estimated quantities of Work required by the Contract Documents are increased or decreased.

### 1.4 PROCEDURES

- A. Unit prices include all necessary material, plus cost for delivery, installation, insurance, applicable taxes, overhead, and profit.
- B. Measurement and Payment: Refer to individual Specification Sections for work that requires establishment of unit prices. Methods of measurement and payment for unit prices are specified in those Sections.
- C. Owner reserves the right to reject Contractor's measurement of work-in-place that involves use of established unit prices and to have this work measured, at Owner's expense, by an independent surveyor acceptable to Contractor.
- D. List of Unit Prices: A list of unit prices is included in Part 3. Specification Sections referenced in the schedule contain requirements for materials described under each unit price.
- E. The Extended Prices for the Unit Price items (estimated quantity x unit price) are to be included in the base bid.

UNIT PRICES 01 22 00 - 1

## UNIT PRICES SECTION 01 22 00

F. Owner, at its sole discretion, may award Unit Prices or negotiate as changes to the work.

PART 2 - PRODUCTS (Not Used)

**PART 3 - EXECUTION** 

- 3.1 LIST OF UNIT PRICES
  - A. Unit Price No. 1 Concrete Walk Replacement:
    - 1. Description: Areas shown on drawings, according to Division 32 Section "Concrete Walks, Pavement, Curbs and Gutters". Unit price includes removal and replacement of concrete and base rock.
    - 2. Unit of Measurement: Square Foot

END OF SECTION 01 22 00

UNIT PRICES 01 22 00 - 2

## ALTERNATES DOCUMENT 01 23 00

## 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 administrative and procedural requirements for alternates.

## 1.3 DEFINITIONS

- A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the Bidding Requirements that may be added to or deducted from the Base Bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed, the time to complete, or in the products, materials, equipment, systems, or installation methods described in the Contract Documents
  - 1. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.

## 1.4 PROCEDURES

- A. Coordination: Modify or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.
  - 1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.
- B. Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated modifications to alternates.
- C. Execute accepted alternates under the same conditions as other work of the Contract.
- D. Schedule: A Schedule of Alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

ALTERNATES 01 23 00 - 1

# ALTERNATES DOCUMENT 01 23 00

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

- 3.1 SCHEDULE OF ALTERNATES
  - A. Alternate No. 1: Spring Creek Elementary School Concrete Walk & Storm Drain Replacement.

END OF SECTION 01 23 00

ALTERNATES 01 23 00 - 2

## CONTRACT MODIFICATION PROCEDURES SECTION 01 25 00

## **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 specifies administrative and procedural requirements for handling and processing Contract modifications.
- B. Related Sections include the following:
  - 1. Division 0 Document 00 52 13 "Form of Agreement" for monetary values of established Unit Prices and Alternates.
  - 2. Division 0 Document 00 72 13 "General Conditions" for additional requirements for Changes in the Work, Contract Sum, and Contract Time.
  - 3. Division 1 Section 00 11 13 "Supplementary Conditions" for allowable percentages for Contractors' Overhead and Profit.
  - 4. Division 1 Section 01 22 00 "Unit Prices" for administrative requirements for using unit prices.
  - 5. Division 1 Section 01 33 00 "Submittal Procedures" for Schedule of Values requirements.
  - 6. Division 1 Section 01 60 00 "Product Requirements" for administrative procedures for handling requests for substitutions made after Contract award.
  - 7. Division 1 Section 01 78 39 "Project Record Documents" documentation requirements.

## 1.3 MINOR CHANGES IN THE WORK

A. Architect, with the concurrence of the Owner, will issue supplemental instructions authorizing Minor Changes in the Work, not involving adjustment to the Contract Sum or the Contract Time.

# 1.4 CHANGE REQUEST/PROCEED ORDER (CONSTRUCTION CHANGE DIRECTIVE)

- A. Architect or Owner may issue a Change Request/Proceed Order on form included at end of Part 3.
  - 1. Change Request contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.
  - 2. Proceed Order, when signed by the Owner, instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.

## CONTRACT MODIFICATION PROCEDURES SECTION 01 25 00

- B. Documentation: Maintain detailed records on a time and material basis of work required by the Proceed Order.
  - 1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.
- C. Authorization Required: When a Change Request is approved and signed by the Owner, it becomes a Proceed Order authorizing the change requested. Do not proceed with any change without the Owner's signature on the Change Request/Proceed Order.
- D. Owner-Initiated Change Requests: Architect will issue a Change Request, which will include a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
  - 1. Change Requests issued by Architect are for information only. Do not consider them instructions either to stop work in progress or to execute the proposed change.
  - 2. Within time specified in Change Request after receipt of Change Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
    - a. Include a complete cost breakdown including a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
    - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
    - c. Include costs of labor, supervision, overhead, and profit directly attributable to the change.
    - d. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time
- E. Contractor-Initiated Requests: If latent or unforeseen conditions require modifications to the Contract, Contractor may propose changes by submitting a request for a change to the Architect.
  - 1. Changes requested by the Contractor will be authorized only by signature of the Owner on the prescribed. Do not proceed with any changes without this authorization.
  - 2. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
  - 3. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
  - 4. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts
  - 5. Include costs of labor, supervision, overhead, and profit directly attributable to the change.

## CONTRACT MODIFICATION PROCEDURES SECTION 01 25 00

- 6. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
- 7. Comply with requirements in Division 1 Section 01 60 00 "Product Requirements" if the proposed change requires substitution of one product or system for product or system specified.
- F. Change Request Form: Use forms provided by Owner. Sample copies are included at end of Section 3.

## 1.5 CHANGE ORDER PROCEDURES

A. On Owner's approval of a Change Request, and at intervals to be determined, Architect will collect Change Requests and issue a Change Order for signatures of Owner and Contractor on AIA Document G701.

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

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

# CONTRACT MODIFICATION PROCEDURES SECTION 01 25 00

## CHANGE REQUEST/PROCEED ORDER

1992-2010 Capital Improvement Program Eugene School District 4J

	CHANGE REQUEST NOTION	CE				
	roject No.:	— Contract No :		Date:		
C	roject Title:ontractor:					_
						_
1.	REQUEST INFORMATION Estimated \$					
	Reason for change:					
2.	DESCRIPTION Describe changes:					
	Describe affected work:					
	List plan and spec sections:					
	Describe impacted activities:					
	Comment:					
3.	DATES					
	Need for change first known					
	Contractor first notified		How			
	Owner first notified					
4.	Date approved or rejected	d time)	By who	m		
	ROCEED ORDER ROCEED ORDER NO.:					
	DAMAENTE/COCT					
1.	PAYMENT/COST Actual amount of change \$			The contract time will be:		
	<del>-</del>			( ) increased ( ) decreas	ed by	days
				( ) will remain unchanged		_ days
2.	Type of payment (LS/T&M)  MISCELLANEOUS Subcontractors involved:		_			
	Major materials:					
	The cost is not to exceed \$			Date:		
3	CHANGE REQUEST ACCEPT	ED RV·		<u> </u>		
J	Contractor:			Date:		
	Architect:		-	Date:		
	4J CIP Project Manager:			Date:		
	4J CIP Program Manager:			Date:		
	4J Facilities Director:		-	Date:		

Without the signature of Facilities Director, or the acting Director, this Proceed Order is neither accepted or authorized, except by written authorization of other specific delegation.

**END OF SECTION 01250** 

## PAYMENT PROCEDURES SECTION 01 29 00

## **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 specifies administrative and procedural requirements necessary to prepare and process Applications for Payment.
- B. Related Sections include the following:
  - 1. Division 1 Section 01 25 00 "Contract Modification Procedures" for administrative procedures for handling changes to the Contract.
  - 2. Division 1 Section 01 27 00 "Unit Prices" for administrative requirements governing use of unit prices.
  - 3. Division 1 Section 01 32 00 "Construction Progress Documentation" for administrative requirements governing preparation and submittal of Contractor's Construction Schedule and Submittals Schedule.
  - 4. Division 1 Section 01 77 00 "Closeout Procedures" for final Application for Payment.

## 1.3 **DEFINITIONS**

A. Schedule of Values: A statement furnished by Contractor allocating portions of the Contract Sum to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

#### 1.4 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the Schedule of Values with preparation of Contractor's Construction Schedule.
  - 1. Correlate line items in the Schedule of Values with other required administrative forms and schedules, including the following:
    - a. Application for Payment forms with Continuation Sheets.
    - b. Submittals Schedule.
    - c. Contractor's Construction Schedule.
  - 2. Submit the Schedule of Values to Architect and Owner at earliest possible date but no later than seven days before the date scheduled for submittal of initial Application for Payment.
- B. Format and Content: Use the Project Manual table of contents as a guide to establish line items for the Schedule of Values. Provide at least one line item for each Specification Section.
  - 1. Identification: Include the following Project identification on the Schedule of Values:
    - a. Project name and location.
    - b. Name of Architect.

## PAYMENT PROCEDURES SECTION 01 29 00

- c. Architect's project number.
- d. Contractor's name and address.
- e. Date of submittal.
- 2. Submit draft of AIA Document G703 Continuation Sheets.
- 3. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with the Project Manual table of contents. Provide several line items for principal subcontract amounts, where appropriate.
- 4. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
- 5. Provide a separate line item in the Schedule of Values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
  - a. Differentiate between items stored on-site and items stored off-site. If specified, include evidence of insurance or bonded warehousing.
- 6. Provide separate line items in the Schedule of Values for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
- 7. Allowances: Provide a separate line item in the Schedule of Values for each allowance. Show line-item value of unit-cost allowances, as a product of the unit cost, multiplied by measured quantity. Use information indicated in the Contract Documents to determine quantities.
- 8. Each item in the Schedule of Values and Applications for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each item.
  - a. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the Schedule of Values or distributed as general overhead expense, at Contractor's option.
- 9. Schedule Updating: Update and resubmit the Schedule of Values before the next Applications for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.

#### 1.5 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment shall be consistent with previous applications and payments as certified by Architect and paid for by Owner.
  - 1. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.
- B. Payment Application Forms: Use AIA Document G702 and AIA Document G703 Continuation Sheets as form for Applications for Payment.
- C. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Architect will return incomplete applications without action.
  - 1. Entries shall match data on the Schedule of Values and Contractor's Construction Schedule. Use updated schedules if revisions were made.
  - 2. Include amounts of Change Orders issued before last day of construction period covered by application.

## PAYMENT PROCEDURES SECTION 01 29 00

- 3. Transmittal: Submit 3 signed and notarized original copies of each Application for Payment to Architect by a method ensuring receipt within 24 hours.
- D. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
  - 1. List of subcontractors.
  - 2. Schedule of Values (draft submitted previously).
  - 3. Contractor's Construction Schedule (preliminary if not final).
  - 4. Products list.
  - 5. Schedule of unit prices.
  - 6. Submittals Schedule (based Architect's list or required submittals).
  - 7. List of Contractor's staff assignments.
  - 8. Initial progress report.
  - 9. Report of preconstruction conference.
- E. Application for Payment at Substantial Completion: After Architect issues the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.
  - 1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
  - 2. This application shall reflect Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
- F. Final Payment Application: Submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
  - 1. Evidence of completion of Project closeout procedures (See itemized list in Section 01 77 00 "Closeout Procedures").
  - 2. Updated final statement, accounting for final changes to the Contract Sum.
  - 3. AIA Document G706, "Contractor's Affidavit of Payment of Debts and Claims."
  - 4. AIA Document G706A, "Contractor's Affidavit of Release of Liens."
  - 5. AIA Document G707, "Consent of Surety to Final Payment."
  - 6. Evidence that claims have been settled.
  - 7. Final, liquidated damages settlement statement.

## PART 2 - PRODUCTS (Not Used)

## PART 3 - EXECUTION (Not Used)

### **END OF SECTION 10 29 00**

## PROJECT MANAGEMENT AND COORDINATION SECTION 01 31 00

## 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 administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
  - 1. Administrative and supervisory personnel.
  - 2. Project meetings.
- B. Related Sections include the following:
  - 1. Division 1 Section 01 32 00 "Construction Progress Documentation" for preparing and submitting Contractor's Construction Schedule.
  - 2. Division 1 Section 01 73 00 "Execution Requirements" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.
  - 3. Division 1 Section 01 77 00 "Closeout Procedures" for coordinating Contract closeout.

## 1.3 COORDINATION

- A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections that depend on each other for proper installation, connection, and operation.
  - 1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
  - 2. Coordinate installation of different components with other contractors to ensure maximum accessibility for required maintenance, service, and repair.
  - 3. Make adequate provisions to accommodate items scheduled for later installation.
  - 4. Where availability of space is limited, coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair of all components, including mechanical and electrical.
- B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.
  - 1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.

## PROJECT MANAGEMENT AND COORDINATION SECTION 01 31 00

- C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
  - 1. Preparation of Contractor's Construction Schedule.
  - 2. Preparation of the Schedule of Values.
  - 3. Installation and removal of temporary facilities and controls.
  - 4. Delivery and processing of submittals.
  - 5. Progress meetings.
  - 6. Preinstallation conferences.
  - 7. Project closeout activities.
  - 8. Startup and adjustment of systems.
  - 9. Project closeout activities.
- D. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials.
  - 1. Salvage materials and equipment involved in performance of, but not actually incorporated into, the Work. Refer to other Sections for disposition of salvaged materials that are designated as Owner's property.

### 1.4 SUBMITTALS

A. Key Personnel Names: Within 15 days of Notice-to-Proceed, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including pager, cell, and office telephone numbers. Provide names, addresses, and telephone numbers of individuals assigned as standbys in the absence of individuals assigned to Project.

## 1.5 PROJECT MEETINGS

- A. General: Schedule and conduct meetings and conferences at Project site, unless otherwise indicated.
  - 1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Schedule meeting dates and times with Owner and Architect.
  - 2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
  - 3. Minutes: Architect will record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, within three days of receiving them from the Architect.
- B. Preconstruction Conference: Owner's Project Manager will schedule a preconstruction conference before starting construction, no later than 15 days after execution of the Agreement. Hold the conference at Project site or another convenient location. Conduct the meeting to review responsibilities and personnel assignments.

## PROJECT MANAGEMENT AND COORDINATION SECTION 01 31 00

- 1. Attendees: Owner's Project Manager, Architect, and their consultants, as required; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
- 2. Agenda: Discuss items of significance that could affect progress, including the following (see sample agenda at the end of Part 3):
  - a. Introduction of persons present.
  - b. Tentative construction schedule.
  - c. Phasing.
  - d. Critical work sequencing and long-lead items.
  - e. Designation of key personnel and their duties.
  - f. Procedures for processing field decisions and Change Orders.
  - g. Procedures for requests for interpretations (RFIs).
  - h. Procedures for testing and inspecting.
  - i. Procedures for processing Applications for Payment.
  - j. Distribution of the Contract Documents.
  - k. Communications.
  - 1. Role of District's Project Manager.
  - m. Submittal procedures, including MSDS information.
  - n. Energy design requirements.
  - o. Preparation of Record Documents.
  - p. Use of the premises and existing building.
  - q. Work hours and restrictions.
  - r. Owner's occupancy requirements.
  - s. Responsibility for temporary facilities and controls.
  - t. Construction waste management and recycling.
  - u. Parking availability.
  - v. Office, work, and storage areas.
  - w. Equipment deliveries and priorities.
  - x. Safety and first aid.
  - y. Security.
  - z. Progress cleaning.
- 3. Minutes: Architect will record and distribute meeting minutes.
- 4. Statements made by the Contracting Agency's representative at the pre-construction conference are not binding upon the Contracting Agency unless confirmed by Written Addendum.
- C. Preconstruction Asbestos Mitigation Conference: Required when site work excavation is to occur in already developed areas. Coordinate with project manager to review potential issues with 4J staff.
- D. Preinstallation Conferences: When required by individual specification sections, conduct a preinstallation conference at Project site before each construction activity that requires coordination with other construction.
  - 1. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and

## PROJECT MANAGEMENT AND COORDINATION SECTION 01 31 00

installations that have preceded or will follow, shall attend the meeting. Advise Architect and Owner's Project Manager a minimum of four days prior to scheduled meeting dates.

- 2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:
  - a. Contract documents.
  - b. Related requests for interpretations (RFIs).
  - c. Related Change Orders.
  - d. Purchases.
  - e. Deliveries.
  - f. Submittals.
  - g. Possible conflicts.
  - h. Compatibility problems.
  - i. Time schedules.
  - j. Weather limitations.
  - k. Manufacturer's written recommendations.
  - l. Warranty requirements.
  - m. Compatibility of materials.
  - n. Acceptability of substrates.
  - o. Space and access limitations.
  - p. Regulations of authorities having jurisdiction.
  - q. Testing and inspecting requirements.
  - r. Installation procedures.
  - s. Coordination with other work.
  - t. Required performance results.
  - u. Protection of adjacent work.
- 3. Contractor to record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.
- 4. Distribute minutes of the meeting to each party present and to parties who should have been present, within three working days.
- 5. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.
- E. Progress Meetings: Conduct progress meetings at weekly intervals. Coordinate dates of meetings with preparation of payment requests.
  - 1. Attendees: In addition to the Owner's Project Manager and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
  - 2. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
  - 3. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's Construction Schedule. Determine how construction behind schedule will

## PROJECT MANAGEMENT AND COORDINATION SECTION 01 31 00

be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.

- 4. Review present and future needs of each entity present, including the following:
  - 1) Interface requirements.
  - 2) Sequence of operations.
  - 3) Status of submittals.
  - 4) Deliveries.
  - 5) Off-site fabrication.
  - 6) Access.
  - 7) Site utilization.
  - 8) Temporary facilities and controls.
  - 9) Work hours.
  - 10) Hazards and risks.
  - 11) Progress cleaning.
  - 12) Quality and work standards.
  - 13) Status of correction of deficient items.
  - 14) Field observations.
  - 15) Requests for interpretations (RFIs).
  - 16) Status of proposal requests.
  - 17) Pending changes.
  - 18) Status of Change Orders.
  - 19) Pending claims and disputes.
  - 20) Documentation of information for payment requests.
- 5. Minutes: Architect will record and distribute to Contractor the meeting minutes.
- 6. Reporting: Distribute minutes of the meeting to each party present and to parties who should have been present.

## PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

# PROJECT MANAGEMENT AND COORDINATION SECTION 01 31 00

## PRECONSTRUCTION CONFERENCE AGENDA (SAMPLE)

Eugene School District 4J

[Eı	nter	Project Name]		
[D	[Date]			
AC	<u>SEN</u>	<u>DA</u>		
1.	()	Introduction of Persons Present  () District 4J  () Consultants  () Contractor (including job foreman)  () Subcontractors		
2.	()	Availability of Contract Documents		
3.	()	Building Permit Status  () Plan check and Building Permit paid by District  () Pick up Permit at City of Eugene by Contractor  () Location of site stored approved contract documents  () Utility permits  () LRAPA Permit		
4.	()	Prevailing Wage Requirements  () Submittal schedule  () Conformance with requirements		
5.	()	Communications ( ) Notification of problems		
6.	()	Role of District's representative  ( ) Limits of authority  ( ) Visitation schedules		
7.	()	Work Description and Schedule  () General work description  () Proposed start date:  () Proposed completion date:  () Proposed project schedule and phasing  () Progress schedule updates  () Methods to be employed to maintain schedule  () Work requiring Shop Drawings or submittals shall not commence until review is complete.		
8.	()	Submittals Required per Contract Documents  () MSDS Information  () Written proof of Asbestos Worker Certification  () Name, Experience and Qualifications of Asbestos Supervisor		

# PROJECT MANAGEMENT AND COORDINATION

	PROJECT MANAGEMENT AND COORDINATION SECTION 01 31 00
	<ul> <li>() Copy of Contractor's Asbestos Abatement License</li> <li>() Other information as required by Section 01 31 00.</li> <li>() Schedule of values</li> <li>() List of subcontractors including name of contact person, telephone number, and address</li> </ul>
9. ()	Construction () Working hours () Use of premises/set up locations () Protection of existing facilities () Traffic and protection () Excavation and clean-up () Weather restrictions () Deviation from details and/or specifications
10. ()	Correction of Defects ( ) Daily and/or as observed
11. ()	Weekly On-Site Progress Meetings  () Establish day and time: DayTime
12. ()	Change Order Requests and Change Order Procedures  () Written Change Order requests required  () Supporting back-up will be required for all Change Orders  () Mark-up limitations on Change Orders  () Contractor - 15 percent  () Subcontractors - 10 percent  () Progressive requests and Change Orders  () Processing time required
13. ()	Applications for Payment  () Use AIA documents G702 and G703 latest edition  () Provide 5 signed and notarized copies  () Wage certifications to be attached
14. ()	Safety and Emergency Procedures
15. ()	Clean-up Daily ( ) Project completion
16. ()	Project Closeout  ( ) Inspections for  ( ) Air Clearance  ( ) AHERA Close Out Requirements

# PROJECT MANAGEMENT AND COORDINATION SECTION 01 31 00

() Substantial completion
() Contractor provided list of items to be completed
() Inspection with job foreman
() Final Acceptance
() Written notice from Contractor that all work is done and ready for inspection
() Inspection with job foreman
() Responsibility for cost of additional inspections
() Submittals for Closeout
() Final application for payment
() Final set of wage certifications
() Release of liens from all Subcontractors and general Contractor
17. () Tour of Project Sites to Examine and Document Existing Conditions
18. () Additional Comments
The undersigned acknowledges that the items listed above were discussed during this preconstruction conference and are fully understood.
Date:
A/E Firm:
Contractor:
Subcontractors:

END OF SECTION 01 31 00

## CONSTRUCTION PROGRESS DOCUMENTATION SECTION 01 32 00

## 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 administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
  - 1. Preliminary Construction Schedule.
  - 2. Contractor's Construction Schedule.
  - 3. Submittals Schedule.
- B. Related Sections include the following:
  - 1. Division 1 Section 01 29 00 "Payment Procedures" for submitting the Schedule of Values.
  - 2. Division 1 Section 01 31 00 "Project Management and Coordination" for submitting and distributing meeting and conference minutes.
  - 3. Division 1 Section 01 33 00 "Submittal Procedures" for submitting schedules and reports.
  - 4. Division 1 Section 01 40 00 "Quality Requirements" for submitting a schedule of tests and inspections.

#### 1.3 SUBMITTALS

- A. Submittals Schedule: Submit three copies of schedule. Arrange the following information in a tabular format.
  - 1. Scheduled date for first submittal.
  - 2. Specification Section number and title.
  - 3. Submittal category (action or informational).
  - 4. Name of subcontractor.
  - 5. Description of the Work covered.
  - 6. Scheduled date for Architect's final release or approval.
- B. Contractor's Construction Schedule: Submit two opaque copies of initial schedule, large enough to show entire schedule for entire construction period.

