



University of Colorado **Denver**

# Business School 5<sup>th</sup> & 6<sup>th</sup> Roof Drainage Repair

Project Number (PN 21-115057)

## PROJECT MANUAL

Owner Revisions #2

October 20, 2023



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Architectural Workshop, LLC

2 Kalamath Street

Denver, CO 80223



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**END OF SECTION 00 01 00**



**SECTION 00 01 04 – PROJECT DIRECTORY**

**PART 1 - GENERAL**

**1.1 PROJECT DIRECTORY**

**A. OWNER/UNIVERSITY**

University of Colorado Denver | Anschutz Medical Campus  
Campus Services, Mail Stop F418  
1945 Wheeling Street, Rm 334  
Aurora, CO 80045

**B. ARCHITECT**

Architect: Architectural Workshop, LLC  
2 Kalamath Street  
Denver, CO 80223  
Ph: 303.788.1717

Mark Bowers  
mbowers@archshop.com

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

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

**END OF SECTION 00 01 04**





SECTION 00 01 25

INTRODUCTION TO GUIDELINES

PART 1 - GENERAL

1.1 INTRODUCTION TO DIVISION 00 “PROCUREMENT AND CONTRACTING REQUIREMENTS”  
AND DIVISION 01 “GENERAL REQUIREMENTS” MASTER SPECIFICATION

- A. Specification Master: The University has prepared a complete Division 01 “General Requirements” master specification required for use on all University projects by Architects, Engineers, and other Design Professionals who provide design services for the University. The master specification has been written to provide a consistent set of general requirements from project to project. They represent the University’s preferred administrative and procedural requirements and are coordinated with State of Colorado Contracts for Construction and General Conditions.
- B. Denver Campus and Anschutz Medical Campus: There are a number of procedures and requirements that differ between the Denver and Anschutz Medical Campuses. As such, the University has developed a unique master for each campus. The Design Professional should take care to obtain the correct campus specific master from the University Project Manager.
- C. Editing Division 00 and Division 01 Master Specifications: It is the intent of these masters to require a minimum amount of editing; however, in all cases some editing will be required to reflect project specific conditions and requirements.
  - 1. Obtaining master specification: The University Project Manager will provide the Design Professional with an editable copy of the Division 01 master in Microsoft Word format.
  - 2. Editor’s notes: Editor’s notes are found throughout the text where the Design Professional is required to make a choice and/or edit the subsequent paragraph(s) in the Section Text based on project specific requirements. Editor’s notes are indicated by Blue, Arial 8pt font surrounded by a thin black line as indicated below. Delete the editor’s notes after making the indicated edits.
  - 3. Options: Optional selections in the Section Text are indicated by a bold font surrounded by brackets. To edit the option, delete all text that is not applicable, remove brackets from around the applicable choice, and change font from bold to normal face. The following is an example of what an editor’s note and optional text look like in the Section Text.
    - a. **[Contractor’s Agreement Design/Bid/Build, State Form SC-6.21 and The General Conditions of the Construction Contract Design/Bid/Build,]** for definitions and contractual requirements related to contract modification procedures.
  - 4. Format: Do not change format, including but not limited to font typeface and size, page margins, header and footer layout, outline numbering and indents.
    - a. Outline numbering: The document template is set up so that outline numbering is automatic. Use the “Decrease Indent” and “Increase Indent” buttons on the “Paragraph” menu to demote or promote a paragraph in the outline respectively.
    - b. Styles: Automatic numbering, formatting and indents are controlled by the use of Styles within the Microsoft Word document. It is suggested that the editor become familiar with this software capability before editing.
      - 1) Warning: Do not cut and paste text from another document into the master unless familiar with software capability to change Styles. Imported text carries with it

Styles from the document of origin and will damage the auto-numbering capability of the template unless the appropriate document styles are applied after inserting.

- 2) Hierarchy of styles: The following is the hierarchy of styles within each document:

PRT (PART 1)

ART (1.1)

PR1 (A.)

PR2 (1.)

PR3 (a.)

PR4 ( 1 ) )

PR5 ( a ) )

- 3) Section Title and End of Section: Styles for these are SCT and EOS respectively.

- D. Sustainable Design: For projects required to obtain LEED certification, the Design Professional in conjunction with the University Project Manager is required to develop project specific Section 01 81 13 "Sustainable Design Requirements" and Section 01 91 13 "General Commissioning Requirements" for inclusion into Division 01. A Section master is provided for Section 01 74 19 "Construction Waste Management and Disposal." This section should be included in Division 01 only for projects pursuing LEED certification.
- E. Commissioning: The University may choose to engage a Commissioning Agent (CxA) and provide commissioning on projects, even if not pursuing LEED certification. Coordinate project commissioning requirements with University Project Manager and, if required, develop Section 01 91 13 "General Commissioning Requirements" for inclusion in Division 01. Coordinate general commissioning requirements with other required commissioning activities indicated in Mechanical and Electrical Sections, including but not limited to testing and balancing and equipment startup requirements.
- F. Large Project versus Small Project: There are a number of options in the Section Text that distinguish between a large project and a small project. Make the appropriate selection in consultation with University Project Manager. In general, small projects are those with a construction budget of least than \$500,000.

## 1.2 INTRODUCTION TO DIVISION 02 – 33 GUIDELINES

- A. Guidelines: The University has prepared these Guidelines for the benefit and use of Architects, Engineers, and other Design Professionals who provide design services for the University. Divisions 02 through 33 are not intended to be project specifications, nor do they cover all materials and systems which may be required for any given project. These Guidelines represent the University's preferences for the various systems and materials indicated but may not be suitable in all cases. They represent a minimum acceptable level of quality and in some cases indicate preferred and/or required material manufacturers to be used on all projects. Any deviations from this Guideline shall be clearly identified in writing and approved by the University.
- B. University Materials Preferences: In order to be concise and useful to the Design Professional, the Guidelines focus only on materials, systems and/or standards where the University has a preference or where the University standard is higher than that typically accepted within the design and construction industry. In all other cases, it is the Design Professional's responsibility to select and specify appropriate industry standards to govern the fabrication and installation of the work. For example, in SECTION 03 30 00 – CAST-IN-PLACE CONCRETE, the Guidelines do not list ACI 301 – *Specification for Structural Concrete* as a reference standard because it is expected that the Design Professional would include this reference standard as a customary matter of practice without direction to do so by the Guidelines.

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1.3 Designer-of-Record Responsibility

- A. Notwithstanding the above, the Architect, Engineer, or other Design Professional using this Specification Master and Guideline understands that they alone are the professional designer of record and wholly responsible for the incorporation and/or specification of any and all selections of either systems, components, materials, and/or manufacturers as may be required and appropriate for the design. The Design Professional is both required and expected to evaluate the suitability of all materials and systems indicated herein for the purpose intended. They alone shall be considered as author of and fully responsible for the entire design. No claim shall be made of or considered by the University or any of its Consultants who assisted the University in authoring these Guidelines related to any design defect alleged to have resulted from the Design Professionals compliance with these Guidelines. By accepting and using these Guidelines the Design Professional acknowledges the above and the limitations indicated therein.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

**END OF SECTION 00 01 25**



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**SECTION 00 11 00 – ADVERTISEMENT FOR BIDS**

**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS (Not Applicable)**

**1.2 SUMMARY**

- A. Section includes administrative and procedural requirements for project advertisement

**1.3 DEFINITIONS**

- A. **ADVERTISEMENT:** Posting of project description, requirements, schedule, and related requirements necessary to solicit submittals from contractors.

**1.4 ADVERTISEMENT**

- A. **FORM:** State of Colorado form “Advertisement for Bids for Contractor’s Agreement Design/Bid/Build” (OSA-AFB-1)
- B. A copy of the above noted form is attached at the end of this section.

**1.5 PROCEDURE**

- A. If project is less than \$25,000 or greater than \$500,000, remove red “Open to SCPP” box.

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

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

**END OF SECTION 00 11 00**





**ADVERTISEMENT FOR BIDS  
Design/Bid/Build  
State of Colorado  
University of Colorado-Denver**

Project No: 21-115057

Project Title: CU Denver Business School Roof Deck Repairs

\$106,632

**Settlement Notice**

**For all projects with a total dollar value above \$150,000 Notice of Final Settlement is required by C.R.S. §38-26-107(1). Final Settlement, if required, will be advertised in the same location as the original solicitation.**

**Project Description**

CU Denver is addressing roof deck drainage problems and water infiltration at the 4<sup>th</sup>, 5<sup>th</sup>, and 6<sup>th</sup> floor roof decks of the Business School. Existing composite decking on all three levels has been removed to prepare for permanent repairs and stopgap water barriers have been installed at the storefront doors to reduce ongoing water infiltration. The project includes a base bid, 8 construction alternates and a 9<sup>th</sup> alternate to include the cost to administer prevailing wage rates. CU Denver anticipates ultimately making repairs on all roof decks shown in the construction drawings.

The base bid includes repairs and resurfacing to Deck 6C on level 6. Subsequent alternates are organized according to their level of priority. The entire project (base and alternates) involves installation of new cast-in-place concrete and polyacrylate underlayment (Division 3), masonry cavity drainage maintenance at the weepholes and vents (Division 4), decorative metal railings (Division 5), miscellaneous rough carpentry and plastic structural assemblies (Division 6), Dex-Flex waterproof traffic coating system, flashing, sheet metal and joint sealants (Division 7), openings, aluminum framed entrance and storefronts and glazing (Division 8), finishes, non-structural metal framing, gypsum board systems, tile carpeting and interior painting (Division 9). The general contractor is responsible for removing, furnishing, and installing everything shown on the construction drawings per specifications.

All debris and garbage generated from this project must be removed from the site by the general contractor. Coordinate all work with CU's construction manager to coincide with university operations. The Business School will remain occupied throughout much of the construction. The general contractor is responsible for providing all general conditions and general requirements including but not limited to on-site supervision, dumpsters, progress cleaning, etc. The general contractor will be required to provide for costs associated with installing during winter conditions such as snow removal, tenting, heating, etc.

## **Minimum Requirements**

Notice is hereby given to all interested parties that all firms will be required to meet all minimum requirements to be considered for this project. To be considered as qualified, interested firms shall have, as a minimum:

1. Provided General Contracting services within the last three (3) years for at least two (2) projects each in excess of \$106,632 (hard costs), utilizing the expertise present in their Colorado Office; and
2. Demonstrated specific General Contracting experience in projects of similar scope and complexity; and
3. Demonstrated bonding capability up to \$106,632 for an individual project coincidentally with current and anticipated workloads; provide letter from surety that affirms this capacity.

**Firms meeting the minimum requirements may obtain the bidding documents on the website accompanying this advertisement.**

University of Colorado Denver | Anschutz Medical Campus Facilities- Request for Proposals website: <https://www.cuanschutz.edu/offices/facilities-management/construction-projects/RFP>.

ColoradoCORE/ColoradoVSS:  
<https://codpavss.cloud.cgifederal.com/webapp/PRDVSS2x1AltSelfService>.

## **Other Information**

Preference shall be given to Colorado resident bidders and for Colorado labor, as provided by law.

Per C.R.S. §24-105-201 If the construction value is \$50,000 or greater a Bid Bond and Power of Attorney or Proposal Guaranty is required in an amount not less than 5% of the total Bid.

## **Pre-Bid Meeting**

A mandatory Pre-Bid Meeting will be held at:

Address: **Business School, CU-Denver**  
**1475 Lawrence St., Denver, CO 80217**  
Room: **Front Lobby**  
Date/Time: **9:00 am November 14, 2023**



### **Schedule/Submission Details**

1. The schedule of events for the AFB process and an outline of the schedule for the balance of the project is as follows:

Advertisement	11/1//2023	
Mandatory Pre-Bid Conference and Tour	11/14/2023	9:00am
Date Email Questions Due	11/21/2023	2:00pm
Date Email Answers Issued	11/28/2023	
Sealed Bids Due	12/5/2023	2:00pm
Bid Results Published	12/5/2023	5:00pm
Contract Approval (projected)	12/22/2023	
Anticipated Design Start	Completed	
Anticipated General Contractor Start	1/8/2024	
Anticipated Construction Start/Finish	60 Days	

2. One (1) electronic copy of the bid is due 12/5/2023 and shall be received no later than 2:00 PM (MD/ST), and shall be submitted/accepted: [https://ucdenverdata.formstack.com/forms/rfp\\_rfq\\_submission](https://ucdenverdata.formstack.com/forms/rfp_rfq_submission), at the following address:

Comments: **Late sealed bids will be rejected without consideration. The University of Colorado- Anschutz Medical Campus and the State of Colorado assume no responsibility for costs related to the preparation of submittals.**

3. The above schedule is tentative. Responding firms shall be notified of revisions in a timely manner by email or posted on ColoradoVSS website. Respondents may elect to verify times and dates by email, but no earlier than 36 hours before the scheduled date and time.

### **Point of Contact/Clarification**

Name: Greg Filpus  
Agency: University of Colorado- Anschutz Medical Campus  
Phone: 720-281-7417  
Email: Gregory.Filpus@CUAnschutz.edu

**This Notice is also available on the web at:**

<a href="http://www.colorado.gov/pacific/osa/cdnotices">www.colorado.gov/pacific/osa/cdnotices</a>	
Media of Publication(s):	University of Colorado Denver   Anschutz Medical Campus Facilities Projects Website
	Colorado CORE/Colorado VSS
Publication Dates:	11/1/2023

**APPENDICES:**

**Appendix A: Information for Bidders (SBP-6.12)**

**Appendix B: Bid Form (SBP-6.13)**

**Appendix B1: Bid Alternates (SBP-6.131)**

**Appendix B3: Bid Bond (SBP-6.14)**

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**SECTION 00 21 13 – INFORMATION TO BIDDERS**

**PART 1 - GENERAL**

- 1.1 RELATED DOCUMENTS (Not Applicable)
- 1.2 SUMMARY (Not Applicable)
- 1.3 DEFINITIONS (Not Applicable)
- 1.4 INFORMATION TO BIDDERS
  - A. State of Colorado form “Information to Bidders” (SBP-6.12).
  - B. A copy of the above noted form is attached to the end of this section.
- 1.5 PROCEDURE (Not Applicable)

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

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

**END OF SECTION 00 21 13**





STATE OF COLORADO  
OFFICE OF THE STATE ARCHITECT  
STATE BUILDINGS PROGRAMS

**INFORMATION FOR BIDDERS**

Institution or Agency: GFE

Project No./Name: 21-115057 / Business School 5<sup>th</sup> & 6<sup>th</sup> Roof Drainage Repair

1. **BID FORM:** Bidders are required to use the Bid form attached to the bidding documents. Each bidder is required to bid on all alternates and indicate the time from the date of the Notice to Proceed to Substantial Completion in calendar days, and in addition, the bidder is required to indicate the period of time to finally complete the project from Substantial Completion to Final Acceptance, also in calendar days. Bids indicating times for Substantial Completion and Final Acceptance in excess of the number of days indicated in the Advertisement for Bids for completion of the entire Project may be found non-responsive and may be rejected. The bid shall not be modified or conditioned in any manner. Bids shall be submitted in sealed envelopes bearing the address and information shown below. If a bid is submitted by mail, this aforementioned sealed envelope should be enclosed in an outer envelope and sent to the following addressee:

**INSERT NAME OF AGENCY AND ADDRESS WHERE BID SHOULD BE DELIVERED**

The outside of the sealed inner envelope should bear the following information:

Project #  
Project Name  
Name and Address of Bidder  
Date of Opening  
Time of Opening

2. **INCONSISTENCIES AND OMISSIONS:** Bidders may request clarification of any seeming inconsistencies, or matters seeming to require explanation, in the bidding documents at least three (3) business days prior to the time set for the opening of Bids. Decisions of major importance on such matters will be issued in the form of addendum.
3. **APPLICABLE LAWS AND REGULATIONS:** The bidder's attention is called to the fact that all work under this Contract shall comply with the provisions of all state and local laws, approved state building codes, ordinances and regulations which might in any manner affect the work to be done or those to be employed in or about the work. Attention is also called to the fact that the use of labor for work shall be governed by the provisions of Colorado law which are hereinafter set forth in Articles 27 and 52E of the GENERAL CONDITIONS.
4. **UNAUTHORIZED IMMIGRANTS:** Note that the Special Provisions of the General Conditions of the Contract includes the following language: PUBLIC CONTRACTS FOR SERVICES - CRS 8-17.5-101 and PUBLIC CONTRACTS WITH NATURAL PERSONS - 24-76.5-101. The Contractor certifies that the Contractor shall comply with the provisions of CRS 8-17.5-101 et seq. The Contractor shall not knowingly employ or contract with an illegal alien to perform work under this contract or enter into a contract with a subcontractor that fails to certify to the Contractor that the subcontractor shall not knowingly employ or contract with an illegal alien to perform work under this contract. The Contractor represents, warrants, and agrees that it (i) has verified that it does not employ any illegal aliens, through participation in the Basic Pilot Employment Verification Program administered by the Social Security Administration and Department of Homeland Security, and (ii) otherwise will comply with the requirements of CRS 8-17.5-102(2)(b). The Contractor shall comply with all reasonable requests made in the course of an investigation under CRS 8-17.5-102 by the Colorado Department of Labor and Employment. If the Contractor fails to comply with any requirement of this provision or CRS 8-17.5-101 et seq., the State may terminate this contract for breach and the Contractor shall be liable for actual and consequential damages to the State.

A Contractor that operates as a sole proprietor hereby swears or affirms under penalty of perjury that the Contractor (i) is a citizen of the United States or otherwise lawfully present in the United States pursuant to federal law, (ii) shall comply with the provisions of CRS 24-76.5-101 et seq, and (iii) shall produce one of the forms of identification required by CRS 24-76.5-103 prior to the effective date of this Contract. Except where exempted by federal law and except as provided in CRS 24-76.5-103(3), a Contractor that receives federal or state funds under this contract must confirm that any individual natural person eighteen years of age or older is lawfully present in the United States pursuant to CRS 24-76.5-103(4) if such individual applies for public benefits provided under this contract.

5. **TAXES:** The bidder's attention is called to the fact that the Bid submitted shall exclude all applicable federal excise or manufacturers' taxes and all state sales and use taxes as hereinafter set forth in Article 9C of the GENERAL CONDITIONS.
6. **OR EQUAL:** The words "OR EQUAL" are applicable to all specifications and drawings relating to materials or equipment specified. Any material or equipment that will fully perform the duties specified, will be considered "equal", provided the bid submits proof that such material or equipment is of equivalent substance and function and is approved, in writing. Requests for the approval of "or equal" shall be made in writing at least five (5) business days prior to bid opening. During the bidding period, all approvals shall be issued by the Architect/Engineer in the form of addenda at least two (2) business days prior to the bid opening date.
7. **ADDENDA:** Owner/architect initiated addenda shall not be issued later than two (2) business days prior to bid opening date. All addenda shall become part of the Contract Documents and receipt must be acknowledged on the Bid form.
8. **METHOD OF AWARD - LOWEST RESPONSIBLE BIDDER:** If the bidding documents for this project require alternate prices, additive and/or deductible alternates shall be listed on the alternates bid form provided by the Principal Representative. Bidders should note the Method of Award is applicable to this Bid as stated below.
  - A. **DEDUCTIBLE ALTERNATES:** The lowest responsible Bid, taking into account the Colorado resident bidder preference provision of Colorado law, will be determined by and the contract will be awarded on the base bid combined with deductible alternates, deducted in numerical order in which they are listed in the alternates bid form provided by the Principal Representative. The subtraction of alternates shall result in a sum total within available funds. If this bid exceeds such amount, the right is reserved to reject all bids. An equal number of alternates shall be subtracted from the base bid of each bidder within funds available for purposes of determining the lowest responsible bidder.
  - B. **ADDITIVE ALTERNATES:** The lowest responsible Bid, taking into account the Colorado resident bidder preference provision of Colorado law, will be determined by and the contract will be awarded on the base bid plus all additive alternates added in the numerical order in which they are listed in the alternates bid form provided by the Principal Representative. The addition of alternates shall result in a sum total within available funds. If this bid exceeds such amount, the right is reserved to reject all bids. An equal number of alternates shall be added to the base bid of each bidder within funds available for purposes of determining the lowest responsible bidder.
  - C. **DEDUCTIBLE AND ADDITIVE ALTERNATES:** Additive alternates will not be used if deductible alternates are used and deductible alternates will not be used if additive alternates are used.
9. **NOTICE OF CONTRACTOR'S SETTLEMENT** – Agencies/institutions must indicate in the initial Solicitation (Advertisement for Bids, Documented Quotes, or Requests for Proposals) whether settlement will be advertised in newspapers or electronic media.

The Advertisement for Bids can be located at the web site: [www.colorado.gov/pacific/osa/cdnotices](http://www.colorado.gov/pacific/osa/cdnotices)  
(Click on the appropriate link [ColoradoVSS or ColoradoBIDS] or on the State Purchasing Office website)

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**SECTION 00 41 53 – BID FORM**

**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

- A. 00 43 13 - Bid Bond (SPB-6.14)

**1.2 SUMMARY (Not Applicable)**

**1.3 DEFINITIONS (Not Applicable)**

**1.4 BID FORM**

- A. FORM: State of Colorado form “Bid” (SBP-6.13).
- B. A copy of the above noted form is attached to the end of this section.
- C. Additional State and University of Colorado forms to be attached to the submitted bid are listed in the Articles below.

**1.5 PROCEDURES**

- A. The durations for Bidder’s Time of Completion shall match the project advertisement duration.

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

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

**END OF SECTION 00 41 53**







STATE OF COLORADO  
OFFICE OF THE STATE ARCHITECT  
STATE BUILDINGS PROGRAMS

**BID**

Institution/Agency: GFE

Project No./Name: 21-115057 / Business School 5<sup>th</sup> & 6<sup>th</sup> Roof Drainage Repair

Bidder Acknowledges Receipt of Addenda Numbers:

Bidder Anticipates Services outside the United States or Colorado:\*

Bidder will comply with 80% Colorado Labor on project above \$500,000:

Bidder is a Service-Disabled Veteran Owned Small Business:\*

No ☐ Yes ☐ If Yes see 3A below

Yes ☐ No ☐ If No see 3B below

No ☐ Yes ☐ If Yes see 3C below

**Base Bid**

\$

(Refer to Bid Alternate Form SC-6.13.1 Attached, If Applicable)

Bidder's Time of Completion

a. Time Period from Notice to Proceed to Substantial Completion:

60 Days

b. Time Period from Substantial Completion to Final Acceptance:

14 Days

c. Total Time of Completion of Entire Project (a + b):

74 Days

1. **BID:** Pursuant to the advertisement by the State of Colorado dated \_\_\_\_\_ the undersigned bidder hereby proposes to furnish all the labor and materials and to perform all the work required for the complete and prompt execution of everything described or shown in or reasonably implied from the Bidding Documents, including the Drawings and Specifications, for the work and for the base bid indicated above. Bidders should include all taxes that are applicable.
2. **EXAMINATION OF DOCUMENTS AND SITE:** The bidder has carefully examined the Bidding Documents, including the Drawings and Specifications, and has examined the site of the Work, so as to make certain of the conditions at the site and to gain a clear understanding of the work to be done.
3. **PARTIES INTERESTED IN BID:** The bidder hereby certifies that the only persons or parties interested in this Bid are those named herein, and that no other bidder or prospective bidder has given any information concerning this Bid.
  - A. If the bidder anticipates services under the contract or any subcontracts will be performed outside the United States or Colorado, the bidder shall provide in a written statement which must include, but need not be limited to the type of services that will be performed at a location outside the United States or Colorado and the reason why it is necessary or advantageous to go outside the United States or Colorado to perform such services. (Does not apply to any project that receives federal moneys) \*
  - B. For State Public Works projects per C.R.S. 8-17-101, Colorado labor shall be employed to perform at least 80% of the work. Colorado Labor means any person who is a resident of the state of Colorado at the time of the Public Works project. Bidders indicating that their bid proposal will not comply with the 80% Colorado Labor requirement are required to submit written justification along with the bid submission. (Does not apply to any project that receives federal moneys) \*
  - C. A Service-Disabled Veteran Owned Small Business (SDVOSB) per C.R.S. 24-103-211, means a business that is incorporated or organized in Colorado or maintains a place of business or has an office in Colorado and is officially registered and verified by the Center for Veteran Enterprise within the U.S. Department of Veteran Affairs. Attach proof of certification along with the bid submission. \*
4. **BID GUARANTEE:** This Bid is accompanied by the required Bid Guarantee. You are authorized to hold said Bid Guarantee for a period of not more than thirty (30) days after the opening of the Bids for the work above indicated, unless the undersigned bidder is awarded the Contract, within said period, in which event the Director, State Buildings Programs, may retain said Bid Guarantee, until the undersigned bidder has executed the required Agreement and furnished the required Performance Bond, Labor and Material Payment Bond, Insurance Policy and Certificates of Insurance and Affidavit Regarding Unauthorized Immigrants.
5. **TIME OF COMPLETION:** The bidder agrees to achieve Substantial Completion of the Project from the date of the Notice to Proceed within the number of calendar days entered above, and in addition, further agrees that

**the period between Substantial Completion and Final Acceptance of the Project will not exceed the number of calendar days noted above.** If awarded the Work, the bidder agrees to begin performance within ten (10) days from the date of the Notice to Proceed subject to Article 46, Time of Completion and Liquidated Damages of the General Conditions of the Contract, and agrees to prosecute the Work with due diligence to completion. The bidder represents that Article 7D of the Contractor's Agreement (SC-6.21) has been reviewed to determine the type and amount of any liquidated damages that may be specified for this contract.

- 6. EXECUTION OF DOCUMENTS:** The bidder understands that if this Bid is accepted, bidder must execute the required Agreement and furnish the required Performance Bond, Labor and Material Payment Bond, Insurance Policy and Certificates of Insurance and Affidavit Regarding Unauthorized Immigrants within ten (10) days from the date of the Notice of Award, and that the bidder will be required to sign to acknowledge and accept the Contract Documents, including the Drawings and Specifications.
- 7. ALTERNATES:** Refer to the Information for Bidders (SC-6.12) for Method of Award for Alternates and use State Form SBP-6.13.1 Bid Alternates form to be submitted with this bid form if alternates are requested by the institution/agency in the solicitation documents.
- 8. Submit wage rates** (direct labor costs) for prime contractor and subcontractor as requested by the institution/agency in the solicitation documents.
- 9. The right is reserved to waive informalities and to reject any and all Bids.**

*\*Does not apply to projects for Institutions of Higher Education that have opted out of the State Procurement Code.*

**SIGNATURES:** If the Bid is being submitted by a Corporation, the Bid shall be signed by an officer, i.e., President or Vice-President. If a sole proprietorship or a partnership is submitting the Bid, the Bid shall so indicate and be properly signed.

Dated this \_\_\_\_\_ Day of \_\_\_\_\_, 20\_\_\_\_

THE BIDDER:

Company Name

Address (including city, state and zip)

Phone number:

Name (Print) and Title

Signature

**SECTION 00 41 55 – DIRECT LABOR BURDEN CALCULATION**

**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

**1.2 SUMMARY (Not Applicable)**

**1.3 DEFINITIONS (Not Applicable)**

**1.4 DIRECT LABOR BURDEN CALCULATION**

- A. FORM: State of Colorado form “Direct Labor Burden Calculation” (SBP-6.18).
- B. A copy of the above noted form is attached to the end of this section.
- C. Additional State and University of Colorado forms to be attached to the submitted bid are listed in the Articles below.

**1.5 PROCEDURES**

- A. The form shall be submitted for the bidding firm on award of low bid and prior to contract being issued.
- B. Submission of a project bid acknowledges agreement of this requirement. Fail to submit this form may deem a bid as non-responsive

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

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

**END OF SECTION 00 41 55**





STATE OF COLORADO  
OFFICE OF THE STATE ARCHITECT  
STATE BUILDINGS PROGRAM

**DIRECT LABOR BURDEN CALCULATION**

Institution/Agency: GFE

Project No./Name: 21-115057 / Business School 5<sup>th</sup> & 6<sup>th</sup> Roof Drainage Repair

This form is required to be submitted for review prior to execution of a construction agreement.

List items below by the percentage of what makes up the total labor burden; Items include benefits that a contractor pays to employees on their payroll. Examples include taxes, pension cost, health and dental insurance etc. The Labor Burden amount must be agreed to by both the contractor and Principal Representative and will be included in the contract as part of Exhibit A and will be used in the calculation of any future Change Order Proposals (SC-6.312) Line 2.

Major sub-contractors defined as electricians, plumbers, mechanical contractors, excavators, millwork, concrete, block layers etc. Please provide one (1) Labor Burden Calculation Sheet per contractor and for each sub-contractor. These labor burdens shall be used in the calculation of any future Change Order Proposals (SC-6.312) Line 10.

State reserves the right to require back-up confirmation of all information included in this calculation.

	Percent of Salary Paid	
Payroll Taxes		
Pension Costs		
Health Insurance		
Dental Insurance		
Life Insurance		
Other (Specify)		Description: _____
Other (Specify)		Description: _____
Total Labor Burden:	0%	



**CU Denver**  
**Business School 5<sup>th</sup> & 6<sup>th</sup> Floor Drainage Repairs**

**SECTION 00 43 13 – BID BOND**

PART 1 - GENERAL

- 1.1 RELATED DOCUMENTS (Not Applicable)
- 1.2 SUMMARY (Not Applicable)
- 1.3 DEFINITIONS (Not Applicable)
- 1.4 BID BOND
  - A. FORM: State of Colorado form “Bid Bond” (SBP-6.14).
  - B. A copy of the above noted form is attached to the end of this section.
- 1.2 PROCEDURES
  - A. This bid bond must be accompanied by Power of Attorney.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

**END OF SECTION 00 43 13**







STATE OF COLORADO  
OFFICE OF THE STATE ARCHITECT  
STATE BUILDINGS PROGRAM

**BID BOND**

Institution/Agency: GFE

Project No./Name: 21-115057 / Business School 5<sup>th</sup> & 6<sup>th</sup> Roof Drainage Repair

**KNOW ALL MEN BY THESE PRESENTS:**

**WHEREAS**, \_\_\_\_\_ hereinafter called the "PRINCIPAL", is submitting a PROPOSAL for the above described project, to the STATE OF COLORADO, hereinafter called the "OBLIGEE".

**WHEREAS**, the Advertisement for Bids has required as a condition of receiving the Proposals that the Principal submit with the PROPOSAL GUARANTY in an amount not less than five per cent (5%) of the Proposal, which sum it is specifically agreed is to be forfeited as Liquidated Damages in the event that the Principal defaults in his obligation as hereinafter specified, and, in pursuance of which Requirement, this Bid is made, executed and delivered.

**NOW THEREFORE**, the Principal and \_\_\_\_\_ a corporation of the State of \_\_\_\_\_, duly authorized to transact business in Colorado, as Surety, are held and firmly bound unto the Obligee, in the sum of five per cent (5%) of the Principal's total bid price, lawful money of the United States for the payment of which sum, well and truly to be made to the Obligee, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

**FURTHER THAT**, a condition of the obligation that the Principal shall maintain his Proposal in full force and effect for thirty (30) days after the opening of the proposals for the project, or, if the Principal's Proposal is accepted, the Principal shall, within the prescribed time, execute the required Agreement, furnish the required Performance Bond, Labor and Material Payment Bond, Insurance Policy, Certificates of Insurance and Certification and Affidavit Regarding Illegal Aliens, then this obligation shall be null and void, otherwise it shall remain in full force and effect, and subject to forfeiture upon demand as Liquidated Damages.

**IN WITNESS WHEREOF** said Principal and Surety have executed this Bond, this \_\_\_\_\_ day of \_\_\_\_\_, A.D., 20\_\_\_\_\_.

(Corporate Seal)

ATTEST

Secretary

Name (Print)

**THE PRINCIPAL**

Company Name

Address (including city, state and zip)

Phone number: \_\_\_\_\_

Signature

Name (Print) and Title

**SIGNATURES**

If the "Principal" is doing business as a Corporation, the Bid Bond shall be signed by an officer, i.e., President or Vice President. The signature of the officer shall be attested to by the Secretary and properly sealed.

If the "Principal" is an individual or a partnership, the Bid Bond shall so indicate and be properly signed.

(Corporate Seal)

Secretary

**THE SURETY**

By \_\_\_\_\_

Attorney-in-Fact

**THIS BOND MUST BE ACCOMPANIED BY POWER OF ATTORNEY, EFFECTIVELY DATED.**  
**FAILURE TO PROVIDE A PROPERLY EXECUTED BID BOND WITH A PROPERLY EXECUTED**  
**POWER OF ATTORNEY WILL RESULT IN THE BIDDER'S PROPOSAL BEING DEEMED NON-**  
**RESPONSIVE.**



**SECTION 00 43 23 – BID ALTERNATES FORM**

**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

- A. 00 41 53 - Bid Form (SPB-6.13)

**1.2 SUMMARY (Not Applicable)**

**1.3 DEFINITIONS (Not Applicable)**

**1.4 BID FORM**

- A. FORM: State of Colorado form “Bid Alternates Form” (SBP-6.131).
- B. A copy of the above noted form is attached to the end of this section.
- C. Additional State and University of Colorado forms to be attached to the submitted bid are listed in the Articles below.

**1.5 PROCEDURES**

- 1.6 A. Fill out each alternate as shown in project documents with associated cost.

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

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

**END OF SECTION 00 43 23**





STATE OF COLORADO  
OFFICE OF THE STATE ARCHITECT  
STATE BUILDINGS PROGRAM

**BID ALTERNATES FORM**

Institution/Agency: CU Denver

Project No./Name: 21-115057 Business School Roof Deck Repairs

Additive alternates will not be used if deductible alternates are used and deductible alternates will not be used if additive alternates are used.

**Additive Alternates** (If Applicable)

Refer to specification section 00 43 23 for descriptions of add alternates. If the add alternates are accepted, the base bid would be modified by the amount entered by the bidder.

A.A. No. 1	Repair and resurface existing deck 5A on level 5	Add \$	
A.A. No. 2	Infill existing ramp on deck 6C, raise existing door on deck 6C, and complete interior work in Dean's conference room on level 6	Add \$	
A.A. No. 3	Infill existing ramp on deck 5A, raise existing door on deck 5A, and finish interior ramp on level 5	Add \$	
A.A. No. 4	Repair and resurface existing deck 6B, raise existing door on deck 6B, fill in existing ramp on deck 6B, and finish interior ramp on level 6	Add \$	
A.A. No. 5	Repair and resurface existing deck 6A, raise existing door on deck 6A, fill in existing ramp on deck 6A, and finish interior ramp on level 6	Add \$	
A.A. No. 6	Repair and resurface existing deck 4A, raise existing door on deck 4A, fill in existing ramp on deck 4A, and finish interior ramp on level 4	Add \$	
A.A. No. 7	Repair and resurface existing deck 4B, raise existing door on deck 4B, fill in existing ramp on deck 4B, and finish interior ramp on level 4	Add \$	
A.A. No. 8	Install new sheet metal coping over the top of the existing brick wall. Remove the existing guardrails then sand, prep, & paint the guardrails. Reinstall the guardrails at the existing locations. Include weep hole repairs. Note Detail 7/A-501. Alternate 8 applies to all deck levels.	Add \$	
A.A. No. 9	Cost to include prevailing wages for both the base bid and Additive Alternates No. 1 through 8	Add \$	

THE BIDDER:

\_\_\_\_\_  
Company Name

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date



**SECTION 00 43 40 -**

**CERTIFICATE AND AFFIDAVIT REGARDING UNAUTHORIZED IMMIGRANTS**

**PART 1 - GENERAL**

1.1 RELATED DOCUMENTS (Not Applicable)

1.2 SUMMARY

- A. The form UI-1 shall be provided by all contractors, architect, engineers and consultants directly engaged with the University of Colorado Denver | Anschutz Medical Campus.

1.3 DEFINITIONS (Not Applicable)

1.4 CERTIFICATE AND AFFIDAVIT REGARDING UNAUTHROIZED IMMIGRANTS

- A. FORM: State of Colorado form “CERTIFICATE AND AFFIDAVIT REGARDING UNAUTHORIZED IMMIGRANTS” (UI-1).
- B. A copy of the above noted form is attached to the end of this section.

1.5 PROCEDURE (Not Applicable)

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

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

**END OF SECTION 00 43 40**







STATE OF COLORADO  
OFFICE OF THE STATE ARCHITECT  
STATE BUILDINGS PROGRAMS

**CERTIFICATION AND AFFIDAVIT REGARDING UNAUTHORIZED IMMIGRANTS**

Institution/Agency: GFE

Project No./Name: 21-115057 / Business School 5<sup>th</sup> & 6<sup>th</sup> Roof Drainage Repair

**A. CERTIFICATION STATEMENT CRS 8-17.5-101 & 102 (HB 06-1343, SB 08-193)**

The Vendor, whose name and signature appear below, certifies and agrees as follows:

1. The Vendor shall comply with the provisions of CRS 8-17.5-101 et seq. The Vendor shall not knowingly employ or contract with an unauthorized immigrant to perform work for the State or enter into a contract with a subcontractor that knowingly employs or contracts with an unauthorized immigrant.
2. The Vendor certifies that it does not now knowing employ or contract with an unauthorized immigrant who will perform work under this contract, and that it will participate in either (i) the "E-Verify Program", jointly administered by the United States Department of Homeland Security and the Social Security Administration, or (ii) the "Department Program" administered by the Colorado Department of Labor and Employment in order to confirm the employment eligibility of all employees who are newly hired to perform work under this contract.
3. The Vendor shall comply with all reasonable requests made in the course of an investigation under CRS 8-17.5-102 by the Colorado Department of Labor and Employment. If the Vendor fails to comply with any requirement of this provision or CRS 8-17.5-101 et seq., the State may terminate work for breach and the Vendor shall be liable for damages to the State.

**B. AFFIDAVIT CRS 24-76.5-101 (HB 06S-1023)**

1. If the Vendor is a **sole proprietor**, the undersigned hereby swears or affirms under penalty of perjury under the laws of the State of Colorado that (check one):

☐ I am a United States citizen, or

☐ I am a Permanent Resident of the United States, or

☐ I am lawfully present in the United States pursuant to Federal law.

I understand that this sworn statement is required by law because I am a sole proprietor entering into a contract to perform work for the State of Colorado. I understand that state law requires me to provide proof that I am lawfully present in the United States prior to starting work for the State. I further acknowledge that I will comply with the requirements of CRS 24-76.5-101 et seq. and will produce the required form of identification prior to starting work. I acknowledge that making a false, fictitious, or fraudulent statement or representation in this sworn affidavit is punishable under the criminal laws of Colorado as perjury in the second degree under CRS 18-8-503 and it shall constitute a separate criminal offense each time a public benefit is fraudulently received.

CERTIFIED and AGREED to this day \_\_\_\_\_.

VENDOR:

\_\_\_\_\_  
Vendor Full Legal Name

BY: \_\_\_\_\_  
Signature of Authorized Representative

\_\_\_\_\_  
Title



**SECTION 00 45 17 – SUBCONTRACTOR PREQUALIFICATION**

**PART 1 - GENERAL**

- 1.1 RELATED DOCUMENTS (Not Applicable)
- 1.2 SUMMARY (Not Applicable)
- 1.3 DEFINITIONS (Not Applicable)
- 1.4 SUBCONTRACTOR PREQUALIFICATION
  - A. FORM: University of Colorado Denver | Anschutz Medical Campus “Subcontractor’s Statement of Experience.”
  - B. A copy of the above noted document is attached to the end of this section.
- 1.5 PROCEDURE (Not Applicable)

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

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

**END OF SECTION 00 45 17**





University of Colorado  
Denver | Anschutz Medical Campus  
Facilities Management

## **SUBCONTRACTOR'S STATEMENT OF EXPERIENCE**

Project Name: Business School 5<sup>th</sup> & 6<sup>th</sup> Roof  
Drainage Repair

Project # 21-115057

Project Manager: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Email: \_\_\_\_\_  
Architect/Engineer: Architectural Workshop, LLC

- This is a project specific qualification form. Subcontractor must fill this out on each project.

## INDEX OF DOCUMENTS

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**UNIVERSITY OF COLORADO DENVER | ANSCHUTZ MEDICAL CAMPUS  
SUBCONTRACTOR'S QUALIFICATION STATEMENT**

**INFORMATION FORM**

**STATEMENT OF** \_\_\_\_\_  
(Subcontractor)

**ADDRESS** \_\_\_\_\_  
(Street or PO Box) (City) (State) (Zip)

**TELEPHONE/FAX NO.** \_\_\_\_\_  
(telephone) (fax)

**DATE OF EXPERIENCE STATEMENT** \_\_\_\_\_

**PRINCIPLE OWNER/OFFICER** \_\_\_\_\_  
(Names(s) and Official Title(s))

*Please indicate below if your company qualifies as one of the following:*

Minority Business Enterprise (MBE) YES \_\_ NO \_\_

Justification: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Woman-Owned Business Enterprise (WBE) YES \_\_ NO \_\_

Justification: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Small Business Enterprise (SBE) YES \_\_ NO \_\_

Justification: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Disadvantaged Business Enterprise (DBE) YES \_\_ NO \_\_

Justification: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**UNIVERSITY OF COLORADO DENVER | ANSCHUTZ MEDICAL CAMPUS  
SUBCONTRACTOR'S QUALIFICATION STATEMENT**

**TYPES OF WORK**

- (1) If you are a General Contractor interested in bidding on all types of construction, mark "All Classes of Construction" only.
- (2) If you are interested in contracting directly with the University for certain types of work only, mark in the column provided after the particular types of work on which you wish to bid.

TYPES OF WORK	MARK WITH (X)
1. All Classes of Construction	
2. General	
3. Mechanical	
4. Electrical	
5. Excavating and Grading	
6. Concrete	
7. Structural Steel	
8. Steel and Miscellaneous Iron	
9. Painting and Decorating	
10. Laboratory Equipment	
11. Elevator Installation	
12. Plumbing	
13. Heating and Ventilating	
14. Air Conditioning	
15. Boiler and Equipment	
16. Environmental (Describe)	
17. Other (Describe)	
18. Other (Describe)	
19. Other (Describe)	
20. Other (Describe)	



**UNIVERSITY OF COLORADO DENVER | ANSCHUTZ MEDICAL CAMPUS  
SUBCONTRACTOR'S QUALIFICATION STATEMENT**

**IDENTIFICATION**

(The signatory of this questionnaire guarantees the truth and accuracy of all statements and of all answers to questions hereinafter made.)

LEGAL NAME \_\_\_\_\_

PRINCIPAL OFFICE \_\_\_\_\_  
(Street or PO Box) (City) (State) (Zip)

\_\_\_\_ A Corporation    \_\_\_\_ A Copartnership    \_\_\_\_ An Individual    \_\_\_\_ Combination

**GENERAL INFORMATION**

A. Are you licensed as a contractor?      Yes ( )      No ( )

Licensed in the name of	Location (City or State)	License No. & Type
----------------------------	-----------------------------	-----------------------

_____		
_____		

B. How many years has your organization been in business as a contractor under your present business name? \_\_\_\_\_

C. How many years experience in \_\_\_\_\_ construction work has your organization had? (Type)

(a) As a prime contractor? \_\_\_\_\_ (b) As a subcontractor?

D. Have you or your organization, or any officer or partner thereof, failed to complete a contract? \_\_\_\_\_

If so, give details \_\_\_\_\_

\_\_\_\_\_

E. If you have a controlling interest in any firms presently qualified with the University, show names thereof:

\_\_\_\_\_  
\_\_\_\_\_

F. We normally perform \_\_\_\_% of the work with our own forces.

List trades: \_\_\_\_\_  
\_\_\_\_\_

Where qualification is based on a combination of several organizations, show the experience and equipment of the combined organizations.

G. Has your firm been involved in any litigation in the past five (5) years? Yes ( ☐ ) No ( ☐ )  
If yes, explain (listing type, kind, plaintiff, defendant, etc. and state the current status).

H. Are there any activities or interests of officers, principle stockholders, or employees of your firm or other factors which would place your firm and the University of Colorado Denver in a position of "Conflict of Interests"?

Yes ( ☐ ) No ( ☐ ) If yes, or in doubt, explain.

I. Has your firm ever been involved in any bankruptcy action as a bankrupt?

Yes ( ☐ ) No ( ☐ ) If yes, explain.

**UNIVERSITY OF COLORADO DENVER | ANSCHUTZ MEDICAL CAMPUS**  
**SUBCONTRACTOR’S QUALIFICATION STATEMENT**

**PERSONNEL OF ORGANIZATION**

1. Name the persons with whom you have been associated in business as partners or business associates in each of the last five (5) years.
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

2. Show the construction experience of the principal individuals of your present organization in the following tabulation:

Individual’s Name	Present Position or Office in Your Organization	Years of Construction Experience	Magnitudes and Type of Work	In What Capacity

**UNIVERSITY OF COLORADO DENVER | ANSCHUTZ MEDICAL CAMPUS**  
**SUBCONTRACTOR'S QUALIFICATION STATEMENT**

**PROJECT EXPERIENCE**

Show the projects your organization has completed during the last five years in the following tabulation:

Year Completed	Project	Type of Work (See Page 2)	Location	Contract Value	Contracting Authority	In what Capacity

**UNIVERSITY OF COLORADO DENVER | ANSCHUTZ MEDICAL CAMPUS**  
**SUBCONTRACTOR'S QUALIFICATION STATEMENT**

**WORK CURRENTLY UNDER CONTRACT**

Expected Completion Date	Project	Type of Work (See Page 1)	Location	Contract Value	Contracting Authority	Architect or Engineer

**UNIVERSITY OF COLORADO DENVER | ANSCHUTZ MEDICAL CAMPUS**  
**SUBCONTRACTOR’S QUALIFICATION STATEMENT**

**SURETIES**

List the Surety Companies that have bonded your work for the past five (5) years:

Name of Surety and Name and Address of Agent	Project and Location	Period of Bond From	Period of Bond To	General Comments

**UNIVERSITY OF COLORADO DENVER | ANSCHUTZ MEDICAL CAMPUS  
SUBCONTRACTOR'S QUALIFICATION STATEMENT**

**CORPORATION / CO-PARTNERSHIP**

**CORPORATION:**

(If a corporation, answer this:)

When Incorporated \_\_\_\_\_

In What State \_\_\_\_\_

President's Name \_\_\_\_\_

Vice President's Name \_\_\_\_\_

Secretary's Name \_\_\_\_\_

Treasurer's Name \_\_\_\_\_

**CO-PARTNERSHIP:**

(If a co-partnership, answer this:)

Date of Organization \_\_\_\_\_

State whether partnership is general, limited, or association \_\_\_\_\_

Name and address of each partner:

_____ (name)	_____ (name)
-----------------	-----------------

_____ (address)	_____ (address)
--------------------	--------------------

_____	_____
-------	-------

_____	_____
-------	-------

WHERE QUALIFICATION IS BASED ON A COMBINATION OF ORGANIZATIONS, THE APPROPRIATE (ATTACHED) AFFIDAVITS MUST BE EXECUTED FOR EACH MEMBER OF SUCH COMBINATION.

**UNIVERSITY OF COLORADO DENVER | ANSCHUTZ MEDICAL CAMPUS  
SUBCONTRACTOR'S QUALIFICATION STATEMENT**

**AFFIDAVIT FOR CORPORATION**

\_\_\_\_\_certifies and says: That he is  
(Name of officer)

\_\_\_\_\_of the \_\_\_\_\_ (Official capacity)

corporation submitting this statement of experience: that he/she has read the same, and that the same is true of his/her own knowledge: that the statement is for the purpose of inducing the University of Colorado Denver to supply the submittor with plans and specifications, and that any vendor, or other agency therein named is hereby authorized to supply the University of Colorado Denver with any information necessary to verify the statement: and that furthermore, should this statement at any time cease to properly and truly represent his/her condition in any substantial respect, it will refrain from further bidding on University work until it shall have submitted a revised and corrected statement.

I certify and declare under penalty of perjury that the foregoing is true and correct:

Subscribed on \_\_\_\_\_ at \_\_\_\_\_, \_\_\_\_\_, State of \_\_\_\_\_  
(date) (city) (county)

NOTE: Use full corporate name and  
attach corporate seal here. \_\_\_\_\_  
(Officer must sign here)

NOTE: Statement will be returned unless affidavit is completed in EVERY respect.



**UNIVERSITY OF COLORADO DENVER | ANSCHUTZ MEDICAL CAMPUS  
SUBCONTRACTOR'S QUALIFICATION STATEMENT**

**AFFIDAVIT FOR CO-PARTNERSHIP**

\_\_\_\_\_ certifies and says: That he/she is a partner of  
(Name of partner)

the partnership of \_\_\_\_\_: That said partnership  
(Name of Firm)

submitted this statement of experience: that he/she has read the same, and that the same is true of his/her own knowledge: that the statement is for the purpose of inducing the University of Colorado Denver to supply the submittor with plans and specifications, and that any vendor, or other agency therein named is hereby authorized to supply the University of Colorado Denver with any information necessary to verify the statement: and that furthermore, should this statement at any time cease to properly and truly represent the condition of said firm in any substantial respect, it will refrain from further bidding on University work until they shall have submitted a revised and corrected statement.

I certify and declare under penalty of perjury that the foregoing is true and correct:

Subscribed on \_\_\_\_\_ at \_\_\_\_\_, \_\_\_\_\_, State of \_\_\_\_\_  
(date) (city) (county)

The foregoing statement and affidavit are hereby  
offered.

\_\_\_\_\_  
(Member of Firm must sign here)

\_\_\_\_\_  
(Title)

\_\_\_\_\_  
(Remaining members of Firm sign here) (Name of Firm)

NOTE: Statement will be returned unless affidavit is completed in EVERY respect.

**UNIVERSITY OF COLORADO DENVER | ANSCHUTZ MEDICAL CAMPUS  
SUBCONTRACTOR'S QUALIFICATION STATEMENT**

**AFFIDAVIT FOR INDIVIDUAL**

\_\_\_\_\_ doing business \_\_\_\_\_  
(Name of individual) (Name of Firm)

certifies and says: That he/she is the person submitting this statement of experience: that he/she has read the same, and that the same is true of his/her own knowledge: that the statement is for the purpose of inducing the University of Colorado Denver to supply the submitter with plans and specifications, and that any vendor, or other agency therein named is hereby authorized to supply the University of Colorado Denver with any information necessary to verify the statement: and that furthermore, should this statement at any time cease to properly and truly represent his/her condition in any substantial respect, it will refrain from further bidding on University work until it shall have submitted a revised and corrected statement.

I certify and declare under penalty of perjury that the foregoing is true and correct:

Subscribed on \_\_\_\_\_ at \_\_\_\_\_, \_\_\_\_\_, State of \_\_\_\_\_  
(date) (city) (county)

NOTE: Statement will be returned unless  
affidavit is completed in EVERY respect. \_\_\_\_\_  
(Applicant must sign here)

**UNIVERSITY OF COLORADO DENVER | ANSCHUTZ MEDICAL CAMPUS  
SUBCONTRACTOR'S QUALIFICATION STATEMENT**

**BIDDING INFORMATION**

**QUALIFICATION**

The University of Colorado Denver will qualify or disqualify a Subcontractor on the basis of:

- (1) The information contained in this statement and
- (2) Past contract experience with the University.

**NOTIFICATION**

The University of Colorado Denver will, in writing, notify Contractors of their qualification or disqualification.



**CU Denver**  
**Business School 5<sup>th</sup> & 6<sup>th</sup> Floor Drainage Repairs**

**SECTION 00 51 00 – NOTICE OF AWARD (D/B/B)**

**PART 1 - GENERAL**

1.1 RELATED DOCUMENTS (Not Applicable)

1.2 SUMMARY (Not Applicable)

1.3 DEFINITIONS (Not Applicable)

1.4 NOTICE OF AWARD

A. FORM: State of Colorado form “Notice of Award” (SBP-6.15) for Design/Bid/Build Agreements.

B. Copies of the above noted form is attached to the end of this section.

1.5 PROCEDURE (Not Applicable)

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

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

**END OF SECTION 00 51 00**





STATE OF COLORADO  
OFFICE OF THE STATE ARCHITECT  
STATE BUILDINGS PROGRAMS

**NOTICE OF AWARD**

(Design/Bid/Build and Design/Build Lump Sum Agreements)

Date of Notice: \_\_\_\_\_

\_\_\_\_\_ Date to be inserted by the Agency/Institution

Agency/Institution: GFE

Project No./Name: 21-115057 / Business School 5<sup>th</sup> & 6<sup>th</sup> Roof Drainage Repair

TO:

The State of Colorado, represented by the undersigned, has considered the Proposals submitted for the above described work.

Your Proposal, deemed to be in the best interest of the State of Colorado, in the amount of \_\_\_\_\_ DOLLARS AND NO/100\* (\$\_\_\_\_\*) is hereby accepted, pending final execution of the Agreement.

You **are** required to execute the approved Agreement and to furnish the Performance Bond, Labor and Material Payment Bond, Insurance Policy and Certificates of Insurance, Certification and Affidavit Regarding Unauthorized Immigrants and Labor Overhead (Direct Labor Burdens) for Work performed by Contractor and major Subcontractors within ten (10) days from the date of this Notice.

If you fail to execute said Agreement and to furnish said Performance Bond, Labor and Material Payment Bond, Insurance Policy, Certificates of Insurance, Certification and Affidavit Regarding Unauthorized Immigrants, and Labor Overhead (Direct Labor Burdens) as described above within ten (10) days from the date of this Notice, the State Controller is entitled to retain the amount of the Proposal Guaranty submitted with your Proposal as Liquidated Damages. In this event, the right is reserved to consider all of your rights arising out of the acceptance of your Proposal as abandoned and to award the work covered by your Proposal to another, or to re-advertise the Project, or otherwise dispose thereof.

By \_\_\_\_\_  
State Buildings Programs                      Date  
(or Authorized Delegate)

By \_\_\_\_\_  
Principal Representative                      Date  
(Agency/Institution)

When completely executed, this form is to be sent by **certified mail** to the Contractor by the Principal Representative or delivered by any other means to which the parties agree.





**STATE OF COLORADO  
OFFICE OF THE STATE ARCHITECT  
STATE BUILDINGS PROGRAM**



**DESIGN/BUILD LUMP SUM (LS) AGREEMENT**  
(STATE FORM SC-8.0)

---

STATE AGENCY:	GFE
DEPARTMENT ID:	
CMS CONTRACT ID #:	
PROJECT #:	21-115057
PROJECT NAME:	Business School 5 <sup>th</sup> & 6 <sup>th</sup> Roof Drainage Repair
VENDOR NAME:	

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STATE OF COLORADO  
OFFICE OF THE STATE ARCHITECT  
STATE BUILDINGS PROGRAM

DESIGN/BUILD LUMP SUM (LS) AGREEMENT  
(STATE FORM SC-8.0)

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## SIGNATURE PAGE

**THE PARTIES HERETO HAVE EXECUTED THIS AGREEMENT**

Each person signing this Agreement represents and warrants that the signer is duly authorized to execute this Agreement and to bind the Party authorizing such signature.

Project Number/Name: Insert OSC Project Number followed by Project Name

CMS Contract ID No.:            Insert CMS Number & Encumbrance Number

<p style="text-align: center;"><b>DESIGN BUILD ENTITY</b>          INSERT-Legal Name of Contractor</p>   <hr style="border: 0; border-top: 1px solid black; margin: 10px 0;"/> <p style="text-align: center;">By: Name &amp; Title of Person Signing for Contractor</p> <p style="text-align: center;">Date: _____</p>	<p style="text-align: center;"><b>STATE OF COLORADO</b>          Jared S. Polis, Governor          INSERT-Name of Agency or IHE          INSERT-Name &amp; Title of Head of Agency or IHE</p>   <hr style="border: 0; border-top: 1px solid black; margin: 10px 0;"/> <p style="text-align: center;">By: Name &amp; Title of Person Signing for Agency or IHE</p> <p style="text-align: center;">Date: _____</p>
<p style="text-align: center;"><b>DEPARTMENT OF PERSONNEL &amp; ADMINISTRATION</b>          STATE BUILDINGS PROGRAM State Architect          (or authorized delegate)</p>   <hr style="border: 0; border-top: 1px solid black; margin: 10px 0;"/> <p style="text-align: center;">By: Name &amp; Title of SBP Delegate</p> <p style="text-align: center;">Date: _____</p>	<p style="text-align: center;"><b>LEGAL REVIEW</b>          Philip J. Weiser, Attorney General</p>   <p style="text-align: center;">By: _____</p> <p style="text-align: center;">Assistant Attorney General</p> <p style="text-align: center;">Date: _____</p>

In accordance with §24-30-202, C.R.S., this Agreement is not valid until signed and dated below by the State Controller (or an authorized delegate) or the Title of IHE CFO per the Fiscal Rules of the individual Institution of Higher Education

  
  

**STATE CONTROLLER**  
**Robert Jaros, CPA, MBA, JD**

  
  

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

Name of Agency or IHE Delegate-Please delete if contract will be routed to OSC for approval

  
  

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

STATE OF COLORADO  
OFFICE OF THE STATE ARCHITECT  
STATE BUILDINGS PROGRAM

DESIGN/BUILD LUMP SUM (LS) AGREEMENT  
(STATE FORM SC-8.0)

Department ID: Insert Dept. Code Contract ID #: Insert Contract ID Project #: insert Project #

**PARTIES.** THIS AGREEMENT is entered into by and between the STATE OF COLORADO, acting by and through the Insert Department's or IHE's Full Legal Name hereinafter referred to as the Principal Representative, and Insert Contractor's full Legal Name including "Inc.", "LLC" etc. having its offices at Street address, City, State and Zip Code hereinafter referred to as the Design/Build Entity or the contractor.