### 1.4 COORDINATION

A. Coordinate preparation and processing of schedules and reports with performance of construction activities and with scheduling and reporting of separate contractors.

## CONSTRUCTION PROGRESS DOCUMENTATION SECTION 01 32 00

- B. Coordinate Contractor's Construction Schedule with the Schedule of Values, list of subcontracts, Submittals Schedule, progress reports, payment requests, and other required schedules and reports.
  - 1. Secure time commitments for performing critical elements of the Work from parties involved.
  - 2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.

## **PART 2 - PRODUCTS**

#### 2.1 SUBMITTALS SCHEDULE

- A. Preparation: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, resubmittal, ordering, manufacturing, fabrication, and delivery when establishing dates.
  - 1. Coordinate Submittals Schedule with list of subcontracts, the Schedule of Values, and Contractor's Construction Schedule.
  - 2. Initial Submittal: List those required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
  - 3. Final Submittal: Submit concurrently with the first complete submittal of Contractor's Construction Schedule.

## 2.2 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

- A. Time Frame: Extend schedule from date established for the Notice to Proceed to date of Final Completion.
- B. Activities: Treat each floor or separate area as a separately numbered activity for each principal element of the Work
- C. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule, and show how the sequence of the Work is affected.
- D. Products Ordered in Advance: Include a separate activity for each product. Include delivery date indicated in Division 1 Section 01 11 00 "Summary of Work." Delivery dates indicated stipulate the earliest possible delivery date.
- E. Owner-Furnished Products: Include a separate activity for each product. Include delivery date indicated in Division 1 Section 01 11 00 "Summary of Work." Delivery dates indicated stipulate the earliest possible delivery date.
- F. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, Substantial Completion, and Final Completion.
- G. Cost Correlation: At the head of schedule, provide a cost correlation line, indicating planned and actual costs. On the line, show dollar volume of the Work performed as of dates used for preparation of payment requests.

## CONSTRUCTION PROGRESS DOCUMENTATION SECTION 01 32 00

#### 2.3 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. Bar-Chart Schedule: Submit preliminary horizontal bar-chart-type construction schedule within 10 days of date established for the Notice to Proceed.
- B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line.

### **PART 3 - EXECUTION**

## 3.1 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. Contractor's Construction Schedule Updating: At monthly intervals, update schedule to reflect actual construction progress and activities. Issue schedule one week before each regularly scheduled progress meeting.
  - 1. Revise schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.
  - 2. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
  - 3. As the Work progresses, indicate Actual Completion percentage for each activity.
- B. Distribution: Distribute copies of approved schedule to Architect Owner's Project Manager, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.
  - 1. Post copies in Project meeting rooms and temporary field offices.
  - 2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

**END OF SECTION 01 32 00** 

## SUBMITTAL PROCEDURES SECTION 01 33 00

### **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 administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, Information Submittals, Delegated Design and other submittals.
- B. Related Sections include the following:
  - 1. Division 1 Section 01 29 00 "Payment Procedures" for submitting Applications for Payment and the Schedule of Values.
  - 2. Division 1 Section 01 31 00 "Project Management and Coordination" for submitting and distributing meeting and conference minutes and for submitting Coordination Drawings.
  - 3. Division 1 Section 01 32 00 "Construction Progress Documentation" for submitting schedules and reports, including Contractor's Construction Schedule and the Submittals Schedule.
  - 4. Division 1 Section 01 40 00 "Quality Requirements" for submitting test and inspection reports and for mockup requirements, if any.
  - 5. Division 1 Section 01 77 00 "Closeout Procedures" for submitting warranties.
  - 6. Division 1 Section 01 78 39 "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.
  - 7. Division 1 Section 01 78 23 "Operation and Maintenance Data" for submitting operation and maintenance manuals.
  - 8. Divisions 2 through 49 Sections for specific requirements for submittals in those Sections.

### 1.3 **DEFINITIONS**

- A. Action Submittals: Written and graphic information that requires Architect's responsive action.
- B. Informational Submittals: Written information that does not require Architect's responsive action. Submittals may be rejected for not complying with requirements.

#### 1.4 SUBMITTAL PROCEDURES

- A. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
  - 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.

### SUBMITTAL PROCEDURES SECTION 01 33 00

- 2. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination
- B. Submittals Schedule: Comply with requirements in Division 1 Section 01 32 00 "Construction Progress Documentation" for list of submittals and time requirements for scheduled performance of related construction activities.
- C. Processing Time: Allow enough time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
  - 1. Initial Review: Allow 14 calendar days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
  - 2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
- D. Identification: Place a permanent label or title block on each submittal for identification.
  - 1. Indicate name of firm or entity that prepared each submittal on label or title block.
  - 2. Provide a space approximately 6 by 8 inches on label or beside title block to record Contractor's review and approval markings and action taken by Architect.
- E. Deviations: Highlight, encircle, or otherwise specifically identify deviations from the Contract Documents on submittals.
- F. Transmittal: Package each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form. Architect will return submittals, without review, if received from sources other than Contractor without prior consent.
  - 1. Transmittal Form: Provide locations on form for the following information:
    - a. Project name.
    - b. Date.
    - c. Destination (To:).
    - d. Source (From:).
    - e. Names of subcontractor, manufacturer, and supplier.
    - f. Category and type of submittal.
    - g. Submittal purpose and description.
    - h. Specification Section number and title.
    - i. Drawing number and detail references, as appropriate.
    - j. Submittal and transmittal distribution record.
    - k. Remarks.
    - 1. Signature of transmitter.
- G. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.

### SUBMITTAL PROCEDURES SECTION 01 33 00

- 1. Note date and content of previous submittal.
- 2. Note date and content of revision in label or title block and clearly indicate extent of revision
- 3. Resubmit submittals until they are marked "No exception taken."
- H. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
- I. Use for Construction: Use only final submittals with mark indicating "No exception taken" by Architect.

## **PART 2 - PRODUCTS**

#### 2.1 ACTION SUBMITTALS

- A. General: Prepare and submit Action Submittals required by individual Specification Sections.
- B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
  - 1. If information must be specially prepared for submittal because standard printed data are not suitable for use, submit as Shop Drawings, not as Product Data.
  - 2. Mark each copy of each submittal to show which products and options are applicable.
  - 3. Include the following information, as applicable:
    - a. Manufacturer's written recommendations.
    - b. Manufacturer's product specifications.
    - c. Manufacturer's installation instructions.
    - d. Standard color charts.
    - e. Manufacturer's catalog cuts.
    - f. Wiring diagrams showing factory-installed wiring.
    - g. Printed performance curves.
    - h. Operational range diagrams.
    - i. Compliance with specified referenced standards.
    - j. Testing by recognized testing agency.
    - k. Application of testing agency labels and seals.
    - 1. Notation of coordination requirements.
    - m. MSDS information, where applicable.
  - 4. Submit Product Data before or concurrent with Samples.
  - 5. Number of Copies: Submit the number required by the Contractor plus four (4) copies of Product Data, unless otherwise indicated. Architect will return two copies to Contractor and one to Owner. Mark up and retain one returned copy as a Project Record Document.
- C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.

### SUBMITTAL PROCEDURES SECTION 01 33 00

- 1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
  - a. Dimensions.
  - b. Identification of products.
  - c. Wiring diagrams showing field-installed wiring, including power, signal, and control wiring.
  - d. Schedules.
  - e. Design calculations.
  - f. Compliance with specified standards.
  - g. Notation of coordination requirements.
  - h. Notation of dimensions established by field measurement.
  - i. Relationship to adjoining construction clearly indicated.
  - j. Seal and signature of professional engineer if specified.
- 2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches but no larger than 30 by 40 inches.
- 3. Number of Copies: Submit four opaque copies of each submittal, unless copies are required for operation and maintenance manuals. Submit five copies where copies are required for operation and maintenance manuals. Architect will retain two copies, including one for the Owner's Project Manager; remainder will be returned. Mark up and retain one returned copy as a Project Record Drawing.
- D. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.
  - 1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
  - 2. Identification: Attach label on unexposed side of Samples that includes the following:
    - a. Generic description of Sample.
    - b. Product name and name of manufacturer.
    - c. Sample source.
    - d. Number and title of appropriate Specification Section.
  - 3. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
    - a. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
    - b. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor..
    - c. Number of Samples: Submit three sets of Samples. Architect will retain two Sample sets; remainder will be returned.

### SUBMITTAL PROCEDURES SECTION 01 33 00

#### 2.2 INFORMATIONAL SUBMITTALS

- A. General: Prepare and submit Informational Submittals required by other Specification Sections.
  - 1. Number of Copies: Submit two copies of each submittal, unless otherwise indicated. Architect will not return copies.
  - 2. Certificates and Certifications: Provide a notarized statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
  - 3. Test and Inspection Reports: Comply with requirements specified in Division 1 Section 01 40 00 "Quality Requirements."
- B. Coordination Drawings: Comply with requirements specified in Division 1 Section 01 31 00 "Project Management and Coordination."
- C. Contractor's Construction Schedule: Comply with requirements specified in Division 1 Section 01 32 00 "Construction Progress Documentation."
- D. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.
- E. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification (WPS) and Procedure Qualification Record (PQR) on AWS forms. Include names of firms and personnel certified.
- F. Installer Certificates: Prepare written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
- G. Manufacturer Certificates: Prepare written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
- H. Product Certificates: Prepare written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
- I. Material Certificates: Prepare written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
- J. Material Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
- K. Product Test Reports: Prepare written reports indicating current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on

### SUBMITTAL PROCEDURES SECTION 01 33 00

evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.

- L. Schedule of Tests and Inspections: Comply with requirements specified in Division 1 Section 01 40 00 "Quality Requirements."
- M. Preconstruction Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.
- N. Compatibility Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.
- O. Field Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.
- P. Maintenance Data: Prepare written and graphic instructions and procedures for operation and normal maintenance of products and equipment. Comply with requirements specified in Division 1 Section 01 78 23 "Operation and Maintenance Data."
- Q. Design Data: Prepare written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.
- R. Manufacturer's Instructions: Prepare written or published information that documents manufacturer's recommendations, guidelines, and procedures for installing or operating a product or equipment. Include name of product and name, address, and telephone number of manufacturer.
- S. Insurance Certificates and Bonds: Prepare written information indicating current status of insurance or bonding coverage. Include name of entity covered by insurance or bond, limits of coverage, amounts of deductibles, if any, and term of the coverage.
- T. Material Safety Data Sheets (MSDSs): Submit information directly to Owner; do not submit to Architect.

### 2.3 DELEGATED DESIGN

A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.

### SUBMITTAL PROCEDURES SECTION 01 33 00

B. Delegated-Design Submittal: In addition to Shop Drawings, Product Data, and other required submittals, submit three copies of a statement, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.

Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

## **PART 3 - EXECUTION**

### 3.1 CONTRACTOR'S REVIEW

- A. Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect.
- B. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

### 3.2 ARCHITECT'S ACTION

- A. General: Architect will not review submittals that do not bear Contractor's approval stamp and will return them without action.
- B. Action Submittals: Architect will review each submittal, make marks to indicate corrections or modifications required, and return it. Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action taken, as follows:
  - 1. No Exception Taken
  - 2. Make Corrections Noted
  - 3. Revise and Resubmit
  - 4. Submit Specified Item
- C. Informational Submittals: Architect will review each submittal and will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.
- D. Partial submittals are not acceptable, will be considered nonresponsive, and will be returned without review.
- E. Submittals not required by the Contract Documents may not be reviewed and may be discarded.

END OF SECTION 01 33 00

## QUALITY REQUIREMENTS SECTION 01 40 00

### **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 administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
  - 1. Specific quality-assurance and -control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
  - 2. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and -control procedures that facilitate compliance with the Contract Document requirements.
  - 3. Requirements for Contractor to provide quality-assurance and -control services required by Architect, Owner, or authorities having jurisdiction are not limited by provisions of this Section.

## C. Related Sections include the following:

- 1. Division 1 Section 01 32 00 "Construction Progress Documentation" for developing a schedule of required tests and inspections.
- 2. Divisions 2 through 49 Sections for specific test and inspection requirements.

## 1.3 CONFLICTING REQUIREMENTS

- A. General: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to Architect for a decision before proceeding.
- B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.

## QUALITY REQUIREMENTS SECTION 01 40 00

#### 1.4 SUBMITTALS

- A. Qualification Data: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.
- B. Reports: Prepare and submit certified written reports that include the following:
  - 1. Date of issue.
  - 2. Project title and number.
  - 3. Name, address, and telephone number of testing agency.
  - 4. Dates and locations of samples and tests or inspections.
  - 5. Names of individuals making tests and inspections.
  - 6. Description of the Work and test and inspection method.
  - 7. Identification of product and Specification Section.
  - 8. Complete test or inspection data.
  - 9. Test and inspection results and an interpretation of test results.
  - 10. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
  - 11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
  - 12. Name and signature of laboratory inspector.
  - 13. Recommendations on retesting and reinspecting.
- C. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

### 1.5 QUALITY CONTROL

- A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.
  - 1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspecting they are engaged to perform.
  - 2. Payment for these services will be made by Owner.
  - 3. Costs for retesting and reinspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor, and the Contract Sum will be adjusted by Change Order.
- B. Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control services required of Contractor by authorities having jurisdiction, whether specified or not.

### QUALITY REQUIREMENTS SECTION 01 40 00

- 1. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.
- 2. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.
- 3. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
- 4. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
- 5. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- C. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Division 1 Section 01 33 00 "Submittal Procedures."
- D. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.
- E. Testing Agency Responsibilities: Cooperate with Architect and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
  - 1. Notify Architect and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
  - 2. Determine the location from which test samples will be taken and in which in-situ tests are conducted
  - 3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
  - 4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
  - 5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
  - 6. Do not perform any duties of Contractor.
- F. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
  - 1. Access to the Work.
  - 2. Incidental labor and facilities necessary to facilitate tests and inspections.
  - 3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
  - 4. Facilities for storage and field curing of test samples.
  - 5. Delivery of samples to testing agencies.
  - 6. Preliminary design mix proposed for use for material mixes that require control by testing agency.

### QUALITY REQUIREMENTS SECTION 01 40 00

- 7. Security and protection for samples and for testing and inspecting equipment at Project site.
- G. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
  - 1. Schedule times for tests, inspections, obtaining samples, and similar activities.

## PART 2 - PRODUCTS (Not Used)

### **PART 3 - EXECUTION**

### 3.1 TEST AND INSPECTION LOG

- A. Prepare a record of tests and inspections. Include the following:
  - 1. Date test or inspection was conducted.
  - 2. Description of the Work tested or inspected.
  - 3. Date test or inspection results were transmitted to Architect.
  - 4. Identification of testing agency or special inspector conducting test or inspection.
- B. Maintain log at Project site. Post changes and modifications as they occur. Provide access to test and inspection log for Architect's reference during normal working hours.

#### 3.2 REPAIR AND PROTECTION

- A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
  - 1. Provide materials and comply with installation requirements specified in other Specification Sections. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible.
- B. Protect construction exposed by or for quality-control service activities.
- C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

#### END OF SECTION 01 40 00

## TEMPORARY FACILITIES AND CONTROL SECTION 01 50 00

### **PART 1 - GENERAL**

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. This Section includes requirements for temporary utilities, support facilities, and security and protection facilities.
- B. Related Sections include the following:
  - 1. Division 1 Section 01 11 00 "Summary of Work" for limitations on utility interruptions and other work restrictions.
  - 2. Division 1 Section 01 33 00 "Submittal Procedures" for procedures for submitting copies of implementation and termination schedule and utility reports.
  - 3. Division 1 Section 01 77 00 "Execution Requirements" for progress cleaning requirements.
  - 4. Divisions 2 through 49 Sections for temporary heat, ventilation, and humidity requirements for products in those Sections.

### 1.3 USE CHARGES

A. General: Cost or use charges for temporary facilities shall be included in the Contract Sum. Allow other entities to use temporary services and facilities without cost, including, but not limited to, Owner's construction forces, Architect, testing agencies, and authorities having jurisdiction.

## 1.4 QUALITY ASSURANCE

- A. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.
- B. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.

## 1.5 PROJECT CONDITIONS

A. Temporary Use of Permanent Facilities: Installer of each permanent service shall assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before Owner's acceptance, regardless of previously assigned responsibilities.

## TEMPORARY FACILITIES AND CONTROL SECTION 01 50 00

## PART 2 - PRODUCTS

#### 2.1 MATERIALS

A. Portable Chain-Link Fencing: Minimum 2-inch, 9-gage, galvanized steel, chain-link fabric fencing; minimum 6 feet high with galvanized steel pipe posts; minimum 2-3/8-inch OD line posts and 2-7/8-inch OD corner and pull posts, with 1-5/8-inch OD top and bottom rails. Provide concrete bases for supporting posts.

## 2.2 EQUIPMENT

A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.

### **PART 3 - EXECUTION**

## 3.1 INSTALLATION, GENERAL

- A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work.
- B. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

### 3.2 TEMPORARY UTILITY INSTALLATION

- A. Temporary Roads and Paved Areas: Construct and maintain temporary roads and paved areas adequate for construction operations. Locate temporary roads and paved areas **as** indicated on Drawings.
  - 1. Provide dust-control treatment that is nonpolluting and nontracking. Reapply treatment as required to minimize dust.
- B. Traffic Controls: Comply with requirements of authorities having jurisdiction.
  - 1. Protect existing site improvements to remain including curbs, pavement, and utilities.
  - 2. Maintain access for fire-fighting equipment and access to fire hydrants.
- C. Parking: Coordinate temporary parking areas for construction personnel with Owner's representative.
- D. Dewatering Facilities and Drains: Comply with requirements of authorities having jurisdiction. Maintain Project site, excavations, and construction free of water.
  - 1. Dispose of rainwater in a lawful manner that will not result in flooding Project or adjoining properties nor endanger permanent Work or temporary facilities.

## TEMPORARY FACILITIES AND CONTROL SECTION 01 50 00

E. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations. Comply with requirements of authorities having jurisdiction. Comply with Division 1 Section 01 77 00 "Execution Requirements" for progress cleaning requirements.

### 3.3 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
  - 1. Comply with work restrictions specified in Division 1 Section 01 11 00 "Summary of Work."
- B. Temporary Erosion and Sedimentation Control: Comply with requirements specified in Division 31 Section "Earthwork", the drawings and requirements of authority having jurisdiction.
- C. Stormwater Control: Comply with authorities having jurisdiction. Provide barriers in and around excavations and subgrade construction to prevent flooding by runoff of stormwater from heavy rains.
- D. Tree and Plant Protection: Comply with requirements specified on the drawings.
- E. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.

## 3.4 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
- B. Maintenance: Maintain facilities in good operating condition until removal.
- C. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.

END OF SECTION 01 50 00

## PRODUCT REQUIREMENTS SECTION 01 60 00

### **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 administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; product substitutions; and comparable products.
- B. Related Sections include the following:
  - 1. Division 1 Section 01 77 00 "Closeout Procedures" for submitting warranties for Contract closeout
  - 2. Divisions 2 through 49 Sections for specific requirements for warranties on products and installations specified to be warranted.

### 1.3 **DEFINITIONS**

- A. Products: Items purchased for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
- B. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.
- C. Basis-of-Design Product Specification: Where a specific manufacturer's product is named and accompanied by the words "basis of design," including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of other named manufacturers.

#### 1.4 SUBMITTALS

- A. Substitution Requests: Instructions to Bidders specify time restrictions for submitting requests for Substitutions during the bidding period, in compliance with this Section.
- B. After execution of Agreement, the Owner may, at the Owner's option, consider formal requests from the Contractor for substitution of products for those specified. One or more of the following conditions must be documented:
  - 1. Compliance with final interpretation of code requirements or insurance regulations which require that the use of a substituted Product.
  - 2. Unavailability of a specified Product through no fault of the Contractor.
  - 3. Inability of specified Product to perform properly of fit in designated place.

### PRODUCT REQUIREMENTS SECTION 01 60 00

- 4. Manufacturer's or Fabricator's refusal or inability of certify or guarantee performance of a specified Product in the application intended.
- C. A Substitution Request constitutes a representation that the Bidder/Contractor:
  - 1. Has investigated the proposed Product and determined that it meets or exceeds the quality level of the specified Product.
  - 2. Will provide the same warranty for the Substituted Product as for the specified Product.
  - 3. Will coordinate installation and make changes to the Work which may be required for the Work to be completed with no additional cost to the Owner.
  - 4. Waives claims for additional costs or time extension which may subsequently become apparent.
  - 5. Will reimburse the Owner for review or redesign services associated with re-approval by authorities.
- D. Substitutions will not be considered when they are indicated or implied on Shop Drawings or Product Data Submittals, without separate request on the form provided, or when acceptance will require revision to the Contract Documents.
- E. Submit three copies of each request for consideration. Limit each request to one proposed Substitution. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
  - 1. Substitution Request Form: Use form provided at end of Section.
  - 2. Documentation: Show compliance with requirements for substitutions and the following, as may be requested, or as applicable:
    - a. Statement indicating why specified material or product cannot be provided.
    - b. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by Owner and separate contractors, that will be necessary to accommodate proposed substitution.
    - c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
    - d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
    - e. Provide MSDS information to confirm that the product is no more harmful than the products specified.
    - f. Samples, where applicable or requested.
    - g. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners.
    - h. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
    - i. Research/evaluation reports evidencing compliance with building code in effect for Project, from a model code organization acceptable to authorities having jurisdiction.
    - j. Detailed comparison of Contractor's Construction Schedule using proposed substitution with products specified for the Work, including effect on the overall

### PRODUCT REQUIREMENTS SECTION 01 60 00

Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating lack of availability or delays in delivery.

- k. Cost information, including a proposal of change, if any, in the Contract Sum.
- 1. Contractor's certification that proposed substitution complies with requirements in the Contract Documents and is appropriate for applications indicated.
- m. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
- 3. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within 7 days of receipt of a request for substitution. Architect will notify Contractor of acceptance or rejection of proposed substitution within 15 days of receipt of request, or 7 days of receipt of additional information or documentation, whichever is later.
  - a. Form of Acceptance: Change Order.
  - b. Use product specified if Architect cannot make a decision on use of a proposed substitution within time allocated.

## 1.5 QUALITY ASSURANCE

A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, product selected shall be compatible with products previously selected, even if previously selected products were also options.

## 1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft. Comply with manufacturer's written instructions.
- B. Delivery and Handling:
  - 1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
  - 2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
  - 3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
  - 4. Inspect products on delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.
- C. Storage:

### PRODUCT REQUIREMENTS SECTION 01 60 00

- 1. Store products to allow for inspection and measurement of quantity or counting of units.
- 2. Store materials in a manner that will not endanger Project structure.
- 3. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
- 4. Store cementitious products and materials on elevated platforms.
- 5. Store foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
- 6. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
- 7. Protect stored products from damage and liquids from freezing.
- 8. Provide a secure location and enclosure at Project site for storage of materials and equipment by Owner's construction forces. Coordinate location with Owner.
- 9. Provide bonded and insured off-site storage and protection when site does not permit on-site storage and protection.

### 1.7 PRODUCT WARRANTIES

- A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents
  - 1. Manufacturer's Warranty: Preprinted written warranty published by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner
  - 2. Special Warranty: Written warranty required by or incorporated into the Contract Documents, either to extend time limit provided by manufacturer's warranty or to provide more rights for Owner.
- B. Submittal Time: Comply with requirements in Division 1 Section 01 77 00 "Closeout Procedures."

### PART 2 - PRODUCTS (Not Used)

### PART 3 – EXECUTION (Not Used)

## PRODUCT REQUIREMENTS SECTION 01 60 00

## SUBSTITUTION REQUEST FORM

TO:					DEADLINE:	
	Architect				Date	
	Street Address				_	
	City, State Zip Coo	le			_	
PROJECT					_	
	Project Title Eugene School	District 4J			CIP#	
ITEM:			- <del></del>			
S	Section No.	Page No.	Paragraph	Description		
The Under	rsigned requests c	onsideration	of the follow	ring substitut	ion:	
The Under	rsigned states that	the followin	g paragraphs	are true, exc	ept where noted otherwise:	
1. The fur specified i	, T.	e and quality	of the propos	sed substituti	on are equivalent or superior to the	
2. The pro	oposed substitution	on does not af	ffect dimension	ons shown or	n the Drawings;	
	ndersigned will patient illing and construction				ncluding engineering and design ser- estitution;	
	oposed substitution		no adverse aft	fect on other	trades, the construction schedule, or	
5. Mainte	5. Maintenance and service parts will be locally available for the proposed substitution;					
product de ation of th	escription, specific e request, with ap of changes to Con	cations, draw oplicable port	ings, photogr ions of the da	raphs, performata clearly ind	bstitution, including: Manufacturers mance and test data, adequate for evaludicated. Attachments also include delabstitution will require for its proper	
Submitted	by:			Signature	2:	
Firm:						
	:					
Date:		EN	OF SECT	ΓΙΟΝ 01 60 (	00	

## EXECUTION REQUIREMENTS SECTION 01 73 00

### **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 general procedural requirements governing execution of the Work including, but not limited to, the following:
  - 1. Construction layout.
  - 2. Field engineering and surveying.
  - 3. General installation of products.
  - 4. Coordination of Owner-installed products.
  - 5. Progress cleaning.
  - 6. Starting and adjusting.
  - 7. Protection of installed construction.
  - 8. Correction of the Work.

### B. Related Sections include the following:

- 1. Division 1 Section 01 31 00 "Project Management and Coordination" for procedures for coordinating field engineering with other construction activities.
- 2. Division 1 Section 01 33 00 "Submittal Procedures" for submitting surveys.
- 3. Division 1 Section 01 77 00 "Closeout Procedures" for submitting final property survey with Project Record Documents, recording of Owner-accepted deviations from indicated lines and levels, and final cleaning.

## 1.3 SUBMITTALS

- A. Landfill Receipts: Submit copy of receipts issued by a landfill facility, licensed to accept hazardous materials, for hazardous waste disposal.
- B. Final Property Survey: Submit 2 copies showing the Work performed and record survey data.

## 1.4 QUALITY ASSURANCE

A. Land Surveyor Qualifications: A professional land surveyor who is legally qualified to practice in Oregon and who is experienced in providing land-surveying services of the kind indicated.

## EXECUTION REQUIREMENTS SECTION 01 73 00

## PART 2 - PRODUCTS (Not Used)

## **PART 3 - EXECUTION**

#### 3.1 EXAMINATION

- A. Existing Conditions: The existence and location of site improvements, utilities, and other construction indicated as existing are not guaranteed. Before beginning work, investigate and verify the existence and location of mechanical and electrical systems and other construction affecting the Work.
  - 1. Before construction, verify the location and points of connection of utility services.
- B. Existing Utilities: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities and other construction affecting the Work.
  - 1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping; and underground electrical services.
  - 2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.
- C. Acceptance of Conditions: Examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.
  - 1. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:
    - a. Description of the Work.
    - b. List of detrimental conditions, including substrates.
    - c. List of unacceptable installation tolerances.
    - d. Recommended corrections.
  - 2. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
  - 3. Proceed with installation only after unsatisfactory conditions have been corrected. PROCEEDING WITH THE WORK INDICATES ACCEPTANCE OF SURFACES AND CONDITIONS.

#### 3.2 PREPARATION

A. Existing Utility Information: Furnish information to local utility that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.

### EXECUTION REQUIREMENTS SECTION 01 73 00

- B. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- C. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- D. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents, submit a request for information to Architect. Include a detailed description of problem encountered, together with recommendations for changing the Contract Documents.

#### 3.3 CONSTRUCTION LAYOUT

- A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks. If discrepancies are discovered, notify Architect and Owner's Project Manager promptly.
  - 1. General: Engage a land surveyor to lay out the Work using accepted surveying practices.
- B. Site Improvements: Locate and lay out site improvements, including pavements, grading, fill and topsoil placement, utility slopes, and invert elevations.
- C. Record Log: Maintain a log of layout control work. Record deviations from required lines and levels. Include beginning and ending dates and times of surveys, weather conditions, name and duty of each survey party member, and types of instruments and tapes used. Make the log available for reference by Architect and Owner's Project Manager.

#### 3.4 FIELD ENGINEERING

- A. Identification: Owner will identify existing benchmarks, control points, and property corners.
- B. Reference Points: Locate existing permanent benchmarks, control points, and similar reference points before beginning the Work. Preserve and protect permanent benchmarks and control points during construction operations.
- C. Benchmarks: Establish and maintain a minimum of two permanent benchmarks on Project site, referenced to data established by survey control points. Comply with authorities having jurisdiction for type and size of benchmark.
  - 1. Record benchmark locations, with horizontal and vertical data, on Project Record Documents.
  - 2. Where the actual location or elevation of layout points cannot be marked, provide temporary reference points sufficient to locate the Work.
  - 3. Remove temporary reference points when no longer needed. Restore marked construction to its original condition.

## EXECUTION REQUIREMENTS SECTION 01 73 00

#### 3.5 INSTALLATION

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
  - 1. Make vertical work plumb and make horizontal work level.
  - 2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated. Bring any conflicts to the Architect for review.
- C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.
- D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.
- E. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.
- F. Anchors and Fasteners: Provide anchors and fasteners as required to anchor each component securely in place, accurately located and aligned with other portions of the Work.
  - 1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect.
  - 2. Allow for building movement, including thermal expansion and contraction.
  - 3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.
- G. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints where possible. Obtain Architect and Owner's Project Manager approval for all questionable conditions.
- H. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

### 3.6 OWNER-INSTALLED PRODUCTS

- A. Site Access: Provide access to Project site for Owner's construction forces.
- B. Coordination: Coordinate construction and operations of the Work with work performed by Owner's construction forces

### EXECUTION REQUIREMENTS SECTION 01 73 00

- 1. Construction Schedule: Inform Owner of Contractor's preferred construction schedule for Owner's portion of the Work. Adjust construction schedule based on a mutually agreeable timetable. Notify Owner if changes to schedule are required due to differences in actual construction progress.
- 2. Preinstallation Conferences: Include Owner's construction forces at preinstallation conferences covering portions of the Work that are to receive Owner's work. Attend preinstallation conferences conducted by Owner's construction forces if portions of the Work depend on Owner's construction.

### 3.7 PROGRESS CLEANING

- A. General: Clean Project site and work areas daily, including common areas. Coordinate progress cleaning for joint-use areas where more than one installer has worked. Enforce requirements strictly. Dispose of materials lawfully.
  - 1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
  - 2. Do not hold materials more than 7 days during normal weather or 3 days if the temperature is expected to rise above 80 deg F.
  - 3. Containerize hazardous and unsanitary waste materials separately from other waste.

    Mark containers appropriately and dispose of legally, according to applicable regulations.
- B. Site: Maintain Project site free of waste materials and debris.
- C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for safety and proper execution of the Work.
  - 1. Remove liquid spills promptly.
  - 2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
- D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
- E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.
- F. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.
- G. Waste Disposal: Burying or burning waste materials on-site will not be permitted. Washing waste materials down sewers or into waterways will not be permitted.
- H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.

### EXECUTION REQUIREMENTS SECTION 01 73 00

- I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- J. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

### 3.8 STARTING AND ADJUSTING

- A. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.
- B. Adjust operating components for proper operation without binding. Adjust equipment for proper operation.
- C. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
- D. Manufacturer's Field Service: If a factory-authorized service representative is required to inspect field-assembled components and equipment installation, comply with qualification requirements in Division 1 Section 01 40 00 "Quality Requirements."

### 3.9 PROTECTION OF INSTALLED CONSTRUCTION

- A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.
- B. Comply with manufacturer's written instructions for temperature and relative humidity.

#### 3.10 CORRECTION OF THE WORK

- A. Repair or remove and replace defective construction. Restore damaged substrates and finishes.
  - 1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.
- B. Restore permanent facilities used during construction to their specified condition.
- C. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.
- D. Repair components that do not operate properly. Remove and replace operating components that cannot be repaired.
- E. Remove and replace chipped, scratched, and broken glass or reflective surfaces.

### END OF SECTION 01 73 00

## CUTTING AND PATCHING SECTION 01 73 29

## 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. Division 1 Section 10 31 00 "Project Management and Coordination" for preconstruction and pre-installation conferences.
  - 2. Division 2 Section "Selective Demolition" for demolition of selected portions of the building.
  - 3. Divisions 2 through 49 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 written request describing procedures prior to the time cutting and patching will be performed, requesting approval to proceed, for cutting or alteration which affects:
  - 1. Structural integrity of any element of Project.
  - 2. Integrity of weather-exposed or moisture-resistant element.
  - 3. Efficiency, maintenance, or safety of any operational element.
  - 4. Visual qualities of site-exposed elements.
  - 5. Work of Owner or separate contractor.
- B. Include the following information:
  - 1. Identification of Project and CIP number
  - 2. Location and description of the affected Work.
  - 3. Necessity for cutting or alteration.
  - 4. Description of proposed Work and Products to be used.
  - 5. Alternatives to cutting and patching.
  - 6. Effect on work of Owner or separate contractor.
  - 7. Written permission of affected separate contractor, if any.
  - 8. Date and time work will be executed.

## CUTTING AND PATCHING SECTION 01 73 29

## 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.
  - 1. 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.
  - 2. 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.
- B. 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 opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.

### 1.6 WARRANTY

A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during cutting and patching operations, by methods and with materials so as not to void existing warranties.

#### **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.

### **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

### CUTTING AND PATCHING SECTION 01 73 29

#### 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.
- D. Existing Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to minimize interruption to occupied 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 or Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
  - 4. Excavating and Backfilling: Comply with requirements in applicable Division 2 Sections where required by cutting and patching operations.
  - 5. Proceed with patching after construction operations requiring cutting are complete.
- 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.

## CUTTING AND PATCHING SECTION 01 73 29

- 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.
- D. Cleaning: Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty, and similar materials.

**END OF SECTION 01 73 29** 

## CLOSEOUT PROCEDURES SECTION 01 77 00

### **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 administrative and procedural requirements for contract closeout, including, but not limited to, the following:
  - 1. Inspection procedures.
  - 2. Warranties.
  - 3. Final cleaning.
- B. Related Sections include the following:
  - 1. Division 1 Section 01 29 00 "Payment Procedures" for requirements for Applications for Payment for Substantial and Final Completion.
  - 2. Division 1 Section 01 73 00 "Execution Requirements" for progress cleaning of Project site.
  - 3. Division 1 Section 01 78 23 "Operation and Maintenance Data" for operation and maintenance manual requirements.
  - 4. Division 1 Section 01 78 39 "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.
  - 5. Divisions 2 through 49 Sections for specific closeout and special cleaning requirements for the Work in those Sections.

### 1.3 SUBSTANTIAL COMPLETION

- A. Preliminary Procedures: Before requesting inspection for determining date of Substantial Completion, complete the following. List items below that are incomplete in request.
  - 1. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.
  - 2. Advise Owner of pending insurance changeover requirements.
  - 3. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
  - 4. Obtain and submit releases permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
  - 5. Prepare and submit Project Record Documents, operation and maintenance manuals, damage or settlement surveys, property surveys, and similar final record information.
  - 6. Deliver tools, spare parts, extra materials, and similar items to location designated by Owner. Label with manufacturer's name and model number where applicable.

### CLOSEOUT PROCEDURES SECTION 01 77 00

- 7. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
- 8. Complete final cleaning requirements, including touchup painting.
- 9. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects
- B. Inspection: Submit a written request for inspection for Substantial Completion. On receipt of request, Architect and Owner's Project Manager will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.
  - 1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
  - 2. Results of completed inspection will form the basis of requirements for Final Completion.

### 1.4 FINAL COMPLETION

- A. Preliminary Procedures: Before requesting final inspection for determining date of Final Completion, complete the following:
  - 1. Submit a final Application for Payment according to Division 1 Section "Payment Procedures."
  - 2. Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
  - 3. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
  - 4. Submit the following completed forms, items and documents:
    - a. AIA Document G706 Contractor's Affidavit of Payment of Debts and Claims.
    - b. AIA Document G706A Contractor's Affidavit of Release of Liens.
    - c. AIA Document G707 Consent of Surety Company to Final Payment.
    - d. Operation and Maintenance Manuals
    - e. Warranties and Bonds. Submit original documents, including Contractor's General Warranty,
    - f. Record Documents.
    - g. Keys
    - h. Testing and Start-Up records.
    - i. Affidavit of Prevailing Wages paid.
    - j. Complete list of Contractor and all Subcontractors with address, phone numbers, and work
    - k. Asbestos-Containing Materials Statement (Form 01100B).
    - l. Proof of final acceptance and compliance from governing authorities having jurisdiction.

### CLOSEOUT PROCEDURES SECTION 01 77 00

- 5. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems.
- B. Inspection: Submit a written request for final inspection for acceptance. On receipt of request, Architect and Owner's Project Manager will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.
  - 1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
  - 2. Cost of additional re-inspections by Architect and Owner's Project manager will be deducted from Final Payment to the Contractor.

#### 1.5 WARRANTIES

- A. Submittal Time: Submit written warranties on request of Architect for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated.
- B. Partial Occupancy: Submit properly executed warranties within 10 days of completion of designated portions of the Work that are completed and occupied or used by Owner during construction period by separate agreement with Contractor.
- C. Organize warranty documents into an orderly sequence based on the table of contents of the Project Manual.
  - 1. Bind warranties and bonds in heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch paper.
  - 2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
  - 3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.
- D. Provide additional copies of each warranty to include in operation and maintenance manuals.

### **PART 2 - PRODUCTS**

#### **MATERIALS**

A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

## CLOSEOUT PROCEDURES SECTION 01 77 00

## **PART 3 - EXECUTION**

## 3.1 FINAL CLEANING

- A. General: Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
  - 1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a portion of Project:
    - a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
    - b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
    - c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface
    - d. Remove tools, construction equipment, machinery, and surplus material from Project site.
    - e. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
    - f. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
    - g. Remove labels that are not permanent.
    - h. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.
      - 1) Do not paint over "UL" and similar labels.
    - i. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
    - j. Replace parts subject to unusual operating conditions.
    - k. Leave Project clean and ready for occupancy.
- C. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from Project site and dispose of lawfully.

#### END OF SECTION 01 77 00

## PROJECT RECORD DOCUMENTS SECTION 01 78 39

## **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 administrative and procedural requirements for Project Record Documents, including the following:
  - 1. Record Drawings.
  - 2. Record Specifications.
  - 3 Record Product Data
- B. Related Sections include the following:
  - 1. Division 1 Section 01 77 00 "Closeout Procedures" for general closeout procedures.
  - 2. Divisions 2 through 49 Sections for specific requirements for Project Record Documents of the Work in those Sections.

#### 1.3 SUBMITTALS

- A. Record Drawings: Comply with the following:
  - 1. Number of Copies: Submit copies of Record Drawings as follows:
    - a. Final Submittal: Submit one set of marked-up Record Prints (not "Job Shack" set).
- B. Record Specifications: Submit one copy of Project's Specifications, including addenda and contract modifications.
- C. Record Product Data: Submit one copy of each Product Data submittal.
  - 1. Where Record Product Data is required as part of operation and maintenance manuals, submit marked-up Product Data as an insert in manual instead of submittal as Record Product Data.

## **PART 2 - PRODUCTS**

### 2.1 RECORD DRAWINGS

- A. Record Prints: Maintain one set of blue- or black-line white prints of the Contract Drawings and Shop Drawings.
  - 1. Preparation: Mark Record Prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data,

## PROJECT RECORD DOCUMENTS SECTION 01 78 39

whether individual or entity is Installer, subcontractor, or similar entity, to prepare the marked-up Record Prints.

- a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
- b. Accurately record information in an understandable drawing technique.
- c. Record data as soon as possible after obtaining it. Record and check the markup before enclosing concealed installations.
- 2. Content: Types of items requiring marking include, but are not limited to, the following:
  - a. Dimensional changes to Drawings.
  - b. Revisions to details shown on Drawings.
  - c. Depths of foundations below first floor.
  - d. Locations and depths of underground utilities.
  - e. Revisions to routing of piping and conduits.
  - f. Changes made by Change Order.
  - g. Changes made following Architect's written orders.
  - h. Details not on the original Contract Drawings.
  - i. Field records for variable and concealed conditions.
  - i. Record information on the Work that is shown only schematically.
- 3. Mark the Contract Drawings or Shop Drawings, whichever is most capable of showing actual physical conditions, completely and accurately. If Shop Drawings are marked, show cross-reference on the Contract Drawings.
- 4. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
- 5. Mark important additional information that was either shown schematically or omitted from original Drawings.
- 6. Note Alternate numbers, Change Order numbers, and similar identification, where applicable.
- B. Format: Identify and date each Record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.
  - 1. Record Prints: Organize Record Prints and newly prepared Record Drawings into manageable sets. Bind each set with durable paper cover sheets. Include identification on cover sheets.
  - 2. Record Transparencies: Organize into unbound sets matching Record Prints. Place transparencies in durable tube-type drawing containers with end caps. Mark end cap of each container with identification. If container does not include a complete set, identify Drawings included.
  - 3. Identification: As follows:
    - a. Project name.
    - b. Date.
    - c. Designation "PROJECT RECORD DRAWINGS."
    - d. Name of Architect and Owner's Project Manager.

## PROJECT RECORD DOCUMENTS SECTION 01 78 39

e. Name of Contractor.

### 2.2 RECORD SPECIFICATIONS

- A. Preparation: Mark Specifications to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.
  - 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
  - 2. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
  - 3. Record the name of manufacturer, supplier, Installer, and other information necessary to provide a record of selections made.

#### 2.3 RECORD PRODUCT DATA

- A. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.
  - 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
  - 2. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.
  - 3. Note related Change Orders where applicable.

#### 2.4 MISCELLANEOUS RECORD SUBMITTALS

A. Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.

## **PART 3 - EXECUTION**

## 3.1 RECORDING AND MAINTENANCE

- A. Recording: Maintain one copy of each submittal during the construction period for Project Record Document purposes. Post changes and modifications to Project Record Documents as they occur; do not wait until the end of Project.
- B. Maintenance of Record Documents and Samples: Store Record Documents and Samples in the field office apart from the Contract Documents used for construction. Do not use Project Record Documents for construction purposes. Maintain Record Documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to Project Record Documents for Architect's and Owner's Project Manager's reference during normal working hours.

### **END OF SECTION 10 78 39**

# CONCRETE FORMWORK SECTION 03 10 00

## PART 1 – GENERAL

#### 1.01 DESCRIPTION

Work includes but is not limited to the following:

- A. Formwork for cast-in-place concrete curbs, concrete pavement, mow strips, sidewalks, etc.
- B. Openings for other Work.
- C. Form accessories, shoring, bracing and anchorage.

### 1.02 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this section.
- B. RELATED SECTIONS include the following:
  - 1. Division 03. Section CAST-IN-PLACE CONCRETE.
  - 2. Division 32 Section CONCRETE WALKS, PAVEMENTS, CURBS AND GUTTERS.

### 1.03 DESIGN REQUIREMENTS

- A. Contractors responsible to design and construct formwork, shoring and bracing. Resultant concrete shall conform to shape and dimensions shown on the drawings.
- B. Forms shall be used, wherever necessary to continue the concrete and shape it to the required dimensions. Forms shall have sufficient strength to withstand the pressure resulting from placement and vibration of the concrete and shall have sufficient rigidity to maintain specified tolerances.

## 1.04 SUBMITTALS

A. None.

### 1.05 QUAILITY ASSURANCE

- A. Perform work in accordance with American Concrete Institute (ACI) 301, 318 and 347.
- B. The design, engineering and construction of all formwork shall be the responsibility of the contractor. Formwork design, allowable loads, lateral pressures and stresses shall be in accordance with Recommended Practice for Concrete Formwork, ACI 347.

# **PART 2 - PRODUCTS**

#### 2.01 MATERIALS

## CONCRETE FORMWORK SECTION 03 10 00

- A. Steel forms or form liners shall be standard commercially available prefabricated steel forms.
- B. Plywood forms shall be B-B plyform, Class I or Class II, 5/8" minimum thickness, edge sealed.
- C. Boards, sheathing and form lumber shall be No 3, common or better, <sup>3</sup>/<sub>4</sub>" minimum thickness.
- D. Framing lumber shall be standard or better.

#### E. Formwork Accessories:

- 1. Form Ties: Snap-off type, galvanized metal, cone- type, with waterproofing waser, free of defects that could leave holes larger than 1-inch in concrete surface. Non-fabricated wire ties are not permitted.
- 2. Form Release Agent: Colorless mineral oil which will not stain concrete, absorb moisture, or impair natural bonding or color characteristics of coating intended for use on concrete.
- 3. Corners: Chamfered, wood strip type; 1 x 1 inch size.
- 4. Dovetail Anchor Slot: Galvanized steel, 22 gage thick, foam filled, release tape sealed slots, anchors for securing concrete formwork.
- 5. Flashing Reglets: Galvanized steel, 22 gage thick, longest possible lengths, with alignment splines for joints, foam filled, release tape sealed slots, anchors for securing to concrete formwork.
- 6. Nails, Spikes, Lag Bolts, Through Bolts, Anchorages: Sizes as required, of sufficient strength and character to maintain formwork in place while placing concrete.