**EFFECTIVE DATE AND NOTICE OF NONLIABILITY.** This Agreement shall not be effective or enforceable until it is approved and signed by the State Controller or its designee (hereinafter called the "Effective Date"), but shall be effective and enforceable thereafter in accordance with its provisions. The State shall not be liable to pay or reimburse Design/Build Entity for any performance hereunder or be bound by any provision hereof prior to the Effective Date.

**RECITALS:**

**WHEREAS,** the Principal Representative intends to procure Insert Project Name as provided by the State Controller's Office hereinafter called the Project; and

**WHEREAS,** authority exists in the Law and Funds have been budgeted, appropriated, and otherwise made available, and a sufficient unencumbered balance thereof remains available for payment Fund Number: Insert Fund Number Here, Account Number: Insert Account Number Here; and

**WHEREAS,** the State has **Appropriated** and the Principal Representative has been authorized to expend the total sum of Insert Dollar Value in Written Words Dollars (\$      ) for this project including all professional services, construction/improvements, project contingencies, furnishings, movable equipment, reimbursable expenses and miscellaneous expenses; and

(WHEREAS, funds are available for only a portion of the services defined herein, as more fully described in the funding Condition Precedent clause in Article 3.5)

**WHEREAS,** the Principal Representative has established the **Fixed Limit of Construction Cost** in the amount of Insert Dollar Value in Written Words Dollars (\$      ) and

**WHEREAS,** the Design/Build Entity acknowledges the statutory authority and responsibility of the Principal Representative within the State of Colorado;

**WHEREAS,** the Design/Build Entity was selected after a determination that its proposal was the most advantageous to the Principal Representative pursuant to a request for proposal issued and awarded on       ; and

**WHEREAS**, the Design/Build Entity and the Principal Representative have negotiated the terms of this Agreement pursuant to the Colorado Procurement Code or the applicable procurement code for institutions of higher education, as amended.

**WITNESSETH**, That the Principal Representative and the Design/Build Entity agree as follows:

## **1 ARTICLE 1 PERFORMANCE OF THE WORK**

### **1.1 THE WORK**

- 1.1.1 The Design/Build Entity will design and construct the Project within the Lump Sum Lump Sum Contract Price specified, and the Design/Build Entity will furnish all the services, labor and materials to perform all the Work, including design, for the complete and prompt execution of the Project in accordance with the Contract Documents as identified in Section 1.2.
- 1.1.2 In the performance of the Work under this Agreement, the Design/Build Entity acknowledges that time is critical for Project delivery and that portions of the Work could have their design completed as separate Construction Phase(s) and under construction before other portions of the Work are fully designed. It is further recognized that this accelerated approach to construction is defined as "Fast Track Construction" and is a concept that requires maximum cooperation between all parties.
- 1.1.3 The Principal Representative acknowledges that the Design/Build Entity shall provide Written Number in Words (Number) Construction Phase(s) to accomplish the Work as mutually agreed upon. In the event the Principal Representative for any reason within the Principal Representative's control, requests more than Written Number in Words (Number) Construction Phase(s) to be furnished by the Design/Build Entity, the Principal Representative shall make arrangement with Design/Build Entity for the additional Construction Phase(s) desired and shall directly compensate the Design/Build Entity for all fees and cost associated therewith.
- 1.1.4 The Design/Build Entity agrees to use best efforts, to cooperate fully with the Principal Representative in the design and construction aspects of the Work, and to keep within the Principal Representative's monetary, schedule and quality limitations, as stipulated within this agreement.
- 1.1.5 The organization of the Specifications into division, section, and article, and the arrangement of Drawings shall not control the Design/Build Entity in dividing the Work among any level of Subcontractors or in establishing the extent of the Work to be performed by any trade.
- 1.1.6 The Lump Sum Contract Price includes plumbing and electrical building permits from appropriate entities and any other building permits as directed by the Principal Representative.
- 1.1.7 The Design/Build Entity understands the relationship of trust and confidence established between it and the Principal Representative and accepts those responsibilities as described in this Agreement. The Design/Build Entity covenants with the Principal Representative to furnish its best skill and judgment and to cooperate with the Design Build Entity's Design Build Entity's Design Build Entity's Architect/Engineer in furthering the interests of the Principal Representative. The Design/Build Entity agrees to furnish efficient business administration and superintendence and to use its best efforts to complete the Work in an expeditious and economical manner consistent with the interest of the Principal Representative.

- 1.1.8 The Design/Build Entity shall confirm that the Design Build Entity's Architect/Engineer acknowledges that it is responsible for protecting the Principal Representative's interests throughout the evolution of design and construction. Therefore, the Design Build Entity's Design Build Entity's Architect/Engineer shall provide the full scope of professional level services related to design performance and construction administration services within the Project in the same manner as it would acting as a 3<sup>rd</sup> Party entity through a conventional Design-Bid-Build or CM/GC delivery method.

## 1.2 CONTRACT DOCUMENTS

- 1.2.1 The Contract Documents are described in Article 1 of the General Conditions of the Design/Build Lump Sum Agreement (SC-8.1) (the "General Conditions"). The Contract Documents, including the General Conditions, and are essential parts of this Agreement and are fully incorporated herein.

## 2 ARTICLE 2 DESIGN/BUILD ENTITY'S SERVICES

The Design/Build Entity shall perform the following services under this Agreement in each of the phases described below:

### PRE-CONSTRUCTION SERVICES

#### 2.1 AVAILABLE FUNDS

- 2.1.1 The Design/Build Entity acknowledges that the Principal Representative is limited in the sum available to design and construct the Project. Should funding of a lesser amount be made available for the Project, it is the obligation of the Principal Representative to revise the Project Scope consistent with the ultimate appropriation.

#### 2.2 CONSULTATION AND VALUE ENGINEERING

- 2.2.1 The Design/Build Entity shall provide consultation throughout the Preconstruction and Construction Phases including but not limited to the furnishing of Value Engineering Services to identify cost effective changes in the State's specifications that will result in reducing the Lump Sum Contract Price without impairing essential functions or characteristics. The objective of Value Engineering is to achieve optimum value for each construction dollar spent and keep the time of completion and cost of the Work within the time and fiscal constraints set forth throughout the Contract Documents. In cooperation with the Principal Representative, the Design/Build Entity shall:

- a) Formulate and evaluate alternative designs, systems, materials, etc.;
- b) Provide cost estimates of the alternatives to be evaluated. Cost estimates shall include industry standard operating and maintenance costs when appropriate to evaluate life-cycle costs of the alternatives. Cost estimates shall take into consideration all cost impacts related to alternatives including but not limited to design and construction costs. The Design/Build Entity shall, at a minimum review the cost estimate at the completion of the Schematic Design and design development phases and include an analysis and commentary as to any discrepancies observed in the report referenced in 3.2.1 below;

- c) Evaluate the alternatives on the basis of costs, time schedules, availability of labor and materials, construction feasibility, etc.; and
  - d) Enable the Design Build Entity's Architect/Engineer to prepare written reports at the end of the Schematic Design and Design Development Phase summarizing the Value Engineering activities.
  - e) Lead a formal Value Engineering workshop as requested by the Principal Representative, at the end of the Schematic Design, Design Development and Construction Documents Phases review and estimating tasks, bringing multidiscipline cost/construction experts to evaluate alternative designs, systems and materials.
- 2.2.2 The Principal Representative shall participate in the formulation and evaluation of alternatives in the Value Engineering activity.
- 2.3 DESIGN AND CONSTRUCTION COSTS
- 2.3.1 The parties have not included, other than allowances specified, any Principal Representative's contingency in the Lump Sum Lump Sum Contract Price. The Design/Build Entity is responsible for performing in accordance with the Contract Documents, in exchange for the payment of the Lump Sum Contract Price by the Principal Representative. Any adjustments in the Lump Sum Contract Price will be governed by the General Conditions of the Design/Build Lump Sum Agreement (SC-8.1).
- 2.3.2 The Schedule of Values shall include, without duplication:
- a) All labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for the proper execution and completion of the Work, whether temporary or permanent, and whether or not incorporated or to be incorporated in the Work;
  - b) Any allowance designated by the Principal Representative;
  - c) Any Principal Representative furnished equipment which has been designed, specified, selected or specifically provided for by the Design Build Entity's Architect/Engineer;
  - d) The Design Build Entity's fee and the cost of work provided by the Design/Build Entity;
  - e) All bonds, insurance premiums and applicable taxes;
  - f) Contingencies for bidding, price escalation, and construction;
  - g) Plumbing and electrical building permits from appropriate entities and any other building permits as directed by the Principal Representative; and
  - h) Design fees and administrative expenses directly related to the Work.
  - i) (Refer to the General Conditions of the Design/Build Lump Sum Agreement (SC-8.1) Article 12.2 Schedules).
- 2.3.3 The Design and Construction Costs shall include the compensation of the Design Build Entity's Architect/Engineer and, the Design Build Entity's Architect/Engineer's structural, mechanical, electrical, plumbing and any other consultant required in the Request For Proposal or any other sums due the Design Build Entity's Architect/Engineer and it's consultants, but shall not include the costs of land, right of way, financing or other costs, which are the responsibility of the Principal Representative. With prior approval of the Principal Representative, the Design/Build Entity shall contract with the Design Build Entity's Architect/Engineer to perform services in connection with the Project.



## 2.4 OTHER PRE-CONSTRUCTION SERVICES

- 2.4.1 The Design/Build Entity shall perform the other Pre-Construction Services designated in this Article 3 together with such other services as are normally and customarily provided by a Design/Build Entity.
- 2.4.2 The Design/Build Entity shall make recommendations to the Principal Representative regarding the division of Work in the Drawings and Specifications to facilitate the bidding and awarding of subcontracts, allowing for phased construction and funding, if applicable, taking into consideration such factors as time of performance, availability of labor, overlapping trade jurisdictions, provisions for temporary facilities, etc.
- 2.4.3 The Design/Build Entity shall review Drawings and to (1) eliminate areas of conflict, overlapping trade jurisdictions, and overlapping in the Work to be performed by the various Subcontractors, (2) endeavor to confirm that all Work has been included, and (3) allow for phased construction as applicable.
- 2.4.4 The appropriate representatives of the Principal Representative shall review documents submitted as described in paragraph 2.4.4 by the Design/Build Entity and shall render decisions pertaining thereto without unreasonable delay.
- 2.4.5 The Design/Build Entity, including the Design Build Entity's Architect/Engineer, shall attend all regular meetings with the Principal Representative and such additional meetings as the Principal Representative may request. All regular meetings shall be scheduled with the Design/Build Entity and approval of the Principal Representative. All additional meetings shall be requested by the Principal Representative.
- 2.4.6 The Design/Build Entity shall investigate and recommend materials and equipment that could be purchased by the Principal Representative; consider long lead time procurement and mass purchasing power in making such recommendations; recommend a schedule for such purchases after coordination with the schedule for preparation of Contract Documents; and expedite and coordinate delivery of these purchases to facilitate their delivery by the required dates.
- 2.4.7 The Design/Build Entity shall provide not later than the first of each month, unless requested otherwise by the Principal Representative, a monthly report utilizing the Project Management Software described in paragraph 2.6.4 documenting the current status of the project's schedule, costs, requests for information, submittals, manpower, safety, and other pertinent information. The report shall include a narrative discussion of the progress achieved, activities anticipated for the next month, and issues that are affecting the rate of progress. Progress photographs should be attached/included. This monthly report shall be provided in Design and Construction Phases of the project. The schedule status shall include the following minimum items:
- a) Cost report showing activity dollar value, dollar value of Work in place to-date and dollar value for current period.
  - b) Cost report showing activity dollar value, dollar value of Work in place to-date, and dollar value for current period summarizing to schedule of values.
  - c) Resource report showing man-day allocations by specific trade on each activity.
  - d) Variance report comparing current dates to target dates.
  - e) Cash flow report showing monthly projections of expenditures.

A narrative schedule report shall document:

- a) Description of the actual Work accomplished during the reporting period.
- b) Description of any problem areas.
- c) Description of current and anticipated delays with recommended corrective actions to mitigate such delays.
- d) A list of proposed modifications, additions, deletions, and changes in logic to the approved schedule.

2.4.8 If the Design/Build Entity, any of its sub-consultants, or any of its Subcontractors of any tier participating in the Design Reviews observes that any of the Contract Documents are at variance with applicable laws, statutes, building codes, ordinances, rules or regulations, in any respect the Design/Build Entity shall promptly notify the Principal Representative in writing, noting the applicable drawing or specification, and recommending an appropriate alternative for correcting the design.

## 2.5 DESIGN SERVICES

2.5.1 Full scope of Design services shall be performed by qualified architects/engineers and other professionals selected and paid by the Design/Build Entity. The professional obligations of such persons shall be undertaken and performed in the interest of the Design/Build Entity. Nothing contained herein shall create any contractual relationship between Subcontractors, architects/engineers and/or suppliers with the Principal Representative.

2.5.2 Design/Build Entity shall be responsible to the Principal Representative for acts and omissions of the Design/Build Entity's employees, Subcontractors, agents and parties in privity of contract with the Design/Build Entity to perform any portion of the Work, including all design elements of the Project.

2.5.3 The Design/Build Entity may or may not be a licensed as an architect or engineer in the State of Colorado and is not authorized by law to perform design services. Accordingly, if the Design/Build Entity is not a licensed architect or engineer, they will not perform design services pursuant to this Agreement, but will furnish and warrant such design services as otherwise herein provided as a consultant. Prior to designating a professional individual or firm to perform any of these services, the Design/Build Entity shall submit the name, together with a resume of training and experience in the work of like character and magnitude for the Project being contemplated, to the Principal Representative, and receive approval in writing therefrom.

2.5.4 The Design Build Entity's Architect/Engineer shall begin design services upon receiving the Notice To Proceed to Commence Design Phase (SBP-8.26) and shall make certain to the best of its knowledge, information and belief, that the drawings and specifications prepared by it are in compliance with the approved codes as adopted by State Buildings Program (as a minimum standard) as indicated in **Exhibit H**, Building Code Compliance Policy: Coordination of Approved Building Codes, Plan Reviews and Building Inspections. Other more restrictive standards as specified by the Principal Representative are as indicated in **Exhibit H**. Drawings and specifications are to be reviewed by the State's approved Code Review Agents at the appropriate phases and with the required information as described in **Exhibit H**.

2.5.5 No design consultant or subconsultant, not already approved by the Principal Representative, shall be engaged to perform work on the Project wherein a conflict of interest exists, such as being connected with the sale or promotion of equipment or material which may be used on the Project,

provided, however, that in unusual circumstances and with full disclosure to the Principal Representative of such interest, the Principal Representative may provide a waiver, in writing, in respect to the particular consultant or subconsultant.

- 2.5.6 The Design/Build Entity shall review with the Principal Representative alternative approaches to design and construction of the improvements. Any alternative approaches must be approved in writing by the Principal Representative prior to implementation by the Design/Build Entity.
- 2.5.7 The Design/Build Entity has submitted to the Principal Representative a preliminary design for the Work and a proposed schedule for completion of the improvements for the Project in the technical proposal, **Exhibit A**, and the cost proposal, **Exhibit B**. Prior to the development of Construction Documents, the Design/Build Entity shall provide Design Development Phase drawings for review which shall resolve outstanding issues with the preliminary design and shall fix all design elements and Construction Phase(s) of the Project for final review by the Principal Representative.
- 2.5.8 At intervals appropriate to the progress of the Design Development Phase, the Design/Build Entity shall provide the Principal Representative with copies of all materials, documents, and studies necessary to permit the Principal Representative to monitor, review, provide input to, and any necessary acceptance of, the Design Development Phase in progress and completed components thereof.
- 2.5.9 The Design/Build Entity shall provide no fewer than Insert number of sets (\_\_\_\_) complete sets of Drawings, Specifications, and such other documents necessary to fully illustrate the complete Design Development Phase to the Principal Representative for the Principal Representative's approval and provide electronic files in an electric media format that conforms to the latest requirements of the Principal Representative's drawing standards.
- 2.5.10 For the Principal Representative's review and approval of the complete Design Development submittal, the Design/Build Entity shall also include the Design/Build Entity's updated Scope Narrative for the Project.
- 2.5.11 The Principal Representative's final Design Development Phase review must be completed within Insert number of days (\_\_\_\_) days, excepting holidays, commencing with the date of receipt of the complete documents by the Principal Representative. Final review by State Buildings Program Code Review Agents, are conducted separately from the Principal Representative review and shall be coordinated by the Design/Build Entity per 2.5.4 hereof.
- 2.5.12 The Design/Build Entity shall respond to all written Design Development Phase review comments in a written, tabular format. Any reviews held in meeting format shall be documented by the Design/Build Entity and copies distributed as directed by the Principal Representative. The Design/Build Entity shall record minutes of all design meetings and distribute them to all participants of the meeting. The Design/Build Entity shall be responsible for resolving review comments and obtaining necessary approvals prior to proceeding with the Construction Documents.
- 2.5.13 Upon final review and approval of the Design Development Phase, the Design/Build Entity shall develop and submit Construction Documents and Specifications coordinated with the Construction Phase schedule as follows:
  - a) A Minimum thirty percent complete Construction Documents;
  - b) A Minimum sixty percent complete Construction Documents; and,
  - c) A Minimum one hundred percent complete Construction Documents.

- 2.5.14 The Construction Documents (CDs) shall be developed and submitted in accordance with the information and detail required for each Construction Phase and shall illustrate the extent and scope of work fixed directly or indirectly by the previous and corresponding Construction Phase(s) and work related to it. Upon review and approval of each CD submittal, the Principal Representative shall issue a Notice to Proceed to Commence Construction Phase for that related Construction Phase.
- 2.5.15 The thirty percent complete CD submittal shall contain all information required for and related to the Construction Phase; including, but not limited to the following:
- a) Analysis of the Project as it relates to applicable codes, a complete State Buildings Program Code review and a Fire Code Compliance Plan.
  - b) Any changes made to the Technical Proposal, **Exhibit A**, as a result of the Design Development review.
  - c) Site Development Drawings, defining the proposed scope of development including demolition, earthwork, surface development, grading and drainage analysis and utility infrastructure; and confirm accessibility and other design requirements as indicated in the Request for Proposal, **Exhibit D**.
  - d) Complete stamped, engineered drawings for foundation and slab design in conformance with the requirements of the Geotechnical Report dated \_\_\_\_\_ as provided in the Request For Proposals, **Exhibit D**.
  - e) Dimensioned floor plans indicating all interior wall, exterior wall and structural elements and any other dimensions necessary for the engineered foundation plans, and including proposed movable equipment and furnishings, label rooms with square footage size.
  - f) Exterior elevations, including detailed material notes, vertical dimensions as appropriate and any information necessary to the development of engineered foundation plans.
  - g) Building and wall sections with information in sufficient detail to define the basic building structure and any additional scope related to or affected by Construction Phase(s).
  - h) Cut-sheets, materials, equipment and system components, including all such items normally specified under the CSI format Divisions as they relate to the 30% CD submittal.
  - i) All mechanical, electrical, and plumbing systems and equipment affected directly or indirectly by the scope of the Construction Phase(s).
  - j) Outline specifications, including Division 1, using CSI format, identifying conditions of the Agreement, materials, and standards of quality.
  - e) An updated schedule, including a timetable for submission of any other designs required due to change orders or Value Engineering.
  - f) An updated Scope Narrative for the Project.
- 2.5.16 The Design/Build Entity shall provide no fewer than Insert number of sets \_\_\_\_\_ complete sets of Drawings, Specifications, and such other documents necessary to fully illustrate the 30% complete CDs to the Principal Representative for the Principal Representative's approval and provide electronic files in an electric media format that conforms to the latest requirements of the Principal Representative's drawing standards.
- 2.5.17 The Design/Build Entity shall make certain that to the best of its knowledge, information and belief, the CD Drawings and Specifications prepared by it are in full compliance with all applicable codes, regulations, laws and ordinances, including both technical and administrative provisions

thereof. It shall be the responsibility of the Design/Build Entity to submit documents and secure approvals as required for State Buildings Program's Code Compliance Review as per 2.5.4 hereof.

- 2.5.18 Upon the Principal Representative's review and approval of the 30% CD submittal, the Design Entity shall prepare, for review and approval by the Principal Representative a 60% complete CD submittal, including all information required by and related to Insert number of phases (\_\_\_\_) Construction Phase(s). The submittal will consist of construction documents at 60% complete, including Project Specifications in CSI format and further development of all items required in the 30% submittal as provided in paragraph 2.5.15 hereof. The Design/Build Entity shall furnish no fewer than Insert number of sets (\_\_\_\_) complete sets of all 60% documents and Insert number of phases (\_\_\_\_) Construction Phase(s) for review by the Principal Representative.
- 2.5.19 Upon the Principal Representative's review and approval of the 60% complete CD submittal, the Design/Build Entity shall prepare, for the Principal Representative's final review and approval, a 100% complete CD submittal, including all information required in Insert number of phases (\_\_\_\_) Construction Phase(s) and all drawings and specifications necessary for completion of the Project. This submittal shall also include the Design/build Entity's final Scope Narrative for the Project.
- 2.5.20 These 100% and final Construction Phase(s) documents, when submitted for approval shall include a minimum of Insert number of sets (\_\_\_\_) complete sets (including electronic media) of the following for the Principal Representative's review:
- a) Complete architectural, civil, site development, utility, structural, mechanical and electrical drawings. The Design Build Entity's Architect/Engineer shall provide record sets of prints of the Construction Documents which bear the seal of the professional license and the signature of the appropriate consultants;
  - b) Complete sets of all of the Construction Phase(s) Documents including specifications in CSI format;
  - c) The title sheet shall contain the International Building Code occupancy type, construction type, gross square footage, net square footage, gross building volume and code compliance report, and the area and volume take-off;
  - d) A Code Compliance Review and Fire Code Compliance Plan that defines area separations, fire and smoke barriers, exits, exit passages, exit enclosures and fire protection or alarm systems.
  - e) The final Construction Phase(s).
- 2.5.21 It shall be the responsibility of the Design/Build Entity to establish a design submittal and review schedule in conjunction with the Principal Representative as directed that is mutually acceptable.
- 2.5.22 The final Construction Documents shall be subject to the final approval by the Principal Representative, State Buildings Program and other reviewing authorities. The Principal Representative's final review must be completed within Insert number of days (\_\_\_\_) days, excepting holidays, commencing with the date of receipt of the complete documents by the Principal Representative. Final review by State Buildings Program Code Review Agents, are conducted separately from the Principal Representative review and shall be coordinated by the Design/Build Entity per 2.5.4 hereof.
- 2.5.23 The Design/Build Entity shall respond to all written Construction Document review comments in a written, tabular format. Any reviews held in meeting format shall be documented by the Design/Build Entity and copies distributed as directed by the Principal Representative. The Design/Build Entity shall record minutes of all design meetings and distribute them to all

participants of the meetings. The Design/Build Entity shall be responsible for resolving review comments and obtaining necessary approvals prior to proceeding with the Work.

- 2.5.24 In addition to the copies required for the preceding Design Phases, the Design/Build Entity shall furnish sufficient sets of the CDs to insure distribution among Subcontractors and reviewing authorities as directed by the Principal Representative.
- 2.5.25 The Design/Build Entity is responsible for the cost of all expenses including but not limited to the reproduction requirements outlined in this Article 2. The Principal Representative shall pay for any additional review sets required in addition to those sets specified above.
- 2.5.26 The Design/Build Entity shall review the Drawings and Specifications as such are prepared, and shall recommend alternative solutions whenever design details affect construction feasibility, schedules or costs.
- 2.5.27 The Design/Build Entity shall divide the Work in the Drawings and Specifications to facilitate the bidding and awarding of sub-subcontracts, allowing for phased construction and funding, if practicable, taking into consideration such factors as time of performance, availability of labor, overlapping trade jurisdictions, provisions for temporary facilities, etc.
- 2.5.28 Prior to submission for review and approval, the Design/Build Entity shall review Drawings and Specifications with the Design Build Entity's Architect/Engineer to (1) eliminate areas of conflict, overlapping trade jurisdictions and overlapping Work to be performed by the various sub-Subcontractors, (2) endeavor to confirm that all Work has been included, and (3) allow for phased construction. It is the responsibility of the Design/Build Entity to submit complete, coordinated drawings and specifications. All submittals made under the terms of this Agreement must be complete per the requirements of Article 2 and include all required materials at the time of submittal. Incomplete submittals will not be reviewed by the Principal Representative, and the review periods of paragraph 2.5.11 and 2.5.22 shall not commence until complete submittals have been received under the terms of this Agreement. If the Principal Representative exceeds the Insert number of days (\_\_\_\_) day review period for any complete submittal made under the terms of this Agreement, and such time extension is shown to cause a delay in the critical path, the Design/Build Entity shall have the right to add the corresponding calendar days of delay to the overall Project construction schedule.
- 2.5.29 The Design/Build Entity shall develop a Construction Schedule based upon the Design Build Entity's Architect/Engineer's design efforts and design schedule as approved by the Principal Representative, and which is coordinated and integrated therewith.
- 2.5.30 The Design/Build Entity and the Design Build Entity's Architect/Engineer and its Consultants shall attend all preconstruction meetings with the Principal Representative and such additional meetings as the Principal Representative may request. All preconstruction meetings shall be scheduled by the Design/Build Entity with the approval of the Principal Representative. All additional meetings shall be scheduled by the Principal Representative.

## CONSTRUCTION PHASE SERVICES

### 2.6 CONTROL OF THE WORK

- 2.6.1 The Design/Build Entity shall supervise and direct the Work of its Subcontractors and shall coordinate the Work with the activities and responsibilities of the Principal Representative to complete the Project in accordance with the Principal Representative's objectives of cost, time

and quality and subject to the terms and conditions of the General Conditions of the Design/Build Lump Sum Agreement (SC-8.1).

- 2.6.2 The Design/Build Entity shall establish on-site organization and lines of authority in order to carry out the overall plans of the Construction Team.
- 2.6.3 The Design/Build Entity shall schedule and conduct weekly progress meetings at which the Principal Representative, Design Build Entity's Architect/Engineer, Design Build Entity's Architect/Engineer's Consultants, and Design/Build Entity can discuss jointly such matters as procedures, progress, schedule, costs, quality control and problems. The Design/Build Entity shall record and distribute minutes of all construction meetings within 48 hours of the meeting.
- 2.6.4 A contract-control/project-management software (hereafter "Project Management Software") approved by the Principal Representative and provided by the Design/Build Entity, shall be used as a primary tool for project control, communication and documentation control by all the project participants, to include the Principal Representative, the Design/Build Entity and the Design Build Entity's Architect/Engineer. The Design/Build Entity shall utilize the Project Management Software to implement a cost forecasting, monitoring, control and reporting system for the Project. The Project Management Software shall be maintained throughout the project, both during the pre-construction and construction phases. Cost analyses shall be based upon data analyses as developed/described within Section 2.4 and shall include analyses of all trades and Project components making a significant contribution for total Project costs. The Project Management Software shall provide for development of a Project cost model, monitoring the design process and periodic reviews of the cost estimates/forecasts to identify variances from the cost model. Additionally, the Project Management Software shall identify variances between actual and budgeted costs and the Fixed Limit of Design & Construction Cost and the Lump Sum Contract Price.

The Design/Build Entity shall use the Project Management Software for the major contract administration processes to include, but not limited to:

- a) Submittals:
  - 1 Design/Build Entity shall create a Submittal log and Submittal schedule.
  - 2 Submittals shall be directly submitted to the Design Build Entity's Architect/Engineer and Principal Representative and directly returned from the Design Build Entity's Architect/Engineer.
- b) Requests for Information:
  - 1 Design/Build Entity shall submit requests for information using the Project Management Software.
  - 2 Design Build Entity's Architect/Engineer shall answer requests for information via the Project Management Software. Requests for Information responses that have cost impact will have corresponding Change Order Bulletin (Form SC-6.311) issued by the Architect/ Engineer.
- c) Change Management: Entire change management process including Notices, and Change Orders shall be managed using the Project Management Software and utilizing Contract Amendment (Form SC-6.0), Change order (Form SC-6.31), Change Order Bulletin (Form SC-6.311), Change Order Proposal (Form SC-6.312) and Change Order Log.
- d) Pay Applications: Design/Build Entity shall be responsible for creating and distributing pay application in the Project Management Software using an earned-value calculation through the CPM Schedule & utilizing Application and Certificate for Contractor's Payment (SBP-7.2).

- e) Meeting Minutes: Design/Build Entity shall be responsible for creating and distributing construction-meeting minutes in the Project Management Software.
- f) Reports: Design/Build Entity shall be responsible to prepare and distribute reports in the Project Management Software.
- g) Insurance Certificate: Design/Build Entity shall responsible for storing all the insurance related information of Subcontractors in the Project Management Software.
- h) Punchlist: Design/Build Entity shall be responsible to update the Substantial Completion Punchlist status using the Project Management Software.
- i) Construction schedule: Critical Path Method as described in Article 12 of the General Conditions of the Design/Build Lump Sum Agreement (SC-8.1).
- j) All project correspondence with Principal Representative shall be in the Project Management Software.

2.6.5 The Design/Build Entity shall propose and implement an approved procedure for coordinating and tracking all required Code Compliance Building Inspections as indicated on the Building Inspection Record (BIR) as provided by the State Buildings Program approved Code Review Agent at the appropriate Construction Phase(s) as described in **Exhibit H**.

## 2.7 SCHEDULE AND COORDINATION

2.7.1 The Design/Build Entity shall begin the construction Work upon receiving The Notice To Proceed to Commence Construction Phase (SBP-7.26), in accordance with paragraph 4.1.1. The Design/Build Entity shall schedule and coordinate the Work of all of its Subcontractors on the Project including their use of the site. The Design/Build Entity shall keep the Subcontractors informed of the Project construction schedule to enable the Subcontractors to plan and perform the Work properly. The Design/Build Entity shall carry the Work forward expeditiously with adequate forces and shall achieve Completion of the Work prior to the Substantial Completion Date specified in paragraph 4.2.1, as adjusted by Change Orders and Amendments.

### 2.7.2 Schedule Management and Coordination

- a) Schedule Modifications: If, as a result of the monthly schedule update, it appears the Project Schedule no longer represents the actual / logical progression of the Work or the Design/Build Entity's plan for prosecution and progress of the Work, the Principal Representative shall require the Design/Build Entity to submit a revision to the Project Schedule. Such revisions to the Schedule shall not alter any of the Project Milestone dates.
- b) Schedule Impacts, Schedule Delays and Time Extensions: During the course of the Project, it may be appropriate to revise the Schedule to incorporate impacts or delay issues into the Project Schedule. If the Design/Build Entity determines it has encountered schedule impacts that may warrant a time extension, the Design Build Entity shall present an Impacted Schedule in accordance with the Contract General Conditions, to the Principal Representative supporting its claim.
- c) Recovery Schedule: In the event progress falls behind schedule dates, the Design/Build Entity shall prepare a recovery schedule indicating its revised plan to assure the timely completion of the Work. The recovery plan shall be subject to the Principal Representative's approval.

## 2.8 PRINCIPAL REPRESENTATIVE CONSULTANTS

2.8.1 If required, the Design/Build Entity shall assist the Principal Representative in selecting and retaining the professional services including but not limited to a surveyor, geotechnical, testing



and inspection and other special consultants, and coordinate these services, without assuming any responsibility or liability of or for these consultants.

## **2.9 START UP**

- 2.9.1 The Design/Build Entity, with the Principal Representative's maintenance staff and/or consultant, shall direct the checkout of utilities, operations, systems and equipment for readiness and assist in their initial start-up and testing/commissioning as required in the Scope Narrative with the Subcontractors of all tiers.
- 2.9.2 Prior to the Date of Completion of the Work or earlier date for phased occupation of the Work as requested by the Principal Representative, the Design/Build Entity shall schedule and conduct with the Principal Representative and Design Build Entity's Architect/Engineer a complete review, commissioning, demonstration, start-up and operational testing of all equipment and mechanical and electrical systems installed by the Design/Build Entity or its Subcontractors on the Project, and shall also review the operation and maintenance of such systems with the Principal Representative's maintenance personnel.
- 2.9.3 Subsequent to this review, the Design/Build Entity, with reasonable promptness and at no cost to the Principal Representative shall make all adjustments or corrections required by the Principal Representative or Design Build Entity's Architect/Engineer and shall balance all systems in order to make all equipment and systems perform as required by the Contract Documents and to reflect the actual use and occupancy of the Project. If necessary or requested by the Design Build Entity's Architect/Engineer or Principal Representative, the Design/Build Entity shall require the Subcontractor, supplier of material supplier to make adjustments, corrections or balancing required by this process, at no additional cost to the Principal Representative.

## **3 ARTICLE 3 PRINCIPAL REPRESENTATIVESHIP OF DOCUMENTS**

### **3.1 INSTRUMENTS OF SERVICE**

- 3.1.1 Drawings, specifications and other documents, including those in electronic form, prepared by the Design Build Entity's Architect/Engineer and the Design Build Entity's Architect/Engineer's consultants are Instruments of Service for use solely with respect to this Project. The Design Build Entity's Architect/Engineer and the Design Build Entity's Architect/Engineer's consultants shall be deemed the authors and Principal Representatives of their respective Instruments of Service and shall retain all common law, statutory and other reserved rights, including copyrights.
- 3.1.2 Upon execution of this Agreement and the contract between the Design/Build Entity and the Design Build Entity's Architect/Engineer, the Design Build Entity's Architect/Engineer shall grant to the State a perpetual nonexclusive license to reproduce and use, and permit others to reproduce and use for the State, the Design Build Entity's Architect/Engineer's Instruments of Service solely for the purposes of constructing, using and maintaining the Project for future alterations or additions to the Project. The Design Build Entity's Architect/Engineer shall obtain similar nonexclusive licenses from the Design Build Entity's Architect/Engineer's consultants consistent with this Agreement. If and upon the date the Design Build Entity's Architect/Engineer is adjudged in default, the foregoing license shall be deemed terminated and replaced by a second, nonexclusive license permitting the State to authorize other similarly credentialed design professionals to reproduce and, where permitted by law, to make changes, corrections and

additions to the Instruments of Service solely for the purposes of completing, using and maintaining the Project for future alterations or additions to the Project.

- 3.1.3 Any unilateral use by the State of the Instruments of Service for completing, using, maintaining, adding to or altering the Project or facilities shall be at the State's sole risk and without liability to the Design Build Entity's Architect/Engineer and the Design Build Entity's Architect/Engineers consultants; provided, however, that if the State's unilateral use occurs for completing, using or maintaining the Project as a result of the Design Build Entity's Architect/Engineer's default, nothing in this Article shall be deemed to relieve the Design Build Entity's Architect/Engineer of liability for its own acts or omissions or default.

## 3.2 AS-BUILT DRAWINGS/RECORD DRAWINGS

- 3.2.1 The Design Build Entity's Architect/Engineer and its consultants shall, upon completion of the Construction Phase, receive redline As-Built Drawings from the Design/Build Entity. These redline changes shall describe the built condition of the Project. This information and all of the incorporated changes directed by Bidding Addenda, Change Order/Amendment or Design Build Entity's Architect/Engineer's Supplementary Instructions shall be incorporated by the Design Build Entity's Architect/Engineer and its consultants into a Record Drawings document provided to the Principal Representative in the form of an electro-media format and a reproducible format as agreed between the parties. The Design Build Entity's Architect/Engineer shall also provide the Principal Representative with the As-Built Drawings as received from the Design/Build Entity.

## 4 ARTICLE 4 TIME OF COMMENCEMENT AND COMPLETION

### 4.1 COMMENCEMENT

- 4.1.1 The Contract Time shall commence on the Effective Date of this Agreement but no work shall be performed prior to the Principal Representative issuing a Notice to Proceed to Commence Design Phase contingent upon the delivery of all bonds, and insurance certificates as required to be furnished by the Design/Build Entity and described on the Notice of Award.
- 4.1.2 The Construction Phase shall commence on the date of first Notice to Proceed to Commence Construction Phase as issued by the Principal Representative.

### 4.2 COMPLETION

- 4.2.1 The Design/Build Entity agrees to Substantially Complete the Project within \_\_\_\_ calendar days from the date of the Notice To Proceed to Commence Design Phase (SBP-7.26), in addition, the Contractor agrees to finally complete the Project from Substantial Completion to Final Acceptance within \_\_\_\_ calendar days for a total time of completion of the entire Project of \_\_\_\_ calendar days. The Contractor shall perform the Work with due diligence to completion.

## 5 ARTICLE 5 CONTRACT SUM

### 5.1 LUMP SUM CONTRACT PRICE

- 5.1.1 The Design/Build Entity will be paid for the performance of this Agreement, subject to any additions and deductions as provided for in Article 32, 34 and 35 of the General Conditions of the Design/Build Lump Sum Agreement (SC-8.1) the Lump Sum Contract Price of Insert Dollar Value In Written Words dollars and no/100 \$ \_\_\_\_\_ (the "Lump Sum Contract Price").

### 5.2 CONDITION PRECEDENT

#### 5.2.1 FUTURE APPROPRIATIONS

Financial obligations of the Principal Representative payable after the current fiscal year are contingent upon funds for the purpose being appropriated, budgeted, and otherwise made available.

#### 5.2.2 OBLIGATIONS

(At the time of the execution of this Agreement, there are sufficient funds budgeted and appropriated to compensate the Construction Manager only for performance of the Work through and including Insert the phases funded. Therefore, it shall be a Condition Precedent to the Construction Manager's performance of the remaining Work specified in (parts of Article 3) and the State's liability to pay for such performance, sufficient funding must be made available to the Principal Representative for the Project prior to \_\_\_\_\_ and, as a further Condition Precedent, a written Amendment to this Agreement is entered into in accordance with the State of Colorado Fiscal Rules, stating that additional funds are lawfully available for the Project. If either Condition Precedent is not satisfied by \_\_\_\_\_, the Construction Manager's obligation to perform Work for (scope of work) and the State obligation to pay for such Work is discharged without liability to each other. If funding is eventually made available after \_\_\_\_\_, the Construction Manager has no right to perform the Work under (parts of Article 3) of this Agreement and the State has no right to require the Construction Manager to perform said Work.)

## 6 ARTICLE 6 OPTIONAL PROVISIONS AND ELECTIONS

The provisions of this Article 6 alter or enlarge upon the following Articles of the General Conditions of the Design/Build Agreement SC-8.1):

### 6.1 MODIFICATION OF ARTICLE 2. EXECUTION, CORRELATION, INTENT OF DOCUMENTS, COMMUNICATION AND COOPERATION

If the box below is marked, certification of apprenticeship utilization is required for all mechanical, sheet metal, fire suppression, sprinkler fitting, electrical and plumbing work on the project.

☐ \_\_\_\_\_ Principal Representative initials.

### 6.2 MODIFICATION OF ARTICLE 45. GUARANTEE INSPECTIONS AFTER COMPLETION

If the box below is marked the six month guarantee inspection is not required.

☐ \_\_\_\_\_ Principal Representative initials.

6.3 MODIFICATION 1 OF ARTICLE 27. LABOR AND WAGES

If the box is marked the Federal Davis-Bacon Act shall be applicable to the Project. The minimum wage rates to be paid on the Project shall be furnished by the Principal Representative and included in the Contract Documents.

☐ \_\_\_\_\_ Principal Representative initials.

6.4 MODIFICATION 2 OF ARTICLE 27. LABOR AND WAGES

If the box is marked, the State prevailing wage statute shall be applicable to the Project. The minimum wage rates to be paid on the Project shall be furnished by the Principal Representative and included in the Contract Documents.

☐ \_\_\_\_\_ Principal Representative initials.

6.5 MODIFICATION OF ARTICLE 39. NON-BINDING DISPUTE RESOLUTION – FACILITATED NEGOTIATIONS

If the box is marked, and initialed by the State as noted, the requirement to participate in facilitated negotiations shall be deleted from this Agreement. Article 39, Non-Binding Dispute Resolution – Facilitated Negotiations, shall be deleted in its entirety and all references to the right to the same where ever they appear in the Agreement shall be similarly deleted. The box may be marked only for projects with an estimated value of less than \$500,000.

☐ \_\_\_\_\_ Principal Representative initials.

6.6 MODIFICATION OF ARTICLE 46. TIME OF COMPLETION AND LIQUIDATED DAMAGES

If an amount is indicated immediately below, liquidated damages shall be applicable to this Project as, and to, the extent shown below. Where an amount is indicated below, liquidated damages shall be assessed in accordance with and pursuant to the terms of Article 46, Time of Completion and Liquidated Damages, in the amounts and as here indicated. The election of liquidated damages shall limit and control the party's right to damages only to the extent noted.

- a) For the inability to use the Project, for each day after the number of calendar days specified in the Design/Build Entity's proposal for the Project and the Agreement for achievement of Substantial Completion, until the day that the Project has achieved Substantial Completion and the Notice of Substantial Completion is issued, the Design/Build Entity agrees that an amount equal to \_\_\_\_\_ Dollars (\$\_\_\_\_\_); shall be assessed against Design/Build Entity from amounts due and payable to the Design/Build Entity under the Agreement, or the Design/Build Entity and the Design/Build Entity's Surety shall pay to the Principal Representative such sum for any deficiency, if amounts on account thereof are deducted from remaining amounts due, but amounts remaining are insufficient to cover the entire assessment.
- b) For damages related to or arising from additional administrative, technical, supervisory and professional expenses related to and arising from the extended closeout period, for each day in excess of the number of calendar days specified in the Design/Build Entity's proposal for the Project and the Agreement to finally complete the Project as defined by the issuance of the Notice of Final Acceptance) after the issuance of the final Notice of Substantial Completion, the Design/Build Entity agrees that an amount equal to \_\_\_\_\_ Dollars (\$\_\_\_\_\_); shall be assessed against Design/Build Entity from amounts due and payable to the Design/Build Entity under the Agreement, or the Design/Build Entity and the Design/Build Entity's Surety shall pay to the Principal Representative such sum for any deficiency, if

amounts on account thereof are deducted from remaining amounts due but amounts remaining are insufficient to cover the entire assessment.

## **7 ARTICLE 7 NOTICE IDENTIFICATION**

All Notices pertaining to this Agreement and the General Conditions (sc-8.1) or otherwise required to be given shall be transmitted in writing, to the individuals at the addresses listed below, and shall be deemed duly given when received by the parties at their addresses below or any subsequent persons or addresses provided to the other party in writing.

Notice to Principal Representative:

Insert Name of Individual acting on the PR behalf  
Insert Street Address  
City, State Zip Code  
Insert email address

With copies to State Buildings Program (or Delegate):

Insert Name of Individual acting on OSA/SBP behalf  
Insert Street Address  
City, State Zip Code  
Insert email address

Notice to Contractor:

Insert Name of Individual acting on the contractor behalf  
Insert Street Address  
City, State Zip Code  
Insert email address

With copies to:

File

**STATE OF COLORADO  
OFFICE OF THE STATE ARCHITECT  
STATE BUILDINGS PROGRAM**

**DESIGN/BUILD LUMP SUM (LS) AGREEMENT  
(STATE FORM SC-8.0)**

**EXHIBIT A: TECHNICAL PROPOSAL AND LABOR BURDEN**

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Design/Build Entity's Technical Proposal and Labor Burden (Sbp-6.18) All Appendices, Addenda and Clarifications

**STATE OF COLORADO  
OFFICE OF THE STATE ARCHITECT  
STATE BUILDINGS PROGRAM**

**DESIGN/BUILD LUMP SUM (LS) AGREEMENT  
(STATE FORM SC-8.0)**

**EXHIBIT B: COST PROPOSAL**

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Design/Build Entity's Cost Proposal, All Appendices, Addenda and Clarifications

**STATE OF COLORADO  
OFFICE OF THE STATE ARCHITECT  
STATE BUILDINGS PROGRAM**

**DESIGN/BUILD LUMP SUM (LS) AGREEMENT  
(STATE FORM SC-8.0)**

**EXHIBIT C: SCOPE NARRATIVE**

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Design/Build Entity's Scope Narrative



**STATE OF COLORADO  
OFFICE OF THE STATE ARCHITECT  
STATE BUILDINGS PROGRAM**

**DESIGN/BUILD LUMP SUM (LS) AGREEMENT  
(STATE FORM SC-8.0)**

**EXHIBIT D: REQUEST FOR PROPOSAL DOCUMENTS**

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The Request for Proposals Document, All Appendices, Addenda and Clarifications

**STATE OF COLORADO  
OFFICE OF THE STATE ARCHITECT  
STATE BUILDINGS PROGRAM**

**DESIGN/BUILD LUMP SUM (LS) AGREEMENT  
(STATE FORM SC-8.0)**

**EXHIBIT E: PERFORMANCE BOND**

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Performance Bond (Form SC-6.22)

**STATE OF COLORADO  
OFFICE OF THE STATE ARCHITECT  
STATE BUILDINGS PROGRAM**

**DESIGN/BUILD LUMP SUM (LS) AGREEMENT  
(STATE FORM SC-8.0)**

**EXHIBIT F: LABOR AND MATERIAL PAYMENT BOND**

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Labor and Material Payment Bond (Form SC-6.21)

**STATE OF COLORADO  
OFFICE OF THE STATE ARCHITECT  
STATE BUILDINGS PROGRAM**

**DESIGN/BUILD LUMP SUM (LS) AGREEMENT  
(STATE FORM SC-8.0)**

**EXHIBIT G: INSURANCE CERTIFICATES**

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Insurance Certificates (Including professional errors and omissions liability insurance)

**STATE OF COLORADO  
OFFICE OF THE STATE ARCHITECT  
STATE BUILDINGS PROGRAM**

**DESIGN/BUILD LUMP SUM (LS) AGREEMENT  
(STATE FORM SC-8.0)**

**EXHIBIT H: BUILDING CODE COMPLIANCE POLICY**

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Refer to the Office of the State Architect State Buildings Building Codes Webpage for:

*Building Code Compliance Policy* (Rev.       ); and

*Approved State Building Codes* (Rev.       )), which is Exhibit A to the *Building Code Compliance Policy*.

The State Architect Office's Building Codes Webpage is available at:

<https://osa.colorado.gov/state-buildings/building-codes>

**STATE OF COLORADO  
OFFICE OF THE STATE ARCHITECT  
STATE BUILDINGS PROGRAM**

**DESIGN/BUILD LUMP SUM (LS) AGREEMENT  
(STATE FORM SC-8.0)**

**EXHIBIT J: STATE SALES AND USE TAX FORMS**

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State Sales and Use Tax Forms

**STATE OF COLORADO  
OFFICE OF THE STATE ARCHITECT  
STATE BUILDINGS PROGRAM**

**DESIGN/BUILD LUMP SUM (LS) AGREEMENT  
(STATE FORM SC-8.0)**

**EXHIBIT K: APPLICABLE PREVAILING WAGE DETERMINATIONS**

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Applicable Prevailing Wage Determinations (If applicable)

**STATE OF COLORADO  
OFFICE OF THE STATE ARCHITECT  
STATE BUILDINGS PROGRAM**

**DESIGN/BUILD LUMP SUM (LS) AGREEMENT  
(STATE FORM SC-8.0)**

**EXHIBIT L: APPRENTICESHIP UTILIZATION CERTIFICATIONS**

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Apprenticeship Utilization Certifications (SBP-6.17) If applicable



**STATE OF COLORADO  
OFFICE OF THE STATE ARCHITECT  
STATE BUILDINGS PROGRAM**

**CONTRACTOR'S DESIGN/BID/BUILD AGREEMENT  
(STATE FORM SC-6.21)**

**SUPPLEMENTARY GENERAL CONDITIONS: FEDERAL PROVISIONS**

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**Supplementary General Conditions Federal Provisions**

**SLFRF Federal Funds: Contractor Terms and Conditions Certification**

**SLFRF Federal Funds: Contractor Terms and Conditions**



**CU Denver**  
**Business School 5<sup>th</sup> & 6<sup>th</sup> Floor Drainage Repairs**

**SECTION 00 55 00 – NOTICE TO PROCEED**

PART 1 - GENERAL

- 1.1 RELATED DOCUMENTS (Not Applicable)
- 1.2 SUMMARY (Not Applicable)
- 1.3 DEFINITIONS (Not Applicable)
- 1.4 NOTICE TO PROCEED
  - A. FORM: State of Colorado form “Notice To Proceed (Design/Bid/Build Contract)” (SBP-6.26).
  - B. A copy of the above noted form is attached to the end of this section.
- 1.5 PROCEDURE (Not Applicable)

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

**END OF SECTION 00 55 00**





STATE OF COLORADO  
OFFICE OF THE STATE ARCHITECT  
STATE BUILDINGS PROGRAM

**NOTICE TO PROCEED (DESIGN/BID/BUILD CONTRACT)**

Date of Notice: \_\_\_\_\_  
Date to be inserted by the Principal Representative  
Date/Description of Contract Documents: \_\_\_\_\_  
Institution/Agency: GFE  
Project No./Name: 21-115057 / Business School 5<sup>th</sup> & 6<sup>th</sup> Roof Drainage Repair

Attach Notice of Code Compliance from Code Review Agent/Building Official for Documents Listed Above

To:

This is to advise you that your Performance Bond, Labor and Material Payment Bond, Insurance Policy and Certificates of Insurance, and Affidavit Regarding Unauthorized Immigrants have been received. Our issuance of this Notice does not relieve you of responsibility to assure that the bond and insurance requirements of the Contract Documents are met for the duration of the Agreement. The Agreement dated \_\_\_\_\_ covering the above described work has been fully executed.

You are hereby authorized and directed to proceed within ten (10) days from date of this Notice as required in the Agreement. Any liquidated damages for failure to achieve Substantial Completion by the date agreed that may be applicable to this Contract will be calculated using the date of this Notice for the date of the commencement of the Work.

The completion date of the Project is \_\_\_\_\_ (M/D/YYYY).

By \_\_\_\_\_  
State Buildings Program  
(or Authorized Delegate) Date

By \_\_\_\_\_  
Principal Representative  
(Institution or Agency) Date

When completely executed, this form is to be sent by certified mail to the Contractor by the Principal Representative; or delivered by any other means to which the parties agree.



**SECTION 00 61 13.13 – PERFORMANCE BOND**

**PART 1 - GENERAL**

1.1 RELATED DOCUMENTS (Not Applicable)

1.2 SUMMARY (Not Applicable)

1.3 DEFINITIONS (Not Applicable)

1.4 PERFORMANCE BOND

A. FORM: State of Colorado form “Performance Bond” (SC-6.22).

B. A copy of the above noted form is attached to the end of this section.

1.2 PROCEDURE

A. Performance Bond is required for construction values of \$150,000 or more.

B. This bond must be accompanied by Power of Attorney.

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

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

**END OF SECTION 00 61 13.13**







STATE OF COLORADO  
OFFICE OF THE STATE ARCHITECT  
STATE BUILDINGS PROGRAM

**PERFORMANCE BOND**

Institution/Agency: GFE

Project No./Name: 21-115057 / Business School 5<sup>th</sup> & 6<sup>th</sup> Roof Drainage Repair

**BONDING COMPANY: DO NOT MAKE ANY CHANGES TO THE LANGUAGE IN THIS BOND.**

**KNOW ALL PERSONS BY THESE PRESENTS:**

That the Contractor

as Principal and hereinafter called "Principal,"

and

as Surety and hereinafter called "Surety," a corporation organized and existing under the laws of \_\_\_\_\_ are held and firmly bound unto **the STATE OF COLORADO** acting by and through Board of Regents of the University of Colorado, a body corporate, for and on behalf of the University of Colorado Denver, hereinafter called the "Principal Representative", in the sum of \_\_\_\_\_ Dollars (\$\_\_\_\_\_)

for the payment whereof the Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly, by these presents.

**WHEREAS**, the Principal and the State of Colorado acting by and through the Principal Representative have entered into a certain Contract, hereinafter called "Contract," dated \_\_\_\_\_, 20\_\_\_\_, for the construction of a PROJECT described as \_\_\_\_\_

which Contract is hereby by reference made a part hereof;

**NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION**, is such that, if the Principal shall promptly, fully and faithfully perform all the undertakings, covenants, terms, conditions and agreements of said Contract during the original term of said Contract any extensions thereof that may be granted by the Principal Representative with or without notice to the Surety, and during the life of any guaranty required under the Contract, and shall also well and truly perform and fulfill all undertakings, covenants, terms, conditions and agreements of any and all duly authorized modifications of said Contract that may hereafter be made, notice of which modifications to the Surety being hereby waived, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

**AND THE SAID SURETY**, for value received hereby stipulates and agrees that whenever the Principal shall be, and declared by the Principal Representative to be in default under said Contract, the State of Colorado having performed its obligations thereunder, the Surety may promptly remedy the default or shall promptly (1) Complete the Contract in accordance with its terms and conditions, or (2) Obtain a bid or bids for submittal to the Principal Representative for completing the Contract in accordance with its terms and conditions, and upon determination by the Principal Representative and Surety of the lowest responsible bidder, arrange for a contract between such bidder and the State of Colorado acting by and through the Principal Representative and make available as work progresses (even though there should be a default or a succession of defaults under the contract or contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion, less the balance of the contract price but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount hereinbefore set forth. The term "balance of the contract price" as herein used shall mean the total amount payable to the Principal under the Contract and any amendments thereto, less the amount properly paid by the State of Colorado to the Contractor.

No right of action shall accrue on this bond to or for the use of any person or corporation other than the State of Colorado.

**IN WITNESS WHEREOF** said Principal and Surety have executed this Bond, this \_\_\_\_\_ day of , A.D., \_\_\_\_\_ 20\_\_\_\_\_

(Corporate Seal)

**THE PRINCIPAL**

**ATTEST:**

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

Title: \_\_\_\_\_

\_\_\_\_\_  
Secretary

(Corporate Seal)

**SURETY**

By: \_\_\_\_\_  
Attorney-in-fact

**THIS BOND MUST BE ACCOMPANIED BY POWER OF ATTORNEY, EFFECTIVELY DATED**

Note: This bond is issued simultaneously with another bond conditioned for the full and faithful payment for all labor and material of the contract.

**SECTION 00 61 13.16 – LABOR AND MATERIAL BOND**

**PART 1 - GENERAL**

- 1.1 RELATED DOCUMENTS (Not Applicable)
- 1.2 SUMMARY (Not Applicable)
- 1.3 DEFINITIONS (Not Applicable)
- 1.4 LABOR AND MATERIAL BOND
  - A. FORM: State of Colorado form “Labor and Material Bond” (SC-6.221).
  - B. A copy of the above noted form is attached to the end of this section.
- 1.5 PROCEDURES
  - A. Labor and Material Bond is required for construction values of \$150,000 or more.
  - B. This bond must be accompanied by Power of Attorney.

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

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

**END OF SECTION 00 61 13.16**





STATE OF COLORADO  
OFFICE OF THE STATE ARCHITECT  
STATE BUILDINGS PROGRAM

**LABOR AND MATERIAL BOND**

Institution/Agency: GFE

Project No./Name: 21-115057 / Business School 5<sup>th</sup> & 6<sup>th</sup> Roof Drainage Repair

**BONDING COMPANY: DO NOT MAKE ANY CHANGES TO THE LANGUAGE IN THIS BOND.**

KNOW ALL PERSONS BY THESE PRESENTS:

That the Contractor

as Principal and hereinafter called "Principal,"

and

as Surety and hereinafter called "Surety," a corporation organized and existing under the laws of \_\_\_\_\_ are held and firmly bound unto the STATE OF COLORADO acting by and through Board of Regents of the University of Colorado, a body corporate, for and on behalf of the University of Colorado Denver, hereinafter called "Principal Representative," and to all subcontractors and any others who have supplied or furnished or shall supply or furnish materials, rental machinery, tools, or equipment actually used in the performance of the hereinafter identified Contract, or who have performed or shall perform labor in the performance of or in connection with said Contract, hereinafter called "Obligees" in the sum of \_\_\_\_\_ Dollars (\$ \_\_\_\_\_)

together with interest at the rate of eight per cent (8%) per annum on all payments becoming due in accordance with said Contract, from the time such payments shall become due until such payment shall be made, for the payment of which, well and truly made to the Obligees, the Principal and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly, by these presents.