## **PART 3 - EXECUTION**

### 3.01 EXAMINATION

A. Verify lines, levels and centers before proceeding with formwork. Ensure dimensions agree with Drawings.

### 3.02 ERECTION - FORMWORK

- A. Erect formwork, shoring and bracing to achieve design requirements, in accordance with requirements of ACI 301.
- B. Provide bracing to ensure stability of formwork. Shore or strengthen formwork subject to overstressing by construction loads. Conform to shape, lines, and dimensions indicated on the Drawings. Brace and tie together to ensure stability of formwork and position and shape are maintained.
- C. Arrange and assemble formwork to permit dismantling, stripping and removal of remaining principal shores. Do not damage concrete during stripping.

# CONCRETE FORMWORK SECTION 03 10 00

- D. Align joints and make watertight. Keep form joints to a minimum. Where exposed, make joint in plywood flush in regular patter, and as inconspicuous as possible.
- E. Provide chamfer strips on external corners of beams, joists, columns, and walls.
- F. All forms used for exposed concrete work shall be new plywood forms. Reused plywood forms and standard steel forms may be used for all concealed concrete work.

# 3.03 APPLICATION – FORM RELEASE AGENT

- A. Apply form release agent on formwork in accordance with manufacturer's recommendations.
- B. Apply prior to placement of reinforcing steel, anchoring devices, and embedded items.
- C. Do not apply form release agent where concrete surface is to receive special finishes or applied coverings which are affected by agent. Soak inside surfaces of untreated forms with clean water. Keep surfaces coated prior to placement of concrete.

# 3.04 INSERTS, EMBEDDED PARTS, AND OPENINGS

- A. Provide formed openings where required for items to be embedded in or passing through concrete work
- B. Locate and set in place items which cast directly into concrete.
- C. Install accessories in accordance with manufacturer's instructions, straight, level, and plumb. Ensure items are not disturbed during concrete placement.

## 3.05 FORM CLEANING

- A. Clean and remove foreign matter within forms as erection proceeds.
- B. Clean formed cavities of debris prior to placing concrete.
- C. Flush with water or use compressed air to remove remaining foreign matter. Ensure that water and debris drain to exterior through clean-out ports.
- D. During cold weather, remove ice and snow from within forms. Do not use deicing salts or water to clean out forms. Use compressed air or other means to remove foreign matter.

### 3.06 FORMWORK TOLERANCES

A. Construct formwork to maintain tolerances required by ACI 301.

## 3.07 FORM REMOVAL

# CONCRETE FORMWORK SECTION 03 10 00

- A. Do not remove forms or bracing until concrete has gained sufficient strength to carry its own weight and other imposed loads without excessive deflection or creep.
- B. Loosen forms carefully. Do not wedge pry bars, hammers, or tools against finish concrete surfaces scheduled for exposure to view. Do not damage concrete surfaces.
- C. Store removed forms in manner to avoid any damage to form surfaces that will later be in contact with fresh concrete. Discard damaged forms. If forms are reused, clean and recoat with approved sealer.
- D. Repair all blemishes by patching and sanding.

# 3.08 FIELD QUALITY CONTROL

- A. Inspect erected formwork, shoring, and bracing to ensure that work is in accordance with formwork design, and that supports, fastenings, wedges, ties, and items are secure.
- B. Do not use wood formwork more than three times for concrete surfaces to be exposed to view. Do not patch formwork.

**END OF SECTION 03 10 00** 

# CAST-IN-PLACE CONCRETE SECTION 03 30 00

## PART 1 – GENERAL

### 1.01 DESCRIPTION

Work includes, but is not limited to the following:

A. Cast-in-place concrete for curbs, pavements, gutters and walks.

## 1.02 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this section.
- B. RELATED SECTIONS include the following:
  - 1. Division 03 Section CONCRETE FORMWORK.
  - 2. Division 32 Section, CONCRETE WALKS, PAVEMENTS, CURBS AND GUTTERS.

# 1.03 DESIGN REQUIREMENTS

A. Formwork design and engineering, as well as construction, are the responsibility of the Contractor.

### 1.04 SUBMITTALS

- A. Submit the following in accordance with Division 01Section SUBMITTAL PROCEDURES.
- B. Design mixtures: For each concrete mixture.

### 1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products that comply with ASTM C 94/C 94M requirements for production facilities and equipment.
- B. Source Limitations: Obtain each type of cement of the same brand from the same manufacturer's plant, obtain aggregate from one source, and obtain admixtures through one source from a single manufacturer.

### **PART 2 - PRODUCTS**

### 2.01 CONCRETE MATERIALS

- A. Portland Cement: ASTM C150, Type 1.
- B. Aggregates: ASTM C 33, graded, 3/4-inch nominal maximum aggregate size.

# CAST-IN-PLACE CONCRETE SECTION 03 30 00

- C. Water: ASTM C 94/C 94M; potable.
- D. Admixtures to retard or accelerate setting, reduce water ratio or prevent freezing shall not be used without prior approval from Engineer.

## 2.02 CONCRETE MIX

- A. All concrete shall be normal weight concrete consisting of a proportioned mixture of Portland Cement, fine and coarse aggregate and water. Concrete proportions shall be selected on the basis of trial mixes conforming to ACI 211.11.
- B. All concrete, unless noted otherwise, shall have a minimum compressive strength of 3,000 psi at 28 days. Mix design shall be proportioned to provide a minimum of 517 pounds of cement per cubic yard.
- C. All concrete, unless noted otherwise, shall be proportioned to have a slump of 2-1/2" to 4" maximum. Tolerance in slump shall not exceed ACI recommendations.
- D. All exterior concrete shall be air-entrained, air content shall be  $6\% \pm 1\%$ .

## 2.03 PRODUCTION

- A. Ready-mixed concrete shall conform to ASTM C-94, the National Ready Mix Concrete Association and ACI 301. Use of non-agitating trucks is not permitted.
- B. Use of retempered concrete is not permitted.
- C. If air-entrained Portand Cement is not used, air-entraining admixtures shall be introduced into the concrete, in accordance with manufacturer's recommendations.

### **PART 3 – EXECUTION**

### 3. 1 FORMWORK

- A. Refer to Sections:
  - 1. Division 03 Section CONCRETE FORMWORK.

# 3.02 CONCRETE PLACEMENT

- A. Comply with ACI 301 for measuring. Batching, mixing and placing concrete.
- B. Before test sampling and placing concrete, water may be added at the project site, subject to limitations of ACI 301 (The addition of water at the job site is permitted providing only sufficient water is used to provide a workable mix and the design water cement ratio and /or the maximum slump are not exceeded).
- C. The addition of cement at the job site to maintain water-cement ratio is not permitted.

# CAST-IN-PLACE CONCRETE SECTION 03 30 00

D. Consolidate concrete with mechanical vibrating equipment.

#### 3.03 FINISH AND JOINTING

A. Exterior walks shall be finished per Division 32 Section CONCRETE WALKS, PAVEMENTS, CURBS AND GUTTERS.

### 3.04 CONCRETE CURING

- A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and with ACI 301 for hot weather protection during curing.
- B. Evaporation Retarder: Apply evaporation retarder to concrete surfaces if hot, dry or windy conditions cause moisture loss approaching 0.2 lb/sf x h before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete, but before float finishing.
- C. Begin curing after finishing concrete but not before free water has disappeared from concrete surface.
- D. Curing Methods: Cure formed and unformed concrete for at least seven days by one or a combination of the following methods:
  - 1. Moisture Curing: Keep surfaces continuously moist for not less than seven days with the following materials:
    - a. Water.
    - b. Continuous water-fog spray.
    - c. Absorptive cover, water saturated and kept continuously wet. Cover concrete surfaces and edges with 12-inch lap over adjacent absorption covers.
  - 2. Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches and sealed by waterproof tape or adhesive. Cure for not less than seven days. Immediately repair any holes or tears during curing period using cover material and waterproof tape.
  - 3. Curing Compound: Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Apply second coat to areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating and repair damage during curing period.

### 3.05 FIELD QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified independent testing and inspecting agency to sample materials, perform tests, and submit test reports during concrete placement according to requirements specified in this Article.
- B. Tests: Perform according to ACI 301.

# CAST-IN-PLACE CONCRETE SECTION 03 30 00

1. Testing Frequency: One composite sample shall be obtained for each 100 cy or fraction thereof of each concrete mix placed each day.

### 3.06 PROTECTION AND REPAIRS

- A. Protect concrete interior and exterior from moisture loss and premature drying for a minimum of seven (7) days.
- B. Protect concrete from damage, mechanical injury, load stresses and elements during the curing process.
- C. Unless adequate protection is provided, concrete shall not be placed during rain, sleet or snow. Protect Concrete from rain water, maintain concrete water ratio and protect concrete surface.
- D. All concrete shall be adequately protected after pouring to prevent damage from freezing, by the use of suitable cover. Frozen and damaged concrete must be removed and replaced at the Contractor's expense. Don not place concrete on frozen earth.
- E. Contractor shall repair, at no additional cost, any blemishes, cracks, or imperfections in concrete if in the opinion of the Engineer the final product will be diminished in appearance or usability.

**END OF SECTION** 

# EARTHWORK SECTION 31 00 00

## PART 1 – GENERAL

#### 1.01 DESCRIPTION

Work includes, but is not limited to the following:

- A. Preparing subgrades (excavation and fill) for pavements, walks and landscape areas.
- B. Subbase course for concrete walks and pavements.
- C. Excavation and backfill for site utility trenches.

### 1.02 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this section.
- B. REFERENCED SPECIFICATIONS:
  - 1. ODOT Standard Specifications (current edition).
- C. REFERENCED DOCUMENTS
  - 1. Arborist Report Awbrey Park ES, Sperry Tree Care April 5, 2018.

#### 1.03 **DEFINITIONS**

- A. Unsuitable materials:
  - 1. Existing subgrade: Soft, loose, wet or disturbed ground that is not capable of direct support of slabs, pavement, structures and construction equipment with the exception of improvement by compaction, proof rolling or similar methods of improvements or personnel.
  - 2. Fill: Topsoil, frozen material; construction materials and materials subject to decomposition; clods of clay and stones larger than 3 inches; organic materials, including silts, which are unstable; and inorganic materials, including silts, too wet to be stable.
- B. Rock Excavation:
  - 1. Solid Rock Ledge (igneous, metamorphic, and sedimentary rock).
  - 2. Bedded or conglomerate deposits so cemented as to present characteristics of solid rock which cannot be excavated without blasting; or the use of a modern power excavator (shovel, backhoe, similar power excavators) of no less than 1 cubic yard capacity, properly used, having adequate power and in good running condition.
  - 3. Boulders or other detached stones each having a volume of ½ cubic yard or more.
- C. Dry weather/Wet Weather Conditions: Bar run or native fill may be used during dry weather conditions, if approved. Crushed rock fill must be used during wet weather conditions. Dry weather conditions shall be assumed until October 1. Wet weather conditions are anticipated during the Wet Weather Period of October 1 through April 30. The contractor may use Bar Run Fill during the Wet Weather Period if dry conditions occur and if approved; however, the contractor is responsible for providing the appropriate material during the Wet Weather Period, and no additional monies will be paid to the contractor for the required use of Crushed Rock during the Wet Weather Period.

# EARTHWORK SECTION 31 00 00

## 1.04 SUBMITTALS

- A. Submit the following in accordance with the requirements of Division 01 Section SUBMITTAL PROCEDURES.
- B. Material Test Reports: From a qualified testing agency indicating and interpreting test results for compliance of the following requirements indicated:
  - 1. Imported material gradation reports.
  - 2. Material compaction test reports.
- C. Product Data: For the Following:
  - 1. Subgrade Geotextile
  - 2 Erosion Blanket
- D. Field Quality Control Submittals:
  - 1. Field Test Reports as specified in Part 3 of this Section.
  - 2. Special Inspections for Code Compliance
- E. Contract Closeout: Division 01 Section CLOSEOUT PROCEDURES.
  - 1. Provide record documents.

### 1.05 QUAILITY ASSURANCE

- A. Observation and Inspection: Owner will retain a Geotechnical Engineer to monitor earthwork.
- B. Product/Material: Compaction testing shall be in accordance with Division 01 Section QUALITY REQUIREMENTS.
- C. Comply with OSHA requirements for excavation and trenching operations.

# 1.06 PRODUCT DELIVERY, HANDLING, AND STORAGE

- A. Protect from damage by the elements and construction procedures.
- B. Comply with manufacturer's recommendations.

#### 1.07 ADVANCE NOTICE

A. Notify owner's representative at least 48 hours prior to staring work in this section.

## 1.08 COORDINATION

- A. Coordinate with other trades affecting or affected by work in this section.
- B. Existing Utilities; Do not interrupt utilities serving facilities occupied by the Owner or others unless permitted in writing by the Owner and then only after arranging to provide temporary utility service according to the requirements indicated.

# EARTHWORK SECTION 31 00 00

- 1. Notify Owner not less than two days in advance of proposed utility interruptions.
- 2. Do not proceed with utility interruptions without written authorization.
- 3. Contractor to provide private utility locates and call for public utility locates.
- C. Abandon-in-place or demolish and completely remove from site existing underground utilities as indicated on the plans.

## **PART 2 - PRODUCTS**

### 2.01 FILL AND BACKFILL MATERIALS

- A. <u>Stabilization Fill</u>: Imported, clean, angular quarry rock, 3-inch or 6-inch minus material, open gradation.
- B. <u>Native Material</u>: Excavated, on-site, native to project site; free of rock or gravel larger than 3 inches in any dimension, debris, waste, frozen materials, vegetation, and other deleterious matter. Material to be approved for use as fill.
- C. <u>Crushed Rock</u>: Imported clean <sup>3</sup>/<sub>4</sub>"-0 or 1"-0 crushed rock or crushed gravel, free from foreign material and conforming to the requirements of ODOT Standard Specifications (current edition) 02630.

### D. Bedding/Base Rock:

1. <u>Crushed Rock</u>: Imported clean <sup>3</sup>/<sub>4</sub>"-0 or 1"-0 crushed rock or crushed gravel, free from foreign material and conforming to the requirements of ODOT Standard Specifications (current edition) 02630.

#### 2.02 SUBGRADE GEOTEXTILE

A. Subgrade woven geotextile; grab tensile strength 180 lb minimum per ASTM D4632 each direction; burst strength 400 psi per ASTM D3786 Mod. (OSHD TM814) (TF 25. method 3); puncture strength 80 lb per ASTM D4833 or ASTM D3787 Mod. (OSHD TM 826); No. 30 sieve or smaller opening; 0.05 sec water permittivity.

#### 2.03 EROSION BLANKET

A. Erosion blanket shall be Type 2, straw and coconut. Furnish blanket consisting of undyed, untreated, biodegradable, jute, coconut coir, synthetic polypropylene fibers, or approved yarn woven into a plain weave mesh with 5/8- to 1-inch square openings. Ensure the following:

Material	Specification Minimums
Straw 70%*	Straw and Coconut mass to be 0.5 lb/sy
Coconut 30%	(0.25" min thickness)
Netting	Photodegradable netting on the bottom side.
C	5/8 to 1-inch square mesh ** with 0.3 oz/sy weigh

# EARTHWORK SECTION 31 00 00

Contech's 70% straw / 30% coconut meets these requirements.

### 2.04 DRAINAGE GEOTEXTILE

A. Non-woven geotextile; grab tensile strength 90 lb minimum per ASTM D4632 each direction; burst strength 185 psi per ASTM D3786; puncture strength 55 lb per ASTM D4833 or ASTM D3787 Mod. OSHD TM 816; No. 70 sieve or similar opening; minimum 150 gal/min/ft². Amoco 4545 or approved.

### 2.05 TRACER WIRE

- A. Electrically conductive tracer wire, 18 gauge, insulated copper or heavier, or other approved material. To be placed full length of trench with non metallic pipe. Color as specified below:
  - 1. Green: Sewer systems (sanitary and storm)
  - 2. Blue: Water distribution systems (fire, domestic and irrigation).

## 2.06 EROSION CONTROL

A. Provide mulch biobags, sand bags, silt fences, straw bales, plastic sheeting, tape, stakes, mulch, and other items as required to meet the requirements for construction erosion control plan and/or permit.

## **PART 3 – EXECUTION**

### 3.01 PREPARATION

- A. Prepare subgrade for earthwork operations including removal of vegetation, topsoil, debris, obstructions, and deleterious materials from the ground surface.
- B. Verify existing grades and field conditions agree with the drawings prior to starting work of this section. Notify owner's representative of any discrepancies.
- C. Do not start work of this section until any unsatisfactory conditions have been corrected. Commencing work implies acceptance of existing conditions.
- D. Locate and mark existing utilities within the project area prior to commencing excavation work.

#### 3.02 PROTECTION

- A. Protect structures, utilities, sidewalks, pavements and other facilities from damage caused by settlements, lateral movement, undermining, washout, and other hazards created by earthwork operations. Repair or replace items damaged by work of this section.
- B. Preserve staking, marking, or other designation until designation is no longer required. If disturbed or destroyed, replace as directed.

<sup>\*</sup>Moisture content shall not exceed 20%.

<sup>\*\*</sup>Dimensions are approximate and may vary to meet manufacturer's standards.

# EARTHWORK SECTION 31 00 00

C. Dust Control: Protect persons and property against damage and discomfort caused by dust. Water construction area and accesses as necessary and as directed.

#### 3.03 **DEWATERING**

- A. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding Project site and surrounding areas.
- B. Protect subgrades and trenches from softening, undermining, washout, and damage by rain or water accumulation.
  - 1. Reroute surface runoff away from excavated areas. Do not allow water to accumulate in excavations. Do not use excavated trenches as temporary drainage ditches.
  - 2. Install dewatering system to keep subgrade dry and convey ground water away from excavations. Maintain until dewatering is no longer required.

# 3.04 GENERAL REQUIREMENTS

- A. Contractor shall perform all excavation and trenching necessary or required for proper construction of the work and placement or installation of materials. Tunneling or jacking shall not be used unless approved in writing.
- B. Cutting Pavements: Cut vertical, straight-line joints using power saw designed for cutting pavements.
- C. Line and Grade: Excavate to lines and grades shown on the drawings or as established by the Architect.
- D. Shoring: Shore excavations and trenches when necessary to prevent caving during excavation in unstable material, or to protect adjacent structures, property, workers, and the public or as required by local, state, or federal agencies. Shoring shall be removed, as the backfilling is done, in a manner that does not damage work or permit voids in the backfill. It shall be the sole responsibility of the Contractor to see that safety requirements are met.
- E. Temporary stockpiling of Excavated Materials: Locate at least 2 feet from trench edges. Excavated materials may be placed in approved areas. Do not obstruct roadways, bikeways, or pedestrian walkways. Conform to all federal, state and local codes governing the safe loading of excavated materials adjacent to excavations.
- F. Excess Excavation: Where excavation, through the Contractor's error, is carried to levels lower than those shown on drawings, backfill with specified bedding material to proper levels at Contractor's expense.
- G. Backfilling shall not commence until after excavations have been inspected. Backfill shall be placed in such a manner as not to disturb, damage, or subject such facilities to unbalanced loads or forces. Make fills as soon as feasible after review and acceptance.
- H. If rock or unstable soils are encountered, notify the owner's representative. Removal of rock or unstable soil will be paid for as an addition to the contract.

# EARTHWORK SECTION 31 00 00

## 3.05 CONSTRUCTION EROSION CONTROL

- A. Construction erosion control shall comply with the outcome requirements of any permits or the erosion control plan, which ever is more stringent. The contractor shall be responsible for monitoring the construction erosion control measures and shall make adjustments to measures, in accordance with the plans and permit, to accommodate changes in earthwork operations and weather conditions.
- B. Upon completion of the project, remove all temporary erosion control items from the site. Permanent erosion control items to remain in place.

## 3.06 CLEARING AND GRUBBING

- A. Clear and grub all areas to receive improvements or in areas indicated on plans for regrading. Clearing shall include the removal of all brush, grass, shrubs, trees, weeds, rubbish, structures, pavements, and debris flush with or slightly below original ground surface. Remove willow and blackberry, if any, to not less than 12 inches below original ground surface. Grubbing shall include the removal of all stumps and roots larger than 1-1/2 inches in diameter, rocks larger than 6 inches, and existing structures to the following level:
  - 1. Landscape areas: To not less than 12 inches below finish grade.
  - 2. Pavement areas: To not less than 12 inches below finish grade.
- B. Dispose of all cleared and grubbed material off-site.

## 3.07 SUBGRADE INSPECTION

- A. Notify Owner's representative when excavations have reached required subgrade. Do not traffic the subgrade with construction equipment or vehicles.
- B. If geotechnical engineer determines that unsatisfactory soil is present, continue excavation and replace with compacted backfill or fill material as directed.
- C. Excavate soft spots, unsatisfactory soils, and areas of excessive pumping or rutting, as determined by Engineer. Use crushed rock fill to fill the voids left after overexcavation. Place in 12-inch maximum loose lifts and compact to a minimum density of 95 percent relative compaction, per a maximum dry density of ASTM D-698 at an optimum moisture content of +2 percent.
- D. Authorized additional excavation and replacement material will be paid for as an addition to the contract.
- E. Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities, as directed, without additional compensation.

# 3.08 STORAGE OF SOIL MATERIALS

- A. Stockpile materials without intermixing. Place, grade, and shape stockpiles to drain surface water.
- B. Stockpile soil materials away from edge of excavations. Do not store within drip line of remaining trees.