**WHEREAS**, the Principal and the State of Colorado acting by and through the Principal Representative have entered into a certain Contract, hereinafter called "Contract," dated \_\_\_\_\_, 20\_\_\_\_ for the construction of a PROJECT described as

which Contract is hereby by reference made a part hereof;

**NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION** is such that if the Principal and the Surety shall fully indemnify and save harmless the State of Colorado and the Principal Representative from and against any and all costs and damages, including patent infringements, which either may suffer by reason of any failure or failures of the Principal promptly and faithfully to perform all terms and conditions of said Contract and shall fully reimburse and repay the State of Colorado and the Principal Representative all outlay and expense which the State of Colorado and the Principal Representative may incur in making good any such failure or failures, and further, if the Principal and his subcontractors shall duly and promptly pay for any and all labor, materials, team hire, sustenance, provisions, provender, rental machinery, tools, or equipment and other supplies which have been or shall be used or consumed by said Principal or his subcontractors in the performance of the work of said Contract, and it said Principal shall duly and promptly pay all his subcontractors the sums due them for any and all materials, rental machinery, tools, or equipment and labor that have been or shall be furnished, supplied, performed or used in connection with performance of said Contract, and shall also fully indemnify and save harmless the State of Colorado and the Principal Representative to the extent of any and all expenditures which either or both of them may be required to make by reason of any failures or defaults by the Principal or any subcontractor in connection with such payments; then this obligation shall be null and void, otherwise it shall remain in full force and effect.

It is expressly understood and agreed that any alterations which may be made in the terms of said Contract or in the work to be done under said Contract, or any extension(s) of time for the performance of the Contract, or any forbearance on the part of either the State of Colorado or the Principal to any of the others, shall not in any way release the Principal and the Surety, or either of them, their heirs, executors, administrators, successors or assigns from their liability hereunder, notice to the Surety of any such alteration, extension or forbearance being hereby waived.

**IN WITNESS WHEREOF**, the Principal and the Surety have executed this Bond, this \_\_\_\_\_ day of \_\_\_\_\_, A.D., 20\_\_\_\_\_.

(Corporate Seal)

**THE PRINCIPAL**

**ATTEST:**

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

Title: \_\_\_\_\_

\_\_\_\_\_  
Secretary

(Corporate Seal)

**SURETY**

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

Attorney-in-fact

**THIS BOND MUST BE ACCOMPANIED BY POWER OF ATTORNEY, EFFECTIVELY DATED**

Note: This bond is issued simultaneously with another bond conditioned for the full and faithful performance of the contract.

**SECTION 00 62 16 – CERTIFICATE OF INSURANCE**

**PART 1 - GENERAL**

- 1.1 RELATED DOCUMENTS (Not Applicable)
- 1.2 SUMMARY (Not Applicable)
- 1.3 DEFINITIONS (Not Applicable)
- 1.4 CERTIFICATE OF INSURANCE
  - A. Sample Certificate of Liability Insurance and language.
  - B. Sample Evidence of Property Insurance (Builder's Risk)
  - C. A copy of the above noted forms are attached to the end of this section.
- 1.5 PROCEDURE (Not Applicable)

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

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

**END OF SECTION 00 62 16**







# CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)  
CURRENT DATE

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

**IMPORTANT:** If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER COMPANY ADDRESS CITY, STATE, ZIP CODE	CONTACT NAME: PHONE (A/C, No, Ext): E-MAIL ADDRESS: FAX (A/C, No):
INSURED INSURED NAME INSURED ADDRESS INSURED CITY, STATE, ZIP CODE	INSURER(S) AFFORDING COVERAGE INSURER A : INSURER B : INSURER C : INSURER D : INSURER E : INSURER F : NAIC #

## COVERAGES

## CERTIFICATE NUMBER:

## REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS					
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> POLLUTION LIABILITY GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PROJECT <input type="checkbox"/> LOC OTHER:	Y		POLICY NUMBER	01/01/2019	01/01/2020	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ MED EXP (Any one person) \$ PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000 \$					
B	<input checked="" type="checkbox"/> AUTOMOBILE LIABILITY ANY AUTO <input checked="" type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input checked="" type="checkbox"/> HIRED AUTOS ONLY <input checked="" type="checkbox"/> NON-OWNED AUTOS ONLY	Y	Y	POLICY NUMBER	01/01/2019	01/01/2020	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$					
	<input type="checkbox"/> UMBRELLA LIAB <input type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED RETENTION \$						EACH OCCURRENCE \$ AGGREGATE \$ \$					
D	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N <input checked="" type="checkbox"/> Y	N/A	Y	POLICY NUMBER	01/01/2019	01/01/2020	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$ 100,000 E.L. DISEASE - EA EMPLOYEE \$ 100,000 E.L. DISEASE - POLICY LIMIT \$ 500,000				
E	PROFESSIONAL LIABILITY	Y		POLICY NUMBER	01/01/2019	01/01/2020	Each Occurrence 2,000,000 Aggregate 2,000,000					

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

The Regents of the University of Colorado, a Body Corporate are named as Additional Insured as respects General, Pollution and Automobile Liability policies.

The Automobile, Workers Compensation and Professional Liability policies are endorsed to include a Waiver of Subrogation in favor of The Regents of the University of Colorado, a Body Corporate.

## CERTIFICATE HOLDER

## CANCELLATION

The Regents of the University of Colorado Attn: Project Management 1945 North Wheeling Street, Campus Mail stop F-418 Aurora, CO 80045	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
	AUTHORIZED REPRESENTATIVE Authorized Representative Signature

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# EVIDENCE OF PROPERTY INSURANCE

DATE (MM/DD/YYYY)  
CURRENT TEXT

THIS EVIDENCE OF PROPERTY INSURANCE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE ADDITIONAL INTEREST NAMED BELOW. THIS EVIDENCE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS EVIDENCE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE ADDITIONAL INTEREST.

AGENCY COMPANY ADDRESS CITY, STATE, ZIP CODE		PHONE (A/C, No, Ext):	COMPANY  INSURANCE COMPANY	
FAX (A/C, No):		E-MAIL ADDRESS:		
CODE:		SUB CODE:		
AGENCY CUSTOMER ID #:				
INSURED  INSURED NAME INSURED ADDRESS INSURED CITY, STATE, ZIP CODE		LOAN NUMBER		POLICY NUMBER  POLICY NUMBER
		EFFECTIVE DATE 01/01/2019	EXPIRATION DATE 01/01/2020	<input type="checkbox"/> CONTINUED UNTIL TERMINATED IF CHECKED
THIS REPLACES PRIOR EVIDENCE DATED:				

## PROPERTY INFORMATION

LOCATION/DESCRIPTION LOCATION OF PROJECT Builders Risk is required for new buildings or alterations to existing buildings and for materials and equipment to be installed in existing structures.
THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS EVIDENCE OF PROPERTY INSURANCE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

## COVERAGE INFORMATION

PERILS INSURED ☐ BASIC ☐ BROAD ☒ SPECIAL ☐

COVERAGE / PERILS / FORMS	AMOUNT OF INSURANCE	DEDUCTIBLE
Builders Risk - 100% of Completed Value	100% Project Value	\$50,000 or les

## REMARKS (Including Special Conditions)

RE: Specific Project

## CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

## ADDITIONAL INTEREST

NAME AND ADDRESS   The Regents of the University of Colorado Attn: Project Management 1945 North Wheeling Street, Campus Mail stop F-418 Aurora, CO 80045	<input checked="" type="checkbox"/> ADDITIONAL INSURED	<input type="checkbox"/> LENDER'S LOSS PAYABLE	<input type="checkbox"/> LOSS PAYEE
	<input type="checkbox"/> MORTGAGEE	<input checked="" type="checkbox"/> Waiver of Subrogation	
	LOAN #		
	AUTHORIZED REPRESENTATIVE AUTHORIZED REPRESENTATIVE SIGNATURE		

**CU Denver**  
**Business School 5<sup>th</sup> & 6<sup>th</sup> Floor Drainage Repairs**

**SECTION 00 62 76 – APPLICATION AND CERTIFICATE FOR CONTRACTORS PAYMENT FORM**

**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

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

**1.2 SUMMARY**

- A. Section includes administrative and procedural requirements for managing the contractual requirements of this Project.
- B. Related Requirements:
  - 1. 01 29 00 – Payment Procedures

**1.3 DEFINITIONS (Not Applicable)**

**1.4 FORMS**

- A. APPLICATION AND CERTIFICATE FOR CONTRACTORS PAYMENT (SBP-7.2)
  - 1. Download Link: <https://drive.google.com/open?id=0ByG39KP3LPICVHVqenlySGJIMFE>

**1.5 PROCEDURE (Not Applicable)**

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

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

**END OF SECTION 00 62 76**



**SECTION 00 63 46 – CHANGE ORDER BULLETIN**

**PART 1 - GENERAL**

1.1 RELATED DOCUMENTS (Not Applicable)

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for managing the contractual requirements of this Project.

1.3 DEFINITIONS (Not Applicable)

1.4 CHANGE ORDER BULLETIN

- A. State of Colorado form “Change Order Bulletin” (SC-6.311).
- B. A copy of the above noted form is attached to the end of this section.

1.5 PROCEDURE (Not Applicable)

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

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

**END OF SECTION 00 63 46**





STATE OF COLORADO  
OFFICE OF THE STATE ARCHITECT  
STATE BUILDINGS PROGRAM

**CHANGE ORDER BULLETIN**

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Change Order Bulletin No: \_\_\_\_\_ Date \_\_\_\_\_

Contractor: \_\_\_\_\_

Institution or Agency: GFE

Project No./Name: 21-115057 / Business School 5<sup>th</sup> & 6<sup>th</sup> Roof Drainage Repair

Description of Work: \_\_\_\_\_

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This bulletin is issued to define the scope of revision in drawings and/or specifications for a contemplated change order. The work called for by these revisions shall be in accordance with the requirements of the original contract documents.

Please prepare and submit a proposal for the changes described below. For pricing use State Form SC-6.312. A formal change order State Form SC-6.31 will be issued after approval of your proposal by State Buildings Program and the Architect. Your proposal shall include a statement as to the effect this change will have on the time for completion of the project.

This bulletin is **NOT** an authorization to proceed.

DESCRIPTION OF CHANGE:

SPECIFICATION REVISIONS:

STATUS OF EXISTING WORK:

PREPARED BY: \_\_\_\_\_  
ARCHITECT/ENGINEER OR CONTRACTOR

APPROVED BY: \_\_\_\_\_  
STATE BUILDINGS PROGRAM  
(or Authorized Delegate)





**SECTION 00 63 53 – CHANGE ORDER PROPOSAL**

**PART 1 - GENERAL**

1.1 RELATED DOCUMENTS (Not Applicable)

1.2 SUMMARY (Not Applicable)

1.3 DEFINITIONS (Not Applicable)

1.4 CHANGE ORDER PROPOSAL

A. State of Colorado form “Change Order Proposal” (SC-6.312).

1. Download link: [https://drive.google.com/file/d/1Uo7i4h3LqpByA8GUYEI5K9qne\\_8hSwtS/view](https://drive.google.com/file/d/1Uo7i4h3LqpByA8GUYEI5K9qne_8hSwtS/view)

B. A copy of the above noted form is attached to the end of this section.

1.5 PROCEDURE (Not Applicable)

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

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

**END OF SECTION 00 63 53**





STATE OF COLORADO  
OFFICE OF THE STATE ARCHITECT  
STATE BUILDINGS PROGRAMS

CHANGE ORDER PROPOSAL

(enter information ONLY in YELLOWED cells)

Change Order Proposal No. \_\_\_\_\_ Date \_\_\_\_\_

Change Order Bulletin No: \_\_\_\_\_

Description of Work: (enter into text box) \_\_\_\_\_ Date \_\_\_\_\_

Contractor \_\_\_\_\_

Institution or Agency \_\_\_\_\_

Project No./Name \_\_\_\_\_

(Before completing this form, read instructions on reverse side.)

**PART I - WORK PERFORMED BY CONTRACTOR**

Line 1.	Direct Labor Costs		\$		
Line 2.	Labor Overhead (Direct Labor Burdens)	( _____ x Line 1)	\$	0.00	
Line 3.	Total Contractor's Labor Costs (Lines 1 and 2)		\$	0.00	
Line 4.	Direct Materials Costs		\$		
Line 5.	Materials Overhead (Delivery Costs & Taxes)	( _____ x Line 4)	\$	0.00	
Line 6.	Total Materials Costs (Lines 4 and 5)		\$	0.00	
Line 7.	Total Equipment Costs		\$		
Line 8.	PART I - TOTAL CONTRACTOR'S L, M & E COSTS (Lines 3, 6 and 7)		Part I	\$	0.00

**PART II - WORK PERFORMED BY SUBCONTRACTOR**

Line 9.	Direct Labor Costs		\$		
Line 10.	Labor Overhead (Direct Labor Burdens)	( _____ x Line 9)	\$	0.00	
Line 11.	Total Subcontractor's Labor Costs (Lines 9 and 10)		\$	0.00	
Line 12.	Direct Materials Costs		\$		
Line 13.	Materials Overhead (Delivery Costs & Taxes)	( _____ x Line 12)	\$	0.00	
Line 14.	Total Subcontractor's Materials Costs (Lines 12 and 13)		\$	0.00	
Line 15.	Total Subcontractor's Equipment Costs		\$		
Line 16.	Total Subcontractor's L, M & E Costs (Line 11, 14 and 15)		\$	0.00	
Line 17.	Subcontractor's Overhead (Indirect Costs)	( 10.0% x Line 16)	\$	0.00	
Line 18.	Subcontractor's Profit (on line 16) _____ Addition or Deduct _____		\$	0.00	
Line 19.	PART II - TOTAL SUBCONTRACTOR'S COSTS (Lines 16, 17 and 18)		Part II	\$	0.00

**PART III - CONTRACTOR'S OVERHEAD & PROFIT**

Line 20.	Contractor's Overhead (Indirect Costs)	( 10.0% x Part I Total)	\$	0.00	
Line 21.	Contractor's Profit	( 5.0% x Part I Total)	\$	0.00	
Line 22.	PART III - TOTAL CONTRACTOR OVERHEAD & PROFIT (Lines 20 and 21)		Part III	\$	0.00

**PART IV - CONTRACTOR'S MARKUP ON SUBCONTRACTOR**

Line 23.	Contractor's Commission on Subcontractor	( 5.0% x Part II Total)	\$	0.00	
Line 24.	Contractor's Profit (on line 19) _____ Addition or Deduct _____		\$	0.00	
Line 25.	PART IV - TOTAL CONTRACTOR MARKUP ON SUBCONTRACTOR (Lines 23 and 24)		Part IV	\$	0.00

**PART V - SUBTOTAL C.O. PROPOSAL (Parts I and II and III and IV)**

PART V - SUBTOTAL C.O. PROPOSAL (Parts I and II and III and IV)		Part V (Subtotal)	\$	0.00	
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**PART VI - CONTRACTOR'S BOND COST**

PART VI - CONTRACTOR'S BOND COST	( _____ x Part V Total)	Part VI	\$	0.00	
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**PART VII - GRAND TOTAL CHANGE ORDER PROPOSAL (Sum of Totals: Parts V and VI)**

PART VII - GRAND TOTAL CHANGE ORDER PROPOSAL (Sum of Totals: Parts V and VI)		Grand Total	\$	0.00	
--	--	-------------	----	------	--

**PART VIII - CONTRACT TIME (CALENDAR DAYS CHANGED)**

PART VIII - CONTRACT TIME (CALENDAR DAYS CHANGED)	<input type="checkbox"/> EXTENDED <input type="checkbox"/> NO CHANGE <input type="checkbox"/> REDUCED	_____ Days			
---	---	------------	--	--	--

THE TIME OF COMPLETION MAY CHANGE BY THE CALENDAR DAYS INDICATED (ABOVE) FROM THE TOTAL NUMBER OF DAYS LISTED IN THE CONTRACTOR'S AGREEMENT TO COMPLETE THE ENTIRE PROJECT.

**CONTRACTOR'S CERTIFICATE:**

This is to certify that, to the best of my knowledge and belief, the cost/price data submitted in response to the listed C.O. Bulletin, are accurate, complete and current as of \_\_\_\_\_.

Firm: \_\_\_\_\_

Name & title: \_\_\_\_\_

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

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

\* The proposal shall remain in full force and effect for a period of \_\_\_\_\_ calendar days from date of signature.

**ARCHITECT/ENGINEER'S CERTIFICATE:**

This is to certify that I have analyzed the proposal and find, to the best of my knowledge and belief, that the proposal represents current, fair, factual and competitive cost/price data.

Firm: \_\_\_\_\_

Name & title: \_\_\_\_\_

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

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

STATE BUILDINGS PROGRAMS (or Authorized Delegate)

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



**INSTRUCTIONS FOR COMPLETING "CHANGE ORDER PROPOSAL" COST/PRICE DATA SUMMARY (STATE FORM SC-6.312)**

(enter information only in YELLOWED cells)

Enter Change Order Proposal Number, Date Created, Contractor's Name, Agency/Institution, State Project Number and Name.  
REFERENCE: Enter Change Order Bulletin Number, Date Issued, and Description of Changes from Bulletin, noting exceptions which are listed in the Bulletin but are excluded, i.e., not priced on this form.

**PART I - WORK PERFORMED BY CONTRACTOR:**

Line 1. Direct Labor Costs: Fill in subtotal of direct labor costs which includes base rates plus applicable fringe benefits. On Contractor's (or Sub's) letterhead show costs as follows:

Trade	Rate	Duration	Extended Costs
	\$	x	= \$
	\$	x	= \$
Direct Labor Cost			= \$

Line 2. Labor Overhead (Direct Labor Burdens, etc.): Enter percentage (as submitted in Schedule of Values) of Line 1 as applicable. (Spread

Line 3. Total Contractor's Labor Costs: Total of Lines 1 and 2. (Spreadsheet calculates the total)

Line 4. Direct Material Cost: Support with quotes or invoices. Fill in subtotal of direct materials costs.

Include all delivery, handling, insurance costs, etc. On Contractor's letterhead show direct materials costs as follows:

Materials	Rate	Quantity	Extended Costs
	\$	x	= \$
	\$	x	= \$
Direct Materials Cost			= \$

Line 5. Materials Overhead (Delivery, taxes, insurance, etc. - as mutually agreed upon at contract signing):

Enter percentage as applicable. (Spreadsheet calculates the value)

Line 6. Total Contractor's Material Costs: Total of Lines 4 and 5. (Spreadsheet calculates the total)

Line 7. Total Contractor's Equipment Costs: Enter total equipment costs including indirect overhead costs

in hourly rate - except indirect labor costs. On Contractor's letterhead show total equipment costs as follows:

Equipment	Rate	Duration	Extended Costs
	\$	x	= \$
	\$	x	= \$
Total Equipment Cost			= \$

Line 8. TOTAL CONTRACTOR'S Labor, Materials & Equipment (L, M & E) Costs: Add Lines 3, 6 and 7 of Part I.

(Spreadsheet form calculates totals)

**PART II - WORK PERFORMED BY SUBCONTRACTOR:**

Line 9. Direct Labor Costs: See Line 1 instructions.

Line 10. Labor Overhead (Direct Labor Burdens, etc.): Enter percentage (as submitted in Schedule of Values) of Line 9 as applicable.

(Spreadsheet calculates the value)

Line 11. Total Contractor's Labor Costs: Total of Lines 9 and 10. (Spreadsheet calculates the total)

Line 12. Direct Material Cost: See Line 4 instructions.

Line 13. Materials Overhead (Delivery, taxes, insurance, etc.) Enter percentage as applicable. (Spreadsheet calculates the value)

Line 14. Total Subcontractor's Material Costs: Total of Lines 12 and 13. (Spreadsheet calculates the total)

Line 15. Total Subcontractor's Equipment Costs: See Line 7 instructions.

Line 16. TOTAL SUBCONTRACTOR'S Labor, Materials & Equipment (L, M & E) Costs: Add Lines 11, 14 and 15 of Part II.

Line 17. Subcontractor's Overhead (Indirect costs). Edit percentage of Line 16 if applicable - See Article 35 of General Conditions.

Line 18. Subcontractor's Profit: Enter a "1" in appropriate cell. For an addition, Edit E37. a deduct, Edit I37. See Article 35 General Conditions

Line 19. TOTAL SUBCONTRACTOR'S Labor, Materials & Equipment (L, M & E) Costs: Add Lines 16, 17 and 18 of Part II.

**PARTS III THROUGH VIII - CERTIFICATIONS - Self Explanatory.**

Part 3. Edit percentages for Line 20 or 21 if applicable. See Article 35 of General Conditions.

Part 4. Line 23, Edit percentages applicable to Line 18. See Article 35 of General Conditions.

Part 4. Line 24, Enter a "1" in appropriate cell. For an addition, edit E45, a deduct edit I45. See Article 35 of General Conditions.

Part 5. SUBTOTAL OF CHANGE ORDER PROPOSAL (sum of lines 8, 19, 22, and 25 - applicable)

Part 6. Contractor's Bond Cost: Enter percentage value of Part 5 as applicable. (spreadsheet calculates the value)

Part 7. GRAND TOTAL OF THE CHANGE ORDER PROPOSAL. (spreadsheet calculates the sum of parts 5 and 6)

Part 8. Contract time change. Place an "X" in appropriate cell and edit the cell to indicate the number of days changed.

A. The Contractor, who prepares this proposal form, certifies the cost/price data by signing, dating, and forwarding same to the Architect/Engineer (or Consultant) for further action.

B. The Architect/Engineer (or Consultant) reviews and analyzes the cost/price data for the requirements that these are: 1) currently prevalent, 2) reasonably fair, 3) factually applicable, and 4) equivalently competitive market selling prices. The Architect/Engineer (or Consultant) may negotiate - after receipt of the cost proposal - any or all of the cost elements of the proposal to support a recommendation of acceptance to the Principal Representative. Certification by the A/E (or Consultant) of the above requirements is made upon his signature. The Architect/Engineer (or Consultant) forwards the proposal with the supporting back-up to the Agency.

C. Authority for the Institution or Agency (usually the Principal Representative) reviews the proposal, signs, dates, and forwards to Office of the State Architect for final action.

D. State Buildings Division reviews the cost proposal, with all supporting back-up, for technical and procedural requirements and, if in order, signs and dates the proposal.

**SECTION 00 63 58 – CHANGE ORDER LOG (CM/GC)**

**PART 1 - GENERAL**

- 1.1 RELATED ITEMS (Not Applicable)
- 1.2 SUMMARY (Not Applicable)
- 1.3 DEFINITIONS (Not Applicable)
- 1.4 CHANGE ORDER LOG
  - A. State of Colorado form “Change Order Log”
  - B. A copy of the above noted form is attached to the end of this section.
- 1.5 PROCEDURE (Not Applicable)

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

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

**END OF SECTION 00 63 58**



STATE BUILDINGS AND REAL ESTATE PROGRAMS  
CHANGE ORDER MANAGEMENT  
CHANGE ORDER LOG

Project #:

Project Title:  
Contractor:

[illegible]

TOTALS:

	±	±
COST:		
TIME:		

\$0

**Org Contract**

100

Contingency Codes:

**DSC - DIFFERING SITE CONDITIONS:** Either encountered on site or in the building structure due to existing conditions not identified or detected during initial investigations

**BA - BID ALTERNATES:** Implementation of either additive or deductive bid alternates due to favorable/unfavorable base bid results. The functionality of the project is not compromised by implementation of deductive alternates.

**AV-ADDED VALUE** Change work represents essential work necessary to achieve original scope of work but was not identified in the original bid documents due to omission.

UPG-UPGRADES: Change work due to voluntary upgrading by agency/institution of materials and/or equipment/systems within original scope of work. Justification is to be based on durability, energy efficiency, aesthetics, etc.

UI - UNKNOWN ITEMS: Unforeseen costs associated with impact of project on existing functions of the agency/institution causing disruptions, shut downs, relocations, etc.

Status Codes

OPN - Open item

been submitted by Contractor for review by A/E and owner.

APP - Approved for processing

Approved for processing  
Closed item (CI) has been processed or item voided

SUB-COP has

ClO<sub>2</sub>





**SECTION 00 63 63 – CHANGE ORDER**

PART 1 - GENERAL

- 1.1 RELATED DOCUMENTS (Not Applicable)
- 1.2 SUMMARY (Not Applicable)
- 1.3 DEFINITIONS (Not Applicable)
- 1.4 CHANGE ORDER
  - A. State of Colorado form “Change Order” (SC-6.31).
  - B. A copy of the above noted form is attached to the end of this section.
- 1.5 PROCEDURE (Not Applicable)

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

**END OF SECTION 00 63 63**





STATE OF COLORADO  
OFFICE OF THE STATE ARCHITECT  
STATE BUILDINGS PROGRAM

**CHANGE ORDER**

Change Order No: \_\_\_\_\_ Contract ID No. \_\_\_\_\_ Date \_\_\_\_\_

Contractor: \_\_\_\_\_

Institution or Agency: **GFE**

Project No./Name: **21-115057 / Business School 5<sup>th</sup> & 6<sup>th</sup> Roof Drainage Repair**

Your Change Order Proposal(s), dated \_\_\_\_\_ is hereby being designated for approval of the following work:

(Note: If more space is needed for description of work, attach additional 8-1/2" x 11" sheets hereto.)

This change order was originated by the Contractor ☐, Architect/Engineer ☐, State ☐, and I/We do hereby recommend acceptance and approval of the change to the Contractor's Agreement Dated \_\_\_\_\_ which is by this reference, made a part hereof, and identified as Exhibit \_\_\_\_\_ with an increase ☐, a decrease ☐, no change ☐, of \$\_\_\_\_\_.

The Time of Completion is extended \_\_\_\_\_ calendar days ☐, is unchanged ☐, is reduced ☐ calendar days, from the total number of days listed in the Contractor's Agreement to complete the entire Project. The revised total number of days to complete the entire Project aggregating this Change Order and previously approved Change Order(s) per the Summary of Changes chart below, is \_\_\_\_\_ calendar days. If the completion date was extended or reduced, the new completion date of the Project is \_\_\_\_\_ (M/D/YYYY).

SUMMARY OF CHANGES			
	Description of Work/Date	Time of Completion/ Calendar Days Extended/Reduced	Dollar Amounts
Original Contract			
Change Order #1			
Change Order #2			
Current Totals			

\*Persons signing for Architect/Engineer/Contractor hereby swear and affirm that they are authorized to act on Architect/Engineer/Contractor's behalf and acknowledge that the State is relying on their representations to that effect. **Principal is not a recognized title and will not be accepted.**

Architect/Engineer Firm	Name and Title (print)	Date
	Signature	
Contractor (Name of Firm)	Name and Title (print)	Date
	Signature	
Institution or Agency	Name and Title (print)	Principal Representative (Signature)
		Date

CONTRACT STATUS			
Original Contract Value		STATE BUILDINGS PROGRAM (or Authorized Delegate)	DATE
Previous increases by CO/Amend			
Previous decreases by CO/Amend			
Value After Prior CO's/Amend		STATE CONTROLLER (or Authorized Delegate)	DATE
This CO/Amend			
Increases <input type="checkbox"/> Decreases <input type="checkbox"/>			
CURRENT CONTRACT VALUE		(Verification)	

**SECTION 00 63 64.05 – CONTRACT AMENDMENT**

**PART 1 - GENERAL**

1.1 RELATED DOCUMENTS (Not Applicable)

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for managing the contractual requirements of this Project.

1.3 DEFINITIONS (Not Applicable)

1.4 CHANGE ORDER BULLETIN

- A. State of Colorado form “Contract Amendment” (SC-6.0A).
- B. A copy of the above noted form is attached to the end of this section.

1.5 PROCEDURE (Not Applicable)

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

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

**END OF SECTION 00 63 64.05**





STATE OF COLORADO  
OFFICE OF THE STATE ARCHITECT  
STATE BUILDINGS PROGRAM

**CONTRACT AMENDMENT**

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Amendment No: \_\_\_\_\_ Contract ID No. \_\_\_\_\_

Contractor: \_\_\_\_\_

Institution or Agency: **GFE**

Project No./Name: **21-115057 / Business School 5<sup>th</sup> & 6<sup>th</sup> Roof Drainage Repair**

---

PARTIES. THIS AMENDMENT is entered into by and between the STATE OF COLORADO, acting by and through the \_\_\_\_\_, Principal Representative, hereinafter referred to as the State, and \_\_\_\_\_ having its offices at \_\_\_\_\_ hereinafter referred to as the Contractor.

EFFECTIVE DATE AND NOTICE OF NONLIABILITY. This Amendment shall not be effective or enforceable until it is approved and signed by the State Controller or its designee (hereinafter called the "Effective Date"), but shall be effective and enforceable thereafter in accordance with its provisions. The State shall not be liable to pay or reimburse Contractor for any performance hereunder or be bound by any provision hereof prior to the Effective Date.

**FACTUAL RECITALS**

Authority exists in the Law and Funds have been budgeted, appropriated, and otherwise made available and a sufficient unencumbered balance thereof remains available for payment.

Required approval, clearance, and coordination has been accomplished from and with appropriate agencies; and

[Statement of facts/reasons for the Amendment]

NOW THEREFORE, it is hereby agreed that

1. Consideration for this Amendment consists of the payments, which shall be made pursuant to this Amendment and the promises, and agreements herein set forth.
2. It is expressly agreed by the parties that this Amendment is supplemental to the original Contract, as amended (\_\_\_\_\_), *collectively\** referred to as the original Contract, which is incorporated by reference herein, that all provisions thereof, unless specifically modified herein, apply to this Amendment as though they were expressly re-written, incorporated, and included herein. (*\*Note: only use this language if creating Amendment #2 or higher*)
3. It is agreed the original contract is and shall be modified, altered, and changed in the following respects only:
  - a.
  - b.
  - c.

SUMMARY OF CHANGES			
	Description of Work/Date	Time of Completion/ Calendar Days Extended/Reduced	Dollar Amounts
Original Contract			
Amendment #1			
Current Total Amount of Contract (To Date):			

4. Except with respect to the "Special Provisions," in the event of any conflict, inconsistency, variance, or contradiction between the provisions of this Amendment and any of the provisions of the original contract, the provisions of this Amendment shall in all respects supersede, govern, and control. The "Special Provisions" shall always be controlling over other provisions in the contract or Amendments. The factual representations in the "Special Provisions" concerning the absence of bribery or corrupt influences and personal interest of State employees are presently reaffirmed.
5. FINANCIAL OBLIGATIONS OF THE STATE PAYABLE AFTER THE CURRENT FISCAL YEAR ARE CONTINGENT UPON FUNDS FOR THAT PURPOSE BEING APPROPRIATED, BUDGETED, AND OTHERWISE MADE AVAILABLE.
6. THIS AMENDMENT SHALL NOT BE DEEMED VALID UNTIL IT SHALL HAVE BEEN APPROVED BY THE CONTROLLER OF THE STATE OF COLORADO OR SUCH ASSISTANT AS SHE OR HE MAY DESIGNATE.



**THE PARTIES HERETO HAVE EXECUTED THIS CONTRACT**

Persons signing for Contractor/Consultant hereby swear and affirm that they are authorized to act on Contractor's behalf and acknowledge that the State is relying on their representations to that effect. **Principal is not a recognized title and will not be accepted.**

Project Name/Number: 21-115057 / Business School 5<sup>th</sup> & 6<sup>th</sup> Roof Drainage Repair  
Contract ID No.: \_\_\_\_\_

**THE CONTRACTOR/CONSULTANT:**

\_\_\_\_\_  
Legal Name of Contracting Entity

\_\_\_\_\_  
\*Signature

By \_\_\_\_\_  
Name (print) Title

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

**STATE OF COLORADO**, acting by and through:  
(Insert Name of Agency or IHE)

By: \_\_\_\_\_  
(Insert Name & Title of Principal Representative for Agency or IHE)

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

**APPROVED**  
DEPARTMENT OF PERSONNEL & ADMINISTRATION  
STATE BUILDINGS PROGRAM  
State Architect (or authorized Delegate)

By: \_\_\_\_\_  
(Insert Name of Authorized Individual)

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

**APPROVED**  
DEPARTMENT OF LAW  
ATTORNEY GENERAL (or authorized Delegate)

By: \_\_\_\_\_  
(Insert Name of Authorized Individual)

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

**ALL CONTRACTS MUST BE APPROVED BY THE STATE CONTROLLER:**

CRS §24-30-202 requires the State Controller to approve all State Contracts. This Contract is not valid until signed and dated below by the State Controller or delegate. Contractor is not authorized to begin performance until such time. If Contractor begins performing prior thereto, the State of Colorado is not obligated to pay Contractor for such performance or for any goods and/or services provided hereunder.

**APPROVED:**

STATE OF COLORADO  
STATE CONTROLLER'S OFFICE  
State Controller (or authorized Delegate)

By: \_\_\_\_\_  
(Insert Name & Title of Authorized Individual)

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



**SECTION 00 65 15 – NOTICE OF PARTIAL SUBSTANTIAL COMPLETION**

**PART 1 - GENERAL**

1.1 RELATED DOCUMENTS (Not Applicable)

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for managing the contractual requirements of this Project.

1.3 DEFINITIONS (Not Applicable)

1.4 NOTICE OF PARTIAL SUBSTANTIAL COMPLETION

- A. State of Colorado form “Notice of Partial Substantial Completion” (SPB-071).
- B. A copy of the above noted form is attached to the end of this section.

1.5 PROCEDURE (Not Applicable)

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

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

**END OF SECTION 00 65 15**





STATE OF COLORADO  
OFFICE OF THE STATE ARCHITECT  
STATE BUILDINGS PROGRAM

**NOTICE OF PARTIAL SUBSTANTIAL COMPLETION**

Date of Partial Substantial Completion: \_\_\_\_\_  
Date to be inserted by the Principal Representative

Institution/Agency: GFE

Project No./Name: 21-115057 / Business School 5<sup>th</sup> & 6<sup>th</sup> Roof Drainage Repair

TO:

Principal Representative

and

Contractor

This is to advise you that the Work has been reviewed, inspected and determined, to the best knowledge, information and belief of the Architect/Engineer, to be substantially complete as of the date noted above in accordance with the criteria outlined in Article 41 of The General Conditions of the Contract in SC-6.23 and SC-8.1 or Article 17.3 in SC-6.4 and the Specifications, including without limitation a) suitable for occupancy, b) inspected for code compliance with Building Inspection Records signed by code officials for the State, c) determined to be fully and comfortably usable, and d) fully cleaned and appropriate for presentation to the public.

A punch list of work to be completed, work not in compliance with the Drawings or Specifications, and unsatisfactory work is attached hereto, along with the Contractor's schedule for the completion of each and every item identified on the punch list specifying the Subcontractor or trade responsible for the work, and the dates the completion or correction will be commenced and finished within any period indicated in the Agreement for punch list completion prior to Final Acceptance.

Except as stated on the reverse side of this Notice of Partial Substantial Completion, all manufacturers' warranties, other special warranties and the Contractor's one-year obligation to perform remedial work, shall commence on the Date of Substantial Completion noted above.

This Notice of Partial Substantial Completion shall be effective and establish the Date of Substantial Completion only when fully executed on the reverse by the Contractor and the Principal Representative. The Principal Representative accepts the Work as substantially complete as of the Date of Substantial Completion herein noted. The Contractor agrees to complete or correct the Work identified on the attached punch list and to do so in accordance with attached punch list completion schedule

_____ Architect/Engineer	_____ Date	_____ Contractor	_____ Date
_____ State Buildings Program (or Authorized Delegate)	_____ Date	_____ Principal Representative (Institution or Agency)	_____ Date

The responsibilities of the Principal Representative and the Contractor for security, maintenance, heat, utilities, and insurance shall be as specified in the Contract Documents or as otherwise hereafter noted:

Exceptions, if any, to the commencement of warranties shall be:

The attached final punch list consists of \_\_\_\_ pages, and the attached Contractor's schedule showing the dates of commencement and completion of each punch list item consists of \_\_\_\_ pages.

When completely executed, this form shall be sent to the Contractor and the Principal Representative with a copy to State Buildings Program.

**SECTION 00 65 16 – NOTICE OF SUBSTANTIAL COMPLETION**

**PART 1 - GENERAL**

1.1 RELATED DOCUMENTS (Not Applicable)

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for managing the contractual requirements of this Project.

1.3 DEFINITIONS (Not Applicable)

1.4 CHANGE ORDER BULLETIN

- A. State of Colorado form “Notice of Substantial Completion” (SPB-07).
- B. A copy of the above noted form is attached to the end of this section.

1.5 PROCEDURE (Not Applicable)

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

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

**END OF SECTION 00 65 16**







STATE OF COLORADO  
OFFICE OF THE STATE ARCHITECT  
STATE BUILDINGS PROGRAM

**NOTICE OF SUBSTANTIAL COMPLETION**

Date of Substantial Completion: \_\_\_\_\_  
Date to be inserted by the Principal Representative

Institution/Agency: GFE

Project No./Name: 21-115057 / Business School 5<sup>th</sup> & 6<sup>th</sup> Roof Drainage Repair

TO:

Principal Representative

and

Contractor

This is to advise you that the Work has been reviewed, inspected and determined, to the best knowledge, information and belief of the Architect/Engineer, to be substantially complete as of the date noted above in accordance with the criteria outlined in Article 41 of The General Conditions of the Contract in SC-6.23 and SC-8.1 or Article 17.3 in SC-6.4 and the Specifications, including without limitation a) suitable for occupancy, b) inspected for code compliance with Building Inspection Records signed by code officials for the State, c) determined to be fully and comfortably usable, and d) fully cleaned and appropriate for presentation to the public.

A punch list of work to be completed, work not in compliance with the Drawings or Specifications, and unsatisfactory work is attached hereto, along with the Contractor's schedule for the completion of each and every item identified on the punch list specifying the Subcontractor or trade responsible for the work, and the dates the completion or correction will be commenced and finished within any period indicated in the Agreement for punch list completion prior to Final Acceptance.

Except as stated on the reverse side of this Notice of Substantial Completion, all manufacturers' warranties, other special warranties and the Contractor's one-year obligation to perform remedial work, shall commence on the Date of Substantial Completion noted above.

This Notice of Substantial Completion shall be effective and establish the Date of Substantial Completion only when fully executed by the Contractor and the Principal Representative. The Principal Representative accepts the Work as substantially complete as of the Date of Substantial Completion herein noted. The Contractor agrees to complete or correct the Work identified on the attached punch list and to do so in accordance with attached punch list completion schedule

_____ Architect/Engineer	_____ Date	_____ Contractor	_____ Date
_____ State Buildings Program (or Authorized Delegate)	_____ Date	_____ Principal Representative (Institution or Agency)	_____ Date

The responsibilities of the Principal Representative and the Contractor for security, maintenance, heat, utilities, and insurance shall be as specified in the Contract Documents or as otherwise hereafter noted:

Exceptions, if any, to the commencement of warranties shall be:

The attached final punch list consists of \_\_\_\_ pages, and the attached Contractor's schedule showing the dates of commencement and completion of each punch list item consists of \_\_\_\_ pages.

When completely executed, this form shall be sent to the Contractor and the Principal Representative with a copy to State Buildings Program.

**SECTION 00 65 19.01 – BUILDING INSPECTION RECORD**

**PART 1 - GENERAL**

1.1 RELATED DOCUMENTS (Not Applicable)

1.2 SUMMARY (Not Applicable)

1.3 DEFINITIONS (Not Applicable)

1.4 BUILDING INSPECTION RECORD

- A. State of Colorado form “Notice of Substantial Completion” (SBP-BIR).
- B. A copy of the above noted form is attached to the end of this section.

1.5 PROCEDURE

- A. The University Project Manager will request building permits and provide to Contractor.
- B. Permits issued outside of the University jurisdiction are the responsibility of the contractor.
- C. Paper copy of the Building Inspection Record (BIR) is required to be kept at the construction site at all times. After final signoff by Building Inspector, return paper copy to University Project Manager. Project Manager is responsible for final signoff on the BIR before the Building Department can close the permit.
- D. Contractor is responsible for requesting all University Building Inspector requests through the University’s MyCityInspector website platform.
- E. Use the following login page for requesting inspections: <https://ucdenver.mycityinspector.com>

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

**END OF SECTION 00 65 19.01**





**STATE OF COLORADO**  
**OFFICE OF THE STATE ARCHITECT**  
**STATE BUILDINGS PROGRAM**

**BUILDING INSPECTION RECORD**

Institution or Agency: GFE

Project No./Name: 21-115057 / Business School 5<sup>th</sup> & 6<sup>th</sup> Roof Drainage Repair

Building Official/Code Review Agent: \_\_\_\_\_ Type of Construction: \_\_\_\_\_

Architect/Engineer: \_\_\_\_\_ Occupancy Classifications: \_\_\_\_\_

Contractors: \_\_\_\_\_ Project Manager: \_\_\_\_\_

General: \_\_\_\_\_ Project Manager Signature \_\_\_\_\_

Electrical: \_\_\_\_\_ At Completion: \_\_\_\_\_

Mechanical: \_\_\_\_\_ Inspector of Record Signature \_\_\_\_\_

Plumbing: \_\_\_\_\_ at Completion: \_\_\_\_\_

Notice to Proceed Date: \_\_\_\_\_ BIR Completion Date: \_\_\_\_\_

Provide If  
Checked

**\* No work shall be concealed or covered until the appropriate inspector has inspected and approved.**

	Building (Consultant)	Date	Inspector/ICC#	Comments or Corrections
<input type="checkbox"/>	Footings/Foundations			
<input type="checkbox"/>	Concrete Slab / Under-Floor			
<input type="checkbox"/>	Framing (after rough elec/mech/plumb)			
<input type="checkbox"/>	Lath and Gypsum Board			
<input type="checkbox"/>	Fire-Resistant Penetrations			
<input type="checkbox"/>	Mechanical/Energy Efficiency			
<input type="checkbox"/>	Roofing			
<input type="checkbox"/>	Other			
<input type="checkbox"/>	Final			
	<b>Special (Consultant)</b>	<b>Date</b>	<b>Inspector</b>	<b>Comments or Corrections</b>
<input type="checkbox"/>	Steel			
<input type="checkbox"/>	Concrete			
<input type="checkbox"/>	Masonry			
<input type="checkbox"/>	Wood			
<input type="checkbox"/>	Soils/Foundations			
<input type="checkbox"/>	Spray-Applied Fireproofing			
<input type="checkbox"/>	Smoke Control Systems			
<input type="checkbox"/>	Other			
	<b>Elevator Inspection (State)</b>	<b>Date</b>	<b>Inspector</b>	<b>Comments or Corrections</b>
<input type="checkbox"/>	Final			
	<b>Electrical (Co. St. Electrical Bd.)</b>	<b>Date</b>	<b>Inspector</b>	<b>Comments or Corrections</b>
<input type="checkbox"/>	Underground			
<input type="checkbox"/>	Rough Walls			
<input type="checkbox"/>	Rough Ceilings			
<input type="checkbox"/>	Final			

**Place this card in an obvious, protected location, along with all related inspection reports and documents.**

SBP-BIR  
Rev. 5/2012

**SECTION 00 65 19.03 – NOTICE OF APPROVAL OF OCCUPANCY/USE**

**PART 1 - GENERAL**

- 1.1 RELATED DOCUMENTS (Not Applicable)
- 1.2 SUMMARY (Not Applicable)
- 1.3 DEFINITIONS (Not Applicable)
- 1.4 NOTICE OF APPROVAL OF OCCUPANCY/USE
  - A. State of Colorado form “Notice of Approval of Occupancy/Use” (SBP-01).
  - B. A copy of the above noted form is attached to the end of this section.
- 1.5 PROCEDURE

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

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

**END OF SECTION 00 65 19.03**







STATE OF COLORADO  
OFFICE OF THE STATE ARCHITECT  
STATE BUILDINGS PROGRAM

**NOTICE OF APPROVAL OF OCCUPANCY/USE**

Date of Occupancy: \_\_\_\_\_  
Date to be inserted by the Architect/Engineer after consultation with Principal Representative

Institution/Agency: GFE

Project No./Name: 21-115057 / Business School 5<sup>th</sup> & 6<sup>th</sup> Roof Drainage Repair

Portion(s) of project for which occupancy is approved:

Type of Occupancy: ☐ Total or ☐ Partial

The items identified below if applicable must be completed with before Occupancy is approved.

Date Completed	A/E Signoff	
		1. The Notice of Substantial Completion has been issued and the Building Inspection Record is completely signed-off and attached.
		2a. Notification has been made to the local Fire Department concerning which portion(s) of the building will be occupied and the date(s).
		2b. Fire alarms, smoke detection systems and building fire sprinkler systems have been fully checked and are operable.
		2c. The building's fire connections must be installed and operable, if applicable.
		3. Coordination for final utility and service connections and meters (water, gas, sewer, electricity and telecommunication) has been made and systems are in full operating order.
		4. Sterilization of plumbing systems has been performed.
		5. Operational test of systems and equipment has been performed as required.
		6. Systems adjustments such as balancing, equipment operations, etc., have been performed. Reports have been submitted to the Architect/Engineer for approval.
		7. Principal Representative furnished equipment and furnishings are coordinated and placed.
		8. All elements left unfinished must be in such condition that there would be no hazard to the health or safety of the occupants.
		9. All restroom facilities must be fully functional and operable.
		10. All light fixtures must be installed and operable.



**SECTION 00 65 19.23 – PRE-ACCEPTANCE CHECKLIST**

**PART 1 - GENERAL**

- 1.1 RELATED DOCUMENTS (Not Applicable)
- 1.2 SUMMARY (Not Applicable)
- 1.3 DEFINITIONS (Not Applicable)
- 1.4 PRE-ACCEPTANCE CHECKLIST
  - A. State of Colorado form “Pre-Acceptance Checklist” (SBP-05).
  - B. A copy of the above noted form is attached to the end of this section.
- 1.5 PROCEDURE (Not Applicable)

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

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

**END OF SECTION 00 65 19.23**





STATE OF COLORADO  
OFFICE OF THE STATE ARCHITECT  
STATE BUILDINGS PROGRAMS

**PRE-ACCEPTANCE CHECKLIST\***

Institution or Agency: GFE Final Punch List Date \_\_\_\_\_  
Architect/Engineer: Architectural Workshop, LLC  
Contractor: \_\_\_\_\_  
Project No./Name: 21-115057 / Business School 5<sup>th</sup> & 6<sup>th</sup> Roof Drainage Repair

After Contractor is satisfied that work is complete as per Notice of Substantial Completion Punch List, a date for final review is established. Architect/Engineer inspection is made with Contractor(s) and Principal Representative and State Buildings Programs (SBP) present. Forms are processed as required.

	DATE COMPLETED	A/E SIGNOFF	REMARKS
1. The Notice of Approval of Occupancy/Use has been fully executed.			
2. Schedule for corrections, deficiencies, and items to be supplied are established by Contractor.			
3. Final Change Orders are processed (work must be completed prior to Notice of Acceptance).			
4. Punch list work is completed and accepted			
5. Permanent keying, keys and keying instructions have been performed.			
6. Extra materials as per specifications are delivered to Principal Representative.			
7. As-built drawings have been submitted to Architect/Engineer.			
8. Guarantee/Warranty documentation requirements are met.			
9. Five Most Costly Goods form is completed by Contractor and received			
10. Removal of Contractor's temporary work including cleanup and debris removal.			
11. State personnel are instructed in system and equipment operations as required by contract.			
12. All Instructions, manuals, guides, and charts have been transmitted to Principal Representative.			

Architect/Engineer \_\_\_\_\_ Date \_\_\_\_\_

Contractor \_\_\_\_\_ Date \_\_\_\_\_

State Buildings Programs \_\_\_\_\_ Date \_\_\_\_\_  
(or Authorized Delegate)

Principal Representative \_\_\_\_\_ Date \_\_\_\_\_  
(Institution or Agency)



**SECTION 00 65 19.25 – NOTICE OF PARTIAL FINAL ACCEPTANCE**

**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

**1.2 SUMMARY**

**1.3 DEFINITIONS**

**1.4 NOTICE OF PARTIAL FINAL ACCEPTANCE**

- A.** State of Colorado form “Notice of Partial Final Acceptance” (SC-6.271).
- B.** A copy of the above noted form is attached to the end of this section.

**1.5 PROCEDURE**

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

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

**END OF SECTION 00 65 19.25**







STATE OF COLORADO  
OFFICE OF THE STATE ARCHITECT  
STATE BUILDINGS PROGRAM

**NOTICE OF PARTIAL FINAL ACCEPTANCE**

Date of Notice of Partial Acceptance: \_\_\_\_\_

\_\_\_\_\_ Date to be inserted by A/E after consultation with the Principal Representative

Institution/Agency: **GFE**

Project No./Name: **21-115057 / Business School 5<sup>th</sup> & 6<sup>th</sup> Roof Drainage Repair**

Portion(s) of Project for which final acceptance is approved:

TO:

Notice is hereby given that the State of Colorado, acting by and through the \_\_\_\_\_,  
accepts as complete\* the above numbered project.

\_\_\_\_\_  
State Buildings Program  
(or Authorized Delegate)

\_\_\_\_\_  
Date

\_\_\_\_\_  
Principal Representative  
(Institution or Agency)

\_\_\_\_\_  
Date

\*When completely executed, this form is to be sent by certified mail to the Contractor by the Principal Representative.



**SECTION 00 65 19.26 – NOTICE OF FINAL ACCEPTANCE**

**PART 1 - GENERAL**

- 1.1 RELATED DOCUMENTS (Not Applicable)
- 1.2 SUMMARY (Not Applicable)
- 1.3 DEFINITIONS (Not Applicable)
- 1.4 NOTICE OF FINAL ACCEPTANCE
  - A. State of Colorado form “Notice of Final Acceptance” (SBP-6.27).
  - B. A copy of the above noted form is attached to the end of this section.
- 1.5 PROCEDURE (Not Applicable)

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

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

**END OF SECTION 00 65 19.26**





STATE OF COLORADO  
OFFICE OF THE STATE ARCHITECT  
STATE BUILDINGS PROGRAM

**NOTICE OF FINAL ACCEPTANCE**

Date of Notice of Acceptance: \_\_\_\_\_

\_\_\_\_\_ Date to be inserted by A/E after consultation with the Principal Representative

Institution/Agency: GFE

Project No./Name: 21-115057 / Business School 5<sup>th</sup> & 6<sup>th</sup> Roof Drainage Repair

TO:

Notice is hereby given that the State of Colorado, acting by and through the \_\_\_\_\_,  
accepts as complete\* the above numbered project.

\_\_\_\_\_  
State Buildings Program  
(or Authorized Delegate)

\_\_\_\_\_  
Date

\_\_\_\_\_  
Principal Representative  
(Institution or Agency)

\_\_\_\_\_  
Date

\*When completely executed, this form is to be sent by **certified mail** to the Contractor by the Principal Representative or delivered by any other means to which the parties agree.



**SECTION 00 65 19.30 – NOTICE OF CONTRACTOR’S SETTLEMENT**

**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

**1.2 SUMMARY**

**1.3 DEFINITIONS**

**1.4 NOTICE OF CONTRACTOR’S SETTLEMENT**

- A.** State of Colorado form “Notice of Contractor’s Settlement” (SBP-7.3).
- B.** A copy of the above noted form is attached to the end of this section.

**1.5 PROCEDURE**

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

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

**END OF SECTION 00 65 19.30**







STATE OF COLORADO  
OFFICE OF THE STATE ARCHITECT  
STATE BUILDINGS PROGRAM

**NOTICE OF CONTRACTOR'S SETTLEMENT**

---

Institution/Agency: GFE

Notice Number: \_\_\_\_\_

Project No./Title: 21-115057 / Business School 5<sup>th</sup> & 6<sup>th</sup> Roof Drainage Repair

---

Notice is hereby given that on date at address Colorado, final settlement will be made by the STATE OF COLORADO with vendor name, hereinafter called the "CONTRACTOR", for and on account of the contract for the construction of a PROJECT as referenced above.

1. Any person, co-partnership, association or corporation who has an unpaid claim against the said project, for or on account of the furnishing of labor, materials, team hire, sustenance, provisions, provender, rental machinery, tools, or equipment and other supplies used or consumed by such Contractor or any of his subcontractors in or about the performance of said work, may at any time up to and including said time of such final settlement, file a verified statement of the amount due and unpaid on account of such claim
2. All such claims shall be filed with the Authority for College, Institution, Department or Agency.
3. Failure on the part of a creditor to file such statement prior to such final settlement will relieve the State of Colorado from any and all liability for such claim

**Authorized Facility Manager or Authorized Individual**

Name: \_\_\_\_\_  
Approval Date: \_\_\_\_\_  
Agency: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Fax: \_\_\_\_\_  
Email: \_\_\_\_\_

**MEDIA OF PUBLICATION:**

PUBLICATION DATES:

First:

Second: (At least ten (10) days prior to above settlement date)

NOTES TO EDITOR:

Transmit two (2) copies of the Affidavit of Publication, and invoice, to:



**STATE OF COLORADO  
OFFICE OF THE STATE ARCHITECT  
STATE BUILDINGS PROGRAM**



**THE GENERAL CONDITIONS OF THE DESIGN/BUILD LUMP SUM (LS) AGREEMENT  
(STATE FORM SC-8.1)**

STATE OF COLORADO  
OFFICE OF THE STATE ARCHITECT  
STATE BUILDINGS PROGRAM

THE GENERAL CONDITIONS OF THE DESIGN/BUILD LUMP SUM AGREEMENT  
(STATE FORM SC-8.1)

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**STATE OF COLORADO  
OFFICE OF THE STATE ARCHITECT  
STATE BUILDINGS PROGRAM**

**THE GENERAL CONDITIONS OF THE DESIGN/BUILD LUMP SUM AGREEMENT  
(STATE FORM SC-8.1)**

**1 ARTICLE 1 DEFINITIONS**

**1.1 CONTRACT DOCUMENTS**

The Contract Documents consist of the following some of which are procedural documents used in the administration and performance of the Agreement:

- a) Design/Build Lump Sum (LS) Agreement; (SC-8.0) including:
- b) Design/Build Entity's Technical Proposal, All Appendices, Addenda and Clarifications
- c) Design/Build Entity's Cost Proposal, All Appendices, Addenda and Clarifications
- d) Design/Build Entity's Scope Narrative
- e) The Request for Proposals, All Appendices, Addenda and Clarifications;
- f) Performance Bond (SC-6.22) and Labor and Material Payment Bond (SC-6.221);
- g) These General Conditions of the Design/Build Lump Sum (LS) Agreement (SC- 8.1) and if applicable, Supplementary General Conditions;
- h) Detailed Specification Requirements, including all addenda issued prior to the Notice to Proceed to Commence Design Phase (SBP-8.26);
- i) Drawings, including all addenda issued prior to the Notice to Proceed to Commence Construction Phase (SBP-8.261);
- j) Change Orders (SC-6.31) and Amendments (SC-6.0A and/or B), if any, when properly executed;
- k) Notice of Award (SBP-6.15);
- l) Builder's risk insurance certificates of insurance (ACORD 25-S);
- m) Liability, Workers' compensation and professional liability errors and omissions certificates of insurance;
- n) Notice to Proceed to Commence Design Phase (SBP-8.26);
- o) Notice to Proceed to Commence Construction Phase (SBP-8.261);
- p) Notice of Approval of Occupancy/Use (SBP-01);
- q) Notice of Partial Substantial Completion (SBP-071);
- r) Notice of Substantial Completion (SBP-07);
- s) Notice of Final Acceptance (SBP-6.27);
- t) Notice of Partial Final Acceptance (SBP-6.271);
- u) Notice of Design/Build Entity's Settlement (SBP-7.3);
- v) Notice of Partial Design/Build Entity's Settlement (SBP-7.31);
- w) Application and Certificate for Design/Build Entity's Payment (SBP-7.2); and
- x) Other procedural and reporting documents or forms referred to in these General Conditions, the Supplementary General Conditions, the Specifications or required by the State Buildings Program or the Principal Representative, including but not necessarily limited to Pre-



Acceptance Check List (SBP-05) and the Building Inspection Record (SBP-BIR). A list of the current standard State Buildings Program forms applicable to this Contract may be obtained from the Principal Representative on request.

## 1.2 DEFINITIONS OF WORDS AND TERMS USED

### Agreement

The term "Agreement" shall mean the written agreement entered into by the State of Colorado acting by and through the Principal Representative and the Contractor for the performance of the Work and payment therefore, on State Form SC-6.21. The term Agreement when used without reference to State Form SC-6.21 may also refer to the entirety of the parties' agreement to perform the Work described in the Contract Documents or reasonably inferable there from. The term "Contract" shall be interchangeable with this latter meaning of the term Agreement.

### Amendment

The term "Amendment" means a written order signed by the Principal Representative or its authorized agent, issued after the execution of this Agreement, authorizing a change in the Work, the method or manner of performance, an adjustment in the Contract Sum, or the Contract Time. Each adjustment in the Contract Sum, or Contract Time resulting from an Amendment shall clearly separate the amount attributable to the cost of the Work and the Design/Build Entity's Fee, if any. The Contract Sum, and Contract Time may be changed only by Amendment.

### Architect/Engineer

The term "Architect/Engineer" shall mean either the architect of record or the engineer of record under contract to the State of Colorado for the Project identified in the Contract Documents.

### Bid Package

Bid Package describes all documents that relate to a specific scope of Work, including the drawings, specifications, documents, estimates, bid forms and bid bonds relevant to a discrete portion of or a complete construction Project.

### Change Order

The term "Change Order" means a written order, signed by the Principal Representative, directing the Design/Build Entity to make changes in the Work, in accordance with Article 35.1, The Value of Changed Work.

### Colorado Labor

The term "Colorado labor" shall be defined, as provided in C.R.S. § 8-17-101(2)(a), as any person who is a resident of the state of Colorado, at the time of the public Works project, without discrimination as to race, color, creed, sex, sexual orientation, marital status, national origin, ancestry, age, or religion except when sex or age is a bona fide occupational qualification. A resident of the state of Colorado is a person who can provide a valid Colorado driver's license, a valid Colorado state issued photo identification, or documentation that he or she has resided in Colorado for the last thirty days.

### Consultant

The term "Consultant" shall mean a person, firm or corporation supplying design/consulting services for the Project. Design professionals and consultants are directly contracted to the Design/Build Entity.

### CORA

The term "CORA" refers to the Colorado Open Records Act, §§24-72-200.1, et seq., C.R.S.

#### Days

The term “days” whether singular or plural shall mean calendar days unless expressly stated otherwise. Where the term “business days” is used it shall mean business days of the State of Colorado.

#### Design/Build Entity

The word “Design/Build Entity” shall mean the design/build entity entering into a contract to design and construct the Project with the State of Colorado acting by and through the Principal Representative. The Design/Build Entity may also be referred to as “Design/Build Entity” in this agreement or in related exhibits, attachments, contract modification or procedural documents.

#### Design/Build Entity’s Architect/Engineer

The term Design Build Entity’s Architect/Engineer” shall mean professionals licensed or registered by the State of Colorado who have contracted with the Design/Build Entity, with prior approval by the State, to accomplish the architectural and engineering services necessary for the Project. Although the Contract Documents impose specific performance requirements to be discharged by the architect or design professional selected by the Design/Build Entity, and approved by the State, nothing in this contract is intended to create a contractual relationship between such professional and the State of Colorado.

#### Design/Build Entity’s Scope Narrative

Design/Build Entity’s Scope Narrative shall be defined as the bilateral agreement concerning final scope, which is developed cumulatively and simultaneously with each of the design phases and is agreed upon during review of the final scope as it pertains to each design submission.

#### Direct Cost of Work

The term “Direct Cost of Work” shall mean those costs directly linked to the physical construction of the project including material, labor and equipment and subcontractor costs and as further defined in Designated Services and Method of Payment, Exhibit A.

#### Drawings

The term “Drawings” shall mean all drawings approved by appropriate State officials which have been prepared by the Design Build Entity’s Architect/Engineer and/or civil, structural, mechanical, electrical or plumbing engineers, and others as required to represent a complete project, showing the Work to be done, except that where a list of drawings is specifically enumerated in the Supplementary General Conditions or division 1 of the Specifications, the term shall mean the drawings so enumerated, including all addenda drawings.

#### Emergency Field Change Order

The term “Emergency Field Change Order” shall mean a written change order for extra Work or a change in the Work necessitated by an emergency as defined in Article 35.4 executed on State form SC 6.31 and identified as an Emergency Field Change Order. The use of such orders is limited to emergencies and to the amounts shown in Article 35.4.

#### Fast Track Construction

The term “Fast Track Construction” is a methodology where portions of the Work could have their design completed as separate Construction Phase(s) and may be under construction before other portions of the Work are fully designed.

#### Guaranteed Maximum Price

The term "Guaranteed Maximum Price" shall mean the maximum amount for which the Work shall be accomplished and it shall be computed by the Construction Manager in accordance with

the provisions of paragraph 5.4 of the Agreement and as approved by the Principal Representative.

#### Incident

The term 'incident' means any accidental or deliberate event that results in or constitutes an imminent threat of the unauthorized access, loss, disclosure, modification, disruption, or destruction of any communications or information resources of the State, which are included as part of the Work, as described in §§24-37.5-401, et seq., C.R.S. Incidents include, without limitation, (i) successful attempts to gain unauthorized access to a State system or State Records regardless of where such information is located; (ii) unwanted disruption or denial of service; (iii) the unauthorized use of a State system for the processing or storage of data; or (iv) changes to State system hardware, firmware, or software characteristics without the State's knowledge, instruction, or consent.

#### Final Acceptance

The terms "final acceptance" or "finally complete" mean the stage in the progress of the Work, after substantial completion, when all remaining items of Work have been completed, all requirements of the Contract Documents are satisfied and the Notice of Acceptance can be issued. Discrete physical portions of the Project may be separately and partially deemed finally complete at the discretion of the Principal Representative when that portion of the Project reaches such stage of completion and a partial Notice of Acceptance can be issued.

#### Fixed Limit of Design & Construction Cost

The term "Fixed Limit of Design & Construction Cost" shall set forth a dollar amount available for the total Design and Construction Cost for design and construction of all elements of the Work as specified by the Principal Representative.

#### Notice

The term "Notice" shall mean any communication in writing from either contracting party to the other by such means of delivery that receipt cannot properly be denied. Notice shall be provided to the person identified to receive it in Article 8 of the Agreement. Notice Identification, or to such other person as either party identifies in writing to receive Notice. Notice by facsimile transmission where proper transmission is evidence shall be adequate where facsimile numbers are included in Article 7 of the Agreement, or to such other person as either party identifies in writing to receive Notice or in the absence of the identified party, a principal of the Design Build Entity. Notice by facsimile transmission where proper transmission is evidenced shall be adequate where facsimile numbers are included in Article 7 of the Agreement. Notwithstanding an email delivery or return receipt, email Notice shall not be adequate. Acknowledgment of receipt of a voice message shall not be deemed to waive the requirement that Notice, where required, shall be in writing.

#### Occupancy

The term "Occupancy" means occupancy taken by the State as Owner after the Date of Substantial Completion at a time when a building or other discrete physical portion of the Project is used for the purpose intended. The Date of Occupancy shall be the date of such first use, but shall not be prior to the date of execution of the Notice of Approval of Occupancy/Use. Prior to the date of execution of a Notice of Approval of Occupancy/Use, the Principal Representative shall have no right to occupy and the Project may not be considered safe for occupancy for the intended use.

#### Owner

The term "Owner" shall mean the Principal Representative.

#### PII

The term "PII" shall be defined as personally identifiable information including, without limitation, any information maintained by the State about an individual that can be used to distinguish or trace an individual's identity, such as name, social security number, date and place of birth, mother's maiden name, or biometric records; and any other information that is linked or linkable to an individual, such as medical, educational, financial, and employment information. PII includes, but is not limited to, all information defined as personally identifiable information in §§24-72-501 and 24-73-101, C.R.S. "PII" shall also mean "personal identifying information" as set forth at § 24-74-102, et. seq., C.R.S.

#### Preconstruction

The term "Preconstruction" shall mean the Work done by the Design/Build Entity in the management and definition of the project prior to the awarding of construction contracts for any bid package.

#### Principal Representative

The term "Principal Representative" shall be defined, as provided in C.R.S. § 24-30-1301(14), as the governing board of a state department, institution, or agency; or if there is no governing board, then the executive head of a state department, institution, or agency, as designated by the governor or the general assembly and as specifically identified in the Contract Documents, or shall have such other meaning as the term may otherwise be given in C.R.S. § 24-30-1301(14), as amended. The Principal Representative may delegate authority. The Design/Build Entity shall have the right to inquire regarding the delegated authority of any of the Principal Representative's representatives on the Project and shall be provided with a response in writing when requested.

#### Product Data

The term "Product Data" shall mean all submittals in the form of printed manufacturer's literature, manufacturer's specifications, and catalog cuts.

#### Project

The "Project" is the total construction of which the Work performed under the Contract Documents is a part, and may include construction by the Principal Representative or by separate contractors.

#### Reasonably Inferable

The phrase "reasonably inferable" means that if an item or system is either shown or specified, all material and equipment normally furnished with such items or systems and needed to make a complete installation shall be provided whether mentioned or not, omitting only such parts as are specifically excepted, and shall include only components which the Design/Build Entity could reasonably anticipate based on his or her skill and knowledge using an objective, industry standard, not a subjective standard. This term takes into consideration the normal understanding that not every detail is to be given on the Drawings and Specifications. If there is a difference of opinion, the Principal Representative shall make the determination as to the standards of what reasonably inferable.

#### Samples

The term "Samples" shall mean examples of materials or Work provided to establish the standard by which the Work will be judged.

#### SBP

The term "SBP" means "State Buildings Program", which is used in connection with labeling applicable State form documents (e.g., "SBP-01" is the form number for Notice of Approval of Occupancy/Use).

#### SC

The term "SC" means "State Contract" which is used in connection with labeling applicable State form documents (e.g. "SC 9.1" is the State form number for these General Conditions of the Guaranteed Maximum Price (GMP) Agreement).

#### Schedule of Values

The term "Schedule of Values" is defined as the itemized listing of description of the Work by Division and Section of the Specifications. The format shall be the same as Form SC-7.2. Included shall be the material costs, and the labor and other costs plus the sum of both.

#### Shop Drawings

The term "Shop Drawings" shall mean any and all detailed drawings prepared and submitted by Design/Build Entity, SubDesign/Build Entity at any tier, vendors or manufacturers providing the products and equipment specified on the Drawings or called for in the Specifications.

#### Specifications

The term "Specifications" shall mean the requirements of the CSI divisions of the project manual prepared by the Design Build Entity's Architect/Engineer describing the Work to be accomplished.

#### State Buildings Program

Shall refer to the Office of the State Architect within the Department of Personnel & Administration of Colorado State government responsible for project administration, review, approval and coordination of plans, construction procurement policy, contractual procedures, and code policy compliance of all public Works and improvements erected for state purposes; except public roads and highways and projects under the supervision of the division of wildlife and the division of parks and outdoor recreation as provided in C.R.S. § 24-30-1301, *et seq.* The term State Buildings Program shall also mean that individual within a State Department agency or institution, including institutions of higher education, who has signed an agreement accepting delegation to perform all or part of the responsibilities and functions of State Buildings Program.

#### State Confidential Information

The term "State Confidential Information" shall mean any and all State Records not subject to disclosure under CORA. State Confidential Information shall include, but is not limited to, PII, and State personnel records not subject to disclosure under CORA. State Confidential Information shall not include information or data concerning individuals that is not deemed confidential but nevertheless belongs to the State, which has been communicated, furnished, or disclosed by the State to Contractor which (i) is subject to disclosure pursuant to CORA; (ii) is already known to Contractor without restrictions at the time of its disclosure to Contractor; (iii) is or subsequently becomes publicly available without breach of any obligation owed by Contractor to the State; (iv) is disclosed to Contractor, without confidentiality obligations, by a third party who has the right to disclose such information; or (v) was independently developed without reliance on any State Confidential Information.

#### State Fiscal Rules

State Fiscal Rules means the fiscal rules promulgated by the Colorado State Controller pursuant to §24-30-202(13)(a), C.R.S.

#### State Records

The term "State Records" shall mean any and all State data, information, and records, regardless of physical form, including, but not limited to, information subject to disclosure under CORA.

#### Subconsultant

The term "Subconsultant" shall mean a person, firm or corporation supplying design/consulting services for the Project. Design and other professionals directly contracted to the Design Build Entity's Architect/Engineers are considered subconsultants.

#### Subcontractor

The term "Subcontractor" shall mean a person, firm or corporation supplying labor, materials, equipment and/or Services for Work at the site of the Project for, and under separate contract or agreement with the Design/Build Entity.

#### Submittals

The term "submittals" means drawings, lists, tables, documents and samples prepared by the Design/Build Entity to facilitate the progress of the Work as required by these General Conditions or the Drawings and Specifications. They consist of Shop Drawings, Product Data, Samples, and various administrative support documents including but not limited to lists of subcontractors, construction progress schedules, schedules of values, applications for payment, inspection and test results, requests for information, various document logs, and as-built drawings. Submittals are required by the Contract Documents, but except to the extent expressly specified otherwise are not themselves a part of the Contract Documents.

#### Substantial Completion

The terms "substantial completion" or "substantially complete" mean the stage in the progress of the Work when the construction is sufficiently complete, in accordance with the Contract Documents as modified by any Change Orders, so that the Work, or at the discretion of the Principal Representative, any designated portion thereof, is available for its intended use by the Principal Representative and a Notice of Substantial Completion can be issued. Portions of the Project may, at the discretion of the Principal Representative, be designated as substantially complete.

#### Supplier

The term "Supplier" shall mean any manufacturer, fabricator, distributor, material man or vendor.

#### Surety

The term "Surety" shall mean the company providing the labor, materials, equipment and/or services payment and performance bonds for the Design/Build Entity as obligor.

#### Value Engineering

"Value Engineering" or "VE" is defined as an analysis and comparison of cost versus value of building materials, equipment, and systems. VE considers the initial cost of construction, coupled with the estimated cost of maintenance, energy use, life expectancy and replacement cost. VE related to this Project shall include the analysis and comparison of building elements in an effort to reduce overall Project costs, while maintaining or enhancing the quality of the design intent, whenever possible.

#### Work

The term "Work" shall mean all or part of the labor, materials, equipment, and other services required by the Contract Documents or otherwise required to be provided by the Design/Build Entity to meet the Design/Build Entity's obligations under the Contract.

## Work Product

The phrase "Work Product" means the tangible and intangible results of the Work, whether finished or unfinished, including drafts. Work Product includes, but is not limited to, documents, text, software (including source code), research, reports, proposals, specifications, plans, notes, studies, data, images, photographs, negatives, pictures, drawings, designs, models, surveys, maps, materials, ideas, concepts, know-how, and any other results of the Work. "Work Product" does not include any material that was developed prior to the Effective Date that is used, without modification, in the performance of the Work.

## **2 ARTICLE 2 EXECUTION, CORRELATION, INTENT OF DOCUMENTS, COMMUNICATION AND COOPERATION**

### **2.1 EXECUTION**

The Design/Build Entity, within ten (10) days from the date of Notice of Award, will be required to:

- a) Execute the Design/Build Lump Sum Agreement, State Form SC-8.0;
- b) Furnish fully executed Performance and Labor and Material Payment Bonds on State Forms SBP-6.22 and SBP-6.221;
- c) Furnish certificates of insurance evidencing all required insurance on standard Acord forms designed for such purpose; and
- d) Furnish Professional Liability Errors and Omissions Insurance.
- e) If Article 6.1 of the Design/Build Lump Sum Agreement (SC-8.0) applies, furnish documentation that identifies the subcontractors that will be used for all mechanical, sheet metal, fire suppression, sprinkler fitting, electrical, and plumbing work required on the project and certify that all firms identified participate in apprenticeship programs registered with the United States Department of Labor's Employment and Training Administration or state apprenticeship councils recognized by the United States Department of Labor and have a proven record of graduating a minimum of fifteen percent of its apprentices for at least three of the past five years.

### **2.2 CORRELATION**

By execution of the Design/Build Agreement the Design/Build Entity represents that the Design/Build Entity has visited the site, has become familiar with local conditions and local requirements under which the Work is to be performed, including the building code programs of the State Buildings Program as implemented by the Principal Representative, and has correlated personal observations with the requirements of the Contract Documents.

### **2.3 INTENT OF DOCUMENTS**

The Contract Documents are complementary, and what is called for by any one document shall be as binding as if called for by all. The intention of the documents is to include all labor, materials, equipment and transportation necessary for the proper execution of the Work. Words describing materials or Work which have a well-known technical or trade meaning shall be held to refer to such recognized standards.

Where a conflict occurs between or within standards, Specifications or Drawings, which is not resolved by reference to the precedence between the Contract Documents, the more stringent or higher quality requirements shall apply so long as such more stringent or higher quality requirements are reasonably inferable. The Principal Representative, or Architect/Engineer with consent of the Principal Representative, shall decide which requirements will provide the best installation.

With the exception noted in the following paragraph, the precedence of the Contract Documents is in the following sequence:

- a) The Supplementary General Conditions, if any;
- b) The Minimum Requirements of the Request for Proposals;;
- c) The Design/Build Entity's Scope Narrative
- d) The Design/Build Entity's Technical and Cost proposals;
- e) The Agreement (SC-8.0);
- f) These General Conditions (SC-8.1); and
- g) Drawings and Specifications, all as modified by any addenda.
- h) Any additional Exhibit to this agreement

Change Orders and Amendments, if any, to the Contract Documents take precedence over the original Contract Documents.

Unless Federal Provisions are applicable, the Special Provisions of Article 52 of these General Conditions shall take precedence, rule and control over all other provisions of the Contract Documents.

Unless the context otherwise requires, form numbers in this document are for convenience only. In the event of any conflict between the form required by name or context and the form required by number, the form required by name or context shall control. The Design/Build Entity may obtain State forms from the Principal Representative upon request.

Nothing contained in the Design/Build Contract Documents shall create a professional obligation or contractual relationship between the Principal Representative and any third party, including the Architect/Engineer.

## 2.4 PARTNERING, COMMUNICATIONS AND COOPERATION

In recognition of the fact that conflicts, disagreements and disputes often arise during the performance of construction contracts, the Design/Build Entity and the Principal Representative aspire to encourage a relationship of open communication and cooperation between the employees and personnel of both, in which the objectives of the Contract may be better achieved and issues resolved in a more fully informed atmosphere.

The Design/Build Entity and the Principal Representative each agree to assign an individual who shall be fully authorized to negotiate and implement a voluntary partnering plan for the purpose of facilitating open communications between them. Within thirty days (30) of the Notice to Proceed, the assigned individuals shall meet to discuss development of an informal agreement to accomplish these goals.

The assigned individuals shall endeavor to reach an informal agreement, but shall have no such obligation. Any plans these parties voluntarily agree to implement shall result in no change to the contract amount, and no costs associated with such plan or its development shall be recoverable



under any contract clause. In addition, no plan developed to facilitate open communication and cooperation shall alter, amend or waive any of the rights or duties of either party under the Contract unless and except by written Amendment to the Contract, nor shall anything in this clause or any subsequently developed partnering plan be deemed to create fiduciary duties between the parties unless expressly agreed in a written Amendment to the Contract. It is also recognized that projects with relatively low contract values may not justify the expense or special efforts required. In the case of small projects with an initial Contract value under \$500,000, the requirements of the preceding paragraph shall not apply.

### **3 ARTICLE 3 COPIES FURNISHED**

Refer to Article 2.5 of the Agreement (SC-8.0).

### **4 ARTICLE 4 OWNERSHIP OF DRAWINGS**

Refer to Article 3 of the Agreement (SC-8.0).

### **5 ARTICLE 5 ARCHITECT/ENGINEER'S STATUS**

In case of termination of employment or the death of the Architect/Engineer, the Design/Build Entity will appoint a capable and reputable Architect/Engineer against whom the Principal Representative makes no reasonable objection, whose status under the Contract shall be the same as that of the former Architect/Engineer.

### **6 ARTICLE 6 ARCHITECT/ENGINEER DECISIONS AND JUDGMENTS, ACCESS TO WORK AND INSPECTION**

#### **6.1 DECISIONS**

The Architect/Engineer shall, within a reasonable time, make decisions on all matters relating to the interpretation of the Contract Documents as it relates to compliance with the Drawings and Specifications.

Such decisions by the Architect/Engineer shall be promptly forwarded to the Design/Build Entity and Principal Representative. The Principal Representative may consent with such decision by the Architect/Engineer or amend/revise such decision at the discretion of the Principal Representative.

#### **6.2 JUDGMENTS**

The Architect/Engineer is, in the first instance, the judge of the performance required by the Contract Documents as it relates to compliance with the Drawings and Specifications and quality of Workmanship and materials.

### 6.3 ACCESS TO WORK

The Architect/Engineer, the Principal Representative and representatives of State Buildings Program shall at all times have access to the Work. The Design/Build Entity shall provide proper facilities for such access and for their observations or inspection of the Work.

### 6.4 INSPECTION

The Design Build Entity's Architect/Engineer has agreed to make, or that structural, mechanical, electrical, plumbing, civil engineers or other design consultants will make, periodic visits to the site to generally observe the progress and quality of the Work to determine in general if the Work is proceeding in accordance with the Contract Documents as it relates to compliance with the Drawings and Specifications. Observation may extend to all or any part of the Work and to the preparation, fabrication or manufacture of materials.

Without in any way meaning to be exclusive or to limit the responsibilities of the Design Build Entity's Architect/Engineer or the Design/Build Entity, the Design Build Entity's Architect/Engineer has agreed to observe, among other aspects of the Work, the following for compliance with the Contract Documents as it relates to compliance with the Drawings and Specifications:

- a) Compaction testing reports based upon the findings and recommendations of the Principal Representative's testing consultant; Bearing surfaces of excavations before concrete is placed based upon the findings and recommendations of the Principal Representative's soils engineering consultant;
- b) Bearing surfaces of excavations before concrete is placed based upon the findings and recommendations of the Principal Representative's soils engineering consultant;
- c) Reinforcing steel after installation and before concrete is poured;
- d) Structural concrete;
- e) Laboratory reports on all concrete testing based upon the findings and recommendations of the Principal Representative's testing consultant;
- f) Structural steel during and after erection and prior to its being covered or enclosed;
- g) Steel welding; Principal Representative will furnish steel welding inspection consultant/agency if required or necessary for the Project;
- h) Mechanical and plumbing Work following its installation and prior to its being covered or enclosed;
- i) Electrical Work following its installation and prior to its being covered or enclosed; and
- j) Any special or quality control testing required in the Contract Documents provided by the Principal Representative's testing consultant.

If the Specifications, the Architect/Engineer's instructions, laws, ordinances of any public authority require any Work to be specifically tested or approved, the Design/Build Entity shall give the Principal Representative, Architect/Engineer and appropriate testing agency (if necessary) timely notice of its readiness for observation by the Principal Representative and Architect/Engineer or inspection by another authority, and if the inspection is by another authority, of the date fixed for such inspection, required certificates of inspection being secured by the Design/Build Entity. The Design/Build Entity shall give all required Notices to the Principal Representative or his or her designee for inspections required for the building inspection program. It shall be the responsibility of the Design/Build Entity to determine the Notice required by the State pursuant to Building Inspection Record for the Project, according to State form SBP-

B.I.R., or the equivalent form required by the Principal Representative as approved by the State Buildings Program. If any portion of the Work should be covered contrary to the reasonable request of the Architect/Engineer, or to requirements specifically expressed in the Contract Documents, it must, if required in writing by the Architect/Engineer, be uncovered for its observation and shall be replaced at the Design/Build Entity's expense.

If any other portion of the Work has been covered which the Architect/Engineer has not specifically requested to observe prior to it's being covered, it may request to see such work and it shall be uncovered by the Design/Build Entity. If such work is found in accordance with the Contract Documents, the cost of uncovering and replacement shall, by appropriate Amendment or Change Order, be charged to the Principal Representative. If such work is found not in accordance with the Contract Documents, the Design/Build Entity shall pay such costs unless it is found that this condition was caused by the Principal Representative or a separate Contractor as provided in Article 18, in which event, the Principal Representative shall be responsible for the payment of such costs.

## **7 ARTICLE 7 DESIGN/BUILD ENTITY'S SUPERINTENDENCE AND SUPERVISION**

The Design/Build Entity shall employ, and keep present on the Project during its progress, a competent project manager and any necessary assistants, all satisfactory to the Principal Representative. The project manager shall not be changed except with the consent of the Principal Representative, unless the project manager proves to be unsatisfactory to the Design/Build Entity and ceases to be in his or her employ. The project manager shall represent the Design/Build Entity for the Project, and in the absence of the Design/Build Entity, all directions given to the project manager shall be as binding as if given to the Design/Build Entity. Directions received by the project manager shall be documented by the project manager and communicated in writing with the Design/Build Entity.

The Design/Build Entity shall employ, and keep present on the Project during its progress, a competent superintendent and any necessary assistants, all satisfactory to the Principal Representative. The superintendent shall not be changed except with the consent of the Principal Representative, unless the superintendent proves to be unsatisfactory to the Design/Build Entity and ceases to be in his or her employ. The superintendent shall represent the Project Manager/Design/Build Entity in his or her absence and all directions given to the superintendent shall be as binding as if given to the Project Manager/Design/Build Entity. Directions received by the superintendent shall be documented by the superintendent and confirmed in writing with the Project Manager/Design/Build Entity.

The Design/Build Entity shall give efficient supervision to the Work, using his or her best skill and attention. He or she shall carefully study and compare all Drawings, Specifications and other written instructions and shall without delay report any error, inconsistency or omission which he or she may discover in writing to the Principal Representative and Architect/Engineer.

The superintendent shall see that the Work is carried out in accordance with the Contract Documents and in a uniform, thorough and first-class manner in every respect. The Design/Build Entity's superintendent shall establish all lines, levels, and marks necessary to facilitate the operations of all concerned in the Design/Build Entity's Work. The Design/Build Entity shall lay out all Work in a manner satisfactory to the Principal Representative and Architect/Engineer,

making permanent records of all lines and levels required for excavation, grading, foundations, and for all other parts of the Work.

## **8 ARTICLE 8 MATERIALS AND EMPLOYEES**

Unless otherwise stipulated, the Design/Build Entity shall provide and pay for all materials, labor, water, tools, equipment, light, power, transportation and other facilities necessary for the execution and completion of the Work.

Unless otherwise specified, all materials shall be new and both workmanship and materials shall be first class and of uniform quality. The Design/Build Entity shall, if required, furnish satisfactory evidence as to the kind and quality of materials.

The Design/Build Entity is fully responsible for all acts and omissions of the Design/Build Entity's employees and shall at all times enforce strict discipline and good order among employees on the site. The Design/Build Entity shall not employ on the Work any person reasonably deemed unfit by the Principal Representative or anyone not skilled in the Work assigned to him.

## **9 ARTICLE 9 SURVEYS, PERMITS, LAWS, TAXES AND REGULATIONS**

### **9.1 SURVEYS**

The Principal Representative shall furnish all surveys, property lines and bench marks deemed necessary by the Architect/Engineer, unless otherwise specified.

### **9.2 PERMITS AND LICENSES**

Permits and licenses necessary for the prosecution of the Work shall be secured and paid for by the Design/Build Entity. Unless otherwise required, no local municipal or county building permit shall be required. However, State Buildings Program requires each Principal Representative to administer a building code inspection program, the implementation of which may vary at each agency or institution of the State. The Design/Build Entity's employees shall become personally familiar with these local conditions and requirements and shall fully comply with such requirements. State electrical and plumbing permits are required, unless the requirement to obtain such permits is altered by State Building's Programs. The Design/Build Entity shall obtain and pay for such permits.

Easements for permanent structures or permanent changes in existing facilities shall be secured and paid for by the Principal Representative, unless otherwise specified.

### **9.3 TAXES**

#### **9.3.1 Refund of Sales and Use Taxes**

The Design/Build Entity shall pay all local taxes required to be paid, including but not necessarily limited to all sales and use taxes. If requested by the Principal Representative prior to issuance of the Notice to Proceed or directed in the Supplementary General Conditions or the Specifications, the Design/Build Entity shall maintain records of such payments in respect to the Work, which shall be separate and distinct from all other records maintained by the Design/Build Entity, and the Design/Build Entity shall furnish such data as may be necessary to enable the State of Colorado, acting by and through the Principal Representative, to obtain any refunds of such

taxes which may be available under the laws, ordinances, rules or regulations applicable to such taxes. When so requested or directed, the Design/Build Entity shall require Subcontractors at all tiers to pay all local sales and use taxes required to be paid and to maintain records and furnish the Design/Build Entity with such data as may be necessary to obtain refunds of the taxes paid by such Subcontractors. No State sales and use taxes are to be paid on material to be used in this Project. On application by the purchaser or seller, the Department of Revenue shall issue to the Design/Build Entity or to a Subcontractor at any tier, a certificate or certificates of exemption per C.R.S. § 39-26-703(2)(b), and C.R.S. § 39-26-708.

#### 9.3.2 Federal Taxes

The Design/Build Entity shall exclude the amount of any applicable federal excise or manufacturers' taxes from the proposal. The Principal Representative will furnish the Design/Build Entity, on request, exemption certificates.

#### 9.4 LAWS AND REGULATIONS

The Design/Build Entity shall give all notices and comply with all laws, ordinances, rules and regulations bearing on the conduct of the Work as drawn or specified.

The Design/Build Entity shall bear all costs arising from the performance of Work required by the Drawings or Specifications that the Design/Build Entity knows to be contrary to such laws, ordinances, rules or regulations.

### 10 ARTICLE 10 PROTECTION OF WORK AND PROPERTY

#### 10.1 GENERAL PROVISIONS

The Design/Build Entity shall continuously maintain adequate protection of all Work and materials, protect the property from injury or loss arising in connection with this Contract and adequately protect adjacent property as provided by law and the Contract Documents. The Design/Build Entity shall make good any damage, injury or loss, except to the extent:

- a) Caused by agents or employees of the Principal Representative; and,
- b) Due to causes beyond the Design/Build Entity's control and not due to fault or negligence; provided such damage, injury or loss would not be covered by the insurance required to be carried by the Design/Build Entity;

#### 10.2 SAFETY PRECAUTIONS

The Design/Build Entity shall take all necessary precautions for the safety of employees on the Project, and shall comply with all applicable provisions of federal, State and municipal safety laws and building codes to prevent accidents or injury to persons on, about or adjacent to the premises where the Work is being performed. He or she shall erect and properly maintain at all times, as required by the conditions and progress of the Work, all necessary safeguards for the protection of Workers and the public and shall post danger signs warning against the hazards created by such features of construction as protruding nails, hoists, well holes, elevator hatchways, scaffolding, window openings, stairways and falling materials; and he or she shall designate a responsible member of his or her organization on the Project, whose duty shall be the prevention of accidents. The name and position of any person so designated shall be reported to the Principal Representative by the Design/Build Entity.

The Design/Build Entity shall provide all necessary bracing, shoring and tying of all structures, decks and framing to prevent any structural failure of any material which could result in damage to property or the injury or death of persons; take all precautions to insure that no part of any structure of any description is loaded beyond its carrying capacity with anything that will endanger its safety at any time; and provide for the adequacy and safety of all scaffolding and hoisting equipment. The Design/Build Entity shall not permit open fires within the building enclosure. The Design/Build Entity shall construct and maintain all necessary temporary drainage and do all pumping necessary to keep excavations and floors, pits and trenches free of water. The Design/Build Entity shall be solely responsible for all construction means, methods, techniques, sequences and procedures, and for coordinating all portions of the Work, except as otherwise noted.

The Design/Build Entity shall take due precautions when obstructing sidewalks, streets or other public ways in any manner, and shall provide, erect and maintain barricades, temporary walkways, roadways, trench covers, colored lights or danger signals and any other devices necessary or required to assure the safe passage of pedestrians and automobiles.

### 10.3 EMERGENCIES

In an emergency affecting the safety of life or of the Work or of adjoining property, the Design/Build Entity without special instruction or authorization from the Principal Representative, is hereby permitted to act, at his or her discretion, to prevent such threatened loss or injury; and he or she shall so act, without appeal, if so authorized or instructed. Provided the Design/Build Entity has no responsibilities for the emergency, in whole or in part, if the Design/Build Entity incurs additional cost not otherwise recoverable from insurance or others on account of any such emergency Work, the Lump Sum Contract Price shall be equitably adjusted in accordance with Article 35, Changes in the Work.

## 11 ARTICLE 11 DRAWINGS AND SPECIFICATIONS ON THE WORK

The Design/Build Entity shall keep on the job site one copy of the Contract Documents in good order, including current copies of all Drawings and Specifications for the Work, and any approved Shop Drawings, Product Data or Samples, and as-built drawings. As-built drawings shall be updated weekly by the Design/Build Entity and Subcontractors to reflect actual constructed conditions including dimensioned locations of underground Work and the Design/Build Entity's failure to maintain such updates may be grounds to withhold portions of payments otherwise due in accordance with Article 33, Payments Withheld. All such documents shall be available to representatives of the State. In addition, the Design/Build Entity shall keep on the job site one copy of all approved addenda, Change Orders and requests for information issued for the Work.

The Design/Build Entity shall develop procedures to insure the currency and accuracy of as-built drawings and shall maintain on a current basis a log of requests for information and responses thereto, a Shop Drawing and Product Data submittal log, and a Sample submittal log to record the status of all necessary and required submittals.

## **12 ARTICLE 12 REQUESTS FOR INFORMATION AND SCHEDULES**

### **12.1 DETAIL DRAWINGS AND INSTRUCTIONS**

The Architect/Engineer shall furnish to the Design/Build Entity and Principal Representative, with reasonable promptness, additional instructions, by means of drawings or otherwise, necessary for the proper execution of the Work. All such drawings and instructions shall be consistent with the Contract Documents, true developments thereof, and reasonably inferable therefrom.

The Work shall be executed in conformity therewith and the Design/Build Entity shall do no Work without proper drawings and instructions.

The Design/Build Entity, the Architect/Engineer, and the Principal Representative shall jointly prepare a schedule, subject to change from time to time in accordance with the progress of the Work, fixing the dates at which the various detail drawings will be required, and the Architect/Engineer shall furnish them in accordance with that schedule. Under like conditions, a schedule shall be prepared, fixing the dates for the submission of shop drawings, for the beginning of manufacture and installation of materials and for the completion of the various parts of the Work.

The Principal Representative may consent with such instructions by the Architect/Engineer or amend/revise such instructions at the discretion of the Principal Representative.

### **12.2 SCHEDULES**

#### **12.2.1 Design Schedule**

Prior to receiving the Notice to Proceed to Commence Design Phase (SC-8.26), the Design/Build Entity shall submit a detailed Design Phase Schedule identifying all phases of design including time identified for the Principal Representative to review and approve design documents at each design milestone. The Design Phase Schedule shall also identify adequate time for the document coordination between the Design Build Entity's Architect/Engineer and each of its consultants.

#### **12.2.2 Submittal Schedules**

Prior to the Notice to Proceed to Commence Construction for the first construction phase, a schedule shall be prepared by the Design/Build Entity fixing the dates for the submission and initial review of required Shop Drawings, Product Data and Samples for the beginning of manufacture and installation of materials, and for the completion of the various parts of the Work. It shall be prepared so as to cause no delay in the Work or in the Work of any other separate contractor engaged by the Principal Representative. The schedule shall be subject to change from time to time in accordance with the progress of the Work, and it shall be subject to the review and approval by the Principal Representative. The schedule shall be finalized, prepared and submitted with respect to each of the elements of the Work in time to avoid delay, considering reasonable periods for review, manufacture and/or installation.

At the time the schedule is prepared, the Design/Build Entity, the Architect/Engineer and Principal Representative shall jointly identify the Shop Drawing, Product Data and Samples, if any, which the Principal Representative shall receive for the purposes of owner coordination with existing facility standards and systems. The Design/Build Entity shall furnish a copy for the Principal Representative when so requested. Transmittal of Shop Drawings and Product Data copies to the Principal Representative shall be solely for the convenience of the Principal Representative and shall neither create nor imply responsibility or duty of review by the Principal Representative.

### 12.2.3 Schedule of Values

Prior to the Notice to Proceed to Commence Construction for the first construction phase, the Design/Build Entity shall submit to the Principal Representative, for approval, and to the State Buildings Program when specifically requested, a complete itemized schedule of the values of the various parts of the Work, as estimated by the Design/Build Entity, aggregating the total price. The schedule of values shall be in such detail as the Principal Representative shall require. It shall, at a minimum, identify on a separate line each division of the Specifications including the general conditions costs to be charged to the Project. The Design/Build Entity shall revise and resubmit the schedule of values for approval when, in the opinion of the Principal Representative, such resubmittal is required due to changes or modifications to the Contract Documents or the Lump Sum Contract Price.

The total cost of each line item so separately identified shall, when requested by the Principal Representative, be broken down into reasonable estimates of the value as indicated in Article 2.3.2 of the Design/Build Lump Sum Agreement (SC-8.0).

The cost of subcontracts shall be incorporated in the Design/Build Entity's schedule of values, and when requested by the Principal Representative, shall be separately shown as line items.

This schedule of values, when approved, shall be used in preparing Design/Build Entity's applications for payment on State Form SBP-7.2, Application for Payment.

### 12.2.4 Construction Schedules

Prior to the Notice to Proceed to Commence Construction for the first construction phase, the Design/Build Entity shall submit to the Principal Representative, and to the State Buildings Program when specifically requested, on a form acceptable to them, an overall timetable of the construction schedule for the Project. Unless the Supplementary General Conditions or the Specifications allow scheduling with bar charts or other less sophisticated scheduling tools, the Design/Build Entity's schedule shall be a critical-path method (CPM) construction schedule. The CPM schedule shall start with the date of the Notice to Proceed to Commence Construction for the first construction phase and include submittals activities, the various construction activities, change order Work (when applicable), close-out, testing, demonstration of equipment operation when called for in the Specifications, and acceptance. The CPM schedule shall at a minimum correlate to the schedule of values line items and shall be cost loaded if requested by the Principal Representative. The completion time shall be the time specified in the Agreement and all Project scheduling shall allocate float utilizing the full period available for construction as specified in the cost proposal, without indication of early completion, unless such earlier completion is approved in writing by the Principal Representative and State Building Programs.

The time shown between the starting and completion dates of the various elements within the construction schedule shall represent one hundred per cent (100%) completion of each element.

All other elements of the CPM schedule shall be as required by the Specifications. In addition, the Design/Build Entity shall submit monthly updates or more frequently, if required by the Principal Representative, updates of the construction schedule. These updates shall reflect the Design/Build Entity's "Work in place" progress.

When requested by the Principal Representative or the State Buildings Program, the Design/Build Entity shall revise the construction schedule to reflect changes in the schedule of values.



When the testing of materials is required by the Specifications, the Design/Build Entity shall also prepare and submit to the Principal Representative a schedule for testing in accordance with Article 14, Samples and Testing.

### **13 ARTICLE 13 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES**

#### **13.1 SUBMITTAL PROCESS**

The Design/Build Entity shall check and field verify all dimensions. The Design/Build Entity shall check, approve and submit to the Principal Representative and Architect/Engineer in accordance with the schedule described in Article 12, Requests for Information and Schedules, all Shop Drawings, Product Data and Samples required by the specifications or required by the Design/Build Entity for the Work of the various trades. All Drawings and Product Data shall contain identifying nomenclature and each submittal shall be accompanied by a letter of transmittal identifying in detail all enclosures. The number of copies of Shop Drawings and Product Data to be submitted shall be as specified in the Specifications and if no number is specified then three copies shall be submitted.

The Architect/Engineer shall review and comment on the Shop Drawings and Product Data within the time provided in the agreed upon schedule for conformance with information given and the design concept expressed in, or reasonably inferred from, the Contract Documents. The nature of all corrections to be made to the Shop Drawings and Product Data, if any, shall be clearly noted, and the submittals shall be returned to the Design/Build Entity for such corrections. On resubmitted Shop Drawings, Product Data or Samples, the Design/Build Entity shall direct specific attention in writing on the transmittal cover to revisions other than those corrections requested by the Architect/Engineer on any previously checked submittal. The Architect/Engineer shall promptly review and comment on, and return to the Design/Build Entity and Principal Representative, the resubmitted items.

The Design/Build Entity shall thereafter furnish such other copies in the form approved by the Principal Representative and Architect/Engineer as may be needed for the prosecution of the Work.

#### **13.2 FABRICATION AND ORDERING**

Fabrication shall be started by the Design/Build Entity only after receiving approved Shop Drawings from the Architect/Engineer. Materials shall be ordered in accordance with approved Product Data. Work which is improperly fabricated, whether through incorrect Shop Drawings, faulty workmanship or materials, will not be acceptable.

#### **13.3 DEVIATIONS FROM DRAWINGS OR SPECIFICATIONS**

The review and comments of the Architect/Engineer or Principal Representative of Shop Drawings, Product Data or Samples shall not relieve the Design/Build Entity from responsibility for deviations from the Drawings or Specifications, unless he or she has in writing called the attention of the Architect/Engineer and Principal Representative to such deviations at the time of submission, nor shall it relieve the Design/Build Entity from responsibility for errors of any sort in Shop Drawings or Product Data. Review and comments on Shop Drawings or Product Data containing identified deviations from the Contract Documents shall not be the basis for a Change Order or a claim based on a change in the scope of the Work unless Notice is given to the Principal Representative of all additional costs, time and other impacts of the identified deviation by

bringing it to their attention in writing at the time the submittals are made, and any subsequent change in the Lump Sum Contract Price or the Contract time shall be limited to cost, time and impacts so identified.

#### 13.4 DESIGN/BUILD ENTITY REPRESENTATIONS

By preparing, approving, and/or submitting Shop Drawings, Product Data and Samples, the Design/Build Entity represents that the Design/Build Entity has determined and verified all materials, field measurements, and field construction criteria related thereto, and has checked and coordinated the information contained within each submittal with the requirements of the Work, the Project and the Contract Documents and prior reviews and approvals.

### 14 ARTICLE 14 SAMPLES AND TESTING

#### 14.1 SAMPLES

The Design/Build Entity shall furnish for approval, with such promptness as to cause no delay in his or her Work or in that of any other separate contractor engaged by the Principal Representative, all Samples as directed by the Principal Representative. The Architect/Engineer and Principal Representative shall check and approve such Samples, with reasonable promptness, but only for conformance with the design intent of the Contract Documents and the Project, and for compliance with any submission requirements given in the Contract Documents.

#### 14.2 TESTING - GENERAL

The Design/Build Entity shall provide such equipment and facilities as the Architect/Engineer or Principal Representative may require for conducting field tests and for collecting and forwarding samples to be tested. Samples themselves shall not be incorporated into the Work after approval without the permission of the Architect/Engineer and Principal Representative.

All materials or equipment proposed to be used may be tested at any time during their preparation or use. The Design/Build Entity shall furnish the required samples without charge and shall give sufficient Notice of the placing of orders to permit the testing thereof. Products may be sampled either prior to shipment or after being received at the site of the Work.

Tests shall be made by an accredited testing laboratory. Except as otherwise provided in the Specifications, sampling and testing of all materials, and the laboratory methods and testing equipment, shall be in accordance with the latest standards and tentative methods of the American Society of Testing Materials (ASTM). The cost of testing which is in addition to the requirements of the Specifications shall be paid by the Design/Build Entity if so directed by the Principal Representative, and the Lump Sum Contract Price shall be adjusted accordingly by Change Order; provided however, that whenever testing shows portions of the Work to be deficient, all costs of testing including that required to verify the adequacy of repair or replacement Work shall be the responsibility of the Design/Build Entity.

#### 14.3 TESTING - CONCRETE AND SOILS

Unless otherwise specified or provided elsewhere in the Contract Documents, the Principal Representative will contract for and pay for the testing of concrete and for soils compaction testing through an independent laboratory or laboratories selected and approved by the Principal Representative. The Design/Build Entity shall assume the responsibility of arranging, scheduling and coordinating the concrete sample collection efforts and soils compaction efforts in an

efficient and cost effective manner. Testing shall be performed in accordance with the requirements of the Specifications, and if no requirements are specified, the Design/Build Entity shall request instructions and testing shall be as directed by the Architect/Engineer or the soils engineer, as applicable, and in accordance with standard industry practices.

The Principal Representative and the Architect/Engineer shall be given reasonable advance notice of each concrete pour and reserve the right to either increase or decrease the number of cylinders or the frequency of tests.

Soil compaction testing shall be at random locations selected by the soils engineer. In general, soils compaction testing shall be as directed by the soils engineer and shall include all substrate prior to backfill or construction.

#### 14.4 TESTING - OTHER

Additional testing required by the Specifications will be accomplished and paid for by the Principal Representative in a manner similar to that for concrete and soils unless noted otherwise in the Specifications. In any case, the Design/Build Entity will be responsible for arranging, scheduling and coordinating additional tests. Where the additional testing will be contracted and paid for by the Principal Representative, the Design/Build Entity shall give the Principal Representative not less than one month advance written Notice of the date the first such test will be required.

### 15 ARTICLE 15 SUBCONTRACTS, CONSULTANTS AND SUBCONSULTANTS

#### 15.1 CONTRACT PERFORMANCE OUTSIDE THE UNITED STATES OR COLORADO

After the contract is awarded, the Design/Build Entity is required to provide written notice to the Principal Representative no later than twenty (20) days after deciding to perform services under this contract outside the United States or Colorado or to subcontract services under this contract to a subcontractor that will perform such services outside the United States or Colorado. The written notification must include, but need not be limited to, a statement of the type of services that will be performed at a location outside the United States or Colorado and the reason why it is necessary or advantageous to go outside the United States or Colorado to perform the services. All notices received by the State pursuant to outsourced services shall be posted on the Colorado Department of Personnel & Administration's website. *If the Design/Build Entity knowingly fails to notify the Principal Representative of any outsourced services as specified herein, the Principal Representative, at its discretion, may terminate this contract as provided in the Colorado Procurement Code or the applicable procurement code for institutions of higher education. (Does not apply to any project that receives federal moneys).*

#### 15.2 SUBCONTRACTOR PREQUALIFICATION

Prior to the Notice to Proceed to Commence Design Phase, the Design/Build Entity shall submit to the Principal Representative and State Buildings Program a complete list of all proposed pre-qualified Subcontractors. The Design/Build Entity Shall submit to the Principal Representative and State Buildings Program a complete list of Consultants including the Architect/Engineer and the professional subconsultants. It shall be as complete as possible at the time, showing all known Subcontractors, Consultants and Subconsultants planned for the Work. The list shall be supplemented as other Subcontractors are determined by the Design/Build Entity and any such supplemental list shall be submitted to the Principal Representative and State Buildings Program not less than ten (10) days before the Subcontractor commences Work.

The Design/Build Entity's list of all proposed pre-qualified Subcontractors shall include those Subcontractors, if any, which the Design/Build Entity indicated in its Technical Proposal would be employed for specific portions of the Work or if such indication was requested in the Request for Proposal documents issued by the State.

#### 15.3 SUBCONTRACTOR PROPOSALS

If Design/Build Entity utilizes any Subcontractor on this Project, Design/Build Entity shall request and receive proposals from the Subcontractors and subcontracts will be awarded after the proposals are tabulated in a pre-approved format which compares to the Fixed Limit of Construction Cost budgeted by line item, as indicated in the finalized Design/Build Entity's Cost Proposal, and, reviewed by the Design/Build Entity, and Principal Representative.

Should Design/Build Entity submit a proposal for subcontract Work, the proposal conditions used shall be the same as for all subcontractor proposals. These Design/Build Entity proposals for subcontract Work shall be submitted to the Principal Representative twenty-four (24) hours prior to receipt of other subcontractor proposals and be opened with the other proposals.

#### 15.4 SUBCONTRACT FORMS

All subcontracts will be between Design/Build Entity and the Subcontractors. The form of subcontracts shall be furnished to the Principal Representative for review and consent as to form, which consent shall not be unreasonably withheld.

#### 15.5 SUBCONTRACTOR SUBSTITUTION

The substitution of any Subcontractor listed in the Design/Build Entity's proposal shall be justified in writing not less than ten (10) days after the date of the Notice to Proceed to Commence Design Phase, and shall be subject to the approval of the Principal Representative. For reasons such as the Subcontractor's refusal to perform as agreed, subsequent unavailability or later discovered proposal errors, or other similar reasons, such substitution may be approved. The Design/Build Entity shall bear any additional cost incurred by such substitutions.

#### 15.6 DESIGN/BUILD ENTITY RESPONSIBLE FOR SUBCONTRACTORS

The Design/Build Entity shall not employ any Subcontractor that the Principal Representative, within ten (10) days after the date of receipt of the Design/Build Entity's list of Subcontractors or any supplemental list, objects to in writing as being unacceptable to either the Principal Representative or State Buildings Program. If a Subcontractor is deemed unacceptable, the Design/Build Entity shall propose a substitute Subcontractor and the Lump Sum Contract Price shall be adjusted by any demonstrated difference between the Subcontractor's bids, except where the Subcontractor has been debarred by the State or fails to meet qualifications of the Contract Documents to perform the Work proposed.

The Design/Build Entity shall be fully responsible to the Principal Representative for the acts and omissions of Subcontractors and of persons either directly or indirectly employed by them. All instructions or orders in respect to Work to be done by Subcontractors shall be given to the Design/Build Entity.

### 16 ARTICLE 16 RELATIONS OF DESIGN/BUILD ENTITY AND SUBCONTRACTOR

The Design/Build Entity agrees to bind each Subcontractor to the terms of these General Conditions and to the requirements of the Drawings and Specifications, and any Addenda thereto,

and also all the other Contract Documents, so far as applicable to the Work of such Subcontractor. The Design/Build Entity further agrees to bind each Subcontractor to those terms of the General Conditions which expressly require that Subcontractors also be bound, including without limitation, requirements that Subcontractors waive all rights of subrogation, provide adequate general commercial liability and property insurance, automobile insurance and workers' compensation insurance as provided in Article 25, Insurance.

Nothing contained in the Contract Documents shall be deemed to create any contractual relationship whatsoever between any Subcontractor and the State of Colorado acting by and through its Principal Representative.

#### **17 ARTICLE 17 MUTUAL RESPONSIBILITY OF CONTRACTORS**

Should the Design/Build Entity cause damage to any separate contractor engaged by the Principal Representative on the Work, the Design/Build Entity agrees, upon due Notice, to settle with such separate contractor by agreement, if he or she will so settle. If such separate contractor sues the Principal Representative on account of any damage alleged to have been so sustained, the Principal Representative shall notify the Design/Build Entity, who shall defend such proceedings if requested to do so by Principal Representative. If any judgment against the Principal Representative arises there from, the Design/Build Entity shall pay or satisfy it and pay all costs and reasonable attorney fees incurred by the Principal Representative, in accordance with Article 53.23, Indemnification, provided the Design/Build Entity was given due Notice of an opportunity to settle.

#### **18 ARTICLE 18 SEPARATE CONTRACTS**

The Principal Representative reserves the right to enter into other contracts in connection with the Project or the Contract. The Design/Build Entity shall afford other separate contractors reasonable opportunity for the introduction and storage of their materials and the execution of their Work, and shall properly connect and coordinate his or her Work with theirs. If any part of the Design/Build Entity's Work depends, for proper execution or results, upon the Work of any other separate contractor, the Design/Build Entity shall inspect and promptly report to the Principal Representative any defects in such Work that render it unsuitable for such proper execution and results. Failure of the Design/Build Entity to so inspect and report shall constitute an acceptance of the other separate contractor's Work as fit and proper for the reception of Work, except as to defects which may develop in the other separate contractor's Work after the execution of the Design/Build Entity's Work.

To insure the proper execution of subsequent Work, the Design/Build Entity shall measure Work already in place and shall at once report to the Principal Representative any discrepancy between the executed Work and the Drawings.

## **19 ARTICLE 19 USE OF PREMISES**

The Design/Build Entity shall confine apparatus, the storage of materials and the operations of workmen to limits indicated by law, ordinances, permits and any limits lines shown on the Drawings. The Design/Build Entity shall not unreasonably encumber the premises with materials.

The Design/Build Entity shall enforce all of the Principal Representative's instructions and prohibitions regarding, without limitation, such matters as signs, advertisements, fires, smoking, and security.

## **20 ARTICLE 20 CUTTING, FITTING OR PATCHING**

The Design/Build Entity shall do all cutting, fitting or patching of Work that may be required to make its several parts come together properly and fit it to receive or be received by Work of other separate contractors shown upon, or reasonably inferred from, the Drawings and Specifications for the complete structure, and shall provide for such finishes to patched or fitted Work as the Principal Representative may direct. The Design/Build Entity shall not endanger any Work by cutting, excavating or otherwise altering the Work and shall not cut or alter the Work of any other separate contractor save with the consent of the Principal Representative.

## **21 ARTICLE 21 UTILITIES**

### **21.1 TEMPORARY UTILITIES**

Unless otherwise specifically stated in the Specifications or on the Drawings, the Principal Representative shall be responsible for the locations of all utilities as shown on the Drawings or indicated elsewhere in the Specifications, subject to the Design/Build Entity's compliance with all statutory or regulatory requirements to call for utility locates. When actual conditions deviate from those shown, the Design/Build Entity shall comply with the requirements of Article 37, Differing Site Conditions. The Design/Build Entity shall provide and pay for the installation of all temporary utilities required to supply all the power, light and water needed by him and other separate contractors for their Work and shall install and maintain all such utilities in such manner as to protect the public and workmen and conform with any applicable laws and regulations. Upon completion of the Work, he or she shall remove all such temporary utilities from the site. The Design/Build Entity shall pay for all consumption of power, light and water used by him or her and the other separate contractors, without regard to whether such items are metered by temporary or permanent meters. The Design/Build Entity's Superintendent shall have full authority over all trades and Subcontractors at any tier to prevent waste. The cut-off date on permanent meters shall be either the agreed date of the date of the Notice of Substantial Completion or the Notice of Approval of Occupancy/Use of the Project.

### **21.2 PROTECTION OF EXISTING UTILITIES**

Where existing utilities, such as water mains, sanitary sewers, storm sewers and electrical conduits, are shown on the Drawings, the Design/Build Entity shall be responsible for the protection thereof, without regard to whether any such utilities are to be relocated or removed as a part of the Work. If any utilities are to be moved, the moving must be conducted in such manner as not to cause undue interruption or delay in the operation of the same.

### 21.3 CROSSING OF UTILITIES

When new construction crosses highways, railroads, streets, or utilities under the jurisdiction of State, city or other public agency, public utility or private entity, the Design/Build Entity shall secure proper written permission before executing such new construction. The Design/Build Entity will be required to furnish a proper release before final acceptance of the Work.

## 22 ARTICLE 22 UNSUITABLE CONDITIONS

The Design/Build Entity shall not Work at any time, or permit any Work to be done, under any conditions contrary to those recommended by manufacturers or industry standards which are otherwise proper, unsuited for proper execution, safety and performance. Any cost caused by ill-timed Work shall be borne by the Design/Build Entity unless the timing of such Work shall have been directed by the Principal Representative, after the award of the Contract, and the Design/Build Entity provided Notice of any additional cost.

## 23 ARTICLE 23 TEMPORARY FACILITIES

### 23.1 OFFICE FACILITIES

The Design/Build Entity shall provide and maintain without additional expense for the duration of the Project temporary office facilities, as required and as specified, for its own use and the use of the representatives of the Principal Representative and State Buildings Program.

### 23.2 TEMPORARY HEAT

The Design/Build Entity shall furnish and pay for all the labor, facilities, equipment, fuel and power necessary to supply temporary heating, ventilating and air conditioning, except to the extent otherwise specified, and shall be responsible for the installation, operation, maintenance and removal of such facilities and equipment. Unless otherwise specified, the permanent HVAC system shall not be used for temporary heat in whole or in part. If the Design/Build Entity desires to put the permanent system into use, in whole or in part, the Design/Build Entity shall set it into operation and furnish the necessary fuel and manpower to safely operate, protect and maintain that HVAC system. Any operation of all or any part of the permanent HVAC system including operation for testing purposes shall not constitute acceptance of the system, nor shall it relieve the Design/Build Entity of his or her one-year guarantee of the system from the date of the Notice of Substantial Completion of the entire Project, and if necessary due to prior operation, the Design/Build Entity shall provide manufacturers' extended warranties from the date of the Design/Build Entity's use prior to the date of the Notice of Substantial Completion.

### 23.3 WEATHER PROTECTION

The Design/Build Entity shall, at all times, provide protection against weather, so as to maintain all Work, materials, apparatus and fixtures free from injury or damages. The Design/Build Entity shall provide weather tight storage on substantial floors at least six (6) inches off the ground for all materials requiring protection from the weather.