# EARTHWORK SECTION 31 00 00

## 3.09 GEOTEXTILE PLACEMENT

- A. Acquisition and Storage: Provide complete rolls of geotextile as furnished by the manufacturer, and protected against damage and deterioration. Store all geotextile rolls in a dry place and off the ground at all times according to ASTM D4873. Cover all rolls and partial rolls with a dark protective covering when received. The geotextile will be rejected for use if the Engineer determines it has defects, deterioration, of has been damaged.
- B. Surface Preparation: Prepare the surface receiving the geotextile to a smooth condition free of obstructions, depressions, and debris unless otherwise directed. Do not drag the geotextile on the ground or mishandle it in any way.
- C. Loosely place the geotextile without wrinkles so placement of the overlying material will not tear the geotextile. Lap or sew the geotextile at the ends and sides of adjoining sheets as specified.
- D. On slopes: Place the geotextile with the machine direction oriented up-down the slope. Lap the upper sheets over the top of the lower sheets. When the geotextile is placed on a slope steeper than 6:1, securely anchor the laps to the ground surface with pins or stakes as necessary to prevent slippage and tearing of the geotextile. Start placement of the fill material on the geotextile at the toe of the slope and proceed upwards.
- E. Overlay: Minimum overlap shall be 24 inches.
- F. If the Engineer determines the specified overlap is not sufficient, increase the overlap to provide adequate coverage or sew the geotextile together in the field. If field-sewn, the provisions of ODOT 00350.20 and 00350.40(d) apply.
- G. Protection of Geotextiles: Protect the geotextile at all times from ultraviolet (UV) rays, contamination by surface runoff, and construction activities.
- H. Traffic or construction equipment will not be permitted directly on the geotextile except as authorized by the Engineer. When placed for construction, cover the geotextile with specified cover material as soon as possible.
- I. Place cover material on the geotextile in a manner that the geotextile is not torn, punctured, or shifted. Use a minimum six inches thick cover layer or twice the maximum aggregate size, whichever is thicker. End-dumping cover material directly on the geotextile will not be permitted.
- J. Limit construction vehicles in size and weight so rutting is the initial layer above the geotextile is not more than three inches deep or one half the layer thickness, whichever is less. Turning of vehicles on the first layer will not be permitted.
- K. Repair of Geotextile: Repair or replace all torn, punctured, or contaminated geotextile during construction at no cost to the Owner. Repair by placing a patch of the specified geotextile over the affected area. When geotextile seams are required to be sewn, repair any damaged sheet by sewing unless otherwise indicated on the plans or special provisions or as directed.

# EARTHWORK SECTION 31 00 00

## 3.10 EXCAVATION AND BACKFILL FOR WALKS AND PAVEMENTS

- A. Excavate surfaces under walks to indicated lines, cross sections, elevations, and subgrades.
- B. Use crushed rock fill to raise the grade to the bottom of the pavement section elevation. Place in 12-inch maximum loose lifts and compact to a minimum density of 95 percent relative compaction, per a maximum dry density of ASTM D-698 at an optimum moisture content of ±2 percent. Fill that cannot be tested shall be compacted to the approval of the geotechnical engineer.
- C. Base Rock: <sup>3</sup>/<sub>4</sub>"-0 crushed rock, depth as specified on the paving plan. Place in 12-inch maximum loose lifts and compact to a minimum density of 95 percent relative compaction, per a maximum dry density of ASTM D-698 at an optimum moisture content of ±2 percent.

## 3.11 EXCAVATION AND FILL AT LANDSCAPE AREAS

- A. Excavate to the grades required on the plans. Scarify subsoil to a depth of 6 inches in all landscape areas.
- B. When necessary, eliminate uneven areas and low spots in subsoil. Remove debris, roots, branches, stones, etc. Notify Owner if subsoil contaminated with petroleum products is encountered.
- C. Fill to required elevations with stockpiled native material or excavated fill. Place fill in relatively dry state and compact to a minimum density of 80 percent relative compaction, per ASTM D 698 at an optimum moisture content of ±2 percent. Fill that cannot be tested, or at the option of the Owner, shall be compacted to the approval of the geotechnical engineer.
- D. Establish levels, profiles, slopes, and contours shown on the plans. Establish uniform gradients between given grade points.
- E. Topsoil shall be compacted to a minimum density of 80 percent relative compaction, per ASTM D 698 at an optimum moisture content of  $\pm 2$  percent.
- E. Soil Placement: Confirm that the following depths of imported topsoil have been placed: 1. Refer to Division 32 Section LANDSCAPNG.

# 3.12 EXAVATION AND BACKFILL FOR UTILITY TRENCHES

- A. Excavate trenches to indicated gradients, lines depths, and elevations.
- B. Excavate trenches to uniform widths to provide the following on each side of the pipe or conduit. Excavate trench walls vertically from trench bottom to 12 inches higher than top of pipe or conduit, unless indicated otherwise:
  - 1. Clearance: 12 inches each side of pipe or conduit.
  - 2. Maximum trench width at top of trench shall not be limited except where excess width of excavation would cause damage or create damage to adjacent structures or facilities.
- C. Trench Bottoms: Excavate and shape trench bottoms to provide uniform bearing and support of pipes and conduits. Shape subgrade to provide continuous support for bells, joints, and barrels of

# EARTHWORK SECTION 31 00 00

the pipes and for joints, fittings and bodies of conduit. Remove projecting stones and shape objects along trench subgrade.

- D. Obstructions: Remove all obstructions encountered within the trench area or adjacent thereto. If requested by Contractor, Architect may make minor changes in trench alignment to avoid major obstructions, provided such alignment changes can be made without adversely affecting the intended function of the facility. Contractor shall pay any additional costs resulting from such alignment changes.
- E. Backfilling shall not commence until after pipe, conduit, structures, and other equipment and appurtenances placed in trench or similar excavations have been properly constructed or installed, as applicable, and inspected. Backfill shall be placed in such a manner as not to disturb, damage, or subject such facilities to unbalanced loads or forces. Make fills as soon as feasible after review and acceptance.
- F. Pipe Base: Place required thickness of pipe base material over full width of trench. Provide uniform bearing under entire length of each pipe.
- G. Pipe Zone: Place required thickness of pipe zone material over full width of trench.
- H. Above Pipe Zone: Backfill full width of trench to paving subgrade elevation or to within depth of loam in landscaped areas.
- I. Compaction: Trench backfill shall be compacted in maximum 12 inch lifts to:
  - 1. 95 percent compaction under pavement areas per ASTM D 698 at an optimum moisture content of  $\pm 2$  percent.
  - 2. 90 percent compaction elsewhere per ASTM D 698 at an optimum moisture content of  $\pm 2$  percent.
  - 3. Water settling of trench backfill will not be considered an acceptable compaction procedure.

## 3.13 GRADING

A. Perform all earthwork to the lines and grades shown on the drawings. Shape and finish slopes to conform to the lines, grades, and cross sections as shown or approved. Provide positive drainage away from retaining walls and walks.

#### 3.14 MAINTENANCE OF EARTHWORK

A. Contractor shall maintain all earthwork surfaces until all work has been completed and accepted. Such maintenance shall include, but not be limited to, addition of appropriate backfill material above the pipe zone to keep backfilled trench surface smooth, free from ruts and potholes, and suitable for traffic flow.

# 3.15 DISPOSAL OF WASTE MATERIAL AND EXCESS EXCAVATION

A. Remove from site excess material and material that is unsuitable for backfilling.

### 3.16 SETTLEMENT

A. Any settlement in trench backfill which occurs during the warranty period and is attributable to construction procedures, such as improper removal of shoring or insufficient compaction, shall be

# EARTHWORK SECTION 31 00 00

corrected by the contractor at his own expense. Any piping or facilities damaged by such settlement shall be restored to their original condition at the Contractor's expense.

## 3.17 FIELD QUALITY CONTROL

- A. Refer to Division 01 Section QUALITY REQUIREMENTS for responsibilities for arranging, supervising, and payment of field quality control requirements.
- B. Field Tests:
  - 1. Material compaction testing:
    - a. Trench Compaction: A minimum of one field density test shall be conducted on compacted material for every 100 linear feet, or fraction thereof, of trench and for every 3 feet, or fraction thereof, of fill placed.
    - b. Subgrade compaction
    - c. Fill material compaction
  - 2. Imported material gradation testing.
- C. Field Inspections: Notify owner's representative prior to work of this section.
- D. Special Inspections for Code Compliance: Obtain building inspector approvals.

#### 3.18 CLEANING

A. Upon completion of the work of this section promptly remove from the working area all scraps, debris, and surplus material.

## 3.19 PROTECTION

- A. Protect all work under this section.
- B. Replace, at no additional cost to Owner, any damaged work of this section.

END OF SECTION 31 00 00

# ASPHALTIC CONCRETE PAVING SECTION 32 12 16

## PART 1 – GENERAL

#### 1.01 SECTION INCLUDES

A. Furnishing all materials, labor, and equipment required to construct asphalt concrete pavement, complete, as shown and herein specified.

## 1.02 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this section.
- B. RELATED SECTIONS include the following:
  - 1. Earthwork, Section 31 00 00.
- C. REFERENCED SPECIFICATIONS:
  - 1. Oregon Standard Specifications for Construction, 2008 (ODOT/APWA) Section 00748

## 1.03 SUBMITTALS

- A. Submit the following in accordance with the requirements of Division 01 Section SUBMITTALS
- B. Data and Test Reports:
  - 1. Aggregate base gradation report.
  - 2. Job Mix formula (JMF).
  - 3. Field tests as specified in Part 3 of this Section.
- C. Contract Closeout: Comply with Division 01 Section CONTRACT CLOSEOUT.
  - 1. Provide record documents.
  - 2. Provide warranties

# 1.04 QUALITY ASSURANCE

- A. Installer Qualifications: Firms experienced in installation of systems similar in complexity to those required for this project.
- B. Product/Material: Compaction testing shall be in accordance with Division 01 Section QUALITY CONTROL.
- C. Pre-installation Conference: Contractor, installer, engineer, and representatives of other effected trades shall meet on-site to review paving operations, acceptance of substrata surfaces and coordination with other trades.

# ASPHALTIC CONCRETE PAVING SECTION 32 12 16

- D. Alignment and Grade Control: The Contractor's Registered Professional Land Surveyor shall establish and control the pavement (aggregate or asphalt base course and asphalt surface course), alignments, grades, elevations, and cross sections as shown on the drawings.
- E. Special Warrantee: Contractor shall warrantee installed pavement for a period of 2 years from the date of Substantial Completion. When notified in writing from the Owner, they shall promptly and without inconvenience and cost to the Owner correct said deficiencies to comply with the requirements.

# 1.05 PRODUCT DELIVERY, HANDLING, AND STORAGE

A. Delivery, storage and Protection: Protect materials and maintain product temperature during delivery.

#### 1.06 ADVANCE NOTICE

A. Notify owner's representative at least 48 hours before pavement placement.

#### 1.07 COORDINATION

A. Coordinate with other trades affecting or affected by work in this section.

### **PART 2 - PRODUCTS**

### 2.01 CRUSHED ROCK PAVEMENT BASE

A. Under Dense Graded HMAC: Imported, clean <sup>3</sup>/<sub>4</sub>"-0 or 1"-0 dense graded crushed rock or crushed gravel, free from foreign material and meeting the requirements of ODOT/APWA, 02630-Base Aggregate.

## 2.04 ASPHALT CONCRETE MIX

- A. Asphalt concrete shall be a mixture of cement, aggregate, mineral filler, and additives as required, heated and plant mixed into a uniformly coated mass.
- B. Asphalt Wearing Course: 1/2" Dense Level 3 HMAC (Standard Duty Class "C" Mix) with PG 64-22 asphalt cement conforming to Section 00745 of ODOT/APWA.
- C. Asphalt Base Course: 1/2" Dense Level 3 HMAC (Standard Duty Class "C" Mix) with PG 64-22 asphalt cement conforming to Section 00745 of ODOT/APWA.

### 2.05 TACK COAT

A. Type CSS-1 or CSS-1h and shall meet the requirements of ODOT/APWA, Section 00730.

### 2.06 JOINT SEAL

# ASPHALTIC CONCRETE PAVING SECTION 32 12 16

- A. Joint Seal shall meet the test requirements of ASTM D-244.
- B. Joint seal material shall be CRS-1 or CRS-2 and shall meet the requirements of ODOT/APWA, Section 02710 for cationic emulsified rapid setting asphalt.

## 2.07 RECLAIMED ASPHALT PAVEMENT (RAP) MATERIAL

- A. Shall not exceed 30%, in the new pavement.
- B. Asphalt containing RAP to meet all normal specifications and requirements of ODOT/APWA.

### 2.08 PAVEMENT MARKINGS

A. Traffic paint shall be white, water borne, traffic marking paint, unless otherwise noted on drawings, two (2) coats, 18.0 mil minimum dry film thickness. Paint to meet the requirements of ODOT specification 02840.10 and shall be listed as approved on ODOT's Construction Materials Qualified Products List. Columbia17-123 meets these requirements.

## **PART 3 – EXECUTION**

## 3.01 JOB MIX FORMULA

- A. Contractor shall submit a JMF for each mixture to be used on the project and meeting the Level 3 criteria of ODOT/APWA
- B. The Contractor shall supply the JMF ten (10) work days prior to production. The JMF shall be no more than five (5) years old.
- C. No paving shall occur until the Contractor receives written approval of the JMF.

## 3.02 MODIFICATION OF MIXTURES

A. The owner reserves the right to modify specified mixes for use under various traffic conditions on various segments of the work and for feathering, spot patching, and other such purposes. The Contractor shall provide mixes proportioned as directed for such purposes.

#### 3.03 CRUSHED ROCK PAVEMENT BASE

A. Placement and compaction shall conform to the requirements of Section 31 00 00, EARTHWORK.

### 3.04 PREPARATION OF UNDERLYING SURFACES

- A. All bases and foundations are to meet the applicable specifications and approved prior to beginning paving. Existing bases and foundations shall be reconditioned as specified or directed
- B. Prepare contact surfaces per ODOT/APWA subsection 00745.42.

# ASPHALTIC CONCRETE PAVING SECTION 32 12 16

C. Apply tack coat to contact surfaces per Section 00730 of ODOT/APWA. The tack coat shall be cured thoroughly prior to applying the asphalt overlay. Do not place on wet surfaces.

### 3.05 ASPHALT CONCRETE PAVEMENT

- A. Mix, process, place and compact in compliance with Section 00745 of ODOT/APWA.
- B. Quality Control: Provide per subsection 00745.49 of ODOT/APWA. The intent of this project is for the Contractor to provide a certified ODOT mix design and compaction tests as provided in Section 00745.16. 745.49(b) applies to all pavement thicknesses and 745.49 (c) does not apply. Other testing by Section 00745.16 may be required at the discretion of the Engineer.
- C. The existing surface shall be dry prior to paving. Place asphalt within 24 hours of applying tack coat.
- D. Do not place material during rain or other adverse weather conditions. Seasonal and temperature limitations for placement limitations as per subsection 00745.40 of ODOT/APWA.
- E. Install drainage covers and frames in correct position and elevation.
- F. Compact pavement by rolling as per APWA/ODOT subsection 00745.49. Use hand operated compacting equipment in areas inaccessible to rolling.
- G. Compaction shall be at least 91% as determined by AASHTO T209, as modified by ODOT/APWA. Compaction shall be completed before the placed temperature drops below 180 degrees F.
- H. Contractor shall perform compaction quality control per subsection 00745.49 of ODOT/APWA using the Random Testing and Moving Maximum Density methods. If tests fail to achieve the target densities take all necessary actions to resolve compaction problems. Do not resume paving without approval.
- I. Prior to placement of wearing course, locate and adjust to finish grade all appurtenances with the pavement area.
- J. The Owner shall take acceptance tests to verify that the work meets specifications.

#### 3.06 FINISHING AND CLEANING UP

- A. Test the top surfaces with a 12-foot long straight edge in conformance with Section 00745.70 of ODOT/APWA. The finish grade shall have a smooth uniform surface for storm drainage with no low spots that would collect water.
- B. Surface of the asphalt concrete after compaction shall be smooth and within 0.02 foot of the established grade and cross section, in compliance with Section 0745.70 ODOT/APWA. These tolerances apply to utility appurtenances within the pavement area.
- C. Any mixture that becomes loose or broken, mixed with dirt, or is in any way defective, shall be removed and replaced with fresh hot mix which, when compacted, shall conform to the

# ASPHALTIC CONCRETE PAVING SECTION 32 12 16

surrounding areas. There shall be no sign of roller marks. Correction requirements and methods shall comply with Section 00745.75 ODOT/APWA, as approved and to the satisfaction of the owner.

- D. Payment may be reduced if the material proves to be outside of the specification limits, in accordance with Section 00745.95 and calculated per Section 00165.40 ODOT/APWA.
- E. All costs for the repair of deficiencies or damages is the responsibility of the Contractor. No additional compensation or adjustment to contract time will be made for corrective work.
- F. Trim and remove excess asphalt concrete from abutting structures and appurtenances.
- G. The Contractor shall remove all debris resulting from the Contractor's operation from the project site.

## 3.07 PROTECTION

- A. No traffic shall come in contact with newly paved surfaces until the surface has cooled and set sufficiently to prevent marking. Edges shall be protected from breakage. The Contractor is responsible for this traffic control.
- B. Protect all work installed under this section.
- C. Replace at no additional cost to the Owner, any damaged work of this section.

**END OF SECTION 31 12 16** 

# CONCRETE WALKS, PAVEMENTS, CURBS AND GUTTERS SECTION 32 16 13

# PART 1 – GENERAL

#### 1.01 DESCRIPTION

Work includes but is not limited to the following:

A. Site work cast-in-place concrete to be constructed upon prepared subgrade, including: curb, gutter, walks, and pavements.

## 1.02 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this section.
- B. RELATED SECTIONS include the following:
  - 1. Division 31 Section EARTHWORK.
  - 2. Division 03 Section CONCRETE FORMWORK.
  - 2. Division 03 Section CAST-IN-PLACE CONCRETE.

### 1.03 DESIGN AND ENGINEERING

A. Formwork design and engineering, as well as construction, are the sole responsibility of the Contractor.

### 1.04 SUBMITTALS

- A. Submit the following in accordance with the requirements of Division 01 Section SUBMITTALS
- B. Material Test Report:
  - 1. Base rock compaction test reports.
  - 2. Job mix test reports.
  - 3. Concrete Cylinder tests.
  - 4. Slump and air tests.
- C. Field Quality Control Submittals:
  - 1. Before starting work and in accordance with SUBMITTAL Section, prepare mockups for Owner's review and acceptance of concrete walk surface texture.
    - a. Minimum Panel Size: 4 square feet
    - b. Re-prepare, if directed, until accepted.
    - c. Accepted mockup represents minimum quality standard. Work of lesser quality will be subject to rejection and replacement.
  - 2. Accepted mockup, in like new condition, may be used in contract work.
- D. Contract Closeout: Comply with Division 01 Section CONTRACT CLOSEOUT.
  - Provide record documents.

# CONCRETE WALKS, PAVEMENTS, CURBS AND GUTTERS SECTION 32 16 13

## 1.05 WEATHER PRECAUTIONS

- A. Provide cold weather and/or hot weather protection as recommended in ACI 305 and ACI 306.
- B. Unless adequate protection is provided, concrete shall not be placed during rain, sleet, or snow. Protect concrete from rain water, maintain concrete water ratio and protect concrete surface.
- C. All concrete shall be adequately protected after pouring to prevent damage from freezing, by the use of suitable cover. Frozen and damaged concrete must be removed and replaced at the Contractor's expense. Do not place concrete on frozen earth.

## 1.06 QUAILITY ASSURANCE

- A. Installer Qualifications: Firms experienced in installation of systems similar in complexity to those required for this project.
- B. Product/Material:
  - Compaction testing shall be in accordance with Division 01 Section QUALITY CONTROL.
  - 2. Provide job mix test reports.

# 1.07 PRODUCT DELIVERY, HANDLING, AND STORAGE

A. Protect from damage by the elements and construction procedures.

#### 1.08 ADVANCE NOTICE

A. Notify owner's representative at least 48 hours before concrete placement.

## 1.09 COORDINATION

- A. Coordinate with other trades affecting or affected by work in this section.
- B. Engineer to inspect and approve formwork and reinforcement prior to concrete placement.

### **PART 2 - PRODUCTS**

# 2.01 CRUSHED ROCK PAVEMENT BASE

A. Imported, clean <sup>3</sup>/<sub>4</sub>"-0 crushed rock or crushed gravel, free from foreign material and meeting the requirements of ODOT Standard Specifications (current edition) 02630.

## 2.02 CAST-IN-PLACE CONCRETE FOR CURBS, GUTTER AND WALKS

A. Concrete shall be ready-mixed conforming to Division 03 Section CAST-IN-PLACE CONCRETE, and shall have a minimum compressive strength of 3,000 psi at 28 days.

# CONCRETE WALKS, PAVEMENTS, CURBS AND GUTTERS SECTION 32 16 13

## 2.03 JOINT FILLER

A. Expansion Joint Filler shall be asphalt-impregnated Cane Fiber per ASTM D-1751; 3/8" thickness, unless otherwise indicated. Depth as required to extend through full slab depth and to position filler top ½ inch below slab.

### **2.04 FORMS**

A. Conform to Division 03 Section CONCRETE FORMWORK.

### 2.05 CURING COMPOUND

A. Curing compound for all other concrete shall conform to AASHTO M 171, White Polyethylene Film for curing concrete or AASHTO M148, Liquid Membrane-Forming Compounds for Curing Concrete.

#### 2.06 TACTILE WARNINGS

A. Shall be formed detectable warning surfaces.

## **PART 3 – EXECUTION**

## 3.01 EXISTING CONDITIONS

- A. Prior to starting work of this section verify that existing grades and field conditions agree with drawings. Notify owner's representative of deviations.
- B. Do not start work of this section until all unsatisfactory conditions have been corrected. Commencing work implies acceptance of existing conditions.
- C. If field measurements differ slightly from drawing dimensions, modify work as required for accurate fit. If measurements differ substantially, notify owner's representative prior to starting work of this section.

# 3.02 EXCAVATION

A. All excavation shall be in accordance with Division 31 Section EARTHWORK.

## 3.03 CRUSHED ROCK PAVEMENT BASE

A. After the subgrade is compacted and at the proper grade, spread required thickness of 3/4-inch minus crushed rock. Compact by rolling or other approved method. Surface of the compacted base shall be at the proper level to receive the concrete. Manholes, catch basins, inlets, and other such structures shall be completed, adjusted, cured, and otherwise prepared, as applicable, and made clean and ready to have concrete placed in contact with them.

# 3.04 FORMWORK

A. Conform to the requirements of Division 03 Section CONCRETE FORMWORK. Construct forms to the shape, lines, grades, and dimensions called for on the Drawings. Stake wood or

# CONCRETE WALKS, PAVEMENTS, CURBS AND GUTTERS SECTION 32 16 13

steel forms securely in place, true to line and grade. Brace forms to prevent change of shape of movement in any direction resulting from the weight of the concrete during placement.

B. Allowable Tolerances: Tops of forms shall not depart from grade line more than 1/8-inch when checked with 10-foot straightedge. Alignment of straight sections shall not vary more than 1/8-inch in 10 feet.