#### **23.4 DUST PARTITIONS**

If the Work involves work in an occupied existing building, the Design/Build Entity shall erect and maintain during the progress of the Work, suitable dust-proof temporary partitions, or more permanent partitions as specified, to protect such building and the occupants thereof.

#### **23.5 BENCH MARKS**

The Design/Build Entity shall maintain any site bench marks provided by the Principal Representative and shall establish any additional benchmarks specified by the Architect/Engineer or Principal Representative as necessary for the Design/Build Entity to layout the Work and ascertain all grades and levels as needed.

#### **23.6 SIGN**

The Design/Build Entity shall erect and permit one 4' x 8' sign only at the site to identify the Project as specified or directed by the Principal Representative which shall be maintained in good condition during the life of the Project.

#### **23.7 SANITARY PROVISION**

The Design/Build Entity shall provide and maintain suitable, clean, temporary sanitary toilet facilities for any and all workmen engaged on the Work, for the entire construction period, in strict compliance with the requirement of all applicable codes, regulations, laws and ordinances, and no other facilities, new or existing, may be used by any person on the Project. When the Project is complete the Design/Build Entity shall promptly remove them from the site, disinfect, and clean or treat the areas as required. If any new construction surfaces in the Project other than the toilet facilities provided for herein are soiled at any time, the entire areas so soiled shall be completely removed from the Project and rebuilt. In no event may present toilet facilities of any existing building at the site of the Work be used by employees of the Design/Build Entity or any subcontractors.

### **24 ARTICLE 24 CLEANING UP**

The Design/Build Entity shall keep the building and premises free from all surplus material, waste material, dirt and rubbish caused by employees or work, and at the completion of the Work shall remove all such surplus material, waste material, dirt, and rubbish, as well as all tools, equipment and scaffolding, and shall wash and clean all window glass and plumbing fixtures, perform cleanup and cleaning required by the Specifications and leave all of the Work clean unless more exact requirements are specified.

### **25 ARTICLE 25 INSURANCE**

#### **25.1 GENERAL**

The Design/Build Entity shall procure and maintain all insurance requirements and limits as set forth below, at his or her own expense, for the length of time set forth in Contract requirements. The Design/Build Entity shall continue to provide evidence of such coverage to State of Colorado on an annual basis during the aforementioned period including all of the terms of the insurance and indemnification requirements of this agreement. All below insurance policies shall include a provision preventing cancellation without thirty (30) days' prior Notice by certified mail. A



completed Certificate of Insurance shall be filed with the Principal Representative and State Buildings Program within ten (10) days after the date of the Notice of Award, said Certificate to specifically state the inclusion of the coverages and provisions set forth herein and shall state whether the coverage is “claims made” or “per occurrence”.

## 25.2 COMMERCIAL GENERAL LIABILITY INSURANCE (CGL)

This insurance must protect the Design/Build Entity from all claims for bodily injury, including death and all claims for destruction of or damage to property (other than the Work itself), arising out of or in connection with any operations under this Contract, whether such operations be by the Design/Build Entity or by any Subcontractor under him or anyone directly or indirectly employed by the Design/Build Entity or by a Subcontractor. All such insurance shall be written with limits and coverages as specified below and shall be written on an occurrence form.

General Aggregate	\$2,000,000
Products – Completed Operations Aggregate	\$2,000,000
Each Occurrence	\$1,000,000
Personal Injury	\$1,000,000

The following coverages shall be included in the CGL:

- a) Per project general aggregate (CG 25 03 or similar)
- b) Additional Insured status in favor of the State of Colorado and any other parties as outlined in The Contract and must include both ONGOING Operations AND COMPLETED Operations per CG2010 10/01 and CG 2037 10/01 or equivalent as permitted by law.
- c) The policy shall be endorsed to be **primary and non-contributory** with any insurance maintained by Additional Insureds.
- d) A waiver of Subrogation in favor of all Additional Insured parties.
- e) Personal Injury Liability  
Contractual Liability coverage to support indemnification obligation per Article 53.23
- f) Explosion, collapse and underground (xcu)

The following exclusionary endorsements are prohibited in the CGL policy:

- a) Damage to Work performed by Subcontract/Vendor (CG 22-94 or similar)
- b) Contractual Liability Coverage Exclusion modifying or deleting the definition of an “insured contract” from the unaltered SO CG 0001 1001 policy from (CG 24 26 or similar)
- c) If applicable to the Work to be performed: Residential or multi-family
- d) If applicable to the Work to be performed: Exterior insulation finish systems
- e) If applicable to the Work to be performed: Subsidence or Earth Movement

The Design/Build Entity shall maintain general liability coverage including Products and Completed Operations insurance, and the Additional Insured with primary and non-contributory coverage as specified in this Contract for three (3) years after completion of the project.

### 25.3 AUTOMOBILE LIABILITY INSURANCE

Automobile and business auto liability covering liability arising out of any auto (including owned, hired and non-owned autos).

Combined Bodily Injury and Property Damage Liability  
(Combined Single Limit): \$1,000,000 each accident

Coverages: Specific waiver of subrogation

### 25.4 WORKERS' COMPENSATION INSURANCE

The Design/Build Entity shall procure and maintain Workers' Compensation Insurance at his or her own expense during the life of this Contract, including occupational disease provisions for all employees per statutory requirements. Policy shall contain a waiver of subrogation in favor of the State of Colorado.

The Design/Build Entity shall also require each Subcontractor to furnish Workers' Compensation Insurance, including occupational disease provisions for all of the latter's employees, and to the extent not furnished, the Design/Build Entity accepts full liability and responsibility for Subcontractor's employees.

In cases where any class of employees engaged in hazardous Work under this Contract at the site of the Project is not protected under the Workers' Compensation statute, the Design/Build Entity shall provide, and shall cause each Subcontractor to provide, adequate and suitable insurance for the protection of employees not otherwise protected.

### 25.5 UMBRELLA LIABILITY INSURANCE

(For construction projects exceeding \$10,000,000, provide the following coverage):

The Design/Build Entity shall maintain umbrella/excess liability insurance on an occurrence basis in excess of the underlying insurance described in Section B-D above. Coverage shall follow the terms of the underlying insurance, included the additional insured and waiver of subrogation provisions. The amounts of insurance required in Sections above may be satisfied by the Design/Build Entity purchasing coverage for the limits specified or by any combination of underlying and umbrella limits, so long as the total amount of insurance is not less than the limits specified in each section previously mentioned.

Each occurrence	\$5,000,000
Aggregate	\$5,000,000

### 25.6 BUILDER'S RISK INSURANCE

Unless otherwise expressly stated in the Supplementary General Conditions (e.g. where the State elects to provide for projects with a completed value of less than \$1,000,000), the Design/Build Entity 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 Lump Sum Contract Price, 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 or until no person or entity

other than the Owner has an insurable interest in the property, or the Date of Notice specified on the Notice of Acceptance, State Form SBP-6.27 or whichever is later.

This insurance shall include interests of the Owner, the Design/Build Entity, Subcontractors and Sub-subcontractors in the Project as named insureds. All associated deductibles shall be the responsibility of the Design/Build Entity. Such policy may have a deductible clause but not to exceed ten thousand dollars (\$10,000.00).

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, false Work, testing and startup, temporary buildings and debris removal including demolition occasioned by enforcement of any applicable legal requirements, and shall cover reasonable compensation for Design/Build Entity and Design/Build /Entity's Architect's services and expenses required as a result of such insured loss.

Design/Build Entity shall maintain Builders Risk coverage including partial use by Owner. The Design/Build Entity shall waive all rights of subrogation with regard to the State of Colorado and the Principal Representative, its officials, its officers, its agents and its employees, all while acting within the scope and course of their employment for damages caused by fire or other causes of loss to the extent covered by property insurance obtained pursuant to this Section or other property insurance applicable to the Work. The Design/Build Entity shall require all Subcontractors and Subconsultants at any tier to similarly waive all such rights of subrogation and shall expressly include such a waiver in all subcontracts.

Upon request, the amount of such insurance shall be increased to include the cost of any additional Work to be done on the Project, or materials or equipment to be incorporated in the Project, under other independent contracts let or to be let. In such event, the Design/Build Entity shall be reimbursed for this cost as his or her share of the insurance in the same ratio as the ratio of the insurance represented by such independent contracts let or to be let to the total insurance carried.

The Principal Representative, with approval of the State Controller, shall have the power to adjust and settle any loss. Unless it is agreed otherwise, all monies received shall be applied first on rebuilding or repairing the destroyed or injured Work.

## 25.7 PROFESSIONAL ERRORS AND OMISSIONS LIABILITY INSURANCE

The Design/Build Entity shall require the Architect/Engineer or other such consultant providing professional services to the Design/Build Entity to maintain in full force and effect an Errors and Omissions Professional Liability Insurance Policy in the amounts (indicated in the following table) as minimum coverage or such other minimum coverage as determined by the Principal Representative and approved by the State Buildings Program. The policy, including claims-made forms, shall remain in effect for the duration of this Agreement and for at least three (3) years beyond the completion and acceptance of the Work. The Architect/Engineer shall be responsible for all claims, damages, losses or expenses including attorney's fees, arising out of or resulting from the performance of Professional Services contemplated in this Agreement, provided that any such claim, damage, loss or expense is caused by any negligent act, error or omission of the Architect/Engineer, any consultant or associated thereof, or anyone directly or indirectly employed by the Architect/Engineer. The Design/Build Entity shall submit a Certificate of Insurance verifying said coverage at the signing of this Agreement and also any notices of Renewals of the said policy as the occur.

For a Fixed Limit of Construction Cost	Minimum Coverage per Claim	Minimum Coverage in the Aggregate
\$999,999 and under	\$250,000	\$500,000
\$1,000,000 to \$4,999,999	\$500,000	\$1,000,000
\$5,000,000 to \$19,999,999	\$1,000,000	\$2,000,000
\$20,000,000 and above	\$2,000,000	\$2,000,000

#### 25.8 POLLUTION LIABILITY INSURANCE

If Design/Build Entity is providing directly or indirectly Work with pollution/environmental hazards, the Design/Build Entity must provide or cause those conducting the Work to provide Pollution Liability Insurance coverage. Pollution Liability policy must include contractual liability coverage. State of Colorado must be included as additional insureds on the policy. The policy limits shall be in the amount of \$1,000,000 with maximum deductible of \$25,000 to be paid by the Subcontractor/Vendor.

#### 25.9 ADDITIONAL MISCELLANEOUS INSURANCE PROVISIONS

Certificates of Insurance and/or insurance policies required under this Contract shall be subject to the following stipulations and additional requirements:

- a) Any and all deductibles or self-insured retentions contained in any Insurance policy shall be assumed by and at the sole risk of the Design/Build Entity;
- b) If any of the said policies shall fail at any time to meet the requirements of the Contract Documents as to form or substance, or if a company issuing any such policy shall be or at any time cease to be approved by the Division of Insurance of the State of Colorado, or be or cease to be in compliance with any stricter requirements of the Contract Documents, the Design/Build Entity shall promptly obtain a new policy, submit the same to the Principal Representative and State Building Programs for approval if requested, and submit a Certificate of Insurance as hereinbefore provided. Upon failure of the Design/Build Entity to furnish, deliver and maintain such insurance as provided herein, this Contract, in the sole discretion of the State of Colorado, may be immediately declared suspended, discontinued, or terminated. Failure of the Design/Build Entity in obtaining and/or maintaining any required insurance shall not relieve the Design/Build Entity from any liability under the Contract, nor shall the insurance requirements be construed to conflict with the obligations of the Design/Build Entity concerning indemnification;
- c) All requisite insurance shall be obtained from financially responsible insurance companies, authorized to do business in the State of Colorado and acceptable to the Principal Representative;
- d) Receipt, review or acceptance by the Principal Representative of any insurance policies or certificates of insurance required by this Contract shall not be construed as a waiver or relieve the Design/Build Entity from its obligation to meet the insurance requirements contained in these General Conditions.

## **26 ARTICLE 26 DESIGN/BUILD ENTITY'S PERFORMANCE AND PAYMENT BONDS**

The Design/Build Entity shall furnish a Performance Bond and a Labor and Material Payment Bond on State Forms SBP-6.22, Performance Bond, and SBP-6.221, Labor and Material Payment Bond, or such other forms as State Buildings Program may approve for the Project, executed by a corporate Surety authorized to do business in the State of Colorado and in the full amount of the Lump Sum Contract Price. The expense of these bonds shall be borne by the Design/Build Entity and the bonds shall be filed with the Principal Representative and State Buildings Program.

If, at any time, a Surety on such a bond is found to be, or ceases to be in strict compliance with any qualification requirements of the Contract Documents, or loses its right to do business in the State of Colorado, another Surety will be required, which the Design/Build Entity shall furnish to the Principal Representative and State Buildings Program within ten (10) days after receipt of Notice from the Principal Representative or after the Design/Build Entity otherwise becomes aware of such conditions.

## **27 ARTICLE 27 LABOR AND WAGES**

### **27.1 COLORADO LABOR**

In accordance with laws of Colorado, C.R.S. § 8-17-101(1), as amended, Colorado labor shall be employed to perform at least eighty percent of the Work. If the Federal Davis-Bacon Act shall be applicable to the Project, as indicated in Article 6.3 (Design/Build Lump Sum Agreement SC-8.0), Modification of Article 27, the minimum wage rates to be paid on the Project will be specified in the Contract Documents.

### **27.2 PREVAILING WAGE RATES**

In accordance with laws of Colorado, C.R.S. § 24-92 Part 2, if State prevailing wage rates are applicable to this project:

- a) The contractor shall in conspicuous places on the project post an owner provided poster with the current prevailing rate of payments as provided in the project solicitation.
  1. A contractor who fails to comply shall be deemed guilty of a class 3 misdemeanor and shall pay the State one hundred dollars (\$100) for each calendar day of noncompliance as determined by the State.
- b) The contractor and any subcontractors shall pay all the employees employed directly on the site of the work, unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account, the full amounts accrued at time of payment computed at wage rates not less than those stated in the competitive solicitation, regardless of any contractual relationships that may be alleged to exist between the contractor or subcontractor and the employees.
- c) The contractor and any subcontractors shall prepare and submit electronic payroll reports to the State on a monthly basis that disclose all relevant payroll information, including the name and address of any entities to which fringe benefits are paid.
- d) The contractor and any subcontractors shall maintain on the site where public projects are being constructed a daily log of employees employed each day on the public project. The log shall include, at a minimum, for each employee his or her name, primary job title, and employer, and shall be kept on a form prescribed by the director. The log shall be available for inspection on the site at all times by the State.

- e) If the contractor or any subcontractor fails to pay wages as are required by the contract, the State shall not approve a warrant or demand for payment to the contractor until the contractor furnishes the State evidence satisfactory to such agency of government that such wages have been paid; except that the State shall approve and pay any portion of a warrant or demand for payment to the contractor to the extent the State has been furnished satisfactory evidence that the contractor or one or more subcontractors has paid such wages required by the contract, The contractor or subcontractor may use the following procedure in order to satisfy the requirements of this section:
1. The contractor or subcontractor may submit to the State, for each employee to whom such wages are due, a check payable to that employee or to the State so it is negotiable by either party. Each such check shall be in an amount representing the difference between the accrued wages required to be paid to that employee by the contract and the wages actually paid by the contractor or subcontractor.
  2. If any check submitted cannot be delivered to the employee within a reasonable period, then it shall be negotiated by the State and the proceeds deposited in the unclaimed property trust fund created in § 38-13-116.6. Nothing in this subsection (1) shall be construed to lessen the responsibility of the contractor or subcontractor to attempt to locate and pay any employee to whom wages are due.

## **28 ARTICLE 28 ROYALTIES AND PATENTS**

The Design/Build Entity shall be responsible for assuring that all rights to use of products and systems have been properly arranged and shall take such action as may be necessary to avoid delay, at no additional charge to the Principal Representative, where such right is challenged during the course of the Work. The Design/Build Entity shall pay all royalties and license fees required to be paid and shall defend all suits or claims for infringement of any patent rights and shall save the State of Colorado and the Principal Representative harmless from loss on account thereof, in accordance with Article 53.23, Indemnification.

## **29 ARTICLE 29 ASSIGNMENT**

Except as otherwise provided hereafter the Design/Build Entity shall not assign the whole or any part of this Contract without the written consent of the Principal Representative. This provision shall not be construed to prohibit assignments of the right to payment to the extent permitted by C.R.S. § 4-9-406, et. seq., as amended, provided that written Notice of assignment adequate to identify the rights assigned is received by the Principal Representative and the controller for the agency, department, or institution executing this Contract (as distinguished from the State Controller). Such assignment of the right to payment shall not be deemed valid until receipt by the Principal Representative and such controller and the Design/Build Entity assumes the risk that such written Notice of assignment is received by the Principal Representative and the controller for the agency, department, or institution involved. In case the Design/Build Entity assigns all or part of any moneys due or to become due under this Contract, the instrument of assignment shall contain a clause substantially to the effect that it is agreed that the right of the assignee in and to any moneys due or to become due to the Design/Build Entity shall be subject to all claims of all persons, firms, and corporations for services rendered or materials supplied for the performance of the Work called for in this Contract, whether said service or materials were supplied prior to or

after the assignment. Nothing in this Article shall be deemed a waiver of any other defenses available to the Principal Representative against the Design/Build Entity or the assignee.

### **30 ARTICLE 30 CORRECTION OF WORK BEFORE ACCEPTANCE**

The Design/Build Entity shall promptly remove from the premises all Work or materials condemned or declared irreparably defective as failing to conform to the Contract Documents on receipt of written Notice from the Architect/Engineer or the Principal Representative, whether incorporated in the Work or not. The Principal Representative reserves the right to consult with the Architect/Engineer on any item in question and to obtain documentation of opinions rendered. If such materials shall have been incorporated in the Work, or if any unsatisfactory Work is discovered, the Design/Build Entity shall promptly replace and re-execute his or her Work in accordance with the requirements of the Contract Documents without expense to the Principal Representative, and shall also bear the expense of making good all Work of other separate contractors destroyed or damaged by the removal or replacement of such defective material or Work.

Design/Build Entity Should any defective Work or material be discovered during the process of construction, or should reasonable doubt arise as to whether certain material or Work is in accordance with the Contract Documents, the value of such defective or questionable material or Work shall not be included in any application for payment, or if previously included, shall be deducted by the Architect/Engineer or the Principal Representative from the next application submitted by the Design/Build Entity.

If the Design/Build Entity does not perform repair, correction and replacement of defective Work, in lieu of proceeding by issuance of a Notice of intent to remove condemned Work as outlined above, the Principal Representative may, not less than seven (7) days after giving the original written Notice of the need to repair, correct, or replace defective Work, deduct all costs and expenses of replacement or correction from the Design/Build Entity's next application for payment in addition to the value of the defective Work or material. The Principal Representative may also make an equitable deduction from the Lump Sum Contract Price by unilateral Change Order, in accordance with Article 33, Payments Withheld, and Article 35, Changes In the Work.

If the Design/Build Entity does not remove such condemned or irreparably defective Work or material within a reasonable time, the Principal Representative may, after giving a second seven (7) day advance Notice to the Design/Build Entity and the Surety, remove them and may store the material at the Design/Build Entity's expense. The Principal Representative may accomplish the removal and replacement with its own forces or with another separate Design/Build Entity. If the Design/Build Entity does not pay the expense of such removal and pay all storage charges within ten (10) days thereafter, the Principal Representative may, upon ten (10) days' written Notice, sell such material at auction or at private sale and account for the net proceeds thereof, after deducting all costs and expenses which should have been borne by the Design/Build Entity. If the Design/Build Entity shall commence and diligently pursue such removal and replacement before the expiration of the seven day period, or if the Design/Build Entity shall show good cause in conjunction with submittal of a revised CPM schedule showing when the Work will be performed and why such removal of condemned Work should be scheduled for a later date, the Principal Representative shall not proceed to remove or replace the condemned Work.

If the Design/Build Entity disagrees with the Notice to remove Work or materials condemned or declared irreparably defective, the Design/Build Entity may request facilitated negotiation of the issue and the Principal Representative's right to proceed with removal and to deduct costs and expenses of repair shall be suspended and tolled until such time as the parties meet and negotiate the issue.

### **31 ARTICLE 31 APPLICATIONS FOR PAYMENTS**

#### **31.1 DESIGN/BUILD ENTITY'S SUBMITTALS**

On or before the first day of each month and no more than five days prior thereto, the Design/Build Entity may submit applications for payment for the Work performed during such month covering the portion of the Work completed as of the date indicated, and payments on account of this Contract shall be due per C.R.S. § 24-30-202(24) (correct notice of amount due), within forty-five (45) days of receipt by the Principal Representative of application for payments that have been certified by the Architect/Engineer. The Design/Build Entity shall submit the application for payment to the Principal Representative and the Architect/Engineer on State forms SBP-7.2, Certificate for Design/Build Entity's Payment, or such other format as the State Buildings Program shall approve, in an itemized format in accordance with the schedule of values or a cost loaded CPM schedule when required, supported to the extent reasonably required by the Principal Representative by receipts or other vouchers, showing payments for materials and labor, prior payments and payments to be made to Subcontractors and such other evidence of the Design/Build Entity's right to payments as the Principal Representative may direct.

If payments are made on account of materials not incorporated in the Work but delivered and suitably stored at the site, or at some other location agreed upon in writing, such payments shall be conditioned upon submission by the Design/Build Entity of bills of sale or such other procedure as will establish the Principal Representative's title to such material or otherwise adequately protect the Principal Representative's interests, and shall provide proof of insurance whenever requested by the Principal Representative and shall be subject to the right to inspect the materials at the request of the Principal Representative.

All applications for payment, except the final application, and the payments there under, shall be subject to correction in the next application rendered following the discovery of any error.

#### **31.2 ARCHITECT/ENGINEER CERTIFICATION**

The Architect/Engineer after appropriate observation of the progress of the Work shall certify to the Principal Representative the amount that the Design/Build Entity is entitled to on the certificate for Design/Build Entity's payment.

#### **31.3 RETAINAGE WITHHELD**

Unless otherwise provided in the Supplementary General Conditions, an amount equivalent to five percent (5%) of the amount shown to be due the Design/Build Entity on each application for payment shall be withheld until the Work required by the Contract has been performed. The withheld percentage of the contract price of any such Work, improvement, or construction shall be administered according to § 24-91-103, C.R.S., as amended, and as provided in C.R.S. § 24-38-26-107, as amended, and Article 31.4, shall be retained until the Work or discrete portions of the Work, have been completed satisfactorily, finally or partially accepted, and advertised for final settlement as further provided in Article 41.5.



#### 31.4 RELEASE OF RETAINAGE

The Design/Build Entity may, for satisfactory and substantial reasons shown to the Principal Representative's satisfaction, make a written request to the Principal Representative for release of part or all of the withheld percentage applicable to the Work of a Subcontractor which has completed the subcontracted Work in a manner finally acceptable to the Principal Representative, the Architect/Engineer and the Design/Build Entity. Any such request shall be supported by a written approval from the Surety furnishing the Design/Build Entity's bonds and any surety that has provided a bond for the Subcontractor. The release of any such withheld percentage shall be further supported by such other evidence as the Principal Representative may require, including but not limited to, evidence of prior payments made to the Subcontractor, copies of the Subcontractor's contract with the Design/Build Entity, any applicable warranties, as-built information, maintenance manuals and other customary close-out documentation. The Principal Representative shall not be obligated to review such documentation nor shall the Principal Representative be deemed to assume any obligations to third parties by any review undertaken.

The Design/Build Entity's obligation under these General Conditions to guarantee Work for one year from the date of the Notice of Substantial Completion or the date of any Notice of Partial Substantial Completion of the applicable portion or phase of the Project, shall be unaffected by such partial release; unless a Notice of Partial Substantial Completion is issued for the Work subject to the release of retainage.

Any rights of the Principal Representative which might be terminated by or from the date of any final acceptance of the Work, whether at common law or by the terms of this Contract, shall not be affected by such partial release of retainage prior to any final acceptance of the entire Project.

The Design/Build Entity remains fully responsible for the Subcontractor's Work and assumes any risk that might arise by virtue of the partial release to the Subcontractor of the withheld percentage, including the risk that the Subcontractor may not have fully paid for all materials, labor and equipment furnished to the Project.

If the Principal Representative considers the Design/Build Entity's request for such release satisfactory and supported by substantial reasons, the Principal Representative and the Architect/Engineer shall make a "final inspection" of the applicable portion of the Project to determine whether the Subcontractor's Work has been completed in accordance with the Contract Documents. A final punch list shall be made for the Subcontractor's Work and the procedures of Article 41, Completion, Final Inspection, Acceptance and Settlement, shall be followed for that portion of the Work, except that advertisement of the intent to make final payment to the Subcontractor shall be required only if the Principal Representative has reason to believe that a supplier or Subcontractor to the Subcontractor for which the request is made, may not have been fully paid for all labor and materials furnished to the Project.

#### 32 ARTICLE 32 CERTIFICATES FOR PAYMENTS

State Form SBP-7.2, Certificate For Design/Build Entity's Payment, as modified to included design and construction administration services and as approved by the Principal Representative and its continuation detail sheets, when submitted, shall constitute the Certificate of Design/Build Entity's Application for Payment, and shall be a representation by the Design/Build Entity to the Principal Representative that the Work has progressed to the point indicated, the quality of the Work is in accordance with the Contract Documents, and materials for which payment is

requested have been incorporated into the Project except as noted in the application. If requested by the Principal Representative, the Certificate of Design/build Entity's Application for Payment shall be sworn under oath and notarized.

### **33 ARTICLE 33 PAYMENTS WITHHELD**

The Principal Representative or State Buildings Program may withhold, or on account of subsequently discovered evidence nullify, the whole or any part of any application on account of, but not limited to any of the following:

- a) Defective Work not remedied;
- b) Claims filed or reasonable evidence indicating probable filing of claims;
- c) Failure of the Design/Build Entity to make payments to Subcontractors for material or labor;
- d) A reasonable doubt that the Contract can be completed for the balance of the contract price then unpaid;
- e) Damage or injury to another separate contractor or any other person, persons or property except to the extent of coverage by a policy of insurance;
- f) Failure to obtain necessary permits or licenses or to comply with applicable laws, ordinances, codes, rules or regulations or the directions of the Architect/Engineer or Principal Representative;
- g) Failure to submit a monthly construction schedule;
- h) Failure of the Design/Build Entity to keep Work progressing in accordance with the time schedule;
- i) Failure to keep a superintendent on the Work;
- j) Failure to maintain as built drawings of the Work in progress;
- k) Unauthorized deviations by the Design/Build Entity from the Contract Documents; or
- l) On account of liquidated damages.

In addition, the Principal Representative or State Buildings Program may withhold or nullify the whole or any part of any application for any reason noted elsewhere in these General Conditions of the Design/Build Lump Sum Agreement. Nullification shall mean reduction of amounts shown as previously paid on the application. The amount withheld or nullified may be in such amount as the Principal Representative estimates to be required to allow the Principal Representative to accomplish the Work, cure the failure and cover any damages or injuries, including an allowance for attorney's fees and costs where appropriate. When the grounds for such withholding or nullifying are removed, payment shall be made for the amounts thus withheld or nullified on such grounds.

### **34 ARTICLE 34 DEDUCTIONS FOR UNCORRECTED WORK**

If the Principal Representative or the Architect/Engineer deem it inexpedient to correct Work damaged or not performed in accordance with the Contract Documents, the Principal Representative may, after consultation with the Architect/Engineer and ten (10) days' Notice to the Design/Build Entity of intent to do so, make reasonable reductions from the amounts

otherwise due the Design/Build Entity on the next application for payment. Notice shall specify the amount or terms of any contemplated reduction. The Design/Build Entity may during this period correct or perform the Work. If the Design/Build Entity does not correct or perform the Work, an equitable deduction from the Lump Sum Contract Price shall be made by Change Order, in accordance with Article 35, Changes in the Work, unilaterally if necessary. If either party elects facilitation of this issue after Notice is given, the ten-day (10) notice period shall be extended and tolled until facilitation has occurred.

### **35 ARTICLE 35 CHANGES IN THE WORK**

The Principal Representative may designate, without invalidating the Agreement, and with the approval of State Buildings Program and the State Controller, may order extra Work or make changes with or without the consent of the Design/Build Entity as hereafter provided, by altering, adding to or deducting from the Work, the Lump Sum Contract Price being adjusted accordingly. All such changes in the Work shall be within the general scope of and be executed under the conditions of the Contract, except that any claim for extension of time made necessary due to the change or any claim of other delay or other impacts caused by or resulting from the change in the Work shall be presented by the Design/Build Entity and adjusted by Change Order to the extent known at the time such change is ordered and before proceeding with the extra or changed Work. Any claims for extension of time or of delay or other impacts, and any costs associated with extension of time, delay or other impacts, which are not presented before proceeding with the change in the Work, and which are not adjusted by Change Order to the extent known, shall be waived.

The Principal Representative or the Architect/Engineer with the consent of the Principal Representative, shall have authority to make minor changes in the Work, not involving extra cost, and not inconsistent with the intent of the Contract Documents, but otherwise, except in an emergency endangering life or property, no extra Work or change in the Contract Documents shall be made unless by 1) a written Change Order, approved by the Principal Representative, State Buildings Program, and the State Controller prior to proceeding with the changed Work; or 2) by an Emergency Field Change Order approved by the Principal Representative and State Buildings Program as hereafter provided in Article 35.3, Emergency Field Ordered Changed Work; or 3) by an allocation in writing of any allowance already provided in the encumbered contract amount, the Lump Sum Contract Price being later adjusted to decrease the Lump Sum Contract Price by any unallocated or unexpended amounts remaining in such allowance. No change to the Lump Sum Contract Price shall be valid unless so ordered.

#### **35.1 THE VALUE OF CHANGED WORK**

The value of any extra Work or changes in the Work shall be determined by agreement in one or more of the following ways:

- a) By estimate and acceptance of a lump-sum amount;
- b) By unit prices specified in the Agreement, or subsequently agreed upon, that are extended by specific quantities;
- c) By actual cost plus a fixed fee in a lump sum amount for profit, overhead and all indirect and off-site home office costs, the latter amount agreed upon in writing prior to starting the extra or changed Work.

Where the Design/Build Entity and the Principal Representative cannot agree on the value of extra Work, the Principal Representative may order the Design/Build Entity to perform the changes in the Work and a Change Order may be unilaterally issued based on an estimate of the change in the Work prepared by the Architect/Engineer or Principal Representative. The value of the change in the Work shall be the Principal Representative's determination of the amount of equitable adjustment attributable to the extra Work or change. The Principal Representative's determination shall be subject to appeal by the Design/Build Entity pursuant to the claims process in Article 36, Claims.

Except as otherwise provided in Article 35.2, Detailed Breakdown, below, the Cost Principles of Cost Principles of the Colorado Procurement Code or the applicable procurement code for institutions of higher education, shall govern all Contract changes.

### 35.2 DETAILED BREAKDOWN

In all cases where the value of the extra or changed Work is not known based on unit prices in the Design/Build Entity's proposal or the Agreement, a detailed change proposal shall be submitted by the Design/Build Entity on a Change Order Proposal (SC-6.312), or in such other format as the Principal Representative and State Buildings Program approve, with which the Principal Representative may require an itemized list of materials, equipment and labor, indicating quantities, time and cost for completion of the changed Work.

Such detailed change proposals shall be stated in lump sum amounts and shall be supported by a separate breakdown, which shall include estimates of all or part of the following when requested by the Principal Representative:

- a) Materials, indicating quantities and unit prices including taxes and delivery costs if any (separated where appropriate into general, mechanical and electrical and/or other Subcontractors' Work; and the Principal Representative may require in its discretion any significant subcontract costs to be similarly and separately broken down).
- b) Labor costs, indicating hourly rates and time and labor burden to include Social Security and other payroll taxes such as unemployment, benefits and other customary burdens.
- c) Costs of project management time and superintendence time of personnel stationed at the site, and other field supervision time, but only where a time extension, other than a weather delay, is approved as part of the Change Order, and only where such project management time and superintendence time is directly attributable to and required by the change.
- d) Construction equipment (including small tools). Expenses for equipment and fuel shall be based on customary commercially reasonable rental rates and schedules. Equipment and hand tool costs shall not include the cost of items customarily owned by workers.
- e) Workers' compensation costs, if not included in labor burden.
- f) The cost of commercial general liability and property damage insurance premiums but only to the extent charged the Design/Build Entity as a result of the changed Work.
- g) Overhead and profit, as hereafter specified.
- h) Builder's risk insurance premium costs.
- i) Bond premium costs.
- j) Testing costs not otherwise excluded by these General Conditions.
- k) Subcontract costs.
- l) Architect/Engineer Design Services Costs.

Unless modified in the Supplementary General Conditions, overhead and profit shall not exceed the percentages set forth in the table below.

	OVERHEAD	PROFIT	COMMISSION
To the Design/Build Entity or to Subcontractors for the portion of Work performed with their own forces:	10%	5%	0%
To the Design/Build Entity or to Subcontractors for Work performed by others at a tier immediately below either of them:	5%	0%	5%

Overhead shall include: a) insurance premium for policies not purchased for the Project and itemized above, b) home office costs for office management, administrative and supervisory personnel and assistants, c) estimating and change order preparation costs, d) incidental job burdens, e) legal costs, f) data processing costs, g) interest costs on capital, h) general office expenses except those attributable to increased rental expenses for temporary facilities, and all other indirect costs, but shall not include the Social Security tax and other direct labor burdens. The term "Work" as used in the proceeding table shall include labor, materials and equipment and the "Commission" shall include all costs and profit for carrying the subcontracted Work at the tiers below except direct costs as listed in items 1 through 11 above if any.

On proposals for Work involving both additions and credits to the amount of the Lump Sum Contract Price, the overhead and profit will be allowed on the net increase only. On proposals resulting in a net deduct to the amount of the Lump Sum Contract Price, profit on the deducted amount shall be returned to the Principal Representative at fifty percent (50%) of the rate specified. The inadequacy of the profit specified shall not be a basis for refusal to submit a proposal.

Except in the case of Change Orders or Emergency Field Change Orders agreed to on the basis of a lump sum amount or unit prices as described in paragraphs 35A1 and 35A2 above, The Value of Changed Work, the Design/Build Entity shall keep and present a correct and fully auditable account of the several items of cost, together with vouchers, receipts, time cards and other proof of costs incurred, summarized on a Change Order form (SC-6.31) using such format for supporting documentation as the Principal Representative and State Buildings Program approve. This requirement applies equally to Work done by Subcontractors. Only auditable costs shall be reimbursable on Change Orders where the value is determined on the basis of actual cost plus a fixed fee pursuant to paragraph 35A3 above, or where unilaterally determined by the Principal Representative on the basis of an equitable adjustment in accordance with the Procurement Rules, as described above in Article 35.1, The Value Of Changed Work.

Except for proposals for Work involving both additions and credits, changed Work shall be adjusted and considered separately for Work either added or omitted. The amount of adjustment for Work omitted shall be estimated at the time it is directed to be omitted, and when reasonable to do so, the agreed adjustment shall be reflected on the schedule of values used for the next Design/Build Entity's application for payment.

The Principal Representative reserves the right to contract with any person or firm other than the Design/Build Entity for any or all extra Work; however, unless specifically required in the Contract Documents, the Design/Build Entity shall have no responsibility without additional compensation

to supervise or coordinate the Work of persons or firms separately contracted by the Principal Representative.

### 35.3 HAZARDOUS MATERIALS

The Principal Representative represents that it has undertaken an examination of the site of the Work and has determined that there are no hazardous substances, as defined below, which the Design/Build Entity could reasonably encounter in its performance of the Work. In the event the Principal Representative so discovers hazardous substances, the Principal Representative shall render harmless such hazards before the Design/Build Entity commences the Work.

In the event the Design/Build Entity encounters any materials reasonably believed to be hazardous substances which have not been rendered harmless, the Design/Build Entity shall immediately stop Work in the area affected and report the condition to the Principal Representative, in writing. For purposes of this Agreement, "hazardous substances" shall include asbestos, lead, polychlorinated biphenyl (PCB) and any or all of those substances defined as "hazardous substance", "hazardous waste", or "dangerous or extremely hazardous wastes" as those terms are used in the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and the Resource Conservation and Recovery Act (RCRA), and shall also include materials regulated by the Toxic Substances Control Act (TSCA), the Clean Air Act, the Air Quality Act, the Clean Water Act, and the Occupational Safety and Health Act. The Work in the affected area shall not therefore be resumed except by written agreement of the Principal Representative and the Design/Build Entity, if in fact materials that are hazardous substances have not been rendered harmless. The Work in the affected area shall be resumed only in the absence of the hazardous substances or when it has been rendered harmless or by written agreement of the Principal Representative and the Design/Build Entity.

The Design/Build Entity shall not be required to perform Work without consent in any areas where it reasonably believes hazardous substances that have not been rendered harmless are present.

### 35.4 EMERGENCY FIELD CHANGE ORDERED WORK

The Principal Representative, without invalidating the Agreement, and with the approval of State Buildings Program and without the approval of the State Controller, may order extra Work or make changes in the case of an emergency that is a threat to life or property or where the likelihood of delays in processing a normal Change Order will result in substantial delays and or significant cost increases for the Project. Emergency Field Orders are not to be used solely to expedite normal Change Order processing absent a clear showing of a high potential for significant and substantial cost or delay. Such changes in the Work may be directed through issuance of an Emergency Field Change Order signed by the Design/Build Entity, the Principal Representative (or by a designee specifically appointed to do so in writing), and approved by the Director of State Buildings Program or his or her delegate. The change shall be directed using an Emergency Field Change Order form (SC-6.31E).

If the amount of the adjustment of the Contract price and time for completion can be determined at the time of issuance of the Emergency Field Change Order, those adjustments shall be reflected on the face of the Emergency Field Change Order. Otherwise, the Emergency Field Change Order shall reflect a not to exceed (NTE) amount for any schedule adjustment (increasing or decreasing the time for completion) and an NTE amount for any adjustment to Lump Sum Contract Price, which NTE amount shall represent the maximum amount of adjustment to which the Design/Build Entity will be entitled, including direct and indirect costs of changed Work, as well as any direct or indirect costs attributable to delays, inefficiencies or other impacts arising out of the change.

Emergency Field Change Orders directed in accordance with this provision need not bear the approval signatures of the State Controller.

On Emergency Field Change Orders where the price and schedule have not been finally determined, the Design/Build Entity shall submit final costs for adjustment as soon as practicable. No later than seven (7) days after issuance, except as otherwise permitted, and every seven days thereafter, the Design/Build Entity shall report all costs to the Principal Representative. The final adjustment of the Emergency Field Change Order amount and the adjustment to the Project time for completion shall be prepared on a normal Change Order from (SC-6.31) in accordance with the procedures described in Article 35.1, The Value of Changed Work, and 35.2, Detailed Breakdown, above. Unless otherwise provided in writing signed by the Director of State Buildings Program to the Principal Representative and the Design/Build Entity, describing the extent and limits of any greater authority, individual Emergency Field Change Orders shall not be issued for more than \$25,000, nor shall the cumulative value of Emergency Field Change Orders exceed an amount of \$100,000.

**35.5 APPROPRIATION LIMITATIONS C.R.S. § 24-91-103.6, as amended**

The amount of money appropriated, as shown on the Design/Build Lump Sum Agreement (SC 8.0), is equal to or in excess of the Contract amount. No Change Order, Emergency Field Change Order, or other type of order or directive shall be issued by the Principal Representative, or any agent acting on his or her behalf, which directs additional compensable Work to be performed, which Work causes the aggregate amount payable under the Contract to exceed the amount appropriated for the original Contract, as shown on the Design/Build Lump Sum Agreement (SC-8.0), unless one of the following occurs: (1) the Design/Build Entity is provided written assurance from the Principal Representative that sufficient additional lawful appropriations exist to cover the cost of the additional Work; or (2) the Work is covered by a Design/Build Entity remedy provision under the Contract, such as a claim for extra cost. By way of example only, no assurance is required for any order, directive or instruction by the Architect/Engineer or the Principal Representative to perform Work which is determined to be within the performance required by the Contract Documents; the Design/Build Entity's remedy shall be as described elsewhere in these General Conditions.

Written assurance shall be in the form of an Amendment to the Contract reciting the source and amount of such appropriation available for the Project. No remedy granting provision of this Contract shall obligate the Principal Representative to seek appropriations to cover costs in excess of the amounts recited as available to pay for the Work to be performed.

**36 ARTICLE 36 CLAIMS**

It is the intent of these General Conditions to provide procedures for speedy and timely resolution of disagreements and disputes at the lowest level possible. In the spirit of on the job resolution of job site issues, the parties are encouraged to use the partnering processes of Article 2.4 , Partnering, Communications and Cooperation, before turning to the more formal claims processes described in this Article 36, Claims. The use of non-binding dispute resolution, whether through the formal processes described in Article 39, Non-Binding Dispute Resolution – Facilitated Negotiations, or through less formal alternative processes developed as part of a partnering plan, are also encouraged. Where such process cannot resolve the issues in dispute, the claims process that follows is intended to cause the issues to be presented, decided and where necessary,

documented in close proximity to the events from which the issues arise. To that end, and in summary of the remedy granting process that follows commencing with the next paragraph of this Article 36, Claims, the Design/Build Entity shall 1) first, informally present the claim to Principal Representative as described hereafter, and 2) failing resolution in the field, give Notice of intent to exercise statutory rights of review of a formal contract controversy, and 3) seek resolution outside the Contract as provided by the Colorado Procurement Code or the applicable procurement code for institutions of higher education.

If the Design/Build Entity claims that any instructions, by detailed drawings, or otherwise, or any other act or omission of the Principal Representative affecting the scope of the Design/Build Entity's Work, involve extra cost, extra time or changes in the scope of the Work under this Contract, the Design/Build Entity shall have the right to assert a claim for such costs or time.

Unless it is the Principal Representative's judgment and determination that the Work is not included in the performance required by the Contract Documents, the Design/Build Entity shall proceed with the Work as originally directed. Where the Design/Build Entity's claim involves a dispute concerning the value of Work unilaterally directed pursuant to Article 35.1.a the Design/Build Entity shall also proceed with the Work as originally directed while his or her claim is being considered.

The Design/Build Entity shall give the Principal Representative Notice of any claim promptly but in no case later than ten (10) days from the date of the occurrence affecting the claim. The Notice of claim shall state the grounds for the claim and the amount of the claim to the extent known in accordance with the procedures of Article 35, Changes In The Work. The period in which Notice must be given may be extended by the Principal Representative if requested in writing by the Design/Build Entity with good cause shown, but any such extension to be effective shall be in writing.

The Principal Representative shall respond in writing within a reasonable time, and except where a request for facilitation of negotiation has been made as hereafter provided, in no case later than seven (7) business days (or at such other time as the Design/Build Entity and Principal Representative agree) after receipt of the Design/Build Entity's Notice of claim regarding such instructions or alleged act or omission. If no response to the Design/Build Entity's claim is received within seven (7) business days of Design/Build Entity's Notice (or at such other time as the Design/Build Entity and Principal Representative agree) and the instructions have not been retracted, it shall be deemed that the Principal Representative has denied the claim.

The Principal Representative may grant or deny the claim in whole or in part, and a Change Order shall be issued if the claim is granted. To the extent any portion of claim is granted where costs are not clearly shown, the Principal Representative may direct that the value of that portion of the Work be determined by any method allowed in Article 35.1, The Value of Changed Work. Except in the case of a deemed denial, the Principal Representative shall provide a written explanation regarding any portion of the Design/Build Entity's claim that is denied.

If the Design/Build Entity disagrees with the Principal Representative's judgment and determination on the claim and seeks an equitable adjustment of the Lump Sum Contract Price or time for performance, he or she shall give Notice of intent to exercise his or her statutory right to seek a decision on the contract controversy within ten (10) days of receipt of the Principal Representative's decision denying the claim. A "contract controversy," as such term is used in the Colorado Procurement Code or the applicable procurement code for institutions of higher education shall not arise until the initial claim process described above in this Article 36 has been properly exhausted by the Design/Build Entity. The Design/Build Entity's failure to proceed with



Work directed by the Principal Representative or to exhaust the claim process provided above in this Article 36 shall constitute an abandonment of the claim by the Design/Build Entity and a waiver of the right to contest the decision in any forum.

At the time of filing the Notice of intent to exercise his or her statutory right to seek a decision on the contract controversy, the Design/Build Entity may request that the Principal Representative defer a decision on the contract controversy until a later date or until the end of the Project. If the Principal Representative agrees, he or she shall so advise the Design/Build Entity in writing. If no such request is made, or if the Principal Representative does not agree to such a request, the Principal Representative shall render a written decision within twenty (20) business days and advise the Design/Build Entity of the reasons for any denial. Unless the claim has been decided by the Principal Representative (as opposed to delegates of the Principal Representative), the person who renders the decision on this statutory contract controversy shall not be the same person who decided the claim. To the extent any portion of the contract controversy is granted where costs are not clearly shown, the Principal Representative may direct that the value of that portion of the Work be determined by any method allowed in Article 35.1, The Value of Changed Work. In the event of a denial the Principal Representative shall give Notice to the Design/Build Entity of his or her right to administrative and judicial reviews as provided in the Colorado Procurement Code or the applicable procurement code for institutions of higher education. If no decision regarding the contract controversy is issued within twenty (20) business days of the Design/Build Entity's giving Notice (or such other date as the Design/Build Entity and Principal Representative have agreed), and the instructions have not been retracted or the alleged act or omission have not been corrected, it shall be deemed that the Principal Representative has ruled by denial on the contract controversy. Except in the case of a deemed denial, the Principal Representative shall provide an explanation regarding any portion of the contract controversy that involves denial of the Design/Build Entity's claim.

Either the Design/Build Entity or the Principal Representative may request facilitation of negotiations concerning the claim or the contract controversy, and if requested, the parties shall consult and negotiate before the Principal Representative decides the issue. Any request for facilitation by the Design/Build Entity shall be made at the time of the giving of Notice of the claim or Notice of the contract controversy. Facilitation shall extend the time for the Principal Representative to respond by commencing the applicable period at the completion of the facilitated negotiation, which shall be the last day of the parties' meeting, unless otherwise agreed in writing.

Disagreement with the decision of the Principal Representative to deny any claim or denying the contract controversy shall not be grounds for the Design/Build Entity to refuse to perform the Work directed or to suspend or terminate performance. During the period that any claim or contract controversy decision is pending under this Article 36, Claims, the Design/Build Entity shall proceed diligently with the Work directed.

In all cases where the Design/Build Entity proceeds with the Work and seeks equitable adjustment by filing a claim and or statutory appeal, the Design/Build Entity shall keep a correct account of the extra cost, in accordance with Article 35.2, Detailed Breakdown supported by receipts. The Principal Representative shall be entitled to reject any claim or contract controversy whenever the foregoing procedures are not followed and such accounts and receipts are not presented.

The payments to the Design/Build Entity in respect of such extra costs shall be limited to reimbursement for the current additional expenditure by the Design/Build Entity made necessary by the change in the Work, plus a reasonable amount for overhead and profit, determined in

accordance with Article 35.2, Detailed Breakdown, determined solely with reference to the additional Work, if any, required by the change.

### **37 ARTICLE 37      DIFFERING SITE CONDITIONS**

#### **37.1      NOTICE IN WRITING**

The Design/Build Entity shall promptly, and where possible before conditions are disturbed, give the Principal Representative Notice in writing of:

- a) Subsurface or latent physical conditions at the site differing materially from those indicated in or reasonably assumed from the information provided in the Contract Documents; and,
- b) Unknown physical conditions at the site, of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in Work of the character provided for in the Contract Documents.

The Principal Representative shall promptly investigate the conditions, and if it is found that such conditions do materially so differ and cause an increase or decrease in the Design/Build Entity's costs of performance of any part of the Work required by the Contract Documents, whether or not such Work is changed as a result of such conditions, an equitable adjustment shall be made and the Lump Sum Contract Price shall be modified in accordance with Article 35, Changes In The Work.

If the time required for completion of the Work affected by such materially differing conditions will extend the Work on the critical path as indicated on the CPM schedule, the time for completion shall also be equitably adjusted.

#### **37.2      LIMITATIONS**

No claim of the Design/Build Entity under this clause shall be allowed unless the Design/Build Entity has given the Notice required in Article 37.1, Notice In Writing, above. The time prescribed for presentation and adjustment in Articles 36, Claims and 38, Delays And Extensions Of Time, shall be reasonably extended by the Principal Representative to the extent required by the nature of the differing conditions; provided, however, that even when so extended no claim by the Design/Build Entity for an equitable adjustment hereunder shall be allowed if not quantified and presented prior to the date the Design/Build Entity requests a final inspection pursuant to Article 41.1, Notice Of Completion.

### **38 ARTICLE 38      DELAYS AND EXTENSIONS OF TIME**

If the Design/Build Entity is delayed at any time in the progress of the Work by any act or neglect of the Principal Representative, or of its employee or agent, or by any separately employed contractor or by strikes, lockouts, fire, unusual delay in transportation, unavoidable casualties or any other causes beyond the Design/Build Entity's control, including weather delays as defined below, the time of Completion of the Work shall be extended for a period equal to such portion of the period of delays directly affecting the completion of the Work as the Design/Build Entity shall be able to show he or she could not have avoided by the exercise of due diligence.

The Design/Build Entity shall provide Notice in writing to the Principal Representative and State Buildings Program within three (3) business days from the beginning of such delay and shall file a written claim for an extension of time within seven (7) business days after the period of such delay has ceased, otherwise, any claim for an extension of time is waived.

All claims for extension of time due to a delay claimed to arise or result from ordered changes in the scope of the Work, or due to instructions claimed to increase the scope of the Work, shall be presented to the Principal Representative and State Buildings Program as part of a claim for extra cost, if any, in accordance with Article 36, Claims, and in accordance with the Change Order procedures required by Article 35, Changes In The Work.

Except as otherwise provided in this paragraph, no extension of time shall be granted when the Design/Build Entity has failed to utilize a CPM schedule or otherwise identify the Project's critical path as specified in Article 12, Requests for Information and Schedules, or has elected not to do so when allowed by the Supplementary General Conditions or the Specifications to use less sophisticated scheduling tools, or has failed to maintain such a schedule. Delay directly affecting the completion of the Work shall result in an extension of time only to the extent that completion of the Work was affected by impacts to the critical path shown on the Design/Build Entity's CPM schedule.

Extension of the time for completion of the Work will be granted for delays due to weather conditions only when the Design/Build Entity demonstrates that such conditions were more severe and extended than those reflected by the ten-year average for the month, as evidenced by the Climatological Data, U. S. Department of Commerce, for the Project area.

Extensions of the time for completion of the Work due to weather will be granted on the basis of one and three tenths (1.3) calendar days for every day that the Design/Build Entity would have Worked but was unable to Work, with each separate extension figured to the nearest whole calendar day.

For weather delays and delays caused by events, acts or omissions not within the control of the Principal Representative or any person acting on the Principal Representative's behalf, the Design/Build Entity shall be entitled to an extension of time only and shall not be entitled to recovery of additional cost due to or resulting from such delays. This Article does not, however, preclude the recovery of damages for delay by either party under other provisions in the Contract Documents.

### **39 ARTICLE 39 NON-BINDING DISPUTE RESOLUTION – FACILITATED NEGOTIATIONS**

The Design/Build Entity and Principal Representative agree to designate one or more mutually acceptable persons willing and able to facilitate negotiations and communications for the resolution of conflicts, disagreements or disputes between them at the specific request of either party with regard to any Project decision of either of them. The designation of such person(s) shall not carry any obligation to use their services except that each party agrees that if the other party requests the intervention of such person(s) with respect to any such conflict, dispute or disagreement, the non-requesting party shall participate in good faith attempts to negotiate a resolution of the issue in dispute. If the parties cannot agree on a mutually acceptable person to serve in this capacity one shall be so appointed; provided, however, that either party may request the director of State Buildings Program to appoint such a person, who, if appointed, shall be accepted for this purpose by both the Design/Build Entity and the Principal Representative.

The cost, if any, of the facilitative services of the person(s) so designated shall be shared if the parties so agree in any partnering plan; or in the absence of agreement the cost shall be borne by the party requesting the facilitation of negotiation.

Any dispute, claim, question or disagreement arising from or relating to the Contract or an alleged breach of the Contract may be subject to a request by either party for facilitated negotiation subject to the limitations hereafter listed, and the parties shall participate by consultation and negotiation with each other, as guided by the facilitator and with recognition of their mutual interests, in an attempt to reach an equitable solution satisfactory to both parties.

The obligation to participate in facilitated negotiations shall be as described above and elsewhere in these General Conditions, as by way of example in Article 36, Claims, or Article 34, Deductions for Uncorrected Work, and to the extent not more particularly described or limited elsewhere, each party's obligations shall be as follows:

- a) A party shall not initiate communication with the facilitator regarding the issues in dispute; except that any request for facilitation shall be made in writing with copies sent, faxed or delivered to the other party;
- b) A party shall prepare a brief written description of its position if so requested by the facilitator (who may elect to first discuss the parties' positions with each party separately in the interest of time and expense);
- c) A party shall respond to any reasonable request for copies of documents requested by the facilitator, but such requests, if voluminous, may consist of an offer to allow the facilitator access to the parties' documents;
- d) A party shall review any meeting agenda proposed by a facilitator and endeavor to be informed on the subjects to be discussed;
- e) A party shall meet with the other party and the facilitator at a mutually acceptable place and time, or, if none can be agreed to, at the time and place designated by the facilitator for a period not to exceed four hours unless the parties agree to a longer period;
- f) A party shall endeavor to assure that any facilitation meeting shall be attended by any other persons in their employ that the facilitator requests be present, if reasonably available including the Architect/Engineer;
- g) Each party shall participate in such facilitated face-to-face negotiations of the issues in dispute through persons fully authorized to resolve the issue in dispute;
- h) Each party shall be obligated to participate in negotiations requested by the other party and to perform the specific obligations described in paragraphs (1) through (10) this Article 39, Facilitated Negotiation, no more than three times during the course of the Project;
- i) Neither party shall be under any obligation to resolve any issue by facilitated negotiation, but each agrees to participate in good faith and the Principal Representative shall appropriately document any resolution or agreement reached and to execute any Amendment or Change Order to the Contract necessary to implement their agreement; and,
- j) Any discussions and documents prepared exclusively for use in the negotiations shall be deemed to be matters pertaining to settlement negotiations and shall not be subsequently available in further proceedings except to the extent of any documented agreement.

In accordance with State Fiscal Rules and Article 52.7, Binding Arbitration Prohibited, nothing in this Article 39 shall be deemed to call for arbitration or otherwise obligate the State to participate in any form of binding alternative dispute resolution.

A partnering plan developed as described in Article 2.4, Partnering, Communications and Cooperation, may modify or expand the requirements of this Article but may not reduce the obligation to participate in facilitated negotiations when applicable. In the case of small projects estimated to be valued under \$500,000, the requirements of this Article may be deleted from this Contract, by modification in Article 6, Optional Provisions and Elections (Design/Build Lump Sum Agreement SC-8.0). When so modified, the references to the parties' right to elect facilitated negotiation elsewhere in these General Conditions shall be deleted.

#### **40 ARTICLE 40 RIGHT OF OCCUPANCY**

The Principal Representative shall have the right to take possession of and to use any completed or partially completed portions of the Work, even if the time for completing the entire Work or portions of the Work has not expired and even if the Work has not been finally accepted, and the Design/Build Entity shall fully cooperate with the Principal Representative to allow such possession and use. Such possession and use shall not constitute an acceptance of such portions of the Work.

Prior to any occupancy of the Project, an inspection shall be made by the Principal Representative, the Architect/Engineer, State Buildings Program and the Design/Build Entity. Such inspection shall be made for the purpose of ensuring that the building is secure, protected by operation safety systems as designed, operable exits, power, lighting and HVAC systems, and otherwise ready for the occupancy intended and the Notice of Substantial Completion has been issued for the occupancy intended. The inspection shall also document existing finish conditions to allow assessment of any damage by occupants. The Design/Build Entity shall assist the Principal Representative in completing and executing State Form SBP-01, Approval of Occupancy/Use, prior to the Principal Representative's possession and use. Any and all areas so occupied will be subject to a final inspection when the Design/Build Entity complies with Article 41, Completion, Final Inspection, Acceptance and Settlement.