## 3.05 FINISHING

- A. After the pavement has been struck off and consolidated, it shall be scraped with straightedge equipped with a handle to permit operation from the edge of the pavement. Any excess water shall be removed from the surface of the pavement. Irregularities shall be corrected by adding or removing concrete. All disturbed places shall be again straightedged.
- B. After the concrete has been given a preliminary finish, the surface of the pavement shall be checked by the contractor with a straightedge device. Each successive check with the straightedge device shall lap the previous check path by at least half the length of the straightedge. Surface deviations exceeding 0.01 foot shall be corrected. Upon completion of the surface floating, but before any required edge tooling or joint tooling, and before initial set of the surface pavement, the pavement shall be given a textured finish perpendicular to match the existing. The textured finish shall be accomplished by a steel tine tool that will mark the finished pavement to a depth of 1/8 inch plus or minus 1/16 of an inch. Match finish of existing pavement where new pavement is adjacent. The surface of the pavement shall not vary from a true surface, when tested with a 12 foot testing straightedge, more than 1/8 inch in 12 feet.
- C. Finish shall be a light broom finish for slip resistant surface. Broom pattern to be parallel to slope.
- D. Accessible Ramps: Steel trowel finish. Apply tactile warning finish.

### **3.06 JOINTS**

- A. Construction joints, expansion joints, transverse contraction joints, and all longitudinal contraction joints shall be placed as indicated in the drawings.
- B Contraction Joints:
  - 1. Contraction joints shall consist of planes of weakness created by forming grooves in the surface of the pavement.
  - 2. Longitudinal contraction joints: Maximum joint spacing shall be 5 feet for sidewalks, and as shown on drawings for other work.
- C. Construction Joints: Construction joints shall be placed whenever the placing of concrete is suspended for more than 45 minutes. A butt joint with dowels or a thickened-edge joint shall be used if the joint occurs at the location of a contraction joint.

### 3.07 WALK EDGING

A. Before final finishing is completed and before final concrete set has occurred, finish concrete edges with edging tool shaped with 1/4 inch radius.

# CONCRETE WALKS, PAVEMENTS, CURBS AND GUTTERS SECTION 32 16 13

- 1. Take particular care to maintain surface on both sides of joint in same plane.
- 2. Do not use kneeling planks on concrete surface.

### 3.08 CURING

- A Minimum Curing Period: 3 days.
- B. Uniformly apply compound in accordance with manufacturer's instructions, after final concrete finishing is complete, and after all free water has disappeared from pavement surface.
- C. Apply to concrete edges immediately after formwork removal.
- D. Do not use membrane compound method if pavement will be exposed to de-icing chemicals within 30 days following curing period completion.

# 3.09 FIELD QUALITY CONTROL

- A. Refer to Division 01 Section QUALITY CONTROL for responsibilities for arranging, supervising, and payment of field quality control requirements.
- B. Field Tests:
  - 1. Observance and approval of subgrade and base rock compaction.
  - 2. Concrete cylinder strength tests.
  - 3. Slump and air tests.
- C. Field Inspections: Notify owner's representative prior to work of this section.
- D. Special Inspections for Code Compliance: Obtain building inspector approvals.

### 3.10 DEFECTIVE WORK

- A. Remove and replace any surfaces which show excessive cracks, pavements that do not drain properly, and other defective concrete.
- B. Minimum Surface Evenness: 1/8 inch per 10 ft.

### 3.11 CLEANING

- A. Including work of other trades, clean, repair and touch-up, or replace when directed products which have been soiled, discolored, or damaged by work of this section.
- B. Upon completion of the work of this section, promptly remove from the working area all scraps, debris, and surplus material.

### 3.11 PROTECTING COMPLETED WORK

- A. Protect all work installed under this section.
- B. Replace, at no additional cost to Owner, any damaged work of this section.

## **END OF SECTION 32 16 13**

# PLANTING IRRIGATION SECTION 32 84 00

### **PART 1 - GENERAL**

### 1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

#### 1.02 SUMMARY

- A. Section Includes:
  - 1. Piping.
  - 2. Encasement for piping.
  - 3. Manual valves.
  - 4. Pressure-reducing valves.
  - 5. Automatic control valves.
  - 6. Transition fittings.
  - 7. Dielectric fittings.
  - 8. Miscellaneous piping specialties.
  - 9. Sprinklers.
  - 10. Controllers.
  - 11. Boxes for automatic control valves.

### 1.03 **DEFINITIONS**

- A. Circuit Piping: Downstream from control valves to sprinklers, specialties, and drain valves. Piping is under pressure during flow.
- B. Drain Piping: Downstream from circuit-piping drain valves. Piping is not under pressure.
- C. Main Piping: Downstream from point of connection to water distribution piping to, and including, control valves. Piping is under water-distribution-system pressure.
- D. Low Voltage: As defined in NFPA 70 for circuits and equipment operating at less than 50 V or for remote-control, signaling power-limited circuits.

### 1.04 PERFORMANCE REQUIREMENTS

- A. Irrigation zone control shall be automatic operation with controller and automatic control valves.
- B. Location of Sprinklers and Specialties: Design location is approximate. Make minor adjustments necessary to avoid plantings and obstructions such as signs and light standards. Maintain head to head irrigation coverage of areas indicated.

# PLANTING IRRIGATION SECTION 32 84 00

- C. Minimum Working Pressures: The following are minimum pressure requirements for piping, valves, and specialties unless otherwise indicated:
  - 1. Irrigation Main Piping: 60 psig
  - 2. Circuit Piping: 50 psig

### 1.05 REGULATORY AGENCY REQUIREMENTS

A. Obtain and pay for any permits and inspections required by Governing Agencies and Utility Companies.

### 1.06 SUBMITTALS

A. Product Data: For each type of product indicated. Include rated capacities, operating characteristics, electrical characteristics, and furnished specialties and accessories.

## B. Record Drawings

- 1. Contractor shall maintain a current legible set of irrigation plans in a safe and accessible location on site at all times for review by Landscape Architect or inspector. Design and actual locations of pipe and valves shall be noted on the plans daily as the irrigation system is constructed.
- 2. Record actual locations of all concealed components, piping system, sleeves and drain valves. Indicate two dimensions for all valves (including quick couplers and drain valves), stub-outs, and main line T's, L's, and ends. Dimension mainline pipes and wire runs at the beginning, mid-point, and end of each curve, or at each change of direction, or at 25' intervals along the curve if longer than 50'. Submit to Landscape Architect for approval.
- 3. Record Drawings to be updated daily prior to backfilling.
- C. Zoning Chart: Provide laminated reduction of overall irrigation plan for mounting on wall near controller. Show each irrigation zone and its control valve.
- D. Controller Timing Schedule: Provide schedule indicating length of time each valve is required to be open to provide a determined amount of water for 3 seasons. Schedule is to account for differing water requirements of lawns, shrubs and different solar orientations.
- E. Operation and Maintenance Data: Provide instructions for operation and maintenance of system and controls, seasonal activation and shutdown, and manufacturer's parts catalog.

## 1.07 QUALITY ASSURANCE

- A. Installer Qualifications:
  - 1. For irrigation work: Valid Oregon Landscape Contractors License for irrigation, and a valid Oregon Landscape Business License.

## PLANTING IRRIGATION SECTION 32 84 00

- 2. For plumbing work: Valid Oregon Plumbing License. This includes all potable water lines. For backflow preventer installations, a valid Oregon Landscape Contractors License for irrigation and backflow or a valid Oregon Plumbing License.
- 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.

# 1.08 REGULATORY REQUIREMENTS

- A. Conform to applicable code for piping and component requirements.
- B. Products Requiring Electrical Connection: Listed and classified by Underwriters Laboratories Inc. as suitable for the purpose specified and indicated.

## 1.09 PRE-INSTALLATION MEETING

A. Convene on site meeting with general contractor, irrigation contractor, and landscape architect two weeks before starting work of this section.

#### 1.10 NOTICES

- A. Notify Landscape Architect at least 48 hours before time for inspections. Request inspections at the following times:
  - 1. Upon completion of the main line, with all valves installed, prior to backfilling.
  - 2. At start and end of pressure test.
  - 3. System performance inspection upon completion of the entire system and after plant installation.

## 1.11 DELIVERY, STORAGE, AND HANDLING

- A. Deliver piping with factory-applied end caps. Maintain end caps through shipping, storage, and handling to prevent pipe-end damage and to prevent entrance of dirt, debris, and moisture.
- B. Store plastic piping protected from direct sunlight. Support to prevent sagging and bending.

### 1.12 SPECIAL WARRANTY

- A. Warranty all material for one year after date of completion or longer if manufacturer furnishes a longer guarantee.
- B. Correct immediately any failure caused by poor material or workmanship during warranty period. "Immediately" shall mean within 72 hours, as determined by the Owner depending upon the immediacy of the needed repair.

## PLANTING IRRIGATION SECTION 32 84 00

C. Owner shall proceed with repairs and bill Contractor for costs and any damages when Contractor fails to comply.

## 1.13 TREE PROTECTION

A. Protect trees and roots over 2" in diameter from damage. Route pipes under roots over 2" in diameter. All trenching within critical root zones (drip lines) of trees to be performed by hand.

## 1.14 PROJECT CONDITIONS

- A. Environmental Conditions:
  - 1. In freezing weather: Do no P.V.C. solvent welding.
  - 2. In Rainy Weather: Don no P.V.C. solvent welding, except under cover.
  - 3. Maximum temperature of mating surfaces of Plastic Pipe and Fittings: 110 ° F.
- B. Interruption of Existing Water Service: Do not interrupt water service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary water service according to requirements indicated:
  - 1. Notify Owner no fewer than two days in advance of proposed interruption of water service.
  - 2. Do not proceed with interruption of water service without Owner's written permission.

## 1.15 EXISTING UTILITIES

A. Locate existing utilities prior to work. Protect active Pipes encountered; notify Pipe Owners. Repair or replace Utility lines damaged by Work of this Section. Remove inactive or abandoned Utilities.

#### 1.16 CLEANING AND PROTECTION

- A. Maintain Public Streets and Driveways clean and Drains open at all times.
- B. Protect Persons and Property from damage and discomfort caused by dust; water as necessary and when directed.
- C. Protect other work against damage and discoloration caused by work of this Section.

#### 1.17 MATERIALS

A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

# PLANTING IRRIGATION SECTION 32 84 00

- 1. (2) Sprinkler heads of each type and size.
- 2. (2) Nozzles of each type and size.
- 3. (1) Valve kes for manual valves.
- 4. (1) Valve Box Key.
- 5. (1) Wrench for each type of head core and for removing and installing each type of head.

# **PART 2 - PRODUCTS**

## 2.01 PIPES, TUBES, AND FITTINGS

- A. Main Lines: Polyvinyl Chloride (PVC) 1120, Schedule 40, ASTM D-2466
- B. Lateral Lines: Polyvinyl Chloride (PVC) 1120, Class 200, ASTM D-2241
- C. Swing Joints at Spray Head and MP Rotator Sprinklers: Triple elbow assembly using Hunter Swing Joints or flexible tubing. 15" minimum length, 30" maximum.
- D. Socket Type Fittings: ASTM D-2466, Schedule 40 P.V.C.
- E. Threaded Fittings: ASTM D-2464 Schedule 80 P.V.C.
- F. Sleeve Piping: ASTM D-2466, PVC 1120, Schedule 40 P.V.C.

### 2.02 PIPING JOINING MATERIALS

- A. Pipe-Flange Gasket Materials: AWWA C110, rubber, flat face, 1/8 inch thick unless otherwise indicated; full-face or ring type unless otherwise indicated.
- B. Metal, Pipe-Flange Bolts and Nuts: ASME B18.2.1, carbon steel unless otherwise indicated.
- C. PVC Cleaner and Primer: R. G. Sloan "Weld-on P-70" or equal.
- D. Solvent Cements for Joining PVC Piping: R. G. Sloan "Weld-on 711" or equal. Ensure that manufacturer's expiration date is not exceeded.
- E. Pipe Joint Tape: Teflon tape or virgin Teflon paste on all threaded joints. Minimum of 4 wraps. No pipe dope.
- F. Plastic, Pipe-Flange Gasket, Bolts, and Nuts: Type and material recommended by piping system manufacturer unless otherwise indicated.

### 2.03 MANUAL VALVES

A. Gate Valves:

## PLANTING IRRIGATION SECTION 32 84 00

- 1. Nibco T-113.
- B. Manual Drain Valves: Bronze construction, angle type, 150 lb. class, threaded end connections, with cross type Operating Handle designed to receive Operating Key. All valves to have non-floating seat disk that allows positive drainage.
  - 1. Nibco T-311-Y or approved.
  - 2. Provide at Main Line low points.

### 2.04 AUTOMATIC CONTROL VALVES

- A. Plastic, Automatic Control Valves:
  - 1. Rain Bird PEB with PRS pressure regulation dial.
- B. Automatic Control Valve Tags: Christy's ID-STD-Y1 or other permanent hang tag indicating zone number.
- C. Valve Sump: Provide inverted valve box sump as detailed on drawings.

## 2.05 SPRINKLERS

A. Plastic, Pop-up Spray Sprinklers: Makes and models indicated on drawings.

#### 2.06 CONTROLS

- A. Automatic Controllers: Exiting to be re-used.
- B. Wire Conductors: 14 gauge, single strand. Color-coded: White common, Red zones, Black spare.
- C. Wire Connectors: DBY by 3M, Scotch Lok 3570 or approved.
- D. Conduit and Fittings:
  - 1. Under ground: Plastic, Class III, Federal Specification W-C-1094.
  - 2. Above ground: Aluminum, Federal Specification WW-G-540.

### 2.07 TRACER WIRE AND TRACER WIRE BOX

- A. Contractor shall place a UF #18 minimum blue tracer wire to allow for location and marking of all otherwise unlocatable buried pipe containing pressurized water. Tracer wire shall be continuous without splices unless approved prior to the work. If approved, splices shall be made using a high-pressure type solderless connector. All splice kits shall be approved.
- B. Splices shall be insulated and waterproofed. Tape wrapped around splices will not be accepted as waterproofing.

## PLANTING IRRIGATION SECTION 32 84 00

## 2.08 VALVE BOXES

- A. Automatic and Manual Control Valves: MacLean Highline 12" standard w/ locking lid. Double box assembly, see details.
- B. Manual Drain and Isolation Valves: MacLean Highline 10" round w/ "irrigation main" labeled on inside of lid.
- C. Backflow Preventer: MacLean Highline 'Jumbo' w/ double valve box assembly.
- D. Valve Box Lid Colors: Brown at plant beds, Green at lawns.
- E. Drainage Backfill at Manual Drain Valves: (1) cu. foot cleaned 3/4"-1" round rock with filter fabric surround.

## **PART 3 - EXECUTION**

### 3.01 EARTHWORK

- A. Excavating, trenching, and backfilling as specified in Section 312000 "Earth Moving."
- B. Provide minimum cover over top of underground piping according to the following:
  - 1. Irrigation Main Piping: Minimum depth of 24" below finished grade to top of pipe.
  - 2. Circuit Piping: Minimum depth of 18" below finished grade to top of pipe.
  - 3. Sleeves: Minimum depth of 24" below finished grade to center of pipe.

#### 3.02 PREPARATION

A. Set stakes to identify locations of proposed irrigation system. Obtain Architect's approval before excavation.

#### 3.03 PIPING INSTALLATION

- A. Location and Arrangement:
  - 1. Piping layout indicated is diagrammatic.
  - 2. Route piping and valve boxes to avoid trees, shrubs, ground cover, and structures.
  - 3. If conditions differ significantly from those shown on plan, contact Landscape Architect immediately.
  - 4. Review layout requirements with plantings and other affected work. Contractor is responsible for insuring irrigation equipment locations do not conflict with proposed plant locations.
- B. Install pipe, valves, controls, and outlets in accordance with manufacturer's instructions and details on drawings.

## PLANTING IRRIGATION SECTION 32 84 00

- C. Provide 3" sand bedding below all main and lateral line piping.
- D. Provide 3" minimum debris free cover over all main and lateral line piping.
- E. Install piping at minimum uniform slope of 0.5 percent down toward drain valves.
- F. Install piping free of sags and bends.
- G. Provide for thermal movement of components in system.
- H. Install groups of pipes parallel to each other, spaced to permit valve servicing.
- I. Install fittings for changes in direction and branch connections.
- J.Lay piping on even bed, uniformly sloped without humps or depressions.
- K. Install PVC piping in dry weather when temperature is above 40 deg F. Allow joints to cure at least 24 hours at temperatures above 40 deg F before testing.
- L. Install piping in sleeves under parking lots, roadways, and sidewalks.

#### 3.04 JOINT CONSTRUCTION

- A. Ream ends of pipes and tubes and remove burrs.
- B. Remove scale, slag, dirt, and debris from inside and outside of pipe and fittings before assembly.
- C. Threaded Joints: Thread pipe with tapered pipe threads according to ASME B1.20.1. Cut threads full and clean using sharp dies. Ream threaded pipe ends to remove burrs and restore full ID. Join pipe fittings and valves as follows:
  - 1. Use Teflon tape or virgin Teflon paste on all threaded joints unless dry seal threading is specified. Minimum of 4 wraps. No pipe dope.
  - 2. Damaged Threads: Do not use pipe or pipe fittings with threads that are corroded or damaged. Do not use pipe sections that have cracked or open welds.
- D. Flanged Joints: Select rubber gasket material, size, type, and thickness for service application. Install gasket concentrically positioned. Use suitable lubricants on bolt threads.
- E. PVC Piping Solvent-Cemented Joints: Clean and dry joining surfaces. Join pipe and fittings according to the following:
  - 1. Comply with ASTM F 402 for safe-handling practice of cleaners, primers, and solvent cements.
  - 2. PVC Pressure Piping: Join schedule number, ASTM D 1785, PVC pipe and PVC socket fittings according to ASTM D 2672. Join other-than-schedule-number PVC pipe and socket fittings according to ASTM D 2855.
  - 3. PVC Nonpressure Piping: Join according to ASTM D 2855.

## PLANTING IRRIGATION SECTION 32 84 00

## 3.05 VALVE INSTALLATION

- A. Automatic Control Valves:
  - 1. Install in double valve box assembly as detailed on drawings.
  - 2. Coil 48" length of control wires around 34" pipe in box.
- B. Main Line Manual Drain Valves:
  - 1. Install at main line low points.
  - 2. Install in 10" round valve box.
  - 3. Provide specified gravel sump.
  - 4. Provide 4" corrugated pipe from valve box elevation to drain valve.
- C. Isolation Valves:
  - 1. Install in 10" round valve box.
  - 2. Provide 4" corrugated pipe from valve box elevation to drain valve.

#### 3.06 SPRINKLER INSTALLATION

- A. Install sprinkler nozzles after system flushing is completed.
- B. Install sprinklers at manufacturer's recommended heights.
- C. Locate part-circle sprinklers to maintain a minimum distance of 4 inches from walls and 2 inches from other boundaries unless otherwise indicated.

## 3.07 CONNECTIONS

- A. Install piping adjacent to equipment, valves, and devices to allow service and maintenance.
- B. Connect wiring between controllers and automatic control valves.

## 3.08 IDENTIFICATION

- A. Provide permanent hang tags at automatic control valves indicating zone number and correlating to controller chart.
- B. Provide reduced, laminated copy of irrigation plan with valve schedule on each automatic controller.

## 3.09 FIELD QUALITY CONTROL

- A. Tests and Inspections:
  - 1. Leak Test: After installation, charge system to 100 PSI and test for leaks. Pressure piping to lose no more than 4 PSI in 24 hours. Repair leaks and retest until no leaks exist.

## PLANTING IRRIGATION SECTION 32 84 00

- 2. Operational Test: After electrical circuitry has been energized, operate controllers and automatic control valves to confirm proper system operation.
- 3. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
- 4. Perform coverage test of plant bed areas after plant material has been installed.
- 5. Perform coverage test of lawn areas prior to seeding or sodding lawns.
- B. Any irrigation product will be considered defective if it does not pass tests and inspections.
- C. Prepare test and inspection reports.

## 3.10 STARTUP SERVICE

- A. Perform startup service.
  - 1. Complete installation and startup checks according to manufacturer's written instructions.
  - 2. Verify that controllers are installed and connected according to the Contract Documents.
  - 3. Verify that electrical wiring installation complies with manufacturer's submittal.
  - 4. Perform one seasonal start-up and shut-down of system and instruct owner's personnel in necessary procedures.

#### 3.11 ADJUSTING

- A. Adjust settings of controllers.
- B. Adjust automatic control valves to provide flow rate at rated operating pressure required for each sprinkler circuit.
- C. Adjust sprinklers and devices, except those intended to be mounted aboveground, so they will be flush with finish grade.
- D. Adjust radii and arcs of sprinklers to provide head to head coverage and prevent overspray onto buildings and paving.

#### 3.12 CLEANING

A. Flush dirt and debris from piping before installing sprinklers and other devices.

### 3.13 DEMONSTRATION

A. Train Owner's maintenance personnel to adjust, operate, and maintain automatic control valves and controllers.

## **END OF SECTION**

## LANDSCAPING SECTION 32 93 00

### **PART 1 - GENERAL**

#### 1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

#### 1.02 SUMMARY

- A. Section Includes:
  - 1. Plants.
  - 2. Topsoil and Soil Preparation.
  - 3. Seeding.
  - 4. Dry Stack Block Planter Wall.

#### B. Related Sections:

- 1. Section 310000 "Earthwork" for excavation, filling, and rough grading and for subsurface aggregate drainage and drainage backfill materials.
- 2. Section 32 84 00 "Planting Irrigation".

#### 1.03 **DEFINITIONS**

- A. Backfill: The earth used to replace or the act of replacing earth in an excavation.
- B. Balled and Burlapped Stock: Plants dug with firm, natural balls of earth in which they were grown, with ball size not less than diameter and depth recommended by ANSI Z60.1 for type and size of plant required; wrapped with burlap, tied, rigidly supported, and drum laced with twine with the root flare visible at the surface of the ball as recommended by ANSI Z60.1.
- C. Balled and Potted Stock: Plants dug with firm, natural balls of earth in which they are grown and placed, unbroken, in a container. Ball size is not less than diameter and depth recommended by ANSI Z60.1 for type and size of plant required.
- D. Container-Grown Stock: Healthy, vigorous, well-rooted plants grown in a container, with a well-established root system reaching sides of container and maintaining a firm ball when removed from container. Container shall be rigid enough to hold ball shape and protect root mass during shipping and be sized according to ANSI Z60.1 for type and size of plant required.
- E. Duff Layer: The surface layer of native topsoil that is composed of mostly decayed leaves, twigs, and detritus.
- F. Finish Grade: Elevation of finished surface of planting soil.