#### **41 ARTICLE 41 COMPLETION, FINAL INSPECTION, ACCEPTANCE AND SETTLEMENT**

##### **41.1 NOTICE OF COMPLETION**

When the Work, or a discrete physical portion of the Work (as hereafter described) which the Principal Representative has agreed to accept separately, is substantially complete and ready for final inspection, the Design/Build Entity shall file a written Notice with the Principal Representative that the Work, or such discrete physical portion, in the opinion of the Design/Build Entity, is substantially complete under the terms of the Contract. The Design/Build Entity shall prepare and submit with such Notice a comprehensive list of items to be completed or corrected prior to final payment, which shall be subject to review and additions as the Principal Representative shall determine after inspection. If the Architect/Engineer or the Principal Representative believe that any of the items on the list of items submitted, or any other item of Work to be corrected or completed, or the cumulative number of items of Work to be corrected or completed, will prevent a determination that the Work is substantially complete, those items shall be completed by the Design/Build Entity and the Notice shall then be resubmitted.

#### 41.2 FINAL INSPECTION

Within ten (10) days after the Design/Build Entity files written Notice that the Work is substantially complete, the Architect/Engineer, the Principal Representative, and the Design/Build Entity shall make a "final inspection" of the Project to determine whether the Work is substantially complete and has been completed in accordance with the Contract Documents. State Buildings Program shall be notified of the inspection not less than three (3) business days in advance of the inspection. The Design/Build Entity shall provide the Principal Representative and the Architect/Engineer an updated punch list in sufficient detail to fully outline the following:

- a) Work to be completed, if any; and
- b) Work not in compliance with the Drawings or Specifications, if any.

A final punch list shall be made by the Architect/Engineer and Principal Representative in sufficient detail to fully outline to the Design/Build Entity:

- a) Work to be completed, if any;
- b) Work not in compliance with the Drawings or Specifications, if any; and
- c) Unsatisfactory Work for any reason, if any.

The required number of copies of the final punch list will be countersigned by the authorized representative of the Principal Representative and will then be transmitted by the Architect/Engineer to the Design/Build Entity, the Principal Representative, and State Buildings Program.

#### 41.3 NOTICE OF SUBSTANTIAL COMPLETION

Notice of Substantial Completion shall establish the date of substantial completion of the Project. The Design/Build Entity acknowledges and agrees that because the departments, agencies and institutions of the State of Colorado are generally involved with the business of the public at large, greater care must be taken in establishing the date of substantial completion than might otherwise be the case to confirm that a project or building or discrete physical portion of the Work is fully usable and safe for public use, and that such care necessarily raises the standard by which the concept of substantial completion is applied for a public building.

The Notice of Substantial Completion shall not be issued until the following have been fully established:

- a) All required building code inspections have been called for and the appropriate code officials have affixed their signatures to the Building Inspection Record indicating successful completion of all required code inspections;
- b) All required corrections noted on the Building Inspection Record shall have been completed unless the Architect/Engineer, the Principal Representative and State Buildings Program, in their complete and absolute discretion, all concur that the condition requiring the remaining correction is not in any way life threatening, does not otherwise endanger persons or property, and does not result in any undue inconvenience or hardship to the Principal Representative or the public;
- c) The building, structure or Project can be fully and comfortably used by the Principal Representative and the public without undue interference by the Design/Build Entity's employees and Workers during the completion of the final punch list taking into consideration the nature of the public uses intended and taking into consideration any stage or level of completion of HVAC system commissioning or other system testing required by the Specifications to be completed prior to issuance of the Notice of Substantial Completion;

- d) The Project has been fully cleaned as required by these General Conditions, and as required by any stricter requirements of the Specifications, and the overall state of completion is appropriate for presentation to the public; and
- e) The Design/Build Entity has provided a schedule for the completion of each and every item identified on the punch list which specifies the Subcontractor or trade responsible for the Work, and the dates the completion or correction of the item will be commenced and finished; such schedule will show completion of all remaining final punch list items within the period indicated in the Contract for final punch list completion prior to Final Acceptance, with the exception of only those items which are beyond the control of the Design/Build Entity despite due diligence. The schedule shall provide for a reasonable punch list inspection process. Unless liquidated damages have been specified in Article 6.6 of the Design/Build Lump Sum Agreement SC-8.0, the cost to the Principal Representative, if any, for re-inspections due to failure to adhere to the Design/Build Entity's proposed punch-list completion schedule shall be the responsibility of the Design/Build Entity and may be deducted by the Principal Representative from final amounts due to the Design/Build Entity.

Substantial completion of the entire Project shall not be conclusively established by a decision by the Principal Representative to take possession and use of a portion, or all of the Project, where portions of the Project cannot meet all the criteria noted above. Notice of Substantial Completion for the entire Project shall, however, only be withheld for substantial reasons when the Principal Representative has taken possession and uses all of the Project in accordance with the terms of Article 40, Right Of Occupancy. Failure to furnish the required completion schedule shall constitute a substantial reason for withholding the issuance of any Notice of Substantial Completion.

The Design/Build Entity shall have the right to request a final inspection of any discrete physical portion of the Project when in the opinion of the Principal Representative, the Architect/Engineer and State Buildings Program a final punch list can be reasonably prepared, without confusion as to which portions of the Project are referred to in any subsequent Notice of Partial Final Settlement which might be issued after such portion is finally accepted. Discrete physical portions of the Project may be, but shall not necessarily be limited to, such portions of the Project as separate buildings where a Project consists of multiple buildings. Similarly, an addition to an existing building where the Project also calls for renovation or remodeling of the existing building may constitute a discrete physical portion of the Project. In such circumstances, when in the opinion of the Principal Representative, the Architect/Engineer and State Buildings Program, the requirements for issuance of a Notice of Substantial Completion can be satisfied with respect to the discrete portion of the Project, a partial Notice of Substantial Completion may be issued for such discrete physical portion of the Project.

#### 41.4 NOTICE OF ACCEPTANCE

The Notice of Acceptance shall establish the completion date of the Project. It shall not be authorized until the Design/Build Entity shall have performed all of the Work to allow completion and approval of the Pre-Acceptance Checklist (SBP-05).

Where partial Notices of Substantial Completion have been issued, partial Notices of Final Acceptance may be similarly issued when appropriate for that portion of the Work. Partial Notice of Final Acceptance may also be issued to exclude the Work described in Change Orders executed during late stages of the Project where a later completion date for the Change Ordered Work is expressly provided for in the Contract as amended by the Change Order, provided the Work can

be adequately described to allow partial advertisement of any Notice of Partial Final Settlement to be issued without confusion as to the Work included for which final payment will be made.

#### 41.5 SETTLEMENT

Final payment and settlement shall be made on the date fixed and published for such payment except as hereafter provided. The Principal Representative shall not authorize final payment until all items on the Pre-Acceptance check list (SBP-05) have been completed, the Notice of Acceptance issued, and the Notice of Design/Build Entity's Settlement published. If the Work shall be substantially completed, but Final Acceptance and completion thereof shall be prevented through delay in correction of minor defects, or unavailability of materials or other causes beyond the control of the Design/Build Entity, the Principal Representative in his or her discretion may release all amounts due to the Design/Build Entity except such amounts as may be in excess of three times the cost of completing the unfinished Work or the cost of correcting the defective Work, as estimated by the Principal Representative and approved by State Buildings Program. Before the Principal Representative may issue the Notice of Design/Build Entity's Settlement and advertise the Project for final payment, the Design/Build Entity shall have corrected all items on the punch list except those items for which delayed performance is expressly permitted, subject to withholding for the cost thereof, and shall have delivered to the Principal Representative:

- a) All guarantees and warranties;
- b) All statements to support local sales tax refunds, if any;
- c) Three (3) complete bound sets of required operating maintenance instructions; and,
- d) One (1) set of hard copy as-built Contract Documents, and one (1) electronic copy, showing all job changes.
- e) Demonstrated to the operating personnel of the Principal Representative the proper operation and maintenance of all equipment.

Delivered to the State of Colorado Department of Personnel & Administration in accordance with Colorado Procurement Code or the applicable procurement code for institutions of higher education:

- a) A written disclosure of the five most costly goods incorporated into the project, including iron, steel, or related manufactured goods and the total cost and country of origin of those five goods and whether the project was subject to any existing domestic content preferences.

Upon completion of the foregoing, the Project shall be advertised in accordance with the Notice of Design/Build Entity's Settlement by two publications of Notice, the last publication appearing at least ten (10) days prior to the time of final settlement. Publication and final settlement should not be postponed or delayed solely by virtue of unresolved claims against the Project or the Design/Build Entity from Subcontractors, suppliers or material men based on good faith disputes; the resolution of the question of payment in such cases being directed by statute.

Except as hereafter provided, on the date of final settlement thus advertised, provided the Design/Build Entity has submitted a written Notice to the Principal Representative that no claims have been filed, and further provided the Principal Representative shall have received no claims, final payments and settlement shall be made in full. If any unpaid claim for labor, materials, rental machinery, tools, supplies or equipment is filed before payment in full of all sums due the Design/Build Entity, the Principal Representative and the State Controller shall withhold from the Design/Build Entity on the date established for final settlement, sufficient funds to insure the



payment of such claim, until the same shall have been paid or withdrawn, such payment or withdrawal to be evidenced by filing a receipt in full or an order for withdrawal signed by the claimant or his or her duly authorized agent or assignee. The amount so withheld may be in the amount of 125% of the claims or such other amount as the Principal Representative reasonably deems necessary to cover expected legal expenses. Such withheld amounts shall be in addition to any amount withheld based on the cost to compete unfinished Work or the cost to repair defective Work. However, as provided by statute, such funds shall not be withheld longer than ninety (90) days following the date fixed for final settlement with the Design/Build Entity, as set forth in the published Notice of Design/Build Entity's Settlement, unless an action at law shall be commenced within that time to enforce such unpaid claim and a Notice of such action at law shall have been filed with the Principal Representative and the State Controller. At the expiration of the ninety (90) day period, the Principal Representative shall authorize the State Controller to release to the Design/Build Entity all other money not the subject of such action at law or withheld based on the cost to compete unfinished Work or the cost to repair defective Work.

Notices of Partial Final Settlement may be similarly advertised, provided all conditions precedent have been satisfied as though that portion of the Work affected stood alone, a Notice of Partial Acceptance has been issued, and the consent of surety to the partial final settlement has been obtained in writing. Thereafter, partial final payments may be made to the Design/Build Entity subject to the same conditions regarding unpaid claims.

#### **42 ARTICLE 42 GENERAL WARRANTY AND CORRECTION OF WORK AFTER ACCEPTANCE**

The Design/Build Entity warrants that the materials used and the equipment furnished shall be new and of good quality unless specified to the contrary. The Design/Build Entity further warrants that the Work shall in all respects be free from material defects not permitted by the Specifications and shall be in accordance with the requirements of the Contract Documents. Neither the final certificate for payment nor any provision in the Contract Documents shall relieve the Design/Build Entity of responsibility for defects or faulty materials or Workmanship. The Design/Build Entity shall be responsible to the Principal Representative for such warranties for the longest period permitted by any applicable statute of limitations.

In addition to these general warranties, and without limitation of these general warranties, for a period of one year after the date of any Notice of Substantial Completion, or any Notice of Partial Substantial Completion if applicable, the Design/Build Entity shall remedy defects, and faulty Workmanship or materials, and Work not in accordance with the Contract Documents which were not accepted at the time of the Notice of Final Acceptance, all in accordance with the provisions of Article 44, One-Year Guarantee And Special Guarantees And Warranties.

#### **43 ARTICLE 43 LIENS**

Colorado statutes do not provide for any right of lien against public buildings. In lieu thereof, C.R.S. § 38-26-107, provides adequate relief for any claimant having furnished labor, materials, rental machinery, tools, equipment, or services toward construction of the particular public Work in that final payment may not be made to a Design/Build Entity until all such creditors have been put on Notice by publication in the public press of such pending payment and given opportunity

for a period of up to ninety (90) days to stop payment to the Design/Build Entity in the amount of such claims.

#### **44 ARTICLE 44 ONE-YEAR GUARANTEE AND SPECIAL GUARANTEES AND WARRANTIES**

##### **44.1 ONE-YEAR GUARANTEE OF THE WORK**

The Design/Build Entity shall guarantee to remedy defects and repair or replace the Work for a period of one year from the date of the Notice of Substantial Completion or from the dates of any partial Notices of Substantial Completion issued for discrete physical portions of the Work. The Design/Build Entity shall remedy any defects due to faulty materials or Workmanship and shall pay for, repair and replace any damage to other Work resulting there from, which shall appear within a period of one year from the date of such Notice(s) of Substantial Completion. The Design/Build Entity shall also remedy any deviation from the requirements of the Contract Documents which shall later be discovered within a period of one year from the date of the Notice of Substantial Completion; provided, however, that the Design/Build Entity shall not be required to remedy deviations from the requirements of the Contract Documents where such deviations were obvious, apparent and accepted by the Principal Representative at the time of the Notice of Final Acceptance. The Principal Representative shall give Notice of observed defects or other Work requiring correction with reasonable promptness. Such Notice shall be in writing to the Design/Build Entity.

The one year guarantee of the Design/Build Entity's Work may run separately for discrete physical portions of the Work for which partial Notices of Substantial Completion have been issued, however, it shall run from the last Notice of Substantial Completion with respect to all or any systems common to the Work to which more than one Notice of Substantial Completion may apply.

This one-year guarantee shall not be construed to limit the Design/Build Entity's general warranty described in Article 42, General Warranty and Correction of Work After Acceptance, that all materials and equipment are new and of good quality, unless specified to the contrary, and that the Work shall in all respects be free from material defects not permitted by the Specifications and in accordance with the requirements of the Contract Documents.

##### **44.2 SPECIAL GUARANTEES AND WARRANTIES**

In case of Work performed for which product, manufacturers or other special warranties are required by the Specifications, the Design/Build Entity shall secure the required warranties and deliver copies thereof to the Principal Representative upon completion of the Work.

These product, manufacturers or other special warranties, as such, do not in any way lessen the Design/Build Entity's responsibilities under the Contract. Whenever guarantees or warranties are required by the Specifications for a longer period than one year, such longer period shall govern.

#### **45 ARTICLE 45 GUARANTEE INSPECTIONS AFTER COMPLETION**

The Architect/Engineer, the Principal Representative and the Design/Build Entity together shall make at least two (2) complete inspections of the Work after the Work has been determined to be substantially complete and accepted. One such inspection, the "Six-Month Guarantee

Inspection,” shall be made approximately six (6) months after date of the Notice of Substantial Completion, unless in the case of smaller projects valued under \$500,000 this inspection is declined in Article 6.2 (Design/Build Agreement Lump Sum), Modification of Article 45, in which case the inspection to occur at six months shall not be required. Another such inspection, the “Eleven-Month Guaranty Inspection” shall be made approximately eleven (11) months after the date of the Notice of Substantial Completion. The Design/Build Entity shall schedule and so notify all parties concerned, and the Principal Representative shall notify State Buildings Program, of these inspections. If more than one Notice of Substantial Completion has been issued at the reasonable discretion of the Principal Representative separate eleven month inspections may be required where the one year guarantees do not run reasonably concurrent.

Written punch lists and reports of these inspections shall be prepared by the Architect/Engineer, approved by the Principal Representative, and forwarded to the Design/Build Entity and State Buildings Program, and all other participants within ten (10) days after the completion of the inspections. The punch list shall itemize all guarantee items, prior punch list items still to be corrected or completed and any other requirements of the Contract Documents to be completed which were not waived by final acceptance because they were not obvious or could not reasonably have been previously observed. The Design/Build Entity shall immediately initiate such remedial Work as may be necessary to correct any deficiencies or defective Work shown by this report, and shall promptly complete all such remedial Work in a manner satisfactory to the Principal Representative and State Buildings Program.

If the Design/Build Entity fails to promptly correct all deficiencies and defects shown by this report, the Principal Representative may do so, after giving the Design/Build Entity ten (10) days written Notice of intention to do so.

The State of Colorado, acting by and through the Principal Representative, shall be entitled to collect from the Design/Build Entity all costs and expenses incurred by it in correcting such deficiencies and defects, as well as all damages resulting from such deficiencies and defects.

#### **46 ARTICLE 46 TIME OF COMPLETION AND LIQUIDATED DAMAGES**

It is hereby understood and mutually agreed, by and between the parties hereto, that the date of beginning, rate of progress, and the time for completion of the Work to be done hereunder are ESSENTIAL CONDITIONS of this Agreement, and it is understood and agreed that the Work embraced in this Contract shall be commenced at the time specified in the Notice to Proceed to Commence Design Phase (SBP-8.26).

It is further agreed that time is of the essence of each and every portion of this Contract, and of any portion of the Work described on the Drawings or Specifications, wherein a definite and certain length of time is fixed for the performance of any act whatsoever. The parties further agree that where under the Contract additional time is allowed for the completion of the Work or any identified portion of the Work, the new time limit or limits fixed by such extension of the time for completion shall be of the essence of this Agreement.

The Design/Build Entity acknowledges that subject to any limitations in the Request for Proposal, issued for the Project, the Design/Build Entity’s proposal is consistent with and considers the number of days to substantially complete the Project and the number of days to finally complete the Project to which the parties may have stipulated in the Agreement, which stipulation was based on the Design/Build Entity’s proposal. The Design/Build Entity agrees that Work shall be

prosecuted regularly, diligently and uninterruptedly at such rate of progress as will confirm the Project will be substantially complete, and fully and finally complete, as recognized by the issuance of all required Notices of Substantial Completion and Notices of Final Acceptance, within any times stipulated and specified in the Agreement, as the same may be amended by Change Order or other written modification, and that the Principal Representative will be damaged if the times of completion are delayed.

It is expressly understood and agreed, by and between the parties hereto, that the times for the Substantial Completion of the Work or for the final acceptance of the Work as may be stipulated in the Agreement, and as applied here and in Article 6.6 of the Design/Build Lump Sum Agreement SC-8.0, Modifications of Article 46, are reasonable times for these stages of completion of the Work, taking into such consideration all factors, including the average climatic range and usual industrial conditions prevailing in the locality of the building operations.

If the Design/Build Entity shall neglect, fail or refuse to complete the Work within the times specified in the Agreement, such failure shall constitute a breach of the terms of the Contract and the State of Colorado, acting by and through the Principal Representative, shall be entitled to liquidated damages for such neglect, failure or refusal, as specified in Article 6.6 of the Design/Build Lump Sum Agreement SC-8.0, Modification of Article 46.

The Design/Build Entity and the Design/Build Entity's Surety shall be jointly liable for and shall pay the Principal Representative, or the Principal Representative may withhold, the sums hereinafter stipulated as liquidated damages for each calendar day of delay until the entire Project is 1) substantially completed, and the Notice (or all Notices) of Substantial Completion are issued, 2) finally complete and accepted and the Notice (or all Notices) of Acceptance are issued, or 3) both. Delay in substantial completion shall be measured from the Date of the Notice to Proceed and delay in final completion and acceptance shall be measured from the Date of the Notice of Substantial Completion.

In the first instance, specified in Article 6.4.a of the Design/Build Lump Sum Agreement SC-8.0, Modification of Article 46, liquidated damages, if any, shall be the amount specified therein, for each calendar day of delay beginning after the stipulated number of days for Substantial Completion from the date of the Notice to Proceed to Commence Design Phase, until the date of the Notice of Substantial Completion. Unless otherwise specified in any Supplementary General Conditions, in the event of any partial Notice of Substantial Completion, liquidated damages shall accrue until all required Notices of Substantial Completion are issued.

In the second instance, specified in Article 6.4.b of the Design/Build Lump Sum Agreement SC-8.0, Modification of Article 46, liquidated damages, if any, shall be the amount specified in Article 6.4.2 of the Design/Build Lump Sum Agreement SC-8.0, Modification of Article 46, for each calendar day in excess of the number of calendar days specified in the Design/Build Entity's proposal for the Project and stipulated in the Agreement to finally complete the Project (as defined by the issuance of the Notice of Acceptance) after the final Notice of Substantial Completion has been issued.

In the third instance, when so specified in both Articles 6.4.a and 6.4.b of the Design/Build Lump Sum Agreement SC-8.0, both types of liquidated damages shall be separately assessed where those delays have occurred.

The parties expressly agree that said amounts are a reasonable estimate of the presumed actual damages that would result from any of the breaches listed, and that any liquidated damages that are assessed have been agreed to in light of the difficulty of ascertaining the actual damages that

would be caused by any of these breaches at the time this Contract was formed; the liquidated damages in the first instance representing an estimate of damages due to the inability to use the Project; the liquidated damages in the second instance representing an estimate of damages due to the additional administrative, technical, supervisory and professional expenses related to and arising from the extended closeout period including delivery of any or all guarantees and warranties, the submittals of sales and use tax payment forms, the calling for the final inspection and the completion of the final punch list.

The parties also agree and understand that the liquidated damages to be assessed in each instance are separate and distinct, although potentially cumulative, damages for the separate and distinct breaches of delayed substantial completion or final acceptance. Such liquidated damages shall not be avoided by virtue of the fact of concurrent delay caused by the Principal Representative, or anyone acting on behalf of the Principal Representative, but in such event the period of delay for which liquidated damages are assessed shall be equitably adjusted in accordance with Article 38, Delays and Extensions of Time.

#### **47 ARTICLE 47 DAMAGES**

If either party to this Contract shall suffer damage under this Contract in any manner because of any wrongful act or neglect of the other party or of anyone employed by either of them, then the party suffering damage shall be reimbursed by the other party for such damage. Except to the extent of damages liquidated for the Design/Build Entity's failure to achieve timely completion as set forth in Article 46, Time of Completion and Liquidated Damages, the Principal Representative shall be responsible for, and at his or her option may insure against, loss of use of any existing property not included in the Work, due to fire or otherwise, however caused. Notwithstanding the foregoing, or any other provision of this Contract, to the contrary, no term or condition of this contract shall be construed or interpreted as a waiver, express or implied, of any of the immunities, rights, benefits, protection, or other provisions of the Colorado Governmental Immunity Act, Section C.R.S. § 24-10-101, *et seq.*, as now or hereafter amended. The parties understand and agree that liability for claims for injuries to persons arising out of negligence of the State of Colorado, its departments, institutions, agencies, boards, officials and employees is controlled and limited by the provisions of Section C.R.S. § 24-101-101, *et seq.*, as now or hereafter amended and the risk management statutes, Section C.R.S. § 24-30-1501, *et seq.*, as now or hereafter amended.

Notice of intent to file a claim under this clause shall be made in writing to the party liable within a reasonable time of the first observance of such damage and not later than the time of final payment, except that in the case of claims by the Principal Representative involving warranties against faulty Work or materials Notice shall be required only to the extent stipulated elsewhere in these General Conditions. Claims made to the Principal Representative involving extra cost or extra time arising by virtue of instructions to the Design/Build Entity to which Article 36, Claims, applies shall be made in accordance with Article 36. Other claims arising under the Contract involving extra cost or extra time which are made to the Principal Representative under this clause shall also be made in accordance with the procedures of Article 36, whether or not arising by virtue of instructions to the Design/Build Entity.

Provided written Notice of intent to file a claim is provided as required in the preceding paragraph, nothing in this Article shall limit or restrict the rights of either party to bring an action at law or to seek other relief to which either party may be entitled, including consequential damages, if any,

and shall not be construed to limit the time during which any action might be brought. Nothing in these General Conditions shall be deemed to limit the period of time during which any action may be brought as a matter of contract, tort, warranty or otherwise, it being the intent of the parties to allow any and all actions at law or in equity for such periods as the law permits. All such rights shall, however be subject to the obligation to assert claims and to appeal denials pursuant to Article 36, Claims, where applicable.

#### **48 ARTICLE 48 STATE'S RIGHT TO DO THE WORK; TEMPORARY SUSPENSION OF WORK; DELAY DAMAGES**

##### **48.1 STATE'S RIGHT TO DO THE WORK**

If after receipt of Notice to do so, the Design/Build Entity should neglect to prosecute the Work properly or fail to perform any provision of the Contract, the Principal Representative, after a second seven (7) days' advance written Notice to the Design/Build Entity and the Surety may, without prejudice to any other remedy the Principal Representative may have, take control of all or a portion of the Work, as the Principal Representative deems necessary and make good such deficiencies deducting the cost thereof from the payment then or thereafter due the Design/Build Entity, as provided in Article 30, Correction Of Work Before Acceptance and Article 33, Payments Withheld.

##### **48.2 TEMPORARY SUSPENSION OF WORK**

The Principal Representative shall have the authority to suspend the Work, either wholly or in part, for such period or periods as may be deemed necessary due to:

- a) Unsuitable weather;
- b) Faulty Workmanship;
- c) Improper superintendence or project management;
- d) Design/Build Entity's failure to carry out orders or to perform any provision of the Contract Documents;
- e) Loss of, or restrictions to, appropriations;
- f) Conditions, which may be considered unfavorable for the prosecution of the Work.

If it should become necessary to stop Work for an indefinite period, the Design/Build Entity shall store materials in such manner that they will not become an obstruction or become damaged in any way; and he or she shall take every precaution to prevent damage to or deterioration of the Work, provide suitable drainage and erect temporary structures where necessary.

Notice of suspension of Work shall be provided to the Design/Build Entity in writing stating the reasons therefore. The Design/Build Entity shall again proceed with the Work when so notified in writing.

The Design/Build Entity understands and agrees that the State of Colorado cannot predict with certainty future revenues and could ultimately lack the revenue to fund the appropriations applicable to this Contract. The Design/Build Entity further acknowledges and agrees that in such event that the Principal Representative may, upon Notice to the Design/Build Entity, suspend the Work in anticipation of a termination of the Contract for the convenience of the State, pursuant to Article 50, Termination for Convenience of State. If the Contract is not so terminated the Lump

Sum Contract Price and the Contract time shall be equitably adjusted at the time the Principal Representative directs the Work to be recommenced and gives Notice that the revenue to fund the appropriation is available.

#### **48.3 DELAY DAMAGES**

The Principal Representative and the State of Colorado shall be liable to the Design/Build Entity for the payment of any claim for extra costs, extra compensation or damages occasioned by hindrances or delays encountered in the Work only when and to the limited extent that such hindrance or delay is caused by an act or omission within the control of the Principal Representative or other persons or entities acting on behalf of the Principal Representative. Further, the Principal Representative and the State of Colorado shall be liable to the Design/Build Entity for the payment of such a claim only if the Design/Build Entity has provided required Notice of the delay or impact, or has presented its claim for an extension of time or claim of other delay or other impact due to changes ordered in the Work before proceeding with the changed Work. Except as otherwise provided, claims for extension of time shall be Noticed and filed in accordance with Article 38, Delays and Extensions of Time, within three (3) business days of the beginning of the delay with any claim filed within seven (7) days after the delay has ceased, or such claim is waived. Claims for extension of time or for other delay or other impact resulting from changes ordered in the Work shall be presented and adjusted as provided in Article 35, Changes in the Work.

### **49 ARTICLE 49 STATE'S RIGHTS TO TERMINATE CONTRACT**

#### **49.1 GENERAL**

If the Design/Build Entity should be adjudged bankrupt, or if he or she should make a general assignment for the benefit of his or her creditors, or if a receiver should be appointed to take over his affairs, or if he or she should fail to prosecute his or her Work with due diligence and carry the Work forward in accordance with the construction schedule and the time limits set forth in the Contract Documents, or if he or she should fail to subsequently perform one or more of the provisions of the Contract Documents to be performed by him, the Principal Representative may serve written Notice on the Design/Build Entity and the Surety on performance and payment bonds, stating his or her intention to exercise one of the remedies hereinafter set forth and the grounds upon which the Principal Representative bases his or her right to exercise such remedy.

In such event, unless the matter complained of is satisfactorily cleared within ten (10) days after delivery of such Notice, the Principal Representative may, without prejudice to any other right or remedy, exercise one of such remedies at once.

#### **49.2 CONDITIONS AND PROCEDURES**

##### **49.2.1 Termination**

The Principal Representative may terminate the services of the Design/Build Entity, which termination shall take effect immediately upon service of Notice thereof on the Design/Build Entity and his or her Surety, whereupon the Surety shall have the right to take over and perform the Contract. If the Surety does not provide Notice to the Principal Representative of its intent to commence performance of the Contract within ten (10) days after delivery of the Notice of termination, the Principal Representative may take over the Work, take possession of and use all materials, tools, equipment and appliances on the premises and prosecute the Work to

completion by such means as he or she shall deem best. In the event of such termination of his or her service, the Design/Build Entity shall not be entitled to any further payment under the Contract until the Work is completed and accepted. If the Principal Representative takes over the Work and if the unpaid balance of the Lump Sum Contract Price exceeds the cost of completing the Work, including compensation for any damages or expenses incurred by the Principal Representative through the default of the Design/Build Entity, such excess shall be paid to the Design/Build Entity. If, however, the cost, expenses and damages exceed such unpaid balance of the Lump Sum Contract Price, the Design/Build Entity and his or her Surety shall pay the difference to the Principal Representative.

#### 49.2.2 Use of Surety

The Principal Representative may require the Surety on the Design/Build Entity's bond to take control of the Work and see to it that all the deficiencies of the Design/Build Entity are made good, with due diligence within ten (10) days of delivery of Notice to the Surety to do so. As between the Principal Representative and the Surety, the cost of making good such deficiencies shall all be borne by the Surety. If the Surety takes over the Work, either by election upon termination of the services of the Design/Build Entity pursuant to Section B(1) of this Article 49, State's Right To Terminate Contract, or upon instructions from the Principal Representative to do so, the provisions of the Contract Documents shall govern the Work to be done by the Surety, the Surety being substituted for the Design/Build Entity as to such provisions, including provisions as to payment for the Work, the times of completion and provisions of this Article as to the right of the Principal Representative to do the Work or to take control of all or a portion of the Work.

#### 49.2.3 Correcting Deficiencies

The Principal Representative may take control of all or a portion of the Work and make good the deficiencies of the Design/Build Entity, or the Surety if the Surety has been substituted for the Design/Build Entity, with or without terminating the Contract, employing such additional help as the Principal Representative deems advisable in accordance with the provisions of Article 48.1, State's Right To Do The Work; Temporary Suspension Of Work; Delay Damages. In such event, the Principal Representative shall be entitled to collect from the Design/Build Entity and his or her Surety, or to deduct from any payment then or thereafter due the Design/Build Entity, the costs incurred in having such deficiencies made good and any damages or expenses incurred through the default of Design/Build Entity.

If the Contract is not terminated, a Change Order to the Contract shall be executed, unilaterally if necessary, in accordance with the procedures of Article 35, Changes in the Work.

#### 49.3 ADDITIONAL CONDITIONS

If any termination by the Principal Representative for cause is later determined to have been improper, the termination shall be automatically converted to and deemed to be a termination by the Principal Representative for convenience and the Design/Build Entity shall be limited in recovery to the compensation provided for in Article 50, Termination for Convenience of State. Termination by the Design/Build Entity shall not be subject to such conversion.



## **50 ARTICLE 50      TERMINATION FOR CONVENIENCE OF STATE**

### **50.1      NOTICE OF TERMINATION**

The performance of Work under this Contract may be terminated, in whole or from time to time in part, by the Principal Representative whenever for any reason the Principal Representative shall determine that such termination is in the best interest of the State. Termination of Work hereunder shall be effected by delivery to the Design/Build Entity of a Notice of such termination specifying the extent to which the performance of Work under the Contract is terminated and the date upon which such termination becomes effective.

### **50.2      PROCEDURES**

After receipt of the Notice of termination, the Design/Build Entity shall, to the extent appropriate to the termination, cancel outstanding commitments hereunder covering the procurement of materials, supplies, equipment and miscellaneous items. In addition, the Design/Build Entity shall exercise all reasonable diligence to accomplish the cancellation or diversion of all applicable outstanding commitments covering personal performance of any Work terminated by the Notice. With respect to such canceled commitments, the Design/Build Entity agrees to:

- a) Settle all outstanding liabilities and all claims arising out of such cancellation of commitments, with approval or ratification of the Principal Representative, to the extent he or she may require, which approval or ratification shall be final for all purposes of this clause; and,
- b) Assign to the Principal Representative, in the manner, at the time, and to the extent directed by the Principal Representative, all of the right, title, and interest of the Design/Build Entity under the orders and subcontracts, consultants and subconsultants so terminated, in which case the Principal Representative shall have the right, in its discretion, to settle or pay any or all claims arising out of the termination of such orders and subcontracts.

The Design/Build Entity shall submit his or her termination claim to the Principal Representative promptly after receipt of a Notice of termination, but in no event later than three (3) months from the effective date thereof, unless one or more extensions in writing are granted by the Principal Representative upon written request of the Design/Build Entity within such three month period or authorized extension thereof. Upon failure of the Design/Build Entity to submit his or her termination claim within the time allowed, the Principal Representative may determine, on the basis of information available to him, the amount, if any, due to the Design/Build Entity by reason of the termination and shall thereupon pay to the Design/Build Entity the amount so determined.

Costs claimed, agreed to, or determined pursuant to the preceding and following paragraph shall be in accordance with the provisions of Colorado Procurement Code or the applicable procurement code for institutions of higher education.

Subject to the preceding provisions, the Design/Build Entity and the Principal Representative may agree upon the whole or any part of the amount or amounts to be paid to the Design/Build Entity by reason of the termination under this clause, which amount or amounts may include any reasonable cancellation charges thereby incurred by the Design/Build Entity and any reasonable loss upon outstanding commitments for personal services which he or she is unable to cancel; provided, however, that in connection with any outstanding commitments for personal services which the Design/Build Entity is unable to cancel, the Design/Build Entity shall have exercised reasonable diligence to divert such commitments to other activities and operations. Any such agreement shall be embodied in an Amendment to this Contract and the Design/Build Entity shall be paid the agreed amount.

The Principal Representative may from time to time, under such terms and conditions as it may prescribe, make partial payments against costs incurred by the Design/Build Entity in connection with the termination portion of this Contract, whenever, in the opinion of the Principal Representative, the aggregate of such payments is within the amount to which the Design/Build Entity will be entitled hereunder.

The Design/Build Entity agrees to transfer title and deliver to the Principal Representative, in the manner, at the time, and to the extent, if any, directed by the Principal Representative, such information and items which, if the Contract had been completed, would have been required to be furnished to the Principal Representative, including:

- a) Completed or partially completed plans, Drawings and information; and,
- b) Materials or equipment produced or in process or acquired in connection with the performance of the Work terminated by the Notice.

Other than the above, any termination inventory resulting from the termination of the Contract may, with written approval of the Principal Representative, be sold or acquired by the Design/Build Entity under the conditions prescribed by and at a price or prices approved by the Principal Representative. The proceeds of any such disposition shall be applied in reduction of any payments to be made by the Principal Representative to the Design/Build Entity under this Contract or shall otherwise be credited to the price or cost of Work covered by this Contract or paid in such other manners as the Principal Representative may direct. Pending final disposition of property arising from the termination, the Design/Build Entity agrees to take such action as may be necessary, or as the Principal Representative may direct, for the protection and preservation of the property related to this Contract which is in the possession of the Design/Build Entity and in which the State has or may acquire an interest.

Any disputes as to questions of fact, which may arise hereunder, shall be subject to the Remedies provisions of the Colorado Procurement Code or the applicable procurement code for institutions of higher education.

## **51 ARTICLE 51 DESIGN/BUILD ENTITY'S RIGHT TO STOP WORK AND/OR TERMINATE CONTRACT**

If the Work shall be stopped under an order of any court or other public authority for a period of three (3) months through no act or fault of the Design/Build Entity or of any one employed by him, then the Design/Build Entity may on seven (7) days' written Notice to the Principal Representative stop Work or terminate this Contract and recover from the Principal Representative payment for all Work executed, any losses sustained on any plant or material, and a reasonable profit only for the Work completed. If the Principal Representative shall fail to issue or otherwise act in writing upon any certificate for payment within ten (10) days after it is due, or if the Principal Representative shall fail to pay the Design/Build Entity any sum certified that is not disputed in whole or in part by the Principal Representative in writing to the Design/Build Entity within thirty (30) days then the Design/Build Entity may on ten (10) days' written Notice to the Principal Representative stop Work and/or give written Notice of intention to terminate this Contract.

If the Principal Representative shall thereafter fail to pay the Design/Build Entity any amount not disputed in writing by the Principal Representative within ten (10) days after receipt of such Notice, then the Design/Build Entity may terminate this Contract and recover from the Principal Representative payment for all Work executed, any losses sustained upon any plant or materials,

and a reasonable profit only for the Work completed. The Principal Representative's right to dispute an amount certified by the Architect/Engineer shall not relieve the Principal Representative of the obligation to pay amounts not in dispute as certified by the Architect/Engineer.

## **52 ARTICLE 52 COLORADO SPECIAL PROVISIONS**

### **52.1 CONTROLLER'S APPROVAL, C.R.S. § 24-30-202(1)**

This contract shall not be valid until it has been approved by the Colorado State Controller or designee.

### **52.2 FUND AVAILABILITY, C.R.S. § 24-30-202(5.5)**

Financial obligations of the State payable after the current fiscal year are contingent upon funds for that purpose being appropriated, budgeted, and otherwise made available.

### **52.3 GOVERNMENTAL IMMUNITY**

Liability for claims for injuries to persons or property arising from the negligence of the State, its departments, boards, commissions committees, bureaus, offices, employees and officials shall be controlled and limited by the provisions of the Colorado Governmental Immunity Act, §24-10-101, et seq., C.R.S.; the Federal Tort Claims Act, 28 U.S.C. Pt. VI, Ch. 171 and 28 U.S.C. 1346(b), and the State's risk management statutes, §§24-30-1501, et seq. C.R.S. No term or condition of this Contract shall be construed or interpreted as a waiver, express or implied, of any of the immunities, rights, benefits, protections, or other provisions, contained in these statutes.

### **52.4 INDEPENDENT CONTRACTOR**

Contractor shall perform its duties hereunder as an independent Contractor and not as an employee. Neither Contractor nor any agent or employee of Contractor shall be deemed to be an agent or employee of the State. Contractor shall not have authorization, express or implied, to bind the State to any agreement, liability or understanding, except as expressly set forth herein. **Contractor and its employees and agents are not entitled to unemployment insurance or workers compensation benefits through the State and the State shall not pay for or otherwise provide such coverage for Contractor or any of its agents or employees. Contractor shall pay when due all applicable employment taxes and income taxes and local head taxes incurred pursuant to this Contract. Contractor shall (i) provide and keep in force workers' compensation and unemployment compensation insurance in the amounts required by law, (ii) provide proof thereof when requested by the State, and (iii) be solely responsible for its acts and those of its employees and agents.**

### **52.5 COMPLIANCE WITH LAW**

Contractor shall comply with all applicable federal and State laws, rules, and regulations in effect or hereafter established, including, without limitation, laws applicable to discrimination and unfair employment practices.

### **52.6 CHOICE OF LAW, JURISDICTION, AND VENUE**

Colorado law, and rules and regulations issued pursuant thereto, shall be applied in the interpretation, execution, and enforcement of this Contract. Any provision included or incorporated herein by reference which conflicts with said laws, rules, and regulations shall be

null and void. All suits or actions related to this Contract shall be filed and proceedings held in the State of Colorado and exclusive venue shall be in the City and County of Denver.

52.7 PROHIBITED TERMS

Any term included in this Contract that requires the State to indemnify or hold Contractor harmless; requires the State to agree to binding arbitration; limits Contractor's liability for damages resulting from death, bodily injury, or damage to tangible property; or that conflicts with this provision in any way shall be void ab initio. Nothing in this Contract shall be construed as a waiver of any provision of §24-106-109, C.R.S.

52.8 SOFTWARE PIRACY PROHIBITION. SOFTWARE PIRACY PROHIBITION

State or other public funds payable under this Contract shall not be used for the acquisition, operation, or maintenance of computer software in violation of federal copyright laws or applicable licensing restrictions. Contractor hereby certifies and warrants that, during the term of this Contract and any extensions, Contractor has and shall maintain in place appropriate systems and controls to prevent such improper use of public funds. If the State determines that Contractor is in violation of this provision, the State may exercise any remedy available at law or in equity or under this Contract, including, without limitation, immediate termination of this Contract and any remedy consistent with federal copyright laws or applicable licensing restrictions.

52.9 EMPLOYEE FINANCIAL INTEREST/CONFLICT OF INTEREST

C.R.S. § 24-18-201 and C.R.S. § 24-50-507

The signatories aver that to their knowledge, no employee of the State has any personal or beneficial interest whatsoever in the service or property described in this contract. Contractor has no interest and shall not acquire any interest, direct or indirect, that would conflict in any manner or degree with the performance of Contractor services and Contractor shall not employ any person having such known interests.

52.10 VENDOR OFFSET AND ERRONEOUS PAYMENTS

C.R.S. § 24-30-202(1) & C.R.S. § 24-30-202.4

Subject to §24-30-202.4(3.5), C.R.S., the State Controller may withhold payment under the State's vendor offset intercept system for debts owed to State agencies for: (i) unpaid child support debts or child support arrearages; (ii) unpaid balances of tax, accrued interest, or other charges specified in §§39-21-101, et seq., C.R.S.; (iii) unpaid loans due to the Student Loan Division of the Department of Higher Education; (iv) amounts required to be paid to the Unemployment Compensation Fund; and (v) other unpaid debts owing to the State as a result of final agency determination or judicial action. The State may also recover, at the State's discretion, payments made to Contractor in error for any reason, including, but not limited to, overpayments or improper payments, and unexpended or excess funds received by Contractor by deduction from subsequent payments under this Contract, deduction from any payment due under any other contracts, grants or agreements between the State and Contractor, or by any other appropriate method for collecting debts owed to the State.

## **53 ARTICLE 53 MISCELLANEOUS PROVISIONS**

### **53.1 PROFESSIONAL ASSOCIATION PERMITTED**

The Contractor may, with the prior written consent of the Principal Representative, join with him in the performance of this Agreement any other duly licensed Architect or Architects or registered Engineers with whom he may, in good faith, and enter into an association.

### **53.2 DISSOLUTION OF PROFESSIONAL ASSOCIATION**

In the event there is dissolution of the association, other than by death of a member, the State of Colorado, acting by and through the Principal Representative, shall designate which former member shall continue with the work and may make all payments thereafter falling due in connection with the work directly to the person or persons so designated and without being required to look to the application of such payments as among the former members.

### **53.3 WAGE RATES, in accordance with C.R.S. § 24-30-1404 (1)**

As amended, the Contractor has executed a schedule, which is attached hereto and made a part hereof by reference as **Exhibit B**, Wage Rates Schedule, and by doing so is certifying that wage rates and other factual unit costs supporting the compensation paid by the State for these professional services are accurate, complete and current.

The original contract price and any additions thereto shall be adjusted to exclude any significant sums by which the Principal Representative determines the contract price had been increased due to inaccurate, incomplete, or non-current wage rates and other factual unit costs. All such contract adjustments shall be made within one year following the end of this contract.

### **53.4 PUBLIC ART LAW**

In recognition of the Public Art Law, C.R.S. § 24-48.5-312, as amended, if the State determines that this project is eligible for the acquisition of artworks in accordance with this law, the Contractor agrees to participate in the art selection process as an art jury member and to cooperate with and to advise the State in working with the commissioned artist(s) for this Capital Construction Project.

### **53.5 ASSIGNMENT**

Contractor's rights and obligations under this Contract are personal and may not be transferred or assigned without the prior, written consent of the State. Any attempt at assignment or transfer without such consent shall be void. Any assignment or transfer of Contractor's rights and obligations approved by the State shall be subject to the provisions of this Contract.

### **53.6 SUBCONTRACTS**

Contractor shall not enter into any subcontract in connection with its obligations under this Contract without the prior, written approval of the State. Contractor shall submit to the State a copy of each such subcontract upon request by the State. All subcontracts entered into by Contractor in connection with this Contract shall comply with all applicable federal and state laws and regulations, shall provide that they are governed by the laws of the State of Colorado, and shall be subject to all provisions of this Contract.

### **53.7 BINDING EFFECT**

Except as otherwise provided in §53.5, all provisions of this Contract, including the benefits and burdens, shall extend to and be binding upon the Parties' respective successors and assigns.

53.8 AUTHORITY

Each Party represents and warrants to the other that the execution and delivery of this Contract and the performance of such Party's obligations have been duly authorized.

53.9 CAPTIONS AND REFERENCES

The captions and headings in this Contract are for convenience of reference only, and shall not be used to interpret, define, or limit its provisions. All references in this Contract to sections (whether spelled out or using the § symbol), subsections, exhibits or other attachments, are references to sections, subsections, exhibits or other attachments contained herein or incorporated as a part hereof, unless otherwise noted.

53.10 COUNTERPARTS

This Contract may be executed in multiple, identical, original counterparts, each of which shall be deemed to be an original, but all of which, taken together, shall constitute one and the same agreement.

53.11 ENTIRE UNDERSTANDING

This Contract represents the complete integration of all understandings between the Parties related to the Work, and all prior representations and understandings related to the Work, oral or written, are merged into this Contract. Prior or contemporaneous additions, deletions, or other changes to this Contract shall not have any force or effect whatsoever, unless embodied herein.

53.12 DIGITAL SIGNATURES

If any signatory signs this Contract using a digital signature in accordance with the Colorado State Controller Contract, Grant and Purchase Order Policies regarding the use of digital signatures issued under the State Fiscal Rules, then any agreement or consent to use digital signatures within the electronic system through which that signatory signed shall be incorporated into this Contract by reference.

53.13 MODIFICATION

Except as otherwise provided in this Contract, any modification to this Contract shall only be effective if agreed to in a formal amendment to this Contract, properly executed and approved in accordance with applicable Colorado State law and State Fiscal Rules. Modifications permitted under this Contract, other than contract amendments, shall conform to the policies issued by the Colorado State Controller.

53.14 STATUTES, REGULATIONS, FISCAL RULES AND OTHER AUTHORITY

Any reference in this Contract to a statute, regulation, State Fiscal Rule, fiscal policy or other authority shall be interpreted to refer to such authority then current, as may have been changed or amended since the Effective Date of this Contract.

53.15 EXTERNAL TERMS AND CONDITIONS

Notwithstanding anything to the contrary herein, the State shall not be subject to any provision included in any terms, conditions, or agreements appearing on Contractor's or a Subcontractor's website or any provision incorporated into any click-through or online agreements related to the Work unless that provision is specifically referenced in this Contract.

53.16 SEVERABILITY

The invalidity or unenforceability of any provision of this Contract shall not affect the validity or enforceability of any other provision of this Contract, which shall remain in full force and effect,

provided that the Parties can continue to perform their obligations under this Contract in accordance with the intent of this Contract.

**53.17 SURVIVAL AND CERTAIN CONTRACT TERMS**

Any provision of this Contract that imposes an obligation on a Party after termination or expiration of this Contract shall survive the termination or expiration of this Contract and shall be enforceable by the other Party.

**53.18 TAXES**

The State is exempt from federal excise taxes under I.R.C. Chapter 32 (26 U.S.C., Subtitle D, Ch. 32) (Federal Excise Tax Exemption Certificate of Registry No. 84-730123K) and from State and local government sales and use taxes under §§39-26-704(1), et seq., C.R.S. (Colorado Sales Tax Exemption Identification Number 98-02565). The State shall not be liable for the payment of any excise, sales, or use taxes, regardless of whether any political subdivision of the state imposes such taxes on Contractor. Contractor shall be solely responsible for any exemptions from the collection of excise, sales or use taxes that Contractor may wish to have in place in connection with this Contract.

**53.19 THIRD PARTY BENEFICIARIES**

Except for the Parties' respective successors and assigns described in § 53.5, this Contract does not and is not intended to confer any rights or remedies upon any person or entity other than the Parties. Enforcement of this Contract and all rights and obligations hereunder are reserved solely to the Parties. Any services or benefits which third parties receive as a result of this Contract are incidental to this Contract, and do not create any rights for such third parties.

**53.20 WAIVER**

A Party's failure or delay in exercising any right, power, or privilege under this Contract, whether explicit or by lack of enforcement, shall not operate as a waiver, nor shall any single or partial exercise of any right, power, or privilege preclude any other or further exercise of such right, power, or privilege.

**53.21 CORA DISCLOSURE**

To the extent not prohibited by federal law, this Contract and the performance measures and standards required under §24-106-107, C.R.S., if any, are subject to public release through the CORA.

**53.22 STANDARD AND MANNER OF PERFORMANCE**

Contractor shall perform its obligations under this Contract in accordance with the highest standards of care, skill and diligence in Contractor's industry, trade, or profession.

**53.23 LICENSES, PERMITS, AND OTHER AUTHORIZATIONS**

Contractor shall secure, prior to the Effective Date, and maintain at all times during the term of this Contract, at its sole expense, all licenses, certifications, permits, and other authorizations required to perform its obligations under this Contract, and shall ensure that all employees, agents and Subcontractors secure and maintain at all times during the term of their employment, agency or subcontract, all license, certifications, permits and other authorizations required to perform their obligations in relation to this Contract.

## 53.24 INDEMNIFICATION

### 53.24.1 General Indemnification

Contractor shall indemnify, save, and hold harmless the State, its employees, agents and assignees (the "Indemnified Parties"), against any and all costs, expenses, claims, damages, liabilities, court awards and other amounts (including attorneys' fees and related costs) incurred by any of the Indemnified Parties in relation to any act or omission by Contractor, or its employees, agents, Subcontractors, or assignees in connection with this Contract.

### 53.24.2 Confidential Information Indemnification

Disclosure or use of State Confidential Information by Contractor in violation of §54 may be cause for legal action by third parties against Contractor, the State, or their respective agents. Contractor shall indemnify, save, and hold harmless the Indemnified Parties, against any and all claims, damages, liabilities, losses, costs, expenses (including attorneys' fees and costs) incurred by the State in relation to any act or omission by Contractor, or its employees, agents, assigns, or Subcontractors in violation of §54.

### 53.24.3 Intellectual Property Indemnification

Contractor shall indemnify, save, and hold harmless the Indemnified Parties, against any and all costs, expenses, claims, damages, liabilities, and other amounts (including attorneys' fees and costs) incurred by the Indemnified Parties in relation to any claim that any Deliverable, Good or Service, software, or Work Product provided by Contractor under this Contract (collectively, "IP Deliverables"), or the use thereof, infringes a patent, copyright, trademark, trade secret, or any other intellectual property right. Contractor's obligations hereunder shall not extend to the combination of any IP Deliverables provided by Contractor with any other product, system, or method, unless the other product, system, or method is (a) provided by Contractor or Contractor's subsidiaries or affiliates; (b) specified by Contractor to work with the IP Deliverables; (c) reasonably required in order to use the IP Deliverables in its intended manner and the infringement could not have been avoided by substituting another reasonably available product, system, or method capable of performing the same function; or (d) is reasonably expected to be used in combination with the IP Deliverables.

### 53.24.4 Accessibility Indemnification

Contractor shall indemnify, save, and hold harmless the state, its employees, agents and assignees (collectively, the "Indemnified Parties"), against any and all costs, expenses, claims, damages, liabilities, court awards and other amounts (including attorneys' fees and related costs) incurred by any of the Indemnified Parties in relation to Contractor's failure to comply with §§24-85-101, et seq., C.R.S., or the Accessibility Standards for Individuals with a Disability as established by the Office of Information Technology pursuant to Section §24-85-103 (2.5), C.R.S.

## 53.25 ACCESSIBILITY

53.25.1 Work Contractor shall comply with and the Work Product provided under this Contract shall be in compliance with all applicable provisions of §§24-85-101, et seq., C.R.S., and the Accessibility Standards for Individuals with a Disability, as established by the Governor's Office Of Information Technology (OIT), pursuant to Section §24-85-103 (2.5), C.R.S. Contractor shall also comply with all State of Colorado technology standards related to technology accessibility and with Level AA of the most current version of the Web Content Accessibility Guidelines (WCAG), incorporated in the State of Colorado technology standards.

53.25.2 The State may require Contractor's compliance to the State's Accessibility Standards to be determined by a third party selected by the State to attest to Contractor's Work Product and software is in compliance with §§24-85-101, et seq., C.R.S., and the Accessibility Standards for



Individuals with a Disability as established by the Office of Information Technology pursuant to Section §24-85-103 (2.5), C.R.S.

## **54 ARTICLE 54 CONFIDENTIAL INFORMATION-STATE RECORDS**

### **54.1 CONFIDENTIALITY**

Contractor shall keep confidential, and cause all Subcontractors to keep confidential, all State Records, unless those State Records are publicly available. Contractor shall not, without prior written approval of the State, use, publish, copy, disclose to any third party, or permit the use by any third party of any State Records, except as otherwise stated in this Contract, permitted by law or approved in writing by the State. Contractor shall provide for the security of all State Confidential Information in accordance with all policies promulgated by the Colorado Office of Information Security and all applicable laws, rules, policies, publications, and guidelines. If Contractor or any of its Subcontractors will or may receive the following types of data, Contractor or its Subcontractors shall provide for the security of such data according to the following: (i) the most recently promulgated IRS Publication 1075 for all Tax Information and in accordance with the Safeguarding Requirements for Federal Tax Information attached to this Contract as an Exhibit, if applicable, (ii) the most recently updated PCI Data Security Standard from the PCI Security Standards Council for all PCI, (iii) the most recently issued version of the U.S. Department of Justice, Federal Bureau of Investigation, Criminal Justice Information Services Security Policy for all CJI, and (iv) the federal Health Insurance Portability and Accountability Act for all PHI and the HIPAA Business Associate Agreement attached to this Contract, if applicable. Contractor shall immediately forward any request or demand for State Records to the State's Principal Representative.

### **54.2 OTHER ENTITY ACCESS AND NONDISCLOSURE AGREEMENTS**

Contractor may provide State Records to its agents, employees, assigns and Subcontractors as necessary to perform the Work, but shall restrict access to State Confidential Information to those agents, employees, assigns and Subcontractors who require access to perform their obligations under this Contract. Contractor shall ensure all such agents, employees, assigns, and Subcontractors sign agreements containing nondisclosure provisions at least as protective as those in this Contract, and that the nondisclosure provisions are in force at all times the agent, employee, assign or Subcontractor has access to any State Confidential Information. Contractor shall provide copies of those signed nondisclosure provisions to the State upon execution of the nondisclosure provisions if requested by the State.

### **54.3 USE, SECURITY, AND RETENTION**

Contractor shall use, hold, and maintain State Confidential Information in compliance with any and all applicable laws and regulations only in facilities located within the United States, and shall maintain a secure environment that ensures confidentiality of all State Confidential Information. Contractor shall provide the State with access, subject to Contractor's reasonable security requirements, for purposes of inspecting and monitoring access and use of State Confidential Information and evaluating security control effectiveness. Upon the expiration or termination of this Contract, Contractor shall return State Records provided to Contractor or destroy such State Records and certify to the State that it has done so, as directed by the State. If Contractor is prevented by law or regulation from returning or destroying State Confidential Information, Contractor warrants it will guarantee the confidentiality of, and cease to use, such State Confidential Information.

#### 54.4 INCIDENT NOTICE AND REMEDIATION

If Contractor becomes aware of any Incident, Contractor shall notify the State immediately and cooperate with the State regarding recovery, remediation, and the necessity to involve law enforcement, as determined by the State. Unless Contractor can establish that Contractor and its Subcontractors are not the cause or source of the Incident, Contractor shall be responsible for the cost of notifying each person who may have been impacted by the Incident. After an Incident, Contractor shall take steps to reduce the risk of incurring a similar type of Incident in the future as directed by the State, which may include, but is not limited to, developing and implementing a remediation plan that is approved by the State at no additional cost to the State. The State may adjust or direct modifications to this plan in its sole discretion, and Contractor shall make all modifications as directed by the State. If Contractor cannot produce its analysis and plan within the allotted time, the State, in its discretion, may perform such analysis and produce a remediation plan, and Contractor shall reimburse the State for the actual costs thereof. The State may, in its sole discretion and at Contractor's sole expense, require Contractor to engage the services of an independent, qualified, State-approved third party to conduct a security audit. Contractor shall provide the State with the results of such audit and evidence of Contractor's planned remediation in response to any negative findings.

#### 54.5 DATA PROTECTION AND HANDLING

Contractor shall ensure that all State Records and Work Product in the possession of Contractor or any Subcontractors are protected and handled in accordance with the requirements of this Contract, including the requirements of any Exhibits hereto, at all times.

#### 54.6 SAFEGUARDING PERSONAL IDENTIFIABLE INFORMATION (PII)

If Contractor or any of its Subcontractors will or may receive Personal Identifiable Information (PII) under this Contract, Contractor shall provide for the security of such PII, in a manner and form acceptable to the State, including, without limitation, State non-disclosure requirements, use of appropriate technology, security practices, computer access security, data access security, data storage encryption, data transmission encryption, security inspections, and audits. Contractor shall be a "Third-Party Service Provider" as defined in §24-73-103(1)(i), C.R.S. and shall maintain security procedures and practices consistent with §§24-73-101 et seq., C.R.S. In addition, as set forth in § 24-74-102, et. seq., C.R.S., Contractor, including, but not limited to, Contractor's employees, agents and Subcontractors, agrees not to share any PII with any third parties for the purpose of investigating for, participating in, cooperating with, or assisting with Federal immigration enforcement. If Contractor is given direct access to any State databases containing PII, Contractor shall execute, on behalf of itself and its employees, a certification as provided by the Office of the State Controller on an annual basis Contractor's duty and obligation to certify shall continue as long as Contractor has direct access to any State databases containing PII. If Contractor uses any Subcontractors to perform services requiring direct access to State databases containing PII, the Contractor shall require such Subcontractors to execute and deliver the certification to the State on an annual basis, so long as the Subcontractor has access to State databases containing PII.

## **SUPPLEMENTARY GENERAL CONDITIONS: FEDERAL PROVISIONS**

### **1. APPLICABILITY OF PROVISIONS.**

- 1.1. The Contract to which these Federal Provisions are attached has been funded, in whole or in part, with an Award of Federal funds. In the event of a conflict between the provisions of these Federal Provisions, the Special Provisions, the body of the Contract, or any attachments or exhibits incorporated into and made a part of the Contract, the provisions of these Federal Provisions shall control.
- 1.1. The State of Colorado is accountable to Treasury for oversight of their subrecipients, including ensuring their subrecipients comply with the SLFRF statute, SLFRF Award Terms and Conditions, Treasury's Final Rule, and reporting requirements, as applicable.
- 1.2. Additionally, any subrecipient that issues a subaward to another entity (2nd tier subrecipient), must hold the 2nd tier subrecipient accountable to these provisions and adhere to reporting requirements.
- 1.3. These Federal Provisions are subject to the Award as defined in §2 of these Federal Provisions, as may be revised pursuant to ongoing guidance from the relevant Federal or State of Colorado agency or institutions of higher education.

### **2. DEFINITIONS.**

- 2.1. For the purposes of these Federal Provisions, the following terms shall have the meanings ascribed to them below.
  - 2.1.1. "Award" means an award of Federal financial assistance, and the Contract setting forth the terms and conditions of that financial assistance that a non-Federal Entity receives or administers.
    - 2.1.1.1. Awards may be in the form of:
      - 2.1.1.1.1. Grants;
      - 2.1.1.1.2. Contracts;
      - 2.1.1.1.3. Cooperative Contracts, which do not include cooperative research and development Contracts (CRDA) pursuant to the Federal Technology Transfer Act of 1986, as amended (15 U.S.C. 3710);
      - 2.1.1.1.4. Loans;
      - 2.1.1.1.5. Loan Guarantees;
      - 2.1.1.1.6. Subsidies;
      - 2.1.1.1.7. Insurance;
      - 2.1.1.1.8. Food commodities;
      - 2.1.1.1.9. Direct appropriations;
      - 2.1.1.1.10. Assessed and voluntary contributions; and
      - 2.1.1.1.11. Other financial assistance transactions that authorize the expenditure of Federal funds by non-Federal Entities.
      - 2.1.1.1.12. Any other items specified by OMB in policy memoranda available at the OMB website or other source posted by the OMB.
    - 2.1.1.2. Award does not include:
      - 2.1.1.2.1. Technical assistance, which provides services in lieu of money;
      - 2.1.1.2.2. A transfer of title to Federally-owned property provided in lieu of money; even if the award is called a grant;

- 2.1.1.2.3. Any award classified for security purposes; or
- 2.1.1.2.4. Any award funded in whole or in part with Recovery funds, as defined in section 1512 of the American Recovery and Reinvestment Act (ARRA) of 2009 (Public Law 111- 5).
- 2.1.2. “Contract” means the Contract to which these Federal Provisions are attached and includes all Award types in §2.1.1.1 of this Exhibit.
- 2.1.3. “Contractor” means a non-Federal Entity (or a Federal agency under an Agreement to a non-Federal Entity) receiving Federal funds through a Prime Recipient to support the performance of the Federal project or program for which the Federal funds were awarded. A Contractor is subject to the terms and conditions of the Federal Award to the Prime Recipient, including program compliance requirements. The term “Contractor” includes and may be referred to as “Subcontractor”. The term does not include an individual who is a beneficiary of a federal program.
- 2.1.4. ~~“Data Universal Numbering System (DUNS) Number” means the nine digit number established and assigned by Dun and Bradstreet, Inc. to uniquely identify a business entity. Dun and Bradstreet’s website may be found at: <http://fedgov.dnb.com/webform>.~~
- 2.1.5. “Entity” means all of the following as defined at 2 CFR part 25, subpart C; 2.1.5.1. A governmental organization, which is a State, local government, or Indian Tribe; 2.1.5.2. A foreign public entity;
- 2.1.5.3. A domestic or foreign non-profit organization;
- 2.1.5.4. A domestic or foreign for-profit organization; and
- 2.1.5.5. A Federal agency, but only a Subrecipient under an Award or Subaward to a non-Federal entity.
- 2.1.6. “Executive” means an officer, managing partner or any other employee in a management position.
- 2.1.7. “Federal Award Identification Number (FAIN)” means an Award number assigned by a Federal agency to a Prime Recipient.
- 2.1.8. “Federal Awarding Agency” means a Federal agency providing a Federal Award to a Recipient as described in 2 CFR §200.37
- 2.1.9. “FFATA” means the Federal Funding Accountability and Transparency Act of 2006 (Public Law 109-282), as amended by §6202 of Public Law 110-252. FFATA, as amended, also is referred to as the “Transparency Act.”
- 2.1.10. “Federal Provisions” means these Federal Provisions subject to the Transparency Act and Uniform Guidance, as may be revised pursuant to ongoing guidance from the relevant Federal or State of Colorado agency or institutions of higher education.
- 2.1.11. “OMB” means the Executive Office of the President, Office of Management and Budget.
- 2.1.12. “Prime Recipient” means a Colorado State agency or institution of higher education that receives an Award.
- 2.1.13. “Subaward” means an award by a Recipient to a Subrecipient funded in whole or in part by a Federal Award. The terms and conditions of the Federal Award flow down to the Award unless the terms and conditions of the Federal Award specifically indicate otherwise in accordance with 2 CFR §200.38. The term does not include payments to a contractor or payments to an individual that is a beneficiary of a Federal program.
- 2.1.14. Not used
- 2.1.15. “Contractor Parent UEI Number” means the subrecipient parent organization’s 9-digit Universal Entity ID (UEI) number that appears in the subrecipient’s System for Award Management (SAM) profile, if applicable.
- 2.1.16. “System for Award Management (SAM)” means the Federal repository into which an Entity must enter the information required under the Transparency Act, which may be found at <http://www.sam.gov>.
- 2.1.17. “Total Compensation” means the cash and noncash dollar value earned by an Executive during the Prime Recipient’s or Subrecipient’s preceding fiscal year and includes the following:
  - 2.1.17.1. Salary and bonus;

- 2.1.17.2. Awards of stock, stock options, and stock appreciation rights, using the dollar amount recognized for financial statement reporting purposes with respect to the fiscal year in accordance with the Statement of Financial Accounting Standards No. 123 (Revised 2005) (FAS 123R), Shared Based Payments;
- 2.1.17.3. Earnings for services under non-equity incentive plans, not including group life, health, hospitalization or medical reimbursement plans that do not discriminate in favor of Executives and are available generally to all salaried employees;
- 2.1.17.4. Change in present value of defined benefit and actuarial pension plans; 2.1.17.5. Above-market earnings on deferred compensation which is not tax-qualified;
- 2.1.17.6. Other compensation, if the aggregate value of all such other compensation (e.g. severance, termination payments, value of life insurance paid on behalf of the employee, perquisites or property) for the Executive exceeds \$10,000.
- 2.1.18. "Transparency Act" means the Federal Funding Accountability and Transparency Act of 2006 (Public Law 109-282), as amended by §6202 of Public Law 110-252. The Transparency Act also is referred to as FFATA.
- 2.1.19. "Uniform Guidance" means the Office of Management and Budget Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards, which supersedes requirements from OMB Circulars A-21, A-87, A-110, and A-122, OMB Circulars A-89, A-102, and A-133, and the guidance in Circular A-50 on Single Audit Act follow-up. The terms and conditions of the Uniform Guidance flow down to Awards to Subrecipients unless the Uniform Guidance or the terms and conditions of the Federal Award specifically indicate otherwise.
- 2.1.20 "Unique Entity ID" means the Unique Entity ID established by the federal government for a Grantee at <https://sam.gov/content/home>.
- 2.1.20. "Vendor" means a dealer, distributor, merchant or other seller providing property or services required for a project or program funded by an Award. A Vendor is not a Prime Recipient or a Subrecipient and is not subject to the terms and conditions of the Federal award. Program compliance requirements do not pass through to a Vendor.

### **3. COMPLIANCE.**

- 3.1. Contractor shall comply with all applicable provisions of the Transparency Act, all applicable provisions of the Uniform Guidance, and the regulations issued pursuant thereto, including but not limited to these Federal Provisions. Any revisions to such provisions or regulations shall automatically become a part of these Federal Provisions, without the necessity of either party executing any further instrument. The State of Colorado may provide written notification to Contractor of such revisions, but such notice shall not be a condition precedent to the effectiveness of such revisions.
- 3.2. Per US Treasury Final Award requirements, programs or services must not include terms or conditions that undermine efforts to stop COVID-19 or discourage compliance with recommendations and CDC guidelines.

### **4. SYSTEM FOR AWARD MANAGEMENT (SAM) AND DATA UNIVERSAL NUMBERING SYSTEM (DUNS) REQUIREMENTS.**

- 4.1. SAM. Contractor shall maintain the currency of its information in SAM until the Contractor submits the final financial report required under the Award or receives final payment, whichever is later. Contractor shall review and update SAM information at least annually after the initial registration, and more frequently if required by changes in its information.
- 4.2. UEI. Grantee shall provide its Unique Entity ID to its Prime Recipient, and shall update Grantee's information in SAM.gov at least annually after the initial registration, and more frequently if required by changes in Grantee's information.

## **5. TOTAL COMPENSATION.**

- 5.1. Contractor shall include Total Compensation in SAM for each of its five most highly compensated Executives for the preceding fiscal year if:
  - 5.1.1. The total Federal funding authorized to date under the Award is \$30,000 or more; and
  - 5.1.2. In the preceding fiscal year, Contractor received:
    - 5.1.2.1. 80% or more of its annual gross revenues from Federal procurement contracts and subcontracts and/or Federal financial assistance Awards or Subawards subject to the Transparency Act; and
    - 5.1.2.2. \$25,000,000 or more in annual gross revenues from Federal procurement contracts and subcontracts and/or Federal financial assistance Awards or Subawards subject to the Transparency Act; and
  - 5.1.3. The public does not have access to information about the compensation of such Executives through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m(a), 78o(d) or § 6104 of the Internal Revenue Code of 1986.

## **6. REPORTING.**

- 6.1. Contractor shall report data elements to SAM and to the Prime Recipient as required in this Exhibit if Contractor is a Subrecipient for the Award pursuant to the Transparency Act. No direct payment shall be made to Contractor for providing any reports required under these Federal Provisions and the cost of producing such reports shall be included in the Contract price. The reporting requirements in this Exhibit are based on guidance from the US Office of Management and Budget (OMB), and as such are subject to change at any time by OMB. Any such changes shall be automatically incorporated into this Contract and shall become part of Contractor's obligations under this Contract.

## **7. EFFECTIVE DATE AND DOLLAR THRESHOLD FOR REPORTING.**

- 7.1. Reporting requirements in §8 below apply to new Awards as of October 1, 2010, if the initial award is \$30,000 or more. If the initial Award is below \$30,000 but subsequent Award modifications result in a total Award of \$30,000 or more, the Award is subject to the reporting requirements as of the date the Award exceeds \$30,000. If the initial Award is \$30,000 or more, but funding is subsequently de-obligated such that the total award amount falls below \$30,000, the Award shall continue to be subject to the reporting requirements. If the total award is below \$30,000 no reporting required; if more than \$30,000 and less than \$50,000 then FFATA reporting is required; and, \$50,000 and above SLFRF reporting is required.
- 7.2. The procurement standards in §9 below are applicable to new Awards made by Prime Recipient as of December 26, 2015. The standards set forth in §11 below are applicable to audits of fiscal years beginning on or after December 26, 2014.

## **8. SUBRECIPIENT REPORTING REQUIREMENTS.**

- 8.1. If Contractor is a Subrecipient, Contractor shall report as set forth below.
  - 8.1.1. To SAM. A Subrecipient shall register in SAM and report the following data elements in SAM for each Federal Award Identification Number no later than the end of the month following the month in which the Subaward was made:
    - 8.1.1.1. Subrecipient UEI Number;
    - 8.1.1.2. Subrecipient UEI Number + 4 if more than one electronic funds transfer (EFT) account;
    - 8.1.1.3. Subrecipient Parent UEI Number;
    - 8.1.1.4. Subrecipient's address, including: Street Address, City, State, Country, Zip + 4, and Congressional District;
    - 8.1.1.5. Subrecipient's top 5 most highly compensated Executives if the criteria in §4 above are met; and
    - 8.1.1.6. Subrecipient's Total Compensation of top 5 most highly compensated Executives if criteria in §4 above met.
  - 8.1.2. To Prime Recipient. A Subrecipient shall report to its Prime Recipient, upon the effective date of the Contract, the following data elements:

8.1.2.1. Subrecipient's UEI Number as registered in SAM.

8.1.2.2. Primary Place of Performance Information, including: Street Address, City, State, Country, Zip code + 4, and Congressional District.

## **9. PROCUREMENT STANDARDS.**

- 9.1. Procurement Procedures. A Subrecipient shall use its own documented procurement procedures which reflect applicable State, local, and Tribal laws and regulations, provided that the procurements conform to applicable Federal law and the standards identified in the Uniform Guidance, including without limitation, §§200.318 through 200.326 thereof.
- 9.2. Procurement of Recovered Materials (2 CFR 200.322). If a Subrecipient is a State Agency or an agency of a political subdivision of the State, its contractors must comply with section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. The requirements of Section 6002 include procuring only items designated in guidelines of the Environmental Protection Agency (EPA) at 40 CFR part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds \$10,000 or the value of the quantity acquired during the preceding fiscal year exceeded \$10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.
- 9.3. Domestic preference for procurements (2 CFR 200.322). As appropriate and to the extent consistent with law, the non-Federal entity should, to the greatest extent practicable under a Federal award, provide a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States (including but not limited to iron, aluminum, steel, cement, and other manufactured products). The requirements of this section must be included in all subawards including all Agreements and purchase orders for work or products under this award.

## **10. ACCESS TO RECORDS**

- 10.1. A Subrecipient shall permit Recipient and auditors to have access to Subrecipient's records and financial statements as necessary for Recipient to meet the requirements of §200.331 (Requirements for pass-through entities), §§200.300 (Statutory and national policy requirements) through 200.309 (Period of performance), and Subpart F-Audit Requirements of the Uniform Guidance. 2 CFR §200.331(a)(5).

## **11. SINGLE AUDIT REQUIREMENTS**

- 11.1. If a Subrecipient expends \$750,000 or more in Federal Awards during the Subrecipient's fiscal year, the Subrecipient shall procure or arrange for a single or program-specific audit conducted for that year in accordance with the provisions of Subpart F-Audit Requirements of the Uniform Guidance, issued pursuant to the Single Audit Act Amendments of 1996, (31 U.S.C. 7501-7507). 2 CFR §200.501.
  - 11.1.1. Election. A Subrecipient shall have a single audit conducted in accordance with Uniform Guidance §200.514 (Scope of audit), except when it elects to have a program-specific audit conducted in accordance with §200.507 (Program-specific audits). The Subrecipient may elect to have a program-specific audit if Subrecipient expends Federal Awards under only one Federal program (excluding research and development) and the Federal program's statutes, regulations, or the terms and conditions of the Federal award do not require a financial statement audit of Prime Recipient. A program-specific audit may not be elected for research and development unless all of the Federal Awards expended were received from Recipient and Recipient approves in advance a program-specific audit.
  - 11.1.2. Exemption. If a Subrecipient expends less than \$750,000 in Federal Awards during its fiscal year, the Subrecipient shall be exempt from Federal audit requirements for that year, except as noted in 2 CFR §200.503 (Relation to other audit requirements), but records shall be available for review or audit by appropriate officials of the Federal agency, the State, and the Government Accountability Office.
  - 11.1.3. Subrecipient Compliance Responsibility. A Subrecipient shall procure or otherwise arrange for the audit required by Part F of the Uniform Guidance and ensure it is properly performed and submitted when due in accordance with the Uniform Guidance. Subrecipient shall prepare appropriate financial statements, including the schedule of expenditures of Federal awards in accordance with Uniform Guidance §200.510 (Financial statements) and provide the auditor with access to personnel, accounts, books, records,

supporting documentation, and other information as needed for the auditor to perform the audit required by Uniform Guidance Part F-Audit Requirements.

## **12. CONTRACT PROVISIONS FOR CONTRACTORS AND SUBCONTRACTORS**

- 12.1. Contractors shall comply with and shall include all of the following applicable provisions in all subcontracts entered into by it pursuant to this Contract and any provisions required by 2 CFR 200 Appendix II.
- 12.1.1. Equal Employment Opportunity. Except as otherwise provided under 41 CFR Part 60, all contracts that meet the definition of “federally assisted construction contract” in 41 CFR Part 60-1.3 shall include the equal opportunity clause provided under 41 CFR 60-1.4(b), in accordance with Executive Order 11246, “Equal Employment Opportunity” (30 FR 12319, 12935, 3 CFR Part, 1964-1965 Comp., p. 339), as amended by Executive Order 11375, “Amending Executive Order 11246 Relating to Equal Employment Opportunity,” and implementing regulations at 41 CFR part 60, “Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor.
- 12.1.1.1. During the performance of this contract, the contractor agrees as follows:
  - 12.1.1.1.1. Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. 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. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause.
  - 12.1.1.1.2. Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.
  - 12.1.1.1.3. Contractor will send to each labor union or representative of workers with which he has a collective bargaining Contract or other contract or understanding, a notice to be provided by the agency contracting officer, advising the labor union or workers’ representative of the contractor’s commitments under section 202 of Executive Order 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
  - 12.1.1.1.4. Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
  - 12.1.1.1.5. Contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
  - 12.1.1.1.6. In the event of Contractor’s non-compliance with the nondiscrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be canceled, terminated or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.
  - 12.1.1.1.7. Contractor will include the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as may be directed by the Secretary of Labor as a means of enforcing such provisions including sanctions for noncompliance: Provided, however, that in the event Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction, the contractor may request the United States to enter into such litigation to protect the interests of the United States.”



- 12.1.2. Davis-Bacon Act. Davis-Bacon Act, as amended (40 U.S.C. 3141-3148). When required by Federal program legislation, all prime construction contracts in excess of \$2,000 awarded by non-Federal entities must include a provision for compliance with the Davis-Bacon Act (40 U.S.C. 3141-3144, and 3146-3148) as supplemented by Department of Labor regulations (29 CFR Part 5, “Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction”). In accordance with the statute, contractors must be required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. In addition, contractors must be required to pay wages not less than once a week. The non-Federal entity must place a copy of the current prevailing wage determination issued by the Department of Labor in each solicitation. The decision to award a contract or subcontract must be conditioned upon the acceptance of the wage determination. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency. The contracts must also include a provision for compliance with the Copeland “Anti-Kickback” Act (40 U.S.C. 3145), as supplemented by Department of Labor regulations (29 CFR Part 3, “Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States”). The Act provides that each contractor or Subrecipient must be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency.
- 12.1.3. Rights to Inventions Made Under a Contract or Contract. If the Federal Award meets the definition of “funding Contract” under 37 CFR §401.2 (a) and Subrecipient wishes to enter into a contract with a small business firm or nonprofit organization regarding the substitution of parties, assignment or performance of experimental, developmental, or research work under that “funding Contract,” Subrecipient must comply with the requirements of 37 CFR Part 401, “Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Contracts,” and any implementing regulations issued by the awarding agency.
- 12.1.4. Clean Air Act (42 U.S.C. 7401-7671q.) and the Federal Water Pollution Control Act (33 U.S.C. 1251-1387), as amended. Contracts and subgrants of amounts in excess of \$150,000 must contain a provision that requires the non-Federal award to agree to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA).
- 12.1.5. Debarment and Suspension (Executive Orders 12549 and 12689). A contract award (see 2 CFR 180.220) must not be made to parties listed on the government wide exclusions in the System for Award Management (SAM), in accordance with the OMB guidelines at 2 CFR 180 that implement Executive Orders 12549 (3 CFR part 1986 Comp., p. 189) and 12689 (3 CFR part 1989 Comp., p. 235), “Debarment and Suspension.” SAM Exclusions contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549.
- 12.1.6. Byrd Anti-Lobbying Amendment (31 U.S.C. 1352). Contractors that apply or bid for an award exceeding \$100,000 must file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the non-Federal award.
- 12.1.7. Prohibition on certain telecommunications and video surveillance services or equipment (2 CFR 200.216). Grantee is prohibited from obligating or expending loan or grant funds on certain telecommunications and video surveillance services or equipment pursuant to 2 CFR 200.216.
- 12.1.8. Never Contract with the Enemy (2 CFR 200.215). Federal awarding agencies and recipients are subject to the regulations implementing “Never Contract with the Enemy” in 2 CFR part 183. The regulations in 2 CFR part 183 affect covered Agreements, grants and cooperative agreements that are expected to exceed \$50,000 within the period of performance, are performed outside the United States and its territories, and

are in support of a contingency operation in which members of the Armed Forces are actively engaged in hostilities.

- 12.1.9. Title VI of the Civil Rights Act. The Subgrantee, Contractor, Subcontractor, transferee, and assignee shall comply with Title VI of the Civil Rights Act of 1964, which prohibits recipients of federal financial assistance from excluding from a program or activity, denying benefits of, or otherwise discriminating against a person on the basis of race, color, or national origin (42 U.S.C. § 2000d et seq.), as implemented by the Department of Treasury's Title VI regulations, 31 CFR Part 22, which are herein incorporated by reference and made a part of this Agreement (or agreement). Title VI also includes protection to persons with "Limited English Proficiency" in any program or activity receiving federal financial assistance, 42 U.S.C. § 2000d et seq., as implemented by the Department of the Treasury's Title VI regulations, 31 CFR Part 22, and herein incorporated by reference and made part of this Agreement or agreement.
- 12.1.10 Contract Work Hours and Safety Standards Act ([40 U.S.C. 3701-3708](#)). Where applicable, all contracts awarded by the non-Federal entity in excess of \$100,000 that involve the employment of mechanics or laborers must include a provision for compliance with [40 U.S.C. 3702](#) and [3704](#), as supplemented by Department of Labor regulations ([29 CFR Part 5](#)). Under [40 U.S.C. 3702](#) of the Act, each contractor must be required to compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than one and a half times the basic rate of pay for all hours worked in excess of 40 hours in the work week. The requirements of [40 U.S.C. 3704](#) are applicable to construction work and provide that no laborer or mechanic must be required to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous. These requirements do not apply to the purchases of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence.
- 12.1.11 Procurement of Recovered Materials (2 CFR 200.323) See Section 9.2
- 12.1.12 Domestic preference for procurements (2 CFR 200.322) See Section 9.3
- 12.1.13 Real Property Disposition (2 CFR 200.311) When real property is no longer needed for the originally authorized purpose, the non-Federal entity must obtain disposition instructions from the Federal awarding agency or pass-through entity.

### **13. CERTIFICATIONS.**

- 13.1. Unless prohibited by Federal statutes or regulations, Recipient may require Contractor to submit certifications and representations required by Federal statutes or regulations on an annual basis. 2 CFR §200.208. Submission may be required more frequently if Contractor fails to meet a requirement of the Federal award. Contractor shall certify in writing to the State at the end of the Award that the project or activity was completed or the level of effort was expended. 2 CFR §200.201(3). If the required level of activity or effort was not carried out, the amount of the Award must be adjusted.

### **14. EXEMPTIONS.**

- 14.1. These Federal Provisions do not apply to an individual who receives an Award as a natural person, unrelated to any business or non-profit organization he or she may own or operate in his or her name.
- 14.2. A Contractor with gross income from all sources of less than \$300,000 in the previous tax year is exempt from the requirements to report Subawards and the Total Compensation of its most highly compensated Executives.

### **15. EVENT OF DEFAULT AND TERMINATION.**

- 15.1. Failure to comply with these Federal Provisions shall constitute an event of default under the Contract and the State of Colorado may terminate the Contract upon 30 days prior written notice if the default remains uncured five calendar days following the termination of the 30 day notice period. This remedy will be in addition to any other remedy available to the State of Colorado under the Contract, at law or in equity.
- 15.2. Termination (2 CFR 200.340). The Federal Award may be terminated in whole or in part as follows:
- § By the Federal Awarding Agency or Prime Recipient, if a Contractor fails to comply with the terms and conditions of a Federal Award;

- § By the Federal awarding agency or Prime Recipient, to the greatest extent authorized by law, if an award no longer effectuates the program goals or agency priorities;
- § By the Federal awarding agency or Prime Recipient with the consent of the Contractor, in which case the two parties must agree upon the termination conditions, including the effective date and, in the case of partial termination, the portion to be terminated;
- § By the Prime Recipient upon sending to the Federal Awarding Agency or Prime Recipient written notification setting forth the reasons for such termination, the effective date, and, in the case of partial termination, the portion to be terminated. However, if the Federal Awarding Agency or Prime Recipient determines in the case of partial termination that the reduced or modified portion of the Federal Award or Contract will not accomplish the purposes for which the Federal Award was made, the Federal Awarding Agency or Prime Recipient may terminate the Federal Award in its entirety; or by the Federal Awarding Agency or Prime Recipient pursuant to termination provisions included in the Federal Award.

**End of Supplementary General Conditions: Federal Provision**



**SECTION 00 73 46 - WAGE DETERMINATION SCHEDULE**

PART 1 - GENERAL

- 1.1 RELATED DOCUMENTS (Not Applicable)
- 1.2 SUMMARY (Not Applicable)
- 1.3 DEFINITIONS (Not Applicable)
- 1.4 PROCEDURE
  - A. DAVIS-BACON WAGE DETERMINATIONS
    - 1. Coordinate with the University Project Manager to determine if applicable.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

**END OF SECTION 00 73 46**



**SECTION 00 73 80 – SALES TAX**

**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS (Not Applicable)**

**1.2 SUMMARY**

- A. This Section includes administrative documents related to sales tax exemption for construction material purchases.

**1.3 DEFINITIONS (Not Applicable)**

**1.4 DOCUMENTS**

- A. Tax Exempt Status of University of Colorado, dated August 25, 2017
- B. City of Aurora Sales and Use Tax Exemption, dated March 12, 2001
- C. City of County of Denver Tax Confirming Exemption Status, dated November 5, 1999
- D. State of Colorado Letter Confirming Adams County, RTD, Stadium, and Cultural Tax Exemptions, dated April 7, 2006
- E. Colorado Department of Revenue - Contractor Application for Exemption Certification
- F. Copies of the above noted documents are attached to the end of this section.

**1.5 PROCEDURE**

- A. General Contractor must apply for a sales tax exemption certificate through the Colorado Department of Revenue using the “Contractor Application For Exemption Certificate.”
  - 1. Form can be downloaded from the Colorado Department of Revenue website:  
<https://www.colorado.gov/pacific/sites/default/files/DR0172.pdf>

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

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

**END OF SECTION 00 73 80**





DR 0160 (02/16/11)  
COLORADO DEPARTMENT OF REVENUE  
DENVER CO 80261-0013

CERTIFICATE OF EXEMPTION FOR STATE SALES/USE TAX ONLY

THIS LICENSE IS  
NOT TRANSFERABLE

USE ACCOUNT NUMBER for all references	LIABILITY INFORMATION		ISSUE DATE
09802565	G	010180	Aug 25 2017



STATE OF COLORADO/ OFFICE OF STATE  
CONTROLLER  
ATTN: OFFICE OF UNIVERSITY CONTROLLER  
1800 N GRANT ST STE 600  
DENVER CO 80203-1148

Executive Director  
Department of Revenue



## Sales Tax Exemption Certificate Multi - Jurisdiction

See page 2 for instructions

Last Name or Business Name		First Name		Middle Initial
Address				
City		State	ZIP	
<b>I Certify That</b>				
Name of Firm (Buyer) The Regents of University of Colorado				
Address 1800 Grant Street, Suite 600				
City Denver		State CO	ZIP 80203	
<b>Qualifies As (Check each applicable item)</b>				
<input type="checkbox"/> Wholesaler <input type="checkbox"/> Retailer <input type="checkbox"/> Manufacturer <input type="checkbox"/> Charitable or Religious				
<input checked="" type="checkbox"/> Political Subdivision or Governmental Agency <input type="checkbox"/> Other (Specify)				
If Other, specify here				
1) and is registered with the below listed states and cities within which your firm would deliver purchases to us which are for resale or lease by us in the normal course of our business which is <u>Institution of Higher Education</u> or				
2) that such purchases are exempt from payment of sales or use tax in such states and cities because our buyer is:				
<input checked="" type="checkbox"/> Political Subdivision or Governmental Agency <input type="checkbox"/> Charitable or Religious <input type="checkbox"/> Otherwise Exempt By Statute (Specify)				
If Otherwise Exempt By Statute, specify here				
City or State City of Aurora	State Registration or ID Number 98-00799-0000	City or State Colorado (Boulder campus)	State Registration or ID Number 98-02915-0000	
City or State Colorado	State Registration or ID Number 98-02565-0000	City or State Texas	State Registration or ID Number 32002730391	
City or State	State Registration or ID Number	City or State	State Registration or ID Number	
<b>If the list of states and cities is more than six(6), attach a list to this certificate.</b> I further certify that if any property so purchased tax free is used or consumed by the firm as to make it subject to a Sale or Use Tax we will pay the tax due direct to proper taxing authority when state law so provides or inform the seller for added tax billing. This certificate shall be part of each order which we may hereafter give to you, unless otherwise specified, and shall be called until canceled by us in writing or revoked by the city or state.				
General Description of products to be purchased from seller				
Under penalties of perjury, I swear or affirm that the information on this form is true and correct as to every material matter.				
Authorized Signature (owner, Partner or Corporate Officer) <i>Robert C. Kuehn</i>		Title Associate Vice President/University Controller		Date (MM/DD/YY) 7/4/18



FINANCE DEPARTMENT

Administration  
1470 South Havana Street  
Aurora, Colorado 80012  
303-739-7055  
FAX: 303-739-7068

March 12, 2001

Wayne F. Henderson  
Vice Chancellor for Administration and Finance  
University of Colorado Health Sciences Center  
Fitzsimons, Building 500, Room C1003  
P.O. Box 6508  
Aurora, Colorado 80045-0508

RE: Letter of Commitment

Dear Mr. Henderson:

I am in receipt of your letter dated February 27, 2001, requesting that I issue a letter of commitment to the University of Colorado Health Sciences Center ("UCHSC") pursuant to *City Code Section 130-63(c)*. It is my understanding that UCHSC is part and parcel of the University of Colorado, a public institution of higher education of the State of Colorado. *§ 23-20-101, et seq., C.R.S.* You have asked for some assurance that UCHSC is exempt from the payment of City sales and use tax, as well as the employer portion of the City occupational privilege tax.

*City Code Section 130-157(1)* exempts all sales of tangible personal property and taxable services to the various political subdivisions of this state from imposition of City sales tax. Identical exemptions exist in both the City Use Tax ordinance (*City Code § 130-198(5)*) and the City Employer Occupational Privilege Tax ordinance (*City Code § 130-405(1)*). Accordingly, UCHSC falls squarely within each of these three exemptions.

It should be noted, however, that these exemptions do not extend to the collection of City tax. For instance, UCHSC must collect, report, and remit City sales tax on any retail sale of tangible personal property or taxable services it makes to a non-exempt third party. *City Code § 130-160*. Likewise, UCHSC

Wayne F. Henderson  
March 12, 2001  
Page Two

must also collect, report, and remit the employee portion of the City occupational privilege tax for each person it employs within the City for any period of time within a calendar month sufficient to receive no less than \$250.00 as compensation for such employment. *City Code § 130-464.*

With respect to the deposit and ultimate payment of City use tax on construction materials, it is the longstanding policy of the City that the party who contracts for and directs and controls the construction of building improvements is liable for such tax. *See Fifteenth Street Investment Co. v. People, 102 Colo. 571, 81 P.2d 764 (1938).* Under the circumstances described in your request, it is UCHSC, and not its contractors, upon whom sole liability for the payment of City use tax would rest. Because UCHSC is an exempt entity, no use tax is due and owing on the purchase and subsequent use of construction materials for the development of UCHSC's property at the Fitzsimons site.

With regard to your additional requests, the City has no objection if UCHSC's contractors wish to use this letter to present to City building officials and third-party retailers as evidence of UCHSC's tax exemption. As for any future revocation of this letter, unless the status of UCHSC as a political subdivision changes, the various City tax exemptions which UCHSC is entitled to claim cannot be lawfully repealed without the prior approval of the City's voters. *See Colo. Const. Art. X, § 20(4)(a).* Therefore, the City believes UCHSC will be adequately informed in the event that the City decides to seek approval for any change in its tax laws that would impact UCHSC's tax-exempt status.

Very truly yours,



John Gross  
Director of Finance



**Department of Finance**  
Treasury Division  
Tax Compliance – Audit Unit  
  
201 W Colfax Ave #1009  
Denver, CO 80202  
fax: 720- 913-9455  
[www.denvergov.org/treasury](http://www.denvergov.org/treasury)

February 19, 2014

University of Colorado  
Procurement Service Center  
1800 Grant Street, Suite 500  
Denver, CO 80203

Ladies/Gentlemen:

The above named entity is exempt from the Denver sales tax per Sec. 53-26(1) of the City Retail Sales Tax Article:

**Sec. 53-26 (1) Exemptions**

There shall be exempt from taxation under the provisions of this Article the following: (1) All sales to the United States Government, to the State, its departments and institutions and the political subdivisions thereof, only when purchased in their governmental capacities.

To qualify for the exemption, purchases must be billed direct to the organization, and payment made from funds of the organization.

The exemption does not extend to construction contractors who may perform contracts for you; they are the consumer of all property purchased and used in the performance or contracts for others. Nor does the exemption apply to purchases by employees or members for their own personal use.

You may reproduce this letter to furnish to suppliers as needed.

Sincerely,

Donald Korte, Audit Manager  
Tax Compliance/Audit Section  
720-913-9339



# STATE OF COLORADO

## TAXPAYER SERVICE DIVISION

Department of Revenue

1375 Sherman Street  
Denver, Colorado 80261



Bill Owens  
Governor

M. Michael Cooke  
Executive Director

Neil Tillquist  
Division Director

Michael J. Barden  
University of Colorado at Denver and Health Sciences Center(UCDHSC)  
Building 500, Mail Stop F418  
P.O. Box 6508  
Aurora CO 80045

April 7, 2006

Dear Mr. Barden:

This is in response to your letter of March 1, 2006, to Bruce Nelson of the Department of Revenue regarding sales tax exemption from county and special district sales taxes for UCDHSC construction projects at the Fitzsimons campus. Mr. Nelson has left the Department, so I am responding to your inquiry.

In regards to Adams County sales and use tax, the sales tax is collected by the Department of Revenue, not the city of Aurora. Use tax on building materials is collected by the county when issuing building permits. Under 29-2-105(d), 39-26-708(1)(a) and 39-26-708(2)(a), C.R.S., UCDHSC and its contractors and sub-contractors are exempt from county sales and use tax on construction and building materials for State/UCDHSC owned real property.

In regards to special district sales and use taxes, UCDHSC and its contractors and sub-contractors are exempt from sales and use tax pursuant to the exemptions granted in 39-26-708(1)(a) and 39-26-708(2)(a), C.R.S., for the Regional Transportation District under 32-9-119(2)(c)(II), C.R.S, for the Scientific and Cultural District under 32-13-107(2), C.R.S, and for the Metropolitan Football Stadium District under 32-15-110(2)(a), C.R.S.

Additionally, for construction projects in the City and County of Denver, UCDHSC and its contractors and sub-contractors are exempt from the aforementioned special district sales and use taxes, as well as state sales and use tax.

Should you have additional questions regarding these matters, feel free to contact me.

Respectfully,

A handwritten signature in cursive script that reads "Steve Asbell".

Steve Asbell

Taxpayer Service Policy Group

Colorado Dept of Revenue

Ph:303.866.3889 email: sasbell@spike.dor.state.co.us



## Special Notice

### Purpose of this application

The exemption certificate for which you are applying must be used only for the purpose of purchasing construction and building materials for the exempt project described below. This exemption does not include or apply to the purchase or rental of equipment, supplies, and materials which are purchased, rented, or consumed by the contractor and which do not become a part of the structure, highway, road, street, or other public works **owned** and **used** by the exempt organization.

Any unauthorized use of the exemption certificate will result in revocation of your exemption certificate and other penalties provided by law.

A separate certificate is required for each project.

### Colorado Withholding Account Number

A Colorado Account Number (CAN) should be provided in this field. Applications that are left blank or list N/A will not be processed and will be returned.

#### Subsidiary:

This box is marked when a subsidiary is using the parents withholding account number (only when it does not have its own.) Provide the parents CAN.

#### Subcontractor:

This box is marked when a contractor does not have employees of their own and outsources their employees through a subcontractor. List the subcontractor or subcontractors name and CAN(s).

#### Staffing Agency:

This box is marked when a contractor does not have employees of their own and outsources their employees through a staffing agency. Provide the Staffing Agency's name and CAN.

### No employees/no subcontractors:

For contractors with no employees, no subcontractors/ staffing agencies:

Write no employees in the (CAN) box and provide explanation. For example, I have no employees or subcontractors and perform all of the work myself.

### Subcontractors:

Subcontractors will not be issued Certificates of Exemption by the Department of Revenue. Upon receipt of the Certificate, the prime contractor should make a copy for each subcontractor involved in the project and complete it by filling in the subcontractor's name and address and signing it. The original Certificate should always be retained by the prime contractor. Copies of all Certificates that the prime contractor issued to subcontractors should be kept at the prime contractor's place of business for a minimum of three years and be available for inspection in the event of an audit.

See FYI Sales 95 for information about qualifying affordable housing projects.

### To avoid a returned application ensure you have done the following:

- ☐ Accurately completed all applicable boxes of the form.
- ☐ Provided a copy of the Contract or agreement page. The Contract or Agreement page lists the type and scope of work.
- ☐ Bid amount on Contract or Agreement page matches the amount listed on the application (to the penny).
- ☐ Contract or Agreement page contains the signatures of the contracting parties.
- ☐ The form DR0172 (application) is signed.
- ☐ The exempt organizations number was provided and is correct.



DR 0172 (05/01/18)  
**COLORADO DEPARTMENT OF REVENUE**  
Denver CO 80261 - 0009  
(303) 238-SERV (7378)

## Contractor Application for Exemption Certificate

This exemption does not include or apply to the purchase or rental of equipment, supplies, and materials which are purchased, rented, or consumed by the contractor and which do not become a part of the structure, highway, road, street, or other public works **owned** and **used** by the exempt organization.

Any unauthorized use of the exemption certificate will result in revocation of your exemption certificate and other penalties provided by law.  
A separate certificate is required for each contract.

**Send completed forms to:** Colorado Department of Revenue, Denver, CO 80261-0009

**Failure to accurately complete all boxes of the form or provide all supporting documentation will cause the application to be denied.**

**For Department Use Only. Do not write in this section.**

Contractor/Account No. <b>89-</b>	Period (MM/YY-MM/YY)
--------------------------------------	----------------------

### Must be completed by applicant

#### Contractor Information

Trade name/DBA				
Owner, partner or corporate last name		First Name		Middle Initial
Mailing Address		City	State	Zip
E-Mail Address		FEIN	Bid amount for your contract (Must match to the penny) \$	
Fax number		Business Phone number		
Colorado withholding tax account number (See instructions)	<input type="checkbox"/> Subsidiary	<input type="checkbox"/> Subcontractors	<input type="checkbox"/> Staffing Agency	
<input type="checkbox"/> No employees/subcontractors (see below)				
No Employees/Subcontractors. (Provide explanation or attach a letter of explanation).				

#### Exemption Information

Copies of contract or agreement page, identifying the contracting parties, bid amount, type of work, and signatures of contracting parties **must** be attached

Name of exempt organization (as show on contract)		Exempt organization's number <b>98</b>		
Address of exempt organization		City	State	Zip
Principal contact at exempt organization-Last Name		First Name		Middle Initial
Housing Authority (if applicable)		Name of Project (if applicable)		
Owner of the Project (if applicable)				
Physical location of project site (give actual address when applicable and Cities and/or County (ies) where project is located)				
City		State	Zip	Principal contact's telephone number
Scheduled construction start date (MM/DD/YY)		Estimated completion date (MM/DD/YY)		
I declare under penalty of perjury in the second degree that the statements made in this application are true and complete to the best of my knowledge.				
Signature of the business owner, partner or corporate officer		Title of corporate officer		Date (MM/DD/YY)



## **SECTION 01 10 00**

### **SUMMARY**

#### **PART 1 - GENERAL**

##### **1.1 RELATED DOCUMENTS**

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

##### **1.2 SUMMARY**

- A. Section Includes:
  - 1. Project information.
  - 2. Work covered by Contract Documents.
  - 3. Work by University.
  - 4. Work under separate contracts.
  - 5. University-furnished and installed products.
  - 6. University-furnished, Contractor-installed products.
  - 7. Access to site.
  - 8. Coordination with occupants.
  - 9. Work restrictions.
  - 10. Specification and drawing conventions.
- B. Related Requirements:
  - 1. Section 01 35 46 "Indoor Air Quality Procedures" for requirements and procedures related to maintaining air quality in adjacent occupied spaces and buildings.

##### **1.3 PROJECT INFORMATION**

- A. Project Identification:
- B. Principal Representation: University of Colorado Denver.
  - 1. University's Representative:
- C. Architect/Engineer: Architectural Workshop, 2 Kalamath St. Denver, CO 80223, Phone: 303-788-1717, Contact: Mark Bowers
- D. Architect/Engineer's Consultants: The Architect/Engineer has retained the following design

##### **1.4 WORK COVERED BY CONTRACT DOCUMENTS**

- A. The Work of Project is defined by the Contract Documents and, in summary, briefly consists of the following: The University is addressing of continuing drainage issues into the building from

existing roof decks on the fourth, fifth, and sixth floors. The project proposes raising the threshold of each door leading to the roof decks. A new landing, ramp, or slope walk will be provided in the building to transition to the new threshold height. The project proposes removing the existing composite decking and replacing with a raised concrete paver system. The roof decks are not undergoing any change in use, occupancy or occupancy numbers. All existing circulation and paths of circulation and egress remain the same.

#### 1.5 WORK BY UNIVERSITY

- A. General: Cooperate fully with University so work may be carried out smoothly, without interfering with or delaying work under this Contract or work by University. Coordinate the Work of this Contract with work performed by University.

#### 1.6 WORK UNDER SEPARATE CONTRACTS

- A. General: Cooperate fully with separate contractors so work on those contracts may be carried out smoothly, without interfering with or delaying work under this Contract or other contracts. Coordinate the Work of this Contract with work performed under separate contracts.

#### 1.7 UNIVERSITY-FURNISHED AND INSTALLED PRODUCTS

- A. University will furnish certain items of equipment/furnishings as noted on the Drawings. Contractor will be responsible for coordinating their work to accommodate these items including, but not limited to, physical space fit, utility connections and rough-in, power wiring and electrical characteristics.
- B. Include in Project scheduling the latest times when information for such items is required and so notify the University in writing.

#### 1.8 UNIVERSITY-FURNISHED, CONTRACTOR-INSTALLED PRODUCTS

- A. The University will furnish certain items delivered to the jobsite as shown on the drawings.
- B. The Contractor will be responsible for coordinating their work to accommodate these items including, but not limited to, physical space fit, utility connections and rough-in, power wiring and electrical characteristics.
- C. Include in Project scheduling the latest times when information for such items is required and so notify the University in writing.
- D. Cooperate with University in scheduling the delivery of these items and be responsible for accommodating their storage and protection in the building and their replacement or repair due to damage as a result of Contractor's operations.

#### 1.9 ACCESS TO SITE

- A. General: Contractor shall have limited and restricted use of Project site for construction operations as indicated on Drawings by the Contract limits and as indicated by requirements of this Section.

- B. Use of Site: Limit use of Project site to areas within the Contract limits indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.
  - 1. Adjust means and methods of construction based on site limits and restrictions.
  - 2. Locate staging areas only where permitted by University.
- C. Construction Access and Travel:
  - 1. Use only those entrances, exits, and travel ways on campus roads and within the building designated by University. Contractor's personnel are not permitted in non-designated areas of University's existing facilities. Use only designated travel ways for transporting demolition materials, new construction materials, tools and equipment.
  - 2. Use of other than designated travel ways on campus roads and within existing buildings requires a minimum of 20 business days prior approval by University.
    - a. Request variations to traffic flow including temporary fire lane, parking lot, sidewalk and road closures, regulatory signage, and traffic control devices in accordance with City and County of Denver requirements.
  - 3. Access to the site will be as permitted by the University. Prearrange delivery and use of cranes, heavy trucks and other heavy equipment at least 72 hours prior to need through the University's Project Manager and University Police.
  - 4. Maintain access to fire lanes and campus operations at all times. Provide flag personnel during the ingress or egress of large equipment.
    - a. When fire lanes and/or access way must be temporarily disrupted notify University Police and University Parking and Transportation at least 20 business days in advance and reconfirm 72 hours in advance through the University's Project Manager.
  - 5. Arrange for and obtain all necessary permits from City and County of Denver for any disruption to or temporary closures of public city streets. Coordinate procurement of permits with University Project Manager.
- D. Construction Parking:
  - 1. General: Contractor parking will not be provided; make arrangements and pay for all required parking.
  - 2. Provide temporary parking or use designated areas of University's existing parking areas as applicable to the Project and in accordance with the following:
    - a. All parking on University property, including parking on University owned streets, is under the exclusive control and authority of University Parking and Transportation Services. Direct policy question to the department at (303) 724-2555.
    - b. There is no free parking on campus. Displacement or use of existing parking spaces by Contractor, either for parking or for staging, is a Contractor cost.
    - c. Use of existing parking spaces or other areas outside of Contractor's staging area must be approved in advance by University Parking and Transportation Services.
    - d. University Parking and Transportation Services may require and issue parking permits through the University Project Manager. Permits must be displayed and visible at all times while parked on the campus. Failure to display a permit will result in citations being written and possible removal of the vehicle from University property.
    - e. Keep all designated parking areas clean and free of litter and debris. University reserves the right to direct Contractor to clean areas not kept clean and orderly.
    - f. University Parking and Transportation Services may change parking assignments as deemed necessary, restrict the use of any space(s) or lot(s) at any time, and determine the hours of control and mode of operations for any parking area at any time. University Parking and Transportation Services may deny or revoke parking privileges to any person when deemed necessary and/or considered to be in the best interests of the University.
  - 3. Parking on University property is at the Contractor's own risk. The University and any entity affiliated with it are not responsible for fire, theft, and damage to or loss of contractor's or subcontractor's vehicle or any article left therein. Only a license is granted

to the user and no bailment is created.

- E. Condition of Existing Building: Maintain portions of existing building affected by construction operations in a weathertight condition throughout construction period. Repair damage caused by construction operations.

#### 1.10 COORDINATION WITH OCCUPANTS

- A. University may occupy site and both existing and adjacent floor(s) during entire construction period. Cooperate with University during construction and sequence operations to minimize conflicts and facilitate University usage. Perform the Work so as not to interfere with University's day-to-day operations.
  - 1. Maintain existing exits from existing and adjacent building, unless otherwise indicated.
  - 2. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from University and approval of authorities having jurisdiction.
  - 3. Limit construction operations to those methods and procedures which will not adversely and unduly affect the working environment of University's occupied spaces, including noise, dust, odors, air pollution, ambient discomfort, poor lighting, hazards and other undesirable effects and conditions.
  - 4. Coordinate with University Project Manager to schedule jack hammering or activities producing dusty conditions, excessive fumes or odors during off-hours.
  - 5. When work must be accomplished in areas containing existing furniture, upon a minimum of 3 business days notification of the University Project Manager, University will remove or relocate existing furniture.
  - 6. Provide not less than 72 hours' notice to University Project Manager of activities that will affect University's operations. University Project Manager will coordinate with campus tenants.
    - a. Refer to "Work Restrictions" Article of this Section for procedures and notification requirements related to utility interruptions.
  - 7. Provide temporary barriers and partitions, or other means as required to protect occupants of existing building and the general public from injury due to construction activities. Prevent the spread of dust and dirt to adjacent occupied areas and building.

#### 1.11 WORK RESTRICTIONS

- A. Work Restrictions, General: Comply with restrictions on construction operations.
  - 1. Comply with limitations on use of public streets and with other requirements of authorities having jurisdiction.
  - 2. In planning and executing the Work, take into consideration the special needs of University patient care, teaching and research settings, for example, supply of critical utilities, noise and dust control, access to existing loading docks, occupied buildings, etc.
- B. Normal Working Hours: Limit work to normal working hours of 7:00 a.m. to 5:00 p.m., Monday through Friday with extended hours as approved by University Project Manager.
  - 1. Notify University Project Manager of all proposed work outside of normal working hours. Include dates, times, names and contact information for contractors and subcontractor performing the Work with notification. University Project Manager will notify, as appropriate, other University personnel and departments including, but not limited to, Building Maintenance and Operations (BMO) Directors, BMO assigned representative, Campus Police and Facilities Management.

- C. Noise and Vibration: Coordinate operations that may result in high levels of noise and vibration, or other disruption to University occupancy with University.
  - 1. Noise during Normal Working Hours: Identify potentially disruptive construction activities at weekly Progress Meeting and adjust active time of day to reduce significant impacts on occupants.
  - 2. Noise outside Normal Working Hours: Schedule construction work or demolition work outside of normal working hours with University Project Manager at minimum of 24 hours in advance.
    - a. The maximum permissible noise level is 75 decibels (dBA), measured at the adjacent property line.
- D. Contractor Identification:
  - 1. Supervisory staff for the primary contractor must obtain an identification badge at the University Anschutz Medical Center (AMC) Building 500. Submit the University Access Control Badge Application form through University Project Manager. Submitted forms shall be complete with all required information including a letter on company letterhead confirming employee status with company and stating whether the company completes background testing and/or drug screening. Contractor supervision must display badge on site during construction activities.
  - 2. To the greatest extent possible, Contractor's and subcontractor's employees must wear a recognizable logo shirt or hardhat identifying them as members of the contractor's work force.
  - 3. Work with University Project Manager and Building Maintenance and Operations staff to get identification badge activated.
  - 4. Work with University Project Manager and Building Maintenance and Operations staff to set up identification badge for access to construction areas secured by card reader.
- E. Use of Existing Elevators: Use designated elevators only and protect finishes during transport. Elevators may not be used for transport of construction materials between 7:00am – 9:00am, 11:30am – 1:30pm, and from 3:00pm – 5:00pm.
  - 1. Do not block corridors, aisles, passageways or doors leading to elevator except as, and only to the extent approved by University Project Manager.
- F. Keys: Submit written request to University Project Manager on University Key Request Form.
  - 1. To the extent the need for keys is demonstrated and required to complete the Work, University Project Manager will issue keys to Contractor.
  - 2. Contractor is responsible for all costs related to lost or non-returned keys.
  - 3. Electrical, mechanical and sensitive research space may require University escort in lieu of issuing keys.
- G. Dock Deliveries: Notify University Project Manager and limit deliver time to a maximum of 20 minutes.
- H. Existing Utility Interruptions: Do not interrupt water, sewer, plumbing, gas, steam, chilled water, oxygen, HVAC, electrical power, lighting, telephone and other related utilities serving facilities occupied by University without prior notice to and approval by the University. Coordinate and schedule interruptions in advance through the University Project Manager in strict conformance with University Utility Interruption/Outage Request Procedure.
  - 1. Form of Notice: University Utility Interruption and Start-up Request form.
  - 2. Time of Notice: Notice for major and minor outages as defined by the Utility Interruption/Outage Request Procedure is 8 business days for minor outages and 31 business days for major outages.
- I. Fire Alarm and Fire Sprinkler Interruptions: When construction activities require interruption of fire alarm or fire sprinkler service, or when dust from construction activities is likely to cause accidental alarm, advise University Project Manager who will submit an interruption request.

1. Form of Notice: University Fire Alarm/Sprinkler Disable Request Form.
  2. Time of Notice: Prior to noon on the day before the anticipated interruption.
- J. Nonsmoking Campus: Smoking, chewing tobacco, and other related tobacco product use is not permitted at any location on campus except outside in designated areas.
- K. University Policies Applying to All Contractors: Comply with University policies applying to contractors including drug policy, sexual harassment policy and tobacco free policy. Obtain copies of University policies from University Project Manager.
1. Controlled Substances: Use of tobacco products and other controlled substances on Project site and surrounding Campus is not permitted.
- L. Designated Eating Areas: Restrict consumption of food on project site to designated eating areas as approved by University Project Manager.

#### 1.12 SPECIFICATION AND DRAWING CONVENTIONS

- A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
1. Imperative mood and streamlined language are generally used in the Specifications. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
  2. Specification requirements are to be performed by Contractor unless specifically stated otherwise.
  3. Words in the singular number include the plural and those in the plural include the singular.
  4. Words of any gender include any other gender.
- B. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.
- C. Drawing Coordination: Requirements for materials and products identified on Drawings are described in detail in the Specifications. One or more of the following are used on Drawings to identify materials and products:
1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
  2. Abbreviations: Materials and products are identified by abbreviations published as part of the U.S. National CAD Standard and scheduled on Drawings.
  3. Keynoting: Materials and products may be identified by reference keynotes referencing Specification Section numbers found in this Project Manual.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

**END OF SECTION 01 10 00**

## **SECTION 01 22 00**

### **UNIT PRICES**

#### **PART 1 - GENERAL**

##### **1.1 RELATED DOCUMENTS**

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

##### **1.2 SUMMARY**

- A. Section includes administrative and procedural requirements for unit prices.
- B. Related Requirements:
  - 1. Section 01 21 00 "Allowances" for lump-sum and unit-cost allowances.

##### **1.3 DEFINITIONS**

- A. Unit price is an amount incorporated in the Agreement, applicable during the duration of the Work as a price per unit of measurement for materials, equipment, or services, or a portion of the Work, added to or deducted from the Contract Sum by Change Order, if the scope of Work or estimated quantities of Work required by the Contract Documents are increased or decreased.

##### **1.4 PROCEDURES**

- A. Unit prices include all necessary material, plus cost for delivery, installation, insurance, applicable taxes, overhead, and profit.
- B. Measurement and Payment: Upon completion of work involving unit prices, submit documentation to establish actual quantity of work provided. A Change Order will be issued in an amount equal to the actual quantity multiplied by the unit price.
- C. University 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 University's expense, by an independent surveyor acceptable to Contractor.
- D. List of Unit Prices: A schedule of unit prices is included in Part 3. Specification Sections referenced in the schedule contain requirements for materials described under each unit price.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF UNIT PRICES

A. Unit Price 1: Roof Deck Underlayment:

Provide unit pricing for square foot of area to add roof deck underlayment as specified to achieve a slope of 2% or less to meet ADA requirements. Roof deck underlayment will vary in depth from 1-1/2" to feather out flush with the surface.

Base bid shall include roof deck underlayment per specification as indicated in drawing 3/A-101 and drawing 3/A-102 per Note #11.

**END OF SECTION 01 22 00**



## **SECTION 01 25 00 - SUBSTITUTION PROCEDURES**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

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

#### **1.2 SUMMARY**

- A. Section includes administrative and procedural requirements for substitutions.
- B. Related Requirements:
  - 1. Section 01 21 00 "Allowances" for products selected under an allowance, if applicable.
  - 2. Section 01 23 00 "Alternates" for products selected under an alternate, if applicable.
  - 3. Section 01 60 00 "Product Requirements" for requirements for submitting comparable product submittals for products by listed manufacturers.

#### **1.3 DEFINITIONS**

- A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.
  - 1. Substitutions for Cause: Changes proposed by Contractor that are required due to changed Project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.
  - 2. Substitutions for Convenience: Changes proposed by Contractor or University that are not required in order to meet other Project requirements but may offer advantage to Contractor or University.