## LANDSCAPING SECTION 32 93 00

- G. Planting Area: Areas to be planted.
- H. Topsoil: As defined in PART 2 PRODUCTS.
- I. Subgrade: Surface or elevation of subsoil remaining after excavation is complete, or the top surface of a fill or backfill before planting soil is placed.
- J.Subsoil: All soil beneath the topsoil layer of the soil profile, and typified by the lack of organic matter and soil organisms.
- K. Surface Soil: Soil that is present at the top layer of the existing soil profile at the Project site. In undisturbed areas, the surface soil is typically topsoil; but in disturbed areas such as urban environments, the surface soil can be subsoil.

#### 1.04 SUBMITTALS

- A. Product Data: For each type of product indicated, including soils.
- B. Qualification Data: For qualified landscape Installer. Include list of similar projects completed by Installer demonstrating Installer's capabilities and experience if requested. Include project names, addresses, and year completed, and include names and addresses of owners' contact persons.

## 1.05 QUALITY ASSURANCE

- A. Installer Qualifications: A qualified landscape Installer whose work has resulted in successful establishment of similar landscape installations.
  - 1. Experience: Five years experience in landscape installation in addition to requirements in Division 01 Section "Quality Requirements."
  - 2. Installer's Field Supervision: Require Installer to maintain an experienced full-time supervisor on Project site when work is in progress.
  - 3. Pesticide Applicator: State licensed, commercial.
- B. Provide quality, size, genus, species, and variety of plants indicated, complying with applicable requirements in ANSI Z60.1.
- C. Plant Material Observation: Architect may observe plant material either at place of growth or at site before planting for compliance with requirements for genus, species, variety, cultivar, size, and quality. Architect retains right to observe trees and shrubs further for size and condition of balls and root systems, pests, disease symptoms, injuries, and latent defects and to reject unsatisfactory or defective material at any time during progress of work. Remove rejected trees or shrubs immediately from Project site. See also: Required Inspections for Approval.

## LANDSCAPING SECTION 32 93 00

D. Preinstallation Conference: Convene on site meeting with General Contractor, Landscape Contractor and Landscape Architect two weeks before starting work of this section, see also Irrigation Specifications. Combine and coordinate with irrigation conference per section 32 84 00.

#### 1.06 DELIVERY, STORAGE, AND HANDLING

- A. Packaged Materials: Deliver packaged materials in original, unopened containers showing weight, certified analysis, name and address of manufacturer, and indication of conformance with state and federal laws if applicable.
- B. Do not prune trees and shrubs before delivery. Protect bark, branches, and root systems from sun scald, drying, wind burn, sweating, whipping, and other handling and tying damage. Do not bend or bind-tie trees or shrubs in such a manner as to destroy their natural shape. Provide protective covering of plants during shipping and delivery. Do not drop plants during delivery and handling.
- C. Deliver plants after preparations for planting have been completed, and install immediately. If planting is delayed more than six hours after delivery, set plants and trees in their appropriate aspect (sun, filtered sun, or shade), protect from weather and mechanical damage, and keep roots moist.
  - 1. Set balled stock on ground and cover ball with soil, peat moss, sawdust, or other acceptable material.
  - 2. Do not remove container-grown stock from containers before time of planting.
  - 3. Water root systems of plants stored on-site deeply and thoroughly with a fine-mist spray. Water as often as necessary to maintain root systems in a moist, but not overly-wet condition.

## 1.07 PROTECTION

A. Provide 4 ft. high construction fence around Seeded Lawn limits. Fencing to be orange, poly, safety fencing or approved. Provide 6' metal T stakes at 6' maximum intervals, o.c. Fencing is required at all areas where disturbance is anticipated prior to complete lawn establishment and approval.

### 1.08 PROJECT CONDITIONS

- A. Field Measurements: Verify actual grade elevations, service and utility locations, irrigation system components, and dimensions of plantings and construction contiguous with new plantings by field measurements before proceeding with planting work.
- B. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit planting to be performed when beneficial and optimum results may be obtained. Apply products during favorable weather conditions according to manufacturer's written instructions and warranty requirements.

## LANDSCAPING SECTION 32 93 00

#### 1.09 WARRANTY

- A. Special Warranty: Installer agrees to repair or replace plantings and accessories that fail in materials, workmanship, or growth within specified warranty period.
  - 1. Failures include, but are not limited to, the following:
    - a. Death and unsatisfactory growth, except for defects resulting from abuse, lack of adequate maintenance, or neglect by Owner, or incidents that are beyond Contractor's control.
    - b. Structural failures including plantings falling or blowing over.
    - c. Faulty performance of tree stabilization.
  - 2. Warranty Period: 1 year from Date of approved Final Completion.
  - 3. Include the following remedial actions as a minimum:
    - a. Immediately remove dead plants and replace unless required to plant in the succeeding planting season.
    - b. Replace plants that are more in an unhealthy condition at end of warranty period.
    - c. Provide extended warranty for period equal to original warranty period, for replaced plant material.

#### 1.10 MAINTENANCE SERVICE

- A. Initial Maintenance Service for all plant materials: Provide maintenance by skilled employees of landscape installer. Maintain as required in Part 3. Begin maintenance immediately after plants are installed and continue until plantings are acceptably healthy and well established but for not less than maintenance period below.
  - 1. Maintenance Period at Irrigated Landscape Areas: Through Final Completion.

## 1.11 REQUIRED INSPECTIONS FOR APPROVAL

- A. Request visitation by the Landscape Architect 3 days minimum in advance of the following:
  - 1. <u>Materials and Layout Inspection:</u> Immediately prior to installation, place (but do not install) plant material for approval by the Landscape Architect. All materials shall be reviewed by Landscape Architect for compliance with specifications and submittals. Layout will be approved by Landscape Architect prior to continued work.
  - 2. <u>Installation Inspection:</u> At time of Substantial Completion Inspection, Landscape Architect will review installation of all work of this Section. Installation Review will not occur until completion of all planting. A punchlist will be prepared by Landscape Architect. All punchlist items must be satisfactorily completed to obtain Final Completion.
  - 3. <u>Warranty Inspection:</u> Immediately prior to the expiration of the Project Warranty, review all work of this Section for compliance with requirements. Make any corrections required by these reviews.

## LANDSCAPING SECTION 32 93 00

## PART 2 - PRODUCTS

#### 2.01 PLANT MATERIAL

- A. General: Furnish nursery-grown plants true to genus, species, variety, cultivar, stem form, shearing, and other features indicated in Plant Schedule or Plant Legend shown on Drawings and complying with ANSI Z60.1; and with healthy root systems developed by transplanting or root pruning. Provide well-shaped, fully branched, healthy, vigorous stock, densely foliated when in leaf and free of disease, pests, eggs, larvae, and defects such as knots, sun scald, injuries, abrasions, and disfigurement.
  - 1. Collected Stock: Do not use plants harvested from the wild, from native stands, from an established landscape planting, or not grown in a nursery unless approved by Landscape Architect.
- B. Provide plants of sizes, grades, and ball or container sizes complying with ANSI Z60.1 for types and form of plants required. Plants of a larger size may be used if acceptable to Landscape Architect, with a proportionate increase in size of roots or balls.
- C. Root-Ball Depth: Furnish trees and shrubs with root balls measured from top of root ball, which shall begin at root flare according to ANSI Z60.1. Root flare shall be visible before planting.
- D. Labeling: Label at least one plant of each variety, size, and caliper with a securely attached, waterproof tag bearing legible designation of common name and full scientific name, including genus and species. Include nomenclature for hybrid, variety, or cultivar, if applicable for the plant as shown on Drawings.

## 2.02 LAWN SEED

- A. Provide only current or last season's crop at manufacturer's high rate.
- B. Purity: 98% by volume.
- C. Germination: 92 percent.
- D. 100% turf type Ryegrass blend available as 'JB Signature' manufactured by JB Instant Lawn Sod and Seed. Phone: 1-800-527-1439.
- E. Fertilizer: Granular or pelleted fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorus, and potassium in the following composition:
  - 1. Composition: 16 percent nitrogen, 16 percent phosphorous, and 16 percent potassium, by weight.
  - 2. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified soil-testing laboratory.

## LANDSCAPING SECTION 32 93 00

## 2.03 SOIL

- A. Topsoil: Imported, natural, fertile, friable, topsoil loam with at least 10% humus, free from subsoils, clay, stones, lumps, roots, clods, sticks, weeds, weed seed and other foreign matter. Submit sample for approval. Available as "Processed Loam" by Eugene Sand and Gravel or approved.
- B. Raised Planter Soil: Combination of 1/3 imported sandy loam and 2/3 organic planting soil. Planting soil is available as Nitro-Rich from Lane Forest Products, Flower-n-Garden from Rexius or approved. Ingredients shall be thoroughly mixed to full depth of planter.

## 2.04 SOIL AMENDMENT MATERIALS

- A. Plant Bed Fertilizer: Containing fifty percent of the elements derived from organic sources with fast and slow release nitrogen; of proportion necessary to eliminate any deficiencies of topsoil as indicated in analysis to the following proportions: Nitrogen 16 percent, phosphoric acid 16 percent, soluble potash 16 percent.
- B. Lawn Fertilizer: Starter slow release fertilizer recommended for sod, with fifty percent of the elements derived from organic sources; of proportion necessary to eliminate any deficiencies of to the following proportions: nitrogen 18 percent, phosphoric acid 24 percent, soluble potash 10 percent.
- C. "Garden Compost" from Rexius Forest By-Products or approved. 100% to pass through ½" mesh screen. Free from weed seeds and debris, and containing not more than 50% sawdust, straw or shavings.
- D. Lime: Ground limestone, dolomite type, minimum 95 percent carbonates with 99% passing through an 8 mesh screen and 75% passing through a 60 mesh screen.

### 2.05 MULCHES

- A. Mulch at Plant Beds: Shredded hemlock bark 5/8"  $\frac{1}{4}$ " diameter, free of growth or germination inhibiting ingredients.
- B. At lawn and Seeded Areas: Clean, seed-free hay, straw, fiber or well-composted organic material.

#### 2.06 TREE STABILIZATION MATERIALS

- A. Stakes and Guys:
  - 1. Upright and Guy Stakes: Rough-sawn, sound, new softwood, free of knots, holes, cross grain, and other defects, 2-by-2-inch nominal by length indicated, pointed at one end. Painted black.

## LANDSCAPING SECTION 32 93 00

- 2. Flexible Ties: Wide rubber or elastic bands or straps of length required to reach stakes or turnbuckles.
- 3. Guys and Tie Wires: ASTM A 641/A 641M, Class 1, galvanized-steel wire, two-strand, twisted, 0.106 inch in diameter.
- 4. Tree-Tie Webbing: UV-resistant polypropylene or nylon webbing with brass grommets.
- 5. See also details in drawing set.

## 2.07 DRY STACK BLOCK RAISED PLANTER WALL

A. Concrete block to be "Keystone Regal' as manufactured by Keystone Hardscapes. Units to be 6" x 17-1/4" x 12", "Straight Face" style block. Large Cap units to be and 3" x 18" x 13". Small Cap units to be 2" x 12" x 8". Color to be Walnut or approved.

## **PART 3 - EXECUTION**

### 3.01 EXAMINATION

- A. Examine areas to receive landscaping for compliance with requirements and conditions affecting installation and performance.
  - 1. Verify that no foreign or deleterious material or liquid such as paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, or acid has been deposited in soil within a planting area.
  - 2. Do not mix or place soils and soil amendments in frozen, wet, or muddy conditions.
  - 3. Suspend soil spreading, grading, and tilling operations during periods of excessive soil moisture until the moisture content reaches acceptable levels to attain the required results.
  - 4. Uniformly moisten excessively dry soil that is not workable and which is too dusty.
  - 5. Verify that previous subgrade grading operations satisfactorily meet specifications and have been approved by Landscape Architect.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.
- C. If contamination by foreign or deleterious material or liquid is present in soil within a planting area, remove the soil and contamination as directed by Architect and replace with new planting soil.

## 3.02 PREPARATION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities and turf areas and existing plants from damage caused by planting operations.
- B. Install erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.

## LANDSCAPING SECTION 32 93 00

C. Lay out individual shrub locations according to required layout.

#### 3.03 SOIL PLACEMENT SCHEDULE

#### A. At Plant Beds:

- 1. Confirm sub-grade material is acceptable to Architect before placing any fill.
- 2. Fill with compacted imported topsoil to a minimum depth of 18". See details.
- 3. Gravel backfill and foreign material are not permitted within 24" of finished grade. Contractor is to ensure that soil is free of gravel or foreign materials.
- 4. Upon approved placement of topsoil, apply the following soil amendments and fertilizer on surface, and thoroughly blend into top 8 inches min. of planting soil throughout the entire plant bed.
  - a. 3 inches Compost
  - b. Fertilizer at the rate of 20 lbs. per 1000 sf.

#### B. At Lawns:

- 1. Confirm sub-grade material is acceptable to Architect before placing any fill.
- 2. Fill with compacted imported topsoil to flush with adjacent finished grade or adjacent curb at restored lawns.
- 3. Upon approved placement of topsoil, apply the following soil amendments and fertilizer on surface, and thoroughly blend into top 6 inches min. of planting soil throughout the entire plant bed.
  - a. 1 inch Compost
  - b. Fertilizer at the rate of 15 lbs. per 1000 sf.

### C. PLANT BED PREPARATION

#### 1. At Plant Beds:

- a. Loosen subgrade of planting areas to a minimum depth of 8 inches. Remove stones larger than 1 inch in any dimension and sticks, roots, rubbish, and other extraneous matter and legally dispose of them off Owner's property.
- b. Spread planting soil to a depth of 18 inches at plant beds and 24" at parking lot planters but not less than required to meet finish grades after natural settlement. Do not spread if planting soil or subgrade is frozen, muddy, or excessively wet.
- c. Spread approximately one-third the thickness of planting soil over loosened subgrade. Mix thoroughly into top 4 inches of subgrade. Spread remainder of planting soil in two additional lifts. Compact each lift to 85%.
- d. Apply the following soil amendments and fertilizer on surface, and thoroughly blend into top 8" min. of planting soil: 3" Compost; Fertilizer at the rate of 20 lbs. per 1000 sf.
- e. Place and blend 1/3 imported sandy loam and 2/3 organic planting soil. Crown as detailed. Thoroughly mix to full depth of planter.

## LANDSCAPING SECTION 32 93 00

#### 3.04 EXCAVATION

- A. Planting Pits: Excavate circular planting pits with sides sloping inward at a 45-degree angle or as shown on drawings. Trim perimeter of bottom leaving center area of bottom raised slightly to support root ball and assist in drainage away from center. Do not further disturb base. Ensure that root ball will sit on undisturbed base soil to prevent settling. Scarify sides of planting pit smeared or smoothed during excavation.
  - 1. Excavate two times as wide as ball diameter for rootball or container minimum or as shown in details.
  - 2. Excavate at least 12 inches wider than root spread.
- B. Drainage: Notify Architect if subsoil conditions evidence unexpected water seepage or retention in tree or shrub planting pits.
- C. Fill excavations with water and allow to percolate away before positioning trees and shrubs.

#### 3.05 PLANTING

- A. Remove stem girdling roots and kinked roots. Remove injured roots by cutting cleanly; do not break.
- B. Balled and Burlapped Stock: Set plumb and in center of planting pit or trench with root flare 2 inches above adjacent finish grades
- C. Container Grown Stock: Carefully remove root ball from container without damaging root ball or plant.
- D. Water thoroughly after planting.

#### 3.06 PRUNING

A. Remove only dead, dying, or broken branches. Do not prune for shape without approval of Landscape Architect.

#### 3.07 SEEDING

- A. Immediately prior to seeding, till into top 4" of soil:
  - 1. Fertilizer: 15 lbs. per 1000 sq. ft.
  - 2. Organic Material: 1 inch spread over entire area
- B. Rake and drag to remove from top one inch of soil: Stones, clods, sticks and other foreign matter larger than 1 inch in any dimension; establish smooth, fine textured seed bed. Compact as necessary to prevent future settling.
- C. Planting Season Between March 15th and October 15th.

## LANDSCAPING SECTION 32 93 00

- D. Do not sow immediately following rain, when ground is too dry, or during windy periods.
- E. Apply half of seed in one direction and remaining at right angles to first seeding at the specified rates.
- F. Lightly rake to cover seed, roll, mulch and water with a fine spray.
- G. Hydro-seeding is an acceptable alternative seeding method.

#### 3.08 GROUND COVER AND PERENNIAL PLANTING

- A. Set out and space ground cover and plants other than trees, shrubs, and vines at indicated spacing in even rows with triangular spacing and as shown in details. Conduct layout inspection as specified.
- B. Use growing medium for backfill.
- C. Dig holes large enough to allow spreading of roots.
- D. Work soil around roots to eliminate air pockets and leave a slight saucer indentation around plants to hold water.
- E. Water thoroughly after planting, taking care not to cover plant crowns with wet soil.
- F. Protect plants from hot sun and wind; remove protection if plants show evidence of recovery from transplanting shock.

#### 3.09 MULCHING

- A. Mulch all plant beds and tree mulch circles to a depth of 3" minimum thickness within 24 hours after planting.
- B. Where plant beds meet sidewalks or mowing edges, provide a vertical spaded edge 2" deep along edge to lock mulch in place.
- C. At seeded area (new and restored lawn): Immediately following seeding and compacting, apply mulch to a thickness of 1/8 inches.

## 3.10 DRY STACK BLOCK RAISED PLANTER WALL INSTALLATION

**A.** Assemble and install in accordance to drawings and in full compliance with manufacturer specifications including corners, caps and transition pieces. Confirm level and alignment for entire wall. Cut and cap pieces as needed to achieve layout as shown on drawings. Caps shall not be less than 1/3 of a whole unit. Saw cut as needed.

## LANDSCAPING SECTION 32 93 00

B. Apply adhesive to the top and bottom of units in accordance to manufacturer specifications.

### 3.11 LANDSCAPE MAINTENANCE

- A. During specified maintenance period, maintain plantings by pruning, cultivating, watering, weeding, fertilizing, mulching, resetting to proper grades or vertical position, and performing other operations as required to establish healthy, viable plantings.
- B. Fill in as necessary soil subsidence that may occur because of settling or other processes. Replace mulch materials damaged or lost in areas of subsidence.
- C. At Lawns Areas: During specified maintenance period, water, weed, mow and fertilize as necessary to establish healthy, thick, even grass stand, 1-1/2 inches high. Contractor shall provide (2) mowings minimum.
- D. Grass Mowing: Do not attempt first mowing until grass is firmly rooted and secure in place.

#### 3.12 CLEANUP AND PROTECTION

- A. During planting, keep adjacent paving and construction clean and work area in orderly condition.
- B. Protect plants from damage due to landscape operations and operations of other contractors and trades. Maintain protection during installation and maintenance periods. Treat, repair, or replace damaged plantings.
- C. After installation and before Final Completion remove nursery stakes, tie tape, wire, burlap, and other debris from plant material, planting areas, and Project site.

#### **END OF SECTION**

## MANHOLES SECTION 33 39 13

## PART 1 – GENERAL

#### 1.01 DESCRIPTION

A. Section Includes: Precast concrete manhole sections and manhole frame and cover castings for use in storm drain systems.

## 1.02 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this section.
- B. RELATED SECTIONS include the following:
  - 1. Division 31 Section EARTHWORK
  - 2. Division 33 Section STORM DRAINAGE

### 1.03 SUBMITTALS

- A. Submit the following in accordance with the requirements of Division 01 Section SUBMITTAL PROCEDURES.
- B. Product Data: For the Following:
  - 1. Manholes, frames and covers
- C. Shop Drawings: For the Following:
  - 1. Manholes: Include plans, elevations, sections, details, and frames and covers. Include design calculations and concrete-mix report for cast-in-place manholes.
- D. Field Quality Control Submittals:
  - 1. Field Test Reports
  - 2. Special Inspections for Code Compliance.
- E. Contract Closeout: Comply with Division 01 Section CLOSEOUT PROCEDURES.
  - 1. Provide record documents.

## 1.04 QUAILITY ASSURANCE

- A. Installer Qualifications: Firm experienced in installation of systems similar to those required for this project.
- B. Product/Material: Compaction testing shall be in accordance with Division 01 Section QUALITY REQUIREMENTS.

## 1.05 PRODUCT DELIVERY, HANDLING, AND STORAGE

A. Protect from damage by the elements and construction procedures.

## MANHOLES SECTION 33 39 13

#### 1.06 ADVANCE NOTICE

A. Notify Engineer at least 48 hours prior to staring work in this section.

## 1.07 COORDINATION

A. Coordinate with other trades affecting or affected by work in this section.

## **PART 2 - PRODUCTS**

#### 2.01 MANHOLES

- A. Provide precast concrete manhole sections (base, barrel section, risers and conical/eccentric tops, flat slab tops, grade rings, etc) per ASTM C478.
  - 1. Concrete Compressive strength of 4,000 psi for 28 days. Maximum size of aggregate shall be 1-1/2 inches. Slump shall be between 2 to 4 inches.
  - 2. No more than 2 lift holes or steel loop shall be cast in each section. Holes shall be located so as not to damage reinforcing or expose it to corrosion.
  - 3 Consist of circular sections in standard nominal diameters

## 2.02 MANHOLE JOINT CONNECTOR

A. Preformed mastic gasket as manufactured by RAM-NEK or Kent Seal.

#### **2.03 GROUT**

A. Cement grout shall conform to ASTM C 387 and consist of one part portland cement and three parts sand by mass (weight), thoroughly mixed with a minimum amount of water to produce a thick, creamy consistency. Sand shall be well graded sand which will pass a 1/8" screen. Mortar shall be used within 30 minutes after it is prepared.

## 2.04 PLASTIC PIPE CONNECTION

A. At PVC pipe penetrations; KOR-N-SEAL Boot or approved.

## 2.05 MANHOLE FRAME AND COVER

- A. Manhole frames shall have a 24" clear frame opening. Machine or grind the bearing surfaces of the frames and covers to furnish a uniform, flat, non-rocking seat for the cover on the frame.
- B. Covers, grates, and frames shall be cast iron conforming to ASTM A48, Class 30. Covers shall be non-locking.
- C. Provide cover with the word "Storm Drain" cast on the storm water manhole cover.

## MANHOLES SECTION 33 39 13

## **PART 3 – EXECUTION**

#### 3.01 EXCAVATION

- A. Excavation and backfill shall conform to the requirements of Division 31 Section EARTHWORK.
- B. When specified, or directed, remove unstable material that will not support the manhole, excavate below grade and backfill with stabilization material according to Section EARTHWORK.

## 3.02 INSTALLATION

- A. Prior to starting work of this section, carefully inspect trench, excavations, and base to verify that all such work is complete to the point where this installation may properly commence.
- B. Do not install work of this section until unsatisfactory conditions have been corrected. Commencing work implies acceptance of existing conditions.
- C. If field measurements differ slightly from drawing dimensions, modify work as required for accurate fit. If measurements differ substantially, notify Engineer prior to starting work of this section.
- D. Invert elevation of pipes entering or exiting manhole and interior inverts shall not vary more than 0.02 foot from the elevations.
- E. Use 4,000 psi at 28 days concrete for formed-in-place foundations or bases, concrete shelves, pipe supports, and concrete fill.
- F. Depending on size of pipe, make connections to existing and new manholes by either core drilling through manhole wall (perform for new precast units), or carefully chipping wall segment. Take care to avoid unnecessary damage to manhole surfaces or walls.

## 3.03 MANHOLE BASES (WITH SUMP)

- A. Manhole bases shall be precast. Base sections shall be constructed to form a watertight structure.
- B. Construct on 4" minimum depth, 3/4"-0 crushed rock base; level and plumb.

## 3.04 PIPE CONNECTIONS

- A. Place connecting pipe at the required alignment and grade. Set the connecting pipe through the full thickness of the wall flush with the inner face of the wall. Ensure that pip connections to the structure are completely watertight. Connect all pipe to manholes according to the manufacturer's recommendations.
- B. For PVC pipe make connections with Kor-N-Seal boot.

## MANHOLES SECTION 33 39 13

C. Grout concrete pipe connections to manholes so they are watertight, using non-shrink grout over waterstop. When grouted into the manhole section, the pipe section shall not extend more than 0.6 m (2 feet) outside the manhole. If an approved flexible connection for concrete pipe is provided at the manhole, full or partial pipe sections may be stubbed into the manhole as required.

#### 3.05 JOINT SEALING

A. Storm Manholes: Non-shrink grout is allowed on joints, and on 24 inch extension rings above the cone. In roadways and other areas intended for traffic, a minimum of one 24 inch diameter precast riser is required between the cone and manhole cover frame. All grouted joints shall be clean and wet before setting risers and tops in a full bed of Portland cement grout. Joints shall be watertight, grouted inside and have a smooth finish. Outside joints shall be grouted before backfilling.

#### 3.06 GRADE RINGS

A. Grade rings shall be laid in grout with the sides plumb and the top level. The joints shall be sealed with mortar. The extensions shall be watertight.

#### 3.07 MANHOLE FRAMES AND COVERS

A. Set metal frames for manholes on full non-shrink grout beds to prevent infiltration of surface water or groundwater between the frame and the concrete of the manhole section. If concrete is to be poured around the frame, coat the portion of the frame that will contact the concrete with hot asphalt before placing the concrete. Set frames, covers and grate true to the locations and grades established and flush with adjacent surfaces.

## 3.08 FIELD QUALITY CONTROL

- A. Refer to Division 01 Section QUALITY REQUIREMENTS for responsibilities for arranging, supervising, and payment of field quality control requirements.
- B. Field Tests:
  - 1. Hydrostatic or air test for all sanitary sewer manholes, as described below.
- C. Field Inspections: Notify Engineer prior to backfilling.
- D. Special Inspections for Code Compliance:
  - 1. Obtain plumbing inspector approvals and submit to Engineer.
  - 2. Provide hydrostatic test or air test of sanitary sewer manholes per State of Oregon Plumbing Specialty Code.

## 3.09 CLEANING

- A. Upon completion, clean each structure of accumulated silt, debris or foreign matter of any kind and keep clean until final acceptance of the work.
- B. Prior to final acceptance, Contractor shall flush and clean all elements of the completed systems.

## MANHOLES SECTION 33 39 13

C. Upon completion of work of this section, promptly remove from the working area all scraps, debris, and surplus material.

## 3.10 PROTECTION

- A. Protect all work installed under this section.
- B. Replace, at no additional cost to Owner, any damaged work of this section.

## **END OF SECTION**

## STORM DRAINAGE SECTION 33 40 00

## PART 1 – GENERAL

#### 1.01 DESCRIPTION

Work includes, but is not limited to the following:

A. Site storm drainage piping, fittings and accessories.

## 1.02 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this section.
- B. RELATED SECTIONS include the following:
  - 1. Division 31 Section EARTHWORK, for utility trench excavation and backfill requirements.

#### 1.03 SUBMITTALS

- A. Submit the following in accordance with the requirements of Division 01 Section SUBMITTALS.
- B. Product Data: For the Following:
  - 1. Pipe and Fittings
  - 2. Area Drains
  - 3. Cleanouts
- C. Field Quality Control Submittals:
  - 1. Field Test Reports
  - 2. Special Inspections for Code Compliance.
- D. Contract Closeout: Comply with Division 01 Section CONTRACT CLOSEOUT.
  - Provide record documents.

#### 1.04 QUAILITY ASSURANCE

- A. Installer Qualifications: Firm experienced in installation of systems similar to those required for this project.
- B. Product/Material: Compaction testing shall be in accordance with Division 01 Section QUALITY CONTROL.

## 1.05 PRODUCT DELIVERY, HANDLING, AND STORAGE

- A. Protect from damage by the elements and construction procedures.
- B. Do not store plastic manholes, pipe, and fittings in direct sunlight.
- C. Protect pipe, pipe fittings and seals from dirt and grease.

## STORM DRAINAGE SECTION 33 40 00

## 1.06 ADVANCE NOTICE

- A. Notify owner's representative at least 48 hours prior to staring work in this section.
- B. Interruption of Existing Storm Drainage Service: Do not interrupt service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary service according to requirements indicated:
  - 1. Notify Owner no fewer than [two] 2 days in advance of proposed interruption of service.
  - 2. Do not proceed with interruption of service without Owner's written permission.

#### 1.07 COORDINATION

A. Coordinate with other trades affecting or affected by work in this section.

## **PART 2 - PRODUCTS**

## 2.01 PIPE AND FITTINGS (UNLESS OTHERWISE NOTED ON DRAWINGS)

Any of the following may be used:

- A. PVC Sewer Pipe and Fittings, NPS 15 (DN 375) and Smaller (4"-15"): ASTM D 3034, SDR 35, with bell-and-spigot ends for gasketed joints with ASTM F 477, elastomeric seals. Provide manufacturer's fittings.
- B. PVC Sewer Pipe and Fittings, NPS18 (DN 450) and Larger (18'-48"): ASTM F 679, T-[1] wall thickness, with bell-and-spigot ends for gasketed joints with ASTM F 477, elastomeric seals.
- C. Polyethylene Pipe: Corrugated polyethylene meeting the requirements of AASHTO M294 Type S. Joint shall be water tight according to the requirements of ASTM D3212. Gaskets shall be made of polyisoprene meeting the requirements of ASTM F477 with the addition that the gaskets shall not have any visible cracking when tested according to ASTM D1149 after 72 hour exposure in 50 PPHM ozone at 104 F. Gaskets shall be installed by the pipe manufacturer and covered with a removable wrap to ensure the gasket is free from debris. Joints shall remain watertight when subjected to a 1.5 degree axial misalignment. A joint lubricant supplied by the manufacturer shall be used on the gasket and bell during assembly. Fittings shall conform to AASHTO M294. Fabricated fittings shall be welded to the interior and exterior at all junctions. Hancor ADS.

# 2.02 STORM DRAIN PIPE AND FITTINGS (BUILDING APPROVED MATERIAL, 3" – 6", FOR USE UNDER AND WITHIN 5 FEET OF BUILDINGS.

- A. Either of the following pipe materials may be used (with solvent cement joints).
  - 1. PCV Schedule 40/DWV, ASTM D2665.
  - 2. ABS Schedule 40/DWV, ASTM D 2661.
  - 3. PVC Schedule 40/DWV Cellular Core Pipe, ASTM F891.

## STORM DRAINAGE SECTION 33 40 00

#### 2.03 PERFORATED PIPE AND FITTINGS

A. Shall be polyethylene plastic pipe. Co-extruded perforated smooth wall, perforations are ½" holes on 5" centers with two rows parallel to the pipe axis and 120 degrees apart.

Manufacturing standard: ASTM F810.Provide with manufactured fittings, unless otherwise noted on the plans.

## 2.04 CLEANOUTS

A. Shall be constructed from solid wall pipe and fittings specified above with traffic grade fram and cover. Frame and cover shall be H-20 rated cast iron valve box with flange top as detailed on the plans with "storm" marking. Varicast VB910 Rich Valve Box or as approved.

## 2.05AREA DRAINS

A. Shall be prefabricated steel, 12-inch diameter round or 12" square - by 24 (minimum) inches deep, 10 gauge minimum, asphalt paint inside and out, 6-inch minimum water seal with hinged lid on trap, outlet size as specified on the drawings. Cast iron or steel grate with bicycle bars. Lynch or Gibson.

### 2.06 FLEXIBLE COUPLING

A. Fernco flexible coupling or as approved.

#### 2.07 OTHER MATERIALS

A. Recommended by manufacturer and subject to Engineer's review and acceptance. Provide all materials to complete an operational drainage system.

## **PART 3 – EXECUTION**

## 3.01 EXISTING CONDITIONS

- A. Prior to starting work of this section inspect trench, excavations and pipe bedding to verify all such work is complete and installation may commence properly.
- B. Do not start work of this section until all unsatisfactory conditions have been corrected. Commencing work implies acceptance of existing conditions.
- C. If field measurements differ slightly from drawing dimensions, modify work as required for accurate fit. If measurements differ substantially, notify owner's representative prior to starting work of this section.

## 3.02 TRENCHING AND BACKFILL

A. Trenching and backfill shall be in accordance with Section 31 00 00, EARTHWORK.

## STORM DRAINAGE SECTION 33 40 00

## 3.03 PIPE INSTALLATION

- A. Lay pipes true to line and grade. Gravity flow sewer shall be laid with bells facing upgrade.
- B. Do not lay pipe on unstable material, in wet trench or when trench and weather conditions are unsuitable for the work.
- C. Support pipe on compacted bedding material. Excavate bell holes only large enough to properly make the joint.
- D. Inspect pipes and fittings for defects before installation. Defective materials shall be plainly marked and removed from the site. Cut pipe shall have smooth regular ends at right angles to the axis of the pipe.
- E. Clean interior of all pipe thoroughly before installation. When work is not in progress, open ends of pipe shall be closed securely to prevent entrance of storm water, dirt or other substances.
- F. Lower pipe into trench carefully and bring to proper line, grade, and joint. After jointing, interior of pipe shall be thoroughly wiped or swabbed to remove any dirt, trash or excess jointing materials.
- G. Do not walk on pipe in trenches until covered with backfill to a depth of 12 inches over the pipe crown.
- H. Install in accordance with manufacturer's recommendations. Install piping within 0.02 feet of grade and location shown on the drawings.
- I. Trim pipe ends flush with manhole interior walls.
- J. Place plugs in ends of incomplete piping at the end of each work day or whenever work stops. Securely close ends so no water, earth, animal life, or other substance may enter.

### 3.04 CLEANOUTS

A. Construct on compacted 4" minimum depth, 3/4"-0 crushed rock base, level, plumb, and aligned with adjacent surfaces. Set rims flush with adjacent finished surfaces unless noted otherwise on the drawings.

## 3.05 AREA DRAINS

A. Construct on 4" minimum depth, 3/4"-0 crushed rock base, level, plumb, and aligned with adjacent construction. Set rims flush with adjacent finished surfaces unless noted otherwise on the drawings.

#### 3.05 IDENTIFICATION

A. Install green tracer wire directly over non-metallic piping and at the outside edge of underground structures.

## STORM DRAINAGE SECTION 33 40 00

## 3.06 FIELD QUALITY CONTROL

- A. Refer to Division 01 Section QUALITY CONTROL for responsibilities for arranging, supervising, and payment of field quality control requirements.
- B. Field Inspections: Notify owner's representative prior to work of this section.
- C. Special Inspections for Code Compliance: Obtain building inspector approvals.

## 3.07 CLEANING

- A. Thoroughly flush and clean all system components prior to final acceptance.
- B. After completing work in this section, remove all scraps and debris from the work area.

## 3.08 PROTECTING COMPLETED WORK

- A. Protect all work installed under this section.
- B. Replace, at no additional cost to Owner, any damaged work of this section.

**END OF SECTION 33 40 00** 

**Roberts Consulting & Engineering** 

Attn: Barbara Roberts

3220 Tilden Street, Suite A

Eugene, OR 97404

April 5, 2018

RE: Critical Root Zone (C.R.Z.) Assessment for Giant Sequoia and Red Oak at Awbrey Park Elementary School

#### **INTRODUCTION**

## **Background and History**

Ms. Barbara Roberts, President of Roberts Consulting & Engineering Inc., contacted the office of Sperry Tree Care on March 26, 2018 to set up a consultation regarding a drainage project at Awbrey Elementary School. We met on site the following Friday, March 30<sup>th</sup>, along with Carole Knapel, the Capital Improvement Program Manager for Eugene School District 4J. According to Ms. Roberts and Ms. Knapel, the original perforated pipes and storm drains had been degraded from both time and tree roots and require replacement with different materials.

Since replacing the drainage pipes will require extensive excavations, the impact to existing trees surrounding the school is a concern. Through numerous revisions to the plan, Barbara was able to reduce c.r.z. impact to the majority of trees to below the 30% threshold. Although, two of the trees remain above the 30% threshold - one is a northern red oak at the east side of the main building with a projected c.r.z. impact of 58% and the other is a giant sequoia to the northeast of the main building with a projected c.r.z. impact of 31%.

Barbara, Kirk Gebb, and I met on site again on Friday, April 6<sup>th</sup> at 1:30 p.m. to answer a few questions I had regarding the finalized drainage plan.

#### **Assignment**

#### My assignment is to:

- 1.) Assess extent of critical root zones and likely impact from construction for two trees that remain over the maximum 30% c.r.z. threshold.
- 2.) Provide recommendations to lessen impact of c.r.z. for both trees.
- 3.) Provide recommendations of care for trees post project.
- 4.) Write a report with my findings.

### **Limits of the Assignment**

I did not perform a root crown excavation to any of the trees surrounding the school. Therefore, exact location of below-ground roots is hypothetical.

## **Assumptions and Limiting Conditions**

- 1. Care has been taken to obtain all information from reliable sources. The consultant can neither guarantee nor be responsible for the accuracy of information provided by others.
- 2. Consultant shall not be required to give testimony or to attend court by reason of this report unless subsequent contractual arrangements are made, including payment of additional fees.
- 3. Any legal description provided to the consultant is assumed to be correct. No responsibility is assumed for matters legal in character.
- 4. Missing pages or alteration of this report invalidates entire report.
- 5. Possession of this report does not imply right of publication or use for any purpose by any other than the person to whom it is addressed, without the prior expressed written or verbal consent of the consultant.
- 6. Neither all nor any part of the contents of this report, nor copy thereof, shall be conveyed by anyone, including the client, to the public through advertising, public relations, news, sales or other media, without the expressed written or verbal consent of the consultant.
- 7. Information contained in this report reflects the conditions present at the time of inspection.
- Inspection is limited to visual examination of accessible items without dissection, excavation, probing, or coring. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the plants or property in question may not arise in the future.

#### **OBSERVATIONS**

#### **Site Observations**

The school lies to the south of Spring Creek Drive and consists of a main, round building with a smaller, rectangular building to the east. There are parking lots on the west and northeast sides of the property. There are five giant sequoias (Sequoiadendron giganteum) to the north of the round building and one northern red oak (Quercus rubra) to the east of the round building. The slope is flat.

According to Kirk Gebb, the school was built in the 1960's and has the original gutter and drainage system. It consists of a flat roof with various down-spouts around the perimeter of each building which free fall into small catch basins below each spout. From there, the water is directed into perforated drainage pipes which circle the perimeter of each building and finally diverted to various catch basins around the perimeter of the property (please see attached storm drain maintenance plan for further details).

### **Subject Tree Observations**

The giant sequoia (Sequoiadendron giganteum) is located in between the main, round school building and the covered walkway to the northeast of the school. It has a d.b.h. (diameter at 4.5' above grade) of 51", a height of 78', and a crown spread of 35'. It appears to be in excellent health. It has very few dead limbs (aside from a normal amount of interior deadwood) and good/average annual shoot elongation for its genus, indicative of good vigor.

The northern red oak (*Quercus rubrum*) is located in between the main, round building and the secondary building to the east. It is closer to the round building. This tree has a d.b.h. of 48", a height of 88', and a crown spread of 80'. It too is in optimal health for its species, exhibiting very few dead branches and good annual shoot elongation. Both trees exhibit very good root flare, a sign that no fill has been piled around either tree's base. The oak did have a neighboring tree to the south which was removed at a time unknown to me. The round planter remains and the tree exhibits very little crown imbalance, considering the immediate proximity of the former tree.

#### **DISCUSSION**

According to my observations, discussions, and available data, the two most vulnerable trees to the proposed project are the 51" diameter sequoia close to the northeast of the round building and the 48" diameter red oak. Through revisions to the building plan, we were able to minimize c.r.z. impact to 31% to the sequoia and 58% to the oak.

I feel that 31% impact to the sequoia is acceptable and only 1% over the 30% allowance. This tree has three other sequoias in close proximity and has likely grafted roots, resulting in shared available resources and increased root area. Additionally, it can be assumed that fewer roots are present underneath the school, given the foundation is a 3' deep stem wall and roots are unlikely to favor this

depth and environment. By shifting pipe locations and angles, and creating a break in the perimeter drain pipe, we have minimized impact and avoided single-side trenching close to the trunk which compromises anchoring ability of the roots. In addition, the initial piping to the drains around the sequoia was changed to 45 degree angles to minimize impact.

On the other hand, 58% impact to the c.r.z. of the red oak is unacceptable and would result in negative consequences to its health and anchoring ability. One can assume that like the sequoia, few roots are present under the school. More than likely, the roots have encountered and run parallel to the foundation wall. Removing these roots from the equation would lower the c.r.z. impact, but since the perimeter pipe is to be excavated in this area, it negates this savings. Additionally, the close and continuous trench on the west side of this tree greatly decreases its anchoring ability, especially taking into account the prevailing west/southwest winds and the lack of wind-breaks on this side. It would be extremely susceptible to wind-throw after trenching.

#### **CONCLUSIONS**

In my opinion, the 51" sequoia (Sequoiadendron giganteum) can be retained post construction if the below recommendations are followed. Damage to the roots of the 48" diameter oak (Quercus rubra) would be significant and unacceptable for its retention.

#### **RECOMMENDATIONS**

Based on the results of my investigation of these trees and construction plan, I recommend the following to minimize c.r.z. impact to the six significant trees present on this property:

- 1.) Cordon off all areas of c.r.z. not slated for excavation with fencing to minimize compaction due to machinery and foot traffic.
- 2.) Abandon any unused pipes within c.r.z. of existing trees to avoid unnecessary impact.
- 3.) Use an Airspade or vacuum excavation to remove soil and tunnel under existing roots at the southeast quadrant of the 51" sequoia.
- 4.) Post trenching, prune exposed roots with sharp pruning tools to avoid torn ends and promote proper compartmentalization.
- 5.) Yearly visit from an I.S.A. Certified Arborist to monitor tree health for first 5 years.
- 6.) Removal of northern red oak unless alternative drainage plan is created (traditional gutter system...).

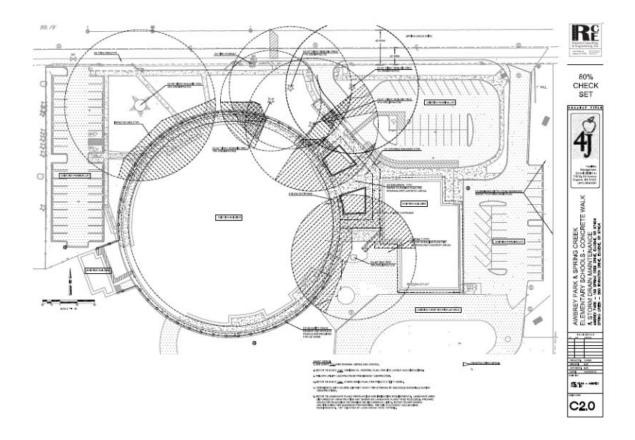
Respectfully submitted,

Christopher White

PNWISA Certified Arborist # 7006

ISA Tree Risk Assessment Qualified

## **Supporting Materials**





# Oregon Department of Education and Lane County School District 4J Contractor Fingerprint and Background Check Requirements

## Step 1: Payment of ODE fee

To complete the requirements of the Oregon Department of Education (ODE), the Contractor must go to the District Financial Services located at the Education Center building, at 200 North Monroe, Eugene, OR 97402. Upon entering the front entrance, Financial Services is the first office on the right. The ODE processing fee for the background check is \$59.00. The individual will be required to indicate name, the name of the company they represent, contact phone #, department requesting background check, and contact email. The \$59.00 payment is required at that time. **Exact Cash or Checks only. No Debit Cards are accepted.** 

# $\underline{\text{Step 2}}$ : Lane County School District 4J background/Volunteer check (Contractors must complete also)

To complete the Lane County School District 4J background check please follow the steps below. Visit <a href="https://www.helpcounterweb.com/welcome/apply.php?district=eugene">https://www.helpcounterweb.com/welcome/apply.php?district=eugene</a>. Click start and enter your information. Click submit, the information is sent directly to the district.

# Step 3: New Employee or Independent Contractor Federal Fingerprint and Background Check Process through FieldPrint

To complete the federal background check please follow the below steps. If you have any questions please contact the Human Resources office at 541-790-7660.

- 1. Visit FieldprintOregon.com
- 2. Click on the "Schedule an Appointment" button.

  Enter an email address under "New Users/Sign Up" and click the "Sign Up" button. Follow the instructions for creating a Password and Security Question and then click "Sign Up and Continue".
- 3. Enter the Eugene School District Fieldprint Code **FPEugeneSD4J**Enter the contact and demographic information required by the FBI and schedule a fingerprint appointment at the location of your choosing.
- 4. During this process you will need the 4J "Institution ID #" which is 2082.
- 5. At the end of the process, print the Confirmation Page. Take the Confirmation Page with you to your fingerprint appointment, along with two forms of identification.
- 6. A registration fee of \$12.50 will be due to Fieldprint during the scheduling of an appointment.
- 7. If you have any questions or problems, you may contact the Fieldprint customer service team at 877-614-4364 or customerservice@fieldprint.com .
- 8. When the District is notified by OED that your background check has cleared we will notify you and you can obtain your 4J badge from the Facilities Management Department located at 715 W 4th Street, Eugene, OR 97404.