#### **1.4 ACTION SUBMITTALS**

- A. Substitution Requests: Submit each request for consideration in format and quantities specified in Section 01 33 00 "Submittal Procedures". 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 CSI Form 13.1A or Contractor-generated form with substantially the same information.
  - 2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
    - a. Statement indicating why specified product or fabrication or installation cannot be provided, if applicable.
    - b. Coordination information, including a list of changes or revisions needed to other parts of the Work and to construction performed by University and separate contractors that will be necessary to accommodate proposed substitution.

- c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Include annotated copy of applicable Specification Section. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.
  - d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
  - e. Samples, where applicable or requested.
  - f. Certificates and qualification data, where applicable or requested.
  - g. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners.
  - h. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
  - i. Research reports evidencing compliance with building code in effect for Project, from ICC-ES.
  - j. Detailed comparison of Contractor's construction schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.
  - k. Cost information, including a proposal of change, if any, in the Contract Sum.
  - l. Contractor's certification that proposed substitution complies with requirements in the Contract Documents except as indicated in substitution request, is compatible with related materials, and is appropriate for applications indicated.
  - m. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
3. Architect/Engineer's Action: If necessary, Architect/Engineer in consultation with the University will request additional information or documentation for evaluation within seven calendar days of receipt of a request for substitution. Architect/Engineer in consultation with the University will notify Contractor of acceptance or rejection of proposed substitution within 14 calendar days of receipt of request, or seven calendar days of receipt of additional information or documentation, whichever is later.
- a. Forms of Acceptance: Change Order.
  - b. Use product specified if Architect/Engineer does not issue a decision on use of a proposed substitution within time allocated.

## 1.5 QUALITY ASSURANCE

- A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. Engage a qualified testing agency to perform compatibility tests recommended by manufacturers.

## 1.6 PROCEDURES

- A. Coordination: Revise or adjust affected work as necessary to integrate work of the approved substitutions.

## PART 2 - PRODUCTS

### 2.1 SUBSTITUTIONS

- A. Substitutions for Cause: Submit requests for substitution immediately on discovery of need for change, but not later than 14 calendar days prior to time required for preparation and review of related submittals.
1. Conditions: Architect/Engineer in consultation with the University will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect/Engineer will return requests without action, except to record noncompliance with these requirements:
- a. Requested substitution is consistent with the Contract Documents and will produce indicated results.
  - b. Requested substitution provides sustainable design characteristics that specified product provided.
  - c. Substitution request is fully documented and properly submitted.
  - d. Requested substitution will not adversely affect Contractor's construction schedule.
  - e. Requested substitution has received necessary approvals of authorities having jurisdiction.
  - f. Requested substitution is compatible with other portions of the Work.
  - g. Requested substitution has been coordinated with other portions of the Work.
  - h. Requested substitution provides specified warranty.
  - i. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.
- B. Substitutions for Convenience: Not allowed.

## PART 3 - EXECUTION (Not Used)

**END OF SECTION 01 25 00**

## SECTION 01 26 00 - CONTRACT MODIFICATION PROCEDURES

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section includes administrative and procedural requirements for handling and processing Contract modifications.
- B. Related Requirements:
  - 1. Section 01 25 00 "Substitution Procedures" for administrative procedures for handling requests for substitutions made after the Contract award.
  - 2. **Contractor's Agreement Design/Bid/Build, State Form SC-6.21 and The General Conditions of the Construction Contract Design/Bid/Build, State Form SC-6.23** for definitions and contractual requirements related to contract modification procedures.

#### 1.3 DEFINITIONS

- A. Change Order: A written order in compliance with the requirements of the Contract authorizing changes in the Work. For the purposes of this Section a Change Order and a Contract Amendment shall have the same meaning.

#### 1.4 INFORMATIONAL SUBMITTALS

- A. Contractor's Authorized Signatory: Submit name of individual authorized to accept changes and responsible for informing others employed by Contractor of changes in the Work.

#### 1.5 MINOR CHANGES IN THE WORK

- A. Architect/Engineer will issue supplemental instructions authorizing minor changes in the Work, not involving adjustment to the Contract Sum or the Contract Time.

#### 1.6 CHANGE ORDER BULLETIN

- A. University-Initiated Change Order Bulletin: Architect/Engineer will issue 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. It will also state the time period for which the request will remain valid.

1. Change Order Bulletin Form: State Form SC-6.311 available on the website of the Office of the State Architect.
  2. Work Change Order Bulletins issued by Architect/Engineer are not instructions either to stop work in progress or to execute the proposed change.
- B. Contractor-Initiated Change Order Bulletin: If latent or changed conditions require modifications to the Contract, Contractor may initiate a claim by submitting a request for a change to Architect/Engineer.
1. Change Order Bulletin Form: State Form SC-6.311 available from the website of the Office of the State Architect.
  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.

#### 1.7 CHANGE ORDER PROPOSAL

- A. Change Order Proposal: In response to a University-Initiated Change Order Bulletin or accompanying a Contractor-Initiated Change Order Bulletin, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change described.
1. Change Order Proposal Form: State Form SC-6.312 available from the website of the Office of the State Architect.
  2. Labor Rates: Prior to submitting first Change Order Proposal, submit bare, unburdened hourly labor rates for all contractor and subcontractor labor categories; submit itemized breakdown of all applicable additional labor benefit costs to be added to the bare labor cost to arrive at the total burdened hourly labor cost.
  3. Equipment Costs: Provide cost backup for all equipment clearly indicating equipment billing rates and sufficient to demonstrate, as determined by the University Project Manager, that proposed rates are competitive and reasonable in all cases. Submit completed Change Order Proposal Form within the requested timeframe. Include backup documentation to support calculations consistent with Contract provisions, including but not limited to, the following:
    - a. Contractor and Subcontractor labor, material and equipment costs including:
      - 1) 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.
      - 2) Applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
      - 3) Costs of labor and supervision directly attributable to the change and as permitted by the terms and conditions of the General Contract for Construction.
    - b. Contractor and Subcontractor overhead and profit.
    - c. Contractor's bond cost.
    - d. Justification for Change in Contract Time: 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.

4. Maintain detailed records of work completed. Provide complete information for evaluation of proposed changes and to substantiate proposed changes in Contract Sum or Contract Time.

#### 1.8 ADMINISTRATIVE CHANGE ORDERS

- A. Allowance Adjustment: See Section 01 21 00 "Allowances" for administrative procedures for preparation of Change Order Proposal for adjusting the Contract Sum to reflect actual costs of allowances.
- B. Unit-Price Adjustment: See Section 01 22 00 "Unit Prices" for administrative procedures for preparation of Change Order Proposal for adjusting the Contract Sum to reflect measured scope of unit-price work.

#### 1.9 CHANGE ORDER PROCEDURES

- A. Submit three signed copies of Change Order Proposal to Architect/Engineer for review.
  1. University-Initiated Change Order Bulletins: University and Architect/Engineer will evaluate Contractor's Change Order Proposal and either request additional information or suggest modifications. Based on this review and evaluation University will either accept or reject the proposal.
  2. Contractor-Initiated Change Order Bulletins: Architect/Engineer will evaluate Contractor's claim based on the terms and conditions of the Contractor Agreement and General Conditions of the Construction Contract, as applicable.
  3. Architect/Engineer's Action: When satisfied as to the accuracy and completeness of the Change Order Proposal, the Architect/Engineer will sign all three copies and forward to the University for consideration.
- B. On University's approval of a Change Order Proposal, Architect/Engineer will prepare, sign and forward three copies of a Change Order, State Form SC-6.31 available from the website of the Office of the State Architect, for signature by the Contractor. Contractor then forwards all three copies of signed Change Order to the University for signature and distribution of fully executed copies to Architect/Engineer and Contractor for record.
- C. Upon receipt of a fully executed Change Order, promptly perform the following:
  1. Revise Schedule of Values on the Application for Payment Form by indicating each authorized Change Order as a separate line item and adjusting the Contract Sum as shown on the Change Order.
    - a. University will not pay for changes to the Work until authorized by a Change Order signed by all parties.
  2. Revise the Progress Schedule to reflect any change in the Contract Time.
  3. Enter changes in the Project Record Documents.

CU Denver Business School  
5<sup>th</sup> & 6<sup>th</sup> Floor Roof Drainage Repair

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

**END OF SECTION 01 26 00**

## **SECTION 01 29 00 - PAYMENT PROCEDURES**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

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

#### **1.2 SUMMARY**

- A. Section includes administrative and procedural requirements necessary to prepare and process Applications for Payment.
- B. Related Requirements:
  - 1. Section 01 21 00 "Allowances" for procedural requirements governing the handling and processing of allowances.
  - 2. Section 01 22 00 "Unit Prices" for administrative requirements governing the use of unit prices.
  - 3. Section 01 26 00 "Contract Modification Procedures" for administrative procedures for handling changes to the Contract.
  - 4. Section 01 32 00 "Construction Progress Documentation" for administrative requirements governing the preparation and submittal of the Contractor's construction schedule.

#### **1.3 DEFINITIONS**

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

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

- A. Coordination: Coordinate preparation of the schedule of values with preparation of Contractor's construction schedule. Schedule of values report from cost-loaded Critical Path Method Schedule prepared in accordance with Section 01 32 00 "Construction Progress Documentation" may serve to satisfy requirements for the schedule of values.
  - 1. Coordinate line items in the schedule of values with other required administrative forms and schedules, including the following:
    - a. Application for Payment forms with continuation sheets.
    - b. Submittal schedule.
    - c. Items required to be indicated as separate activities in Contractor's construction schedule.
      - 1) Construction Manager's Fee.
      - 2) Estimated Project General Conditions Costs.



2. Submit schedule of values and hold a conference with the Architect/Engineer and University Project Manager to finalize the schedule of values at earliest possible date, but no later than 10 business days before the date scheduled for submittal of initial Certificates and Applications for Payment.
- B. Format and Content: Use 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/Engineer.
    - c. Architect/Engineer's project number.
    - d. Contractor's name and address.
    - e. Date of submittal.
  2. Arrange schedule of values consistent with format of AIA Document G703.
  3. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with Project Manual table of contents. Provide multiple line items for principal subcontract amounts in excess of five percent of the Contract Sum.
  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 required, include evidence of insurance.
  6. 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 a direct cost of actual work-in-place shall be shown as separate line items in the schedule of values.
  7. Schedule Updating: Update and resubmit the schedule of values before the next Applications for Payment when Change Orders result in a change in the Contract Sum.

## 1.5 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment following the initial Application for Payment shall be consistent with previous applications and payments as certified by Architect/Engineer and paid for by University.
1. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.
- B. Pay Application and Schedule Review Meetings: Conduct in accordance with Section 01 31 00 "Project Management and Coordination." Provide draft application for payment and draft schedule update reflecting work accomplished during previous pay period. Review progress achieved; discuss and resolve issues affecting the progress; and review critical activities to be accomplished during the following 90 calendar days.

1. Jobsite Walk: When required, conduct a walk of the jobsite to confirm progress related to any activity in question.
- C. Monthly Schedule Reporting: Upon conclusion of the Pay Application and Schedule Review Meeting, but not later than the 28th of the month, update the Construction Schedule and submit the Pay Application.
- D. Payment Application Times: Submit Application for Payment to Architect/Engineer by the first day of the month and no more than five (5) business days prior thereto. The period covered by each Application for Payment is per the date indicated in the Application.
- E. Payment Application Review: The Architect/Engineer shall, within five (5) business days after the receipt of each Certificate and Application for Payment, review the Project Application for Payment and either execute a Project Certificate for Payment to the University or notify the Contractor in writing of the reasons for withholding a Certificate.
  1. All applications for payment, except the final application, and the payments there under, shall be subject to correction in the next application rendered following the discovery of any error
- F. Application for Payment Forms: Use State Form SBP-7.2 "Certification for Contractor Payment."
- G. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Architect/Engineer will return incomplete applications without action.
  1. Entries shall match data on the schedule of values and Contractor's construction schedule. Use updated schedules if revisions were made.
  2. Include amounts for work completed following previous Application for Payment, whether or not payment has been received. Include only amounts for work completed at time of Application for Payment.
  3. Include amounts of Change Orders issued before last day of construction period covered by application.
  4. Indicate separate amounts for work being carried out under University-requested project acceleration.
- H. Stored Materials: Include in Application for Payment amounts applied for materials or equipment purchased or fabricated and stored, but not yet installed. Differentiate between items stored on-site as approved in advance by the University Project Manager and items stored at an off-site location previously agreed upon in writing.
  1. Provide certificate of insurance, evidence of transfer of title to University, and consent of surety to payment, for stored materials.
  2. Provide supporting documentation that verifies amount requested, such as paid invoices. Match amount requested with amounts indicated on documentation; do not include overhead and profit on stored materials.
  3. Provide summary documentation for stored materials indicating the following:
    - a. Value of materials previously stored and remaining stored as of date of previous Applications for Payment.
    - b. Value of previously stored materials put in place after date of previous Application for Payment and on or before date of current Application for Payment.
    - c. Value of materials stored since date of previous Application for Payment and remaining stored as of date of current Application for Payment.

- I. Transmittal: Submit three signed and notarized original copies of each Application for Payment to Architect/Engineer by a method ensuring receipt. One copy shall include waivers of lien and similar attachments if required.
  - 1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.
- J. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
  - 1. List of subcontractors.
  - 2. Schedule of values.
  - 3. For projects required to obtain LEED certification, LEED submittal for project materials cost data.
  - 4. Contractor's construction schedule (preliminary if not final).
  - 5. Products list (preliminary if not final).
  - 6. For projects required to obtain LEED certification, LEED action plans.
  - 7. Schedule of unit prices.
  - 8. Submittal schedule (preliminary if not final).
  - 9. List of Contractor's staff assignments.
  - 10. List of Contractor's principal consultants.
  - 11. Copies of building permits.
  - 12. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
  - 13. Initial progress report.
  - 14. Report of preconstruction conference.
- K. Application for Payment at Substantial Completion: After Architect/Engineer issues the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.
  - 1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
  - 2. This application shall reflect Certificate(s) of Substantial Completion issued previously for University occupancy of designated portions of the Work.
- L. Final Payment Application: After completing Project closeout requirements, submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
  - 1. All items on Pre-acceptance Checklist (State Form SBP-05) have been completed.
  - 2. Notice of Acceptance (State Form SBP-6.27) has been issued.
  - 3. Statements to support local sales tax refunds, if any submitted.
  - 4. Notice of Contractor's settlement has been published.
  - 5. Evidence of completion of Project closeout requirements, including but not limited to:
    - a. Submittal of Record Documents.
    - b. Submittal of all Operation and Maintenance Manuals.
    - c. Completion of all required demonstration and training.
  - 6. Updated final statement, accounting for final changes to the Contract Sum.
  - 7. Evidence that claims have been settled.
  - 8. Final meter readings for utilities, a measured record of stored fuel, and similar data as of date of Substantial Completion or when University took possession of and assumed responsibility for corresponding elements of the Work.

9. Final liquidated damages settlement statement.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

**END OF SECTION 01 29 00**

## **SECTION 01 31 00 - PROJECT MANAGEMENT AND COORDINATION**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

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

#### **1.2 SUMMARY**

- A. Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
  - 1. General coordination procedures.
  - 2. Coordination drawings.
  - 3. Requests for Information (RFIs).
  - 4. Project Web site.
  - 5. Project meetings.
- B. Related Requirements:
  - 1. Section 01 32 00 "Construction Progress Documentation" for preparing and submitting Contractor's construction schedule.
  - 2. Section 01 73 00 "Execution" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.
  - 3. Section 01 77 00 "Closeout Procedures" for coordinating closeout of the Contract.

#### **1.3 DEFINITIONS**

- A. RFI: Request from Contractor seeking information required by or clarifications of the Contract Documents.

#### **1.4 INFORMATIONAL SUBMITTALS**

- A. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Within 21 calendar days of Notice of Award submit, as complete as possible, a preliminary list to include all major subcontractors. Augment, complete and submit the final subcontractor list within 60 calendar days of Notice of Award, unless a longer duration is approved by the Architect/Engineer. Include the following information in tabular form:
  - 1. Name, address, and telephone number of entity performing subcontract or supplying products.
  - 2. Number and title of related Specification Section(s) covered by subcontract.
  - 3. Drawing number and detail references, as appropriate, covered by subcontract.
- B. Key Personnel Names: Within 14 calendar days after 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 home, office, and cellular telephone numbers and e-mail addresses. Provide names, addresses, and telephone numbers of individuals assigned as alternates in the absence of individuals assigned to Project.

## 1.5 GENERAL COORDINATION PROCEDURES

- A. General: Each entity involved in the performance of work for the entire Project shall cooperate in the overall coordination of the Work; promptly, when requested, furnish information concerning its portion of the Work; and respond promptly and reasonably to the decisions and requests of persons designated with coordination, supervision, administrative or similar authority.

### 1. University Standard Project Management Forms

- a. Where applicable, obtain from the University Project Manager and use the following University Standard Forms:

- 1) Preconstruction Agenda
- 2) Change Order Log with Contingency Codes
- 3) Access Control Badge Application Form
- 4) Utility Interruption Request Form
- 5) Utility Start-Up Request Form
- 6) Fire Alarm/Sprinkler Disable Request Form
- 7) Hot Work Permit Form
- 8) Anschutz Medical Campus (AMC) Street and Parking Lot Closure Form
- 9) Indoor Air Quality (IAQ) Planning Checklist
- 10) Indoor Air Quality (IAQ) Inspection Checklist

### 2. Site Utilization:

- a. In addition to the site utilization limitations and requirements indicated in Section 01 10 00 "Summary" and indicated by the Contract Documents; administer the allocation of available space equitably among entities needing access and space, so as to produce the best overall efficiency in the performance of the total work of the project. Schedule deliveries so as to minimize the space and time requirements for storage of materials and equipment on the site; but do not unduly risk delays in the work.
- b. Concurrent with work of the Contractor, other contractors, suppliers, and the University personnel may be working in relatively close proximity. The Contractor is solely responsible for coordinating their work with that of other contractors and will make no claims for failure to do so.

### 3. Layout:

- a. It is recognized that the Contract Documents are diagrammatic in showing certain physical relationships of the various elements and systems and their interfacing with other elements and systems. Establishment and coordination of these relationships is the exclusive responsibility of the Contractor. Do not scale the drawings. Lay out and arrange all elements to contribute to safety, efficiency and to carry the harmony of design throughout the Work. In case of conflict or undimensioned locations, verify required positioning with Architect/Engineer.

### 4. Substrate Examination:

- a. The Installer of each element of the work must examine the conditions of the substrate to receive the work, dimensions and spaces adjacent, tolerances, interfacing with other elements and services, and the conditions under which the work will be performed, and must notify the Contractor in writing of conditions detrimental to the proper or timely completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected in a manner acceptable to the Installer.
5. Large and Heavy Equipment:
  - a. Contractor to coordinate with University Project Manager requirements to be maintained for the subsequent entry of large equipment units. Coordinate the movement of heavy items with shoring and bracing, so that the building structure will not be overloaded during the movement and installation.
  - b. Where equipment or products to be installed on the roof are too heavy to be hand-carried, do not transport across roof deck; position by crane or other device so as to avoid overloading the roof deck.
- B. 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 of the Specification that depend on each other for proper installation, connection, and operation.
  1. Contractor Communication with the University: Direct all communication with the University through the University Project Manager.
  2. 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.
  3. Coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair.
  4. Make adequate provisions to accommodate items scheduled for later installation.
- C. 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 University and separate contractors if coordination of their Work is required.
- D. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities 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.
- E. Coordination Of Submittals: Prior to transmittal to the Architect/Engineer, review shop and erection drawings, product data, and samples for compliance with Contract Documents and for

coordination among work of all Sections of the Specifications. Coordination of submittals shall include, but not be limited to the following:

1. Verification of field dimensions and clearances and relationship to available space and anchors.
2. Verification of compatibility with equipment and work of other Sections, electrical characteristics, and operational control requirements.
3. Verification of motor voltages and control characteristics.
4. Coordination of controls, interlocks, wiring of pneumatic switches, and relays.
5. Coordination of wiring and control diagrams.
6. Review of the effect of any changes on work of other Sections.
7. For any item to be installed in or on a finished surface, certify that applicable Contract Documents have been checked and that the item submitted is compatible with the surface finish on which it is to be installed.
8. Equipment and material submittals shall show sufficient data to indicate complete compliance with Contract Documents as follows:
  - a. Proper sizes and capabilities.
  - b. Ability to fit in the available space in a manner that will allow proper service.
  - c. Construction methods, materials, and finishes.
  - d. List of accessories.

F. Special Coordination Requirements for Mechanical and Electrical Work:

1. General: Provide necessary work and services required to coordinate the complete installation of heating, ventilating, and air conditioning (HVAC) equipment and systems; plumbing systems and fixtures; electrical equipment, fixtures, and systems; and other equipment or systems containing motors and controls or requiring connection to mechanical or electrical systems; all so that the various systems perform as indicated and are in harmony with other project Work.
2. Contract Drawings:
  - a. Drawings are schematic in nature, and indicate in general how the various components are integrated with other parts of the building. Coordinate exact locations by job measurement, by verifying the requirements of other trades, and by review of Contract Documents.
3. Mechanical and Electrical Drawings indicate general routing of the various parts of the systems, but do not indicate all sizes, fittings, offsets, and runouts which are required. Coordinate correct sizes, fittings, offsets, and runouts required to fit systems into allocated spaces. Coordinate locations of all light fixtures, vents, and supply grilles to conform to the ceiling grid system or other modular finishes.
4. Coordinate installation of mechanical and electrical work in compliance with the following requirements:
  - a. Install piping, ductwork and similar services straight and true, aligned with other work, close to walls and overhead structure, allowing for insulation, concealed (except where indicated as exposed) in occupied spaces, and out-of-the-way with maximum passageway and headroom remaining in each space.
  - b. Install electrical work in a neat, organized manner with conduit and similar services in or parallel with building lines, and concealed unless indicated as exposed.
  - c. For all work maintain maximum practical overhead clearance but not less than 6" above ceiling. Where exposed, maintain 7'-0" minimum clearance.
  - d. Arrange all work to facilitate maintenance and repair or replacement of equipment. Locate services requiring maintenance on valves and similar units in front of



- services requiring less maintenance. Connect equipment for ease of disconnecting, with minimum of interference with other work.
- e. Provide space to permit removal of coils, tubes, fan shafts, filters, other parts which may require replacement.
  - f. Locate operating and control equipment and devices for easy access. Furnish access panels where units are concealed by finishes and similar work.
  - g. Integrate mechanical work in ceiling plenums with suspension system, light fixtures and other work, so that required performances of each will be achieved.
  - h. Give the right-of-way to piping systems required to slope for drainage over other service lines and ductwork.
  - i. Advise other trades of openings required in their work for accommodation of mechanical and electrical elements. Provide and place sleeves and anchors required in other work.
5. Access to Equipment: Except where located above accessible ceilings, provide access panels wherever access is required to concealed valves, controls, dampers, pull boxes and other devices requiring ongoing or periodic access.
- a. Acceptable types of access panels are specified in Division 08.
  - b. Each trade is responsible for providing access panels needed for access to their equipment and coordinating installation with other Division 03, 04, 06 and 09 trades.
  - c. Coordinate requirements and obtain approval of locations from Architect/Engineer.

G. Compatibility of Systems:

1. Provide products and equipment which are compatible with other work requiring mechanical/electrical interface including electrical connections, control devices, water, drain and other piping connections. Verify electrical characteristics, fuel requirements and other interface requirements before ordering equipment and resolve conflicts that may arise.
2. Coordinate equipment, mechanical and electrical work in accordance with the following schedule:

<u>ITEM</u>	<u>FURNISHED BY</u>	<u>MOUNTED BY</u>	<u>LOW VOLTAGE WIRED BY</u>	<u>POWER WIRED &amp; CONNECTED BY</u>	<u>LOW VOLTAGE CONTROL CONNECTED BY</u>
Equipment motors	I	MI	MI	EI	--
Motor starters, contactors and overload heaters	MI	EI	EI	EI	MI
Fused and unfused disconnect switches	EI**	EI**	EI**	EI	--
Manual operating switches, speed switches, push-button stations and pilot lights	MI	EI	EI	EI	EI
Duct detectors	EI	MI	MI	EI	MI
Control relays and transformers	MI	MI	MI	EI	MI

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Thermostats, time switches*	MI	MI	MI	EI	MI
Temperature control panels	MI	MI	MI	EI	MI
Motor and solenoid valves, damper motors, PE and EP switches	MI	MI	MI	--	MI
Refrigeration equipment, cooling tower and controls	MI	MI	MI	EI	MI
Electric meters	EI	EI	EI	EI	MI
Steam meters	MI	MI	MI	MI	MI
Chilled water meters,	MI	MI	MI	MI	MI
Water meters	MI***	MI	MI	MI	MI
Natural Gas	MI	MI	MI	MI	MI
<p>I = Installer of equipment requiring electrical service EI = Electrical Installer MI = Mechanical Installer</p> <p>* Motor driven units which are controlled from line voltage automatic controls such as line voltage thermostats, float switches or time switches which conduct full load current of the motor shall be wired for both power and control circuit under the electrical contract. However, if the control device does not conduct full load current, then the responsibility shall be that set forth in the above schedule. (Example: a 208 volt, 3-phase, 3- wire motor requires 120 volt control. Electrical Installer shall furnish a 120 volt circuit for control and 208 volt circuit for power and wire the power circuit. Mechanical Installer shall wire the control circuit.)</p> <p>** Disconnects for AH units are factory mounted.</p> <p>***Building Service meter provided by Civil. Any sub meter provided by MI. Coordinate meter requirements with utility for remote monitoring by 23 09 00 – Instrumentation and Controls.</p>					

H. Special Coordination Requirements for Exterior Envelope Work:

1. General: Provide necessary work and services required to coordinate the complete and continuous installation of the building's heat, air and moisture barriers. Exterior building envelope construction to be coordinated includes, but is not limited to, below-grade walls, slabs-on-grade, exterior opaque walls, windows, curtain walls, roofs, and skylights.
2. Contract Drawings:
  - a. Drawings indicate general concepts and design intent for continuity of heat, air and moisture barriers at each exterior building envelope component and at transitions between building envelope components. Coordinate details for continuity based on actual product selections and Contractor's proposed sequence of construction.

I. Complete Systems:

1. It is the intent of the Contract Documents that all systems, including mechanical and electrical, be complete and functional to provide the intended or specified performance. Provide all incidental items and parts necessary to achieve this requirement.
  2. Provide correctly sized power, utilities, piping, drains, services and their connections to equipment and systems requiring them, whether or not specific items are listed in the schedule under "Compatibility of Systems" paragraph in this Section.
- J. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials. Coordinate use of temporary utilities to minimize waste.
1. Salvage materials and equipment involved in performance of, but not actually incorporated into, the Work. See other Sections for disposition of salvaged materials that are designated as University's property.
  2. Establish recycling program at job site. Refer to Section 01 74 19 "Construction Waste Management and Disposal" for additional requirements.

## 1.6 COORDINATION DRAWINGS

- A. Coordination Drawings, General: Prepare coordination drawings according to requirements in individual Sections, and additionally where installation is not completely shown on Shop Drawings, where limited space availability necessitates coordination, or if coordination is required to facilitate integration of products and materials fabricated or installed by more than one entity.
1. Content: Project-specific information, drawn accurately to a scale large enough to indicate and resolve conflicts. Do not base coordination drawings on standard printed data. Include the following information, as applicable:
    - a. Use applicable Drawings as a basis for preparation of coordination drawings. Prepare sections, elevations, and details as needed to describe relationship of various systems and components.
    - b. Coordinate the addition of trade-specific information to the coordination drawings by multiple subcontractors in a sequence that best provides for coordination of the information and resolution of conflicts between installed components before submitting for review.
    - c. Indicate functional and spatial relationships of components of architectural, structural, civil, mechanical, and electrical systems.
    - d. Indicate space requirements for routine maintenance and for anticipated replacement of components during the life of the installation.
    - e. Show location and size of access doors required for access to concealed dampers, valves, and other controls.
    - f. Indicate required installation sequences.
    - g. Indicate dimensions shown on the Drawings. Specifically note dimensions that appear to be in conflict with submitted equipment and minimum clearance requirements. Provide alternate sketches to Architect/Engineer indicating proposed resolution of such conflicts. Minor dimension changes and difficult installations will not be considered changes to the Contract.
- B. Coordination Drawing Organization: Organize coordination drawings as follows:
1. Floor Plans and Reflected Ceiling Plans: Show architectural and structural elements, and mechanical, plumbing, fire-protection, fire-alarm, and electrical Work. Show locations of

- visible ceiling-mounted devices relative to acoustical ceiling grid. Supplement plan drawings with section drawings, where required, to adequately represent the Work.
2. Plenum Space: Indicate subframing for support of ceiling and wall systems, mechanical and electrical equipment, and related Work. Locate components within ceiling plenum to accommodate layout of light fixtures indicated on Drawings. Indicate areas of conflict between light fixtures and other components.
  3. Mechanical Rooms: Provide coordination drawings for mechanical rooms showing plans and elevations of mechanical, plumbing, fire-protection, fire-alarm, and electrical equipment.
  4. Structural Penetrations: Indicate penetrations and openings required for all disciplines.
  5. Slab Edge and Embedded Items: Indicate slab edge locations and sizes and locations of embedded items for metal fabrications, sleeves, anchor bolts, bearing plates, angles, door floor closers, slab depressions for floor finishes, curbs and housekeeping pads, and similar items.
  6. Mechanical and Plumbing Work: Show the following:
    - a. Sizes and bottom elevations of ductwork, piping, and conduit runs, including insulation, bracing, flanges, and support systems.
    - b. Dimensions of major components, such as dampers, valves, diffusers, access doors, cleanouts and electrical distribution equipment.
    - c. Fire-rated enclosures around ductwork.
  7. Electrical Work: Show the following:
    - a. Runs of vertical and horizontal conduit 1-1/4 inches in diameter and larger.
    - b. Light fixture, exit light, emergency battery pack, smoke detector, and other fire-alarm locations.
    - c. Panel board, switch board, switchgear, transformer, busway, generator, and motor control center locations.
    - d. Location of pull boxes and junction boxes, dimensioned from column center lines.
  8. Fire-Protection System: Show the following:
    - a. Locations of standpipes, mains piping, branch lines, pipe drops, and sprinkler heads.
  9. Windows, Curtain Wall, and Exterior Wall Assembly Transition Work: Show all components of each adjacent wall or window system and all required compatible tie-ins between them including transition strips, flashings and sealants. Clearly identify each product, its configuration and its extent. Shop Drawings which only generically indicate adjacent construction and/or indicate "construction by others" will not be acceptable.
  10. Review: Architect/Engineer will review coordination drawings to confirm that the Work is being coordinated, but not for the details of the coordination, which are Contractor's responsibility. If Architect/Engineer determines that coordination drawings are not being prepared in sufficient scope or detail, or are otherwise deficient, Architect/Engineer will so inform Contractor, who shall make changes as directed and resubmit.
  11. Coordination Drawing Prints: Prepare coordination drawing prints according to requirements in Section 01 33 00 "Submittal Procedures."

#### 1.7 REQUESTS FOR INFORMATION (RFIs)

- A. General: Immediately on discovery of the need for additional information or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI in the form specified.

1. Architect/Engineer will return RFIs submitted to Architect/Engineer by other entities controlled by Contractor with no response.
  2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.
- B. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following:
1. Project name.
  2. Project number.
  3. Date.
  4. Name of Contractor.
  5. Name of Architect/Engineer.
  6. RFI number, numbered sequentially.
  7. RFI subject.
  8. Specification Section number and title and related paragraphs, as appropriate.
  9. Drawing number and detail references, as appropriate.
  10. Field dimensions and conditions, as appropriate.
  11. Contractor's suggested resolution. If Contractor's suggested resolution impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
  12. Contractor's signature.
  13. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.
    - a. Include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments on attached sketches.
  14. Space for response and signature by Architect/Engineer.
- C. RFI Forms: Hard copy form or software-generated form with substantially the same content as indicated above, acceptable to Architect/Engineer.
1. Attachments shall be electronic files in Adobe Acrobat PDF format.
- D. Architect/Engineer's Action: Architect/Engineer will review each RFI, determine action required, and respond. Allow seven calendar days for Architect/Engineer's response for each RFI. RFIs received by Architect/Engineer after 1:00 p.m. will be considered as received the following working day.
1. The following Contractor-generated RFIs will be returned without action:
    - a. Requests for approval of submittals.
    - b. Requests for approval of substitutions.
    - c. Requests for approval of Contractor's means and methods.
    - d. Requests for coordination information already indicated in the Contract Documents.
    - e. Requests for adjustments in the Contract Time or the Contract Sum.
    - f. Requests for interpretation of Architect/Engineer's actions on submittals.
    - g. Incomplete RFIs or inaccurately prepared RFIs.
  2. Architect/Engineer's action may include a request for additional information, in which case Architect/Engineer's time for response will date from time of receipt of additional information.

3. Architect/Engineer's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Contractor-Initiated Change Order Bulletin and Proposal according to Section 01 26 00 "Contract Modification Procedures."
  - a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Architect/Engineer in writing within seven calendar days of receipt of the RFI response.
- E. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by RFI number. Submit log weekly. Include the following:
  1. Project name.
  2. Name and address of Contractor.
  3. Name and address of Architect/Engineer.
  4. RFI number including RFIs that were returned without action or withdrawn.
  5. RFI description.
  6. Date the RFI was submitted.
  7. Date Architect/Engineer's response was received.
- F. On receipt of Architect/Engineer's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect/Engineer within seven calendar days if Contractor disagrees with response.

## 1.8 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. Notify University and Architect/Engineer of scheduled meeting dates and times a minimum of 4 business days prior to meeting.
    - a. Participants, including representatives of subcontractors and suppliers, shall be qualified, familiar with Project and authorized to conclude matters relating to the Work.
  2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
  3. Minutes: Entity responsible for conducting meeting will record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including University and Architect/Engineer, within three business days of the meeting.
- B. Preconstruction Conference: Schedule and conduct a preconstruction conference before starting construction, at a time and site convenient to all parties, but not later than 14 calendar days after Notice to Proceed.
  1. Conduct the conference to review responsibilities and personnel assignments.
  2. Attendees: Participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work and include the following:
    - a. Authorized representatives of University:
      - 1) University Project Manager.
      - 2) University Building Maintenance Operations (BMO) Representative.

- b. Architect/Engineer and their consultants.
  - c. Contractor's project manager and superintendent.
  - d. Major subcontractors and suppliers.
  - e. Other concerned parties shall attend the conference.
- 3. Agenda: Discuss items of significance that could affect progress, including the following:
  - a. Designation of key personnel and their duties.
  - b. Lines of communications.
  - c. List of major subcontractors and suppliers.
  - d. Tentative construction schedule.
    - 1) Phasing.
    - 2) Critical work sequencing and long-lead items.
    - 3) Equipment deliveries and priorities.
  - e. Procedures and processing of:
    - 1) Change Order Bulletin, Change Order Proposal and Change Orders.
    - 2) RFI's
    - 3) Testing and inspecting.
    - 4) Applications for Payment.
    - 5) Submittals.
    - 6) Preparation of record documents.
  - f. Use of the premises, existing building and adjacent buildings as applicable.
    - 1) Work restrictions.
    - 2) Working hours.
    - 3) University's occupancy requirements.
    - 4) Procedures for disruptions and shutdowns.
    - 5) Construction parking and staging.
    - 6) Construction route and site access.
    - 7) Office, work, and storage areas.
    - 8) Progress cleaning and housekeeping procedures.
  - g. Project coordination.
  - h. Distribution of the Contract Documents.
  - i. Temporary facilities and controls.
  - j. Indoor Air Quality Plan and Monitoring including procedures for moisture and mold control.
  - k. Construction waste management and recycling.
  - l. Safety.
    - 1) Fire and Life Safety.
    - 2) Health and Safety.
  - m. First aid.
  - n. Security.
  - o. Building Department.
  - p. Telecommunications.
  - q. Building Services.
  - r. Building Operations.
  - s. University Work Related Policies.
  - t. Contractor Contacts.

- u. University Contacts.
  - v. University Process Forms.
    - 1) Key Request Form.
    - 2) Access Control Badge Application Form.
    - 3) Utility Interruption Request Form.
    - 4) Utility Start-Up Form.
    - 5) Fire Alarm/ Sprinkler Disable Request Form.
    - 6) Hot Work Permit Form.
    - 7) Anschutz Medical Campus (AMC) Street and Parking Lot Closure Form.
    - 8) Indoor Air Quality (IAQ) Plan.
    - 9) IAQ Planning Checklist.
    - 10) IAQ Inspection Checklist.
    - 11) Request for Variance.
  - 4. Minutes: Entity responsible for conducting meeting will record and distribute meeting minutes.
- C. Preinstallation Conferences: Conduct a preinstallation conference at Project site for installations, systems or assemblies where required by individual Specification Sections, or where deemed necessary by Contractor.
- 1. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise Architect/Engineer of scheduled meeting dates.
  - 2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following, as appropriate:
    - a. Contract Documents.
    - b. Options.
    - c. Related RFIs.
    - d. Related Change Orders.
    - e. Purchases.
    - f. Deliveries.
    - g. Submittals.
    - h. LEED requirements, for projects pursuing LEED certification.
    - i. Review of mockups.
    - j. Possible conflicts.
    - k. Compatibility requirements.
    - l. Time schedules.
    - m. Weather limitations.
    - n. Manufacturer's written instructions.
    - o. Warranty requirements.
    - p. Compatibility of materials.
    - q. Acceptability of substrates.
    - r. Temporary facilities and controls.
    - s. Space and access limitations.
    - t. Regulations of authorities having jurisdiction.
    - u. Testing and inspecting requirements.
    - v. Installation procedures.
    - w. Coordination with other work.
    - x. Required performance results.
    - y. Protection of adjacent work.
    - z. Protection of construction and personnel.



3. Record significant conference discussions, approved schedules, agreements, and disagreements, including required corrective measures and actions.
  4. Reporting: Distribute minutes of the meeting to each party present and to other parties requiring information, including University Project Manager and Architect/Engineer.
  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.
- D. Project Closeout Conference: Schedule and conduct a project closeout conference, at a time convenient to University and Architect/Engineer, but no later than **30** calendar days prior to the scheduled date of Substantial Completion or Partial Substantial Completion.
1. Conduct the conference to review requirements and responsibilities related to Project closeout.
  2. Attendees: Participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work and include the following:
    - a. University Project Manager.
    - b. University Building Maintenance Operations (BMO) Representative.
    - c. Architect/Engineer and their consultants.
    - d. Contractor's project manager and superintendent.
    - e. Major subcontractors and suppliers.
    - f. Other concerned parties.
  3. Agenda: Discuss items of significance that could affect or delay Project closeout, including the following:
    - a. Procedures related to:
      - 1) Notice of Completion, including preparation of Contractor's punch list.
      - 2) Final Inspection.
      - 3) Notice of Substantial Completion.
      - 4) Notice of Approval of Occupancy/Use.
      - 5) Supplemental Occupancy/Use Checklist.
      - 6) Supplemental Acceptance Checklist.
      - 7) Pre-acceptance Checklists.
      - 8) Notice of Acceptance.
      - 9) Settlement and Final Payment.
    - b. Preparation of record documents.
    - c. Procedures required prior to inspection for Substantial Completion and for final inspection for acceptance.
    - d. Submittal of written warranties.
    - e. Requirements for completing LEED documentation, for projects pursuing LEED certification.
    - f. Requirements for preparing operations and maintenance data.
    - g. Requirements for delivery of material samples, attic stock, and spare parts.
    - h. Requirements for demonstration and training.
    - i. University's partial occupancy requirements.
    - j. Installation of University's furniture, fixtures, and equipment.
    - k. Responsibility for removing temporary facilities and controls.
  4. Minutes: Entity conducting meeting will record and distribute meeting minutes.
- E. Progress Meetings: Conduct progress meetings at weekly intervals.

1. Coordinate dates of meetings with preparation of payment requests.
2. Attendees: Participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work and include the following:
  - a. University Project Manager.
  - b. University Health Safety Department Representative.
  - c. University Building Maintenance Operations Representative.
  - d. University Campus Building Official.
  - e. Architect/Engineer and their consultants.
  - f. Contractor's project manager and superintendent.
  - g. Major subcontractors and suppliers.
  - h. Other entities concerned with current progress or involved in planning, coordination, or performance of future activities.
  - i. As needed, University Building Maintenance Operations (BMO), Subject Matter Experts (SME), and University Facility Support Services (FSS) Representatives.
3. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
  - a. Contractor's Construction Schedule:
    - 1) Review progress since the last meeting.
    - 2) Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's construction schedule.
    - 3) Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
    - 4) Review schedule for next two week period.
    - 5) Review schedule of deliveries.
    - 6) Review off-site fabrication.
  - b. Site Safety.
  - c. Indoor Air Quality Management monitoring.
  - d. Quality:
    - 1) Quality and work standards.
    - 2) Status of correction of deficient items.
    - 3) Progress cleaning.
    - 4) Field observations.
  - e. Status of submittals.
  - f. Status of RFIs.
  - g. Status of Changes including:
    - 1) Change Order Bulletins.
    - 2) Change Order Proposals.
    - 3) Change Orders.
    - 4) Pending claims and disputes.
  - h. Status of LEED documentation, for projects pursuing LEED certification.
  - i. Review present and future needs of each entity present including:
    - 1) Access.

- 2) Site utilization.
  - 3) Temporary facilities and controls.
  - 4) Coordination.
4. Minutes: Entity responsible for conducting the meeting will record and distribute the meeting minutes to each party present and to parties requiring information.
- F. Pay Application and Schedule Review Meeting: Conduct review meeting monthly on or about the 25<sup>th</sup> of each month.
  1. Attendees:
    - a. University Project Manager.
    - b. Architect/Engineer.
    - c. Contractor's Project Manager, Superintendant and Scheduler.
  2. Agenda: Review draft pay application and progress schedule update in accordance with the requirements of Section 01 29 00 "Payment Procedures" and Section 01 32 00 "Construction Progress Documentation."

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

**END OF SECTION 01 31 00**

## **SECTION 01 32 00 - CONSTRUCTION PROGRESS DOCUMENTATION**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

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

#### **1.2 SUMMARY**

- A. Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
  - 1. Startup construction schedule.
  - 2. Contractor's construction schedule.
  - 3. Construction schedule updating reports.
  - 4. Daily construction reports.
  - 5. Monthly project status reports.
  - 6. Material location reports.
  - 7. Site condition reports.
  - 8. Special reports.
- B. Related Requirements:
  - 1. Section 01 33 00 "Submittal Procedures" for submitting schedules and reports.
  - 2. Section 01 40 00 "Quality Requirements" for submitting a schedule of tests and inspections.

#### **1.3 DEFINITIONS**

- A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction project. Activities included in a construction schedule consume time and resources.
  - 1. Critical Activity: An activity on the critical path that must start and finish on the planned early start and finish times.
  - 2. Predecessor Activity: An activity that precedes another activity in the network.
  - 3. Successor Activity: An activity that follows another activity in the network.
- B. CPM: Critical path method, which is a method of planning and scheduling a construction project where activities are arranged based on activity relationships. Network calculations determine when activities can be performed and the critical path of Project.
- C. Critical Path: The longest connected chain of interdependent activities through the network schedule that establishes the minimum overall Project duration and contains no float.
- D. Event: The starting or ending point of an activity.
- E. Float: The measure of leeway in starting and completing an activity.

1. Float time is not for the exclusive use or benefit of either University or Contractor, but is a jointly owned, expiring Project resource available to both parties as needed to meet schedule milestones and Contract completion date.
2. Free float is the amount of time an activity can be delayed without adversely affecting the early start of the successor activity.
3. Total float is the measure of leeway in starting or completing an activity without adversely affecting the planned Project completion date.

#### 1.4 INFORMATIONAL SUBMITTALS

- A. Format for Submittals: Submit required submittals in the following format:
  1. Working electronic copy of schedule file, where indicated.
  2. PDF electronic file and four paper copies.
- B. Startup construction schedule (bar chart).
  1. Approval of cost-loaded, startup construction schedule will not constitute approval of schedule of values for cost-loaded activities.
- C. Contractor's Preliminary Schedule and Startup Network Diagram: Of size required to display entire network for entire construction period. Show logic ties for activities.
- D. Contractor's Detailed Construction Schedule: Initial schedule, of size required to display entire schedule for entire construction period.
  1. Submit a working electronic copy of schedule, using software indicated, and labeled to comply with requirements for submittals. Include type of schedule (initial or updated) and date on label.
- E. Construction Schedule Updating Reports: Submit draft for discussion at monthly project schedule and pay application review meeting. Submit final report with monthly Application for Payment.
- F. Daily Construction Reports: Submit at weekly intervals.
- G. Material Location Reports: Submit at monthly intervals.
- H. Site Condition Reports: Submit at time of discovery of differing conditions.
- I. Special Reports: Submit at time of unusual event.

#### 1.5 COORDINATION

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

## PART 2 - PRODUCTS

### 2.1 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

- A. Time Frame: Extend schedule from date established for commencement of the Work to date of Substantial Completion.
  - 1. Contract completion date shall not be changed by submission of a schedule that shows an early completion date is not permitted. Contract completion date may only be modified by Change Order.
- B. Activities: Treat each story or separate area as a separate numbered activity for each main element of the Work. Comply with the following:
  - 1. Activity Duration: Define activities so no activity is longer than 21 calendar days, unless specifically allowed by Architect/Engineer.
  - 2. Procurement Activities: Include procurement process activities for long lead items and major items, requiring a cycle of more than 60 calendar days, as separate activities in schedule. Procurement cycle activities include, but are not limited to, submittals, approvals, purchasing, fabrication, and delivery.
  - 3. Submittal Review Time: Include review and resubmittal times indicated in Section 01 33 00 "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's construction schedule with submittal schedule.
  - 4. Startup and Testing Time: Include adequate time for startup, testing and commissioning.
  - 5. Substantial Completion: Indicate completion in advance of date established for Substantial Completion, and allow time for Architect/Engineer's administrative procedures necessary for issuing Notice of Substantial Completion.
- C. Constraints: Include the following constraints and work restrictions as indicated in the Contract Documents and as applicable in schedule; show how the sequence of the Work is affected.
  - 1. Phasing: Arrange list of activities on schedule by phase.
  - 2. Work by University: Include a separate activity for each portion of the Work performed by University.
  - 3. Products Ordered in Advance: Include a separate activity for each product. Include delivery date indicated in Section 01 10 00 "Summary." Delivery dates indicated stipulate the earliest possible delivery date.
  - 4. University-Furnished Products: Include a separate activity for each product. Include delivery date indicated in Section 01 10 00 "Summary." Delivery dates indicated stipulate the earliest possible delivery date.
  - 5. Work Restrictions: Show the effect of the following items, as applicable, on the schedule:
    - a. Coordination with existing construction.
    - b. Limitations of continued occupancies.
    - c. Uninterruptible services.
    - d. Partial occupancy before Substantial Completion.
    - e. Use of premises restrictions.
    - f. Environmental control.
  - 6. Work Stages: Indicate important stages of construction for each major portion of the Work, including, but not limited to, the following:
    - a. Submittals.

- b. Mockups.
  - c. Fabrication.
  - d. Sample testing.
  - e. Deliveries.
  - f. Installation.
  - g. Tests and inspections.
  - h. Building flush-out.
  - i. Startup and placement into final use and operation.
- 7. Construction Areas: As applicable, identify each major area of construction for each major portion of the Work. Indicate where each construction activity within a major area must be sequenced or integrated with other construction activities to provide for the following:
  - a. Structural completion.
  - b. Temporary enclosure and space conditioning.
  - c. Permanent space enclosure.
  - d. Completion of mechanical installation.
  - e. Completion of electrical installation.
  - f. Substantial Completion.
- D. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, Commencement of Work, Substantial Completion, Notice of Occupancy and Use, and Final Acceptance. As applicable, also include milestones for Partial Substantial Completion and Partial Notice of Occupancy and Use.
- E. Recovery Schedule: When periodic update indicates the Work is 14 or more calendar days behind the current approved schedule, submit a separate recovery schedule indicating means by which Contractor intends to regain compliance with the schedule. Indicate changes to working hours, working days, crew sizes, and equipment required to achieve compliance, and date by which recovery will be accomplished.
- F. Computer Scheduling Software: Prepare schedules using current version of a program that has been developed specifically to manage construction schedules and as approved by University and Architect/Engineer.

## 2.2 REPORTS

- A. Daily Construction Reports: Prepare a daily construction report recording the following information concerning events at Project site:
  - 1. List of subcontractors at Project site.
  - 2. List of separate contractors at Project site.
  - 3. Approximate count of personnel at Project site.
  - 4. Equipment at Project site.
  - 5. Material deliveries.
  - 6. High and low temperatures and general weather conditions, including presence of rain or snow.
  - 7. Accidents.
  - 8. Meetings and significant decisions.
  - 9. Unusual events (see special reports).
  - 10. Stoppages, delays, shortages, and losses.
  - 11. Meter readings and similar recordings.
  - 12. Emergency procedures.

13. Orders and requests of authorities having jurisdiction.
  14. Change Orders received and implemented.
  15. Services connected and disconnected.
  16. Equipment or system tests and startups.
  17. Partial completions and occupancies.
  18. Substantial Completions authorized.
  
  19. Narrative of progress achieved in previous month, activities anticipated for the next month, and issues affecting the rate of progress.
  20. Progress photographs in accordance with Section 01 32 33 "Photographic Documentation."
- B. Material Location Reports: At monthly intervals, prepare and submit a comprehensive list of materials delivered to and stored at Project site. List shall be cumulative, showing materials previously reported plus items recently delivered. Include with list a statement of progress on and delivery dates for materials or items of equipment fabricated or stored away from Project site. Indicate the following categories for stored materials:
1. Material stored prior to previous report and remaining in storage.
  2. Material stored prior to previous report and since removed from storage and installed.
  3. Material stored following previous report and remaining in storage.
- C. Site Condition Reports: Immediately on discovery of a difference between site conditions and the Contract Documents, prepare and submit a detailed report. Submit with a Request for Information. Include a detailed description of the differing conditions, together with recommendations for changing the Contract Documents.

## 2.3 SPECIAL REPORTS

- A. General: Submit special reports directly to University within one calendar day(s) of an occurrence. Distribute copies of report to parties affected by the occurrence.
- B. Reporting Unusual Events: When an event of an unusual and significant nature occurs at Project site, whether or not related directly to the Work, prepare and submit a special report. List chain of events, persons participating, response by Contractor's personnel, evaluation of results or effects, and similar pertinent information. Advise University in advance when these events are known or predictable.

## PART 3 - EXECUTION

### 3.1 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. Contractor's Construction Schedule Updating: At monthly intervals, update schedule to reflect actual construction progress and activities. Issue schedule draft update schedule for discussion and review at monthly project progress schedule and pay application review meeting.
1. Revise schedule immediately after each meeting and issue updated schedule concurrently with submittal of monthly Application for Payment.
  2. Include summary reports with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
  3. As the Work progresses, indicate final completion percentage for each activity.



4. Schedule updates may change logic but may not change milestone or critical path without prior approval of University and Architect/Engineer.
- B. Distribution: Distribute copies of approved schedule to Architect/Engineer University, 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**

## **SECTION 01 33 00 - SUBMITTAL PROCEDURES**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

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

#### **1.2 SUMMARY**

- A. Section includes requirements for the submittal schedule and administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.
- B. Related Requirements:
  - 1. Section 01 29 00 "Payment Procedures" for submitting Applications for Payment and the schedule of values.
  - 2. Section 01 32 00 "Construction Progress Documentation" for submitting schedules and reports, including Contractor's construction schedule.
  - 3. Section 01 78 23 "Operation and Maintenance Data" for submitting operation and maintenance manuals.
  - 4. Section 01 78 39 "Project Record Documents" for submitting record Drawings, record Specifications, and record Product Data.
  - 5. Division 02 through 33 for additional submittal requirements specific to indicated Specification Sections.

#### **1.3 DEFINITIONS**

- A. Action Submittals: Written and graphic information and physical samples that require Architect/Engineer's responsive action. Action submittals are those submittals indicated in individual Specification Sections as "action submittals." Submittals not specifically indicated as informational submittals are considered to be action submittals.
- B. Informational Submittals: Written and graphic information and physical samples that do not require Architect/Engineer's responsive action. Submittals may be rejected for not complying with requirements. Informational submittals are those submittals indicated in individual Specification Sections as "informational submittals" and include, but are not limited to:
  - 1. Schedules.
  - 2. Permits.
  - 3. Applications for payment.
  - 4. Performance and payment bonds.
  - 5. Insurance certificates.
  - 6. List of Subcontractors.
  - 7. Schedule of Values.
  - 8. Inspection and test results.
  - 9. Closeout documents.
  - 10. Coordination drawings.
  - 11. Street and Storm Water Quality Management Plan.

12. Indoor Air Quality Management Plan.

- C. Portable Document Format (PDF): An open standard file format licensed by Adobe Systems used for representing documents in a device-independent and display resolution-independent fixed-layout document format.

1.4 ACTION SUBMITTALS

- A. Submittal Schedule: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or revisions to submittals noted by Architect/Engineer and additional time for handling and reviewing submittals required by those corrections.
1. Coordinate submittal schedule with list of subcontracts, the schedule of values, and Contractor's construction schedule.
  2. Initial Submittal: Submit concurrently with startup construction schedule and within 30 calendar days of Notice to Proceed or Commencement of Work, but not later than submittal of first application for payment. Include submittals required during the first 90 calendar days of construction. List those submittals 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.
    - a. Submit revised submittal schedule to reflect changes in current status and timing for submittals.
  4. Format: Arrange the following information in a tabular format:
    - a. Scheduled date for first submittal.
    - b. Specification Section number and title.
    - c. Submittal category: Action; informational.
    - d. Name of subcontractor.
    - e. Description of the Work covered.
    - f. Scheduled date for resubmittal.
    - g. Scheduled date for Architect/Engineer's final release or approval.
    - h. Scheduled date of fabrication.

1.5 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

- A. Architect/Engineer's Digital Data Files: Electronic digital data files of the Contract Drawings will be provided by Architect/Engineer for Contractor's use in preparing submittals.
1. Architect/Engineer will furnish Contractor one set of digital data drawing files of the Contract Drawings for use in preparing Shop Drawings **[and Project record drawings]**.
    - a. Architect/Engineer makes no representations as to the accuracy or completeness of digital data drawing files as they relate to the Contract Drawings.
    - b. Digital Drawing Software Program: The Contract Drawings are available in **AutoCad format**
    - c. Contractor shall execute a data licensing agreement in the form of Agreement form acceptable to University and Architect/Engineer.

- B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities. Transmit for review with sufficient time to avoid construction delays.
1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
  2. Submit all submittal items required for each Specification Section concurrently unless partial submittals for portions of the Work are indicated on approved submittal schedule.
  3. Submit action submittals and informational submittals required by the same Specification Section as separate packages under separate transmittals.
  4. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
    - a. Architect/Engineer reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- C. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect/Engineer'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/Engineer 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.
  3. Resubmittal Review: Allow 14 calendar days for review of each resubmittal.
  4. Large and/or Complex Submittals: For large and/or complex submittals, as determined by the Architect/Engineer and for submittals that require sequential reviews by Architect/Engineer's consultants, a review period greater than 14 calendar days may be required. Architect/Engineer and Contractor shall identify such submittals upon submission of the submittal schedule and determine a mutually agreed upon review period.
- D. Electronic Submittals: Identify and incorporate information in each electronic submittal file as follows:
1. Assemble complete submittal package into a single indexed file incorporating submittal requirements of a single Specification Section and transmittal form with links enabling navigation to each item.
  2. Name file with submittal number or other unique identifier, including revision identifier.
    - a. File name shall use project identifier and Specification Section number followed by a dash and then a sequential number (e.g., LNHS-061000-01). Resubmittals shall include an alphabetic suffix after another dash (e.g., LNHS-061000-01-A).
  3. Provide means for insertion to permanently record Contractor's review and approval markings and action taken by Architect/Engineer.
    - a. Project name.
    - b. Date.
    - c. Name and address of Architect/Engineer.
    - d. Name and address of Contractor.
    - e. Name of firm or entity that prepared submittal.

- f. Names of subcontractor, manufacturer, and supplier.
  - g. Category and type of submittal.
  - h. Submittal purpose and description.
  - i. Specification Section number and title.
  - j. Specification paragraph number or drawing designation and generic name for each of multiple items.
  - k. Drawing number and detail references, as appropriate.
  - l. Location(s) where product is to be installed, as appropriate.
  - m. Related physical samples submitted directly.
  - n. Indication of full or partial submittal.
  - o. Transmittal number.
  - p. Submittal and transmittal distribution record.
  - q. Other necessary identification.
  - r. Contractor's certification that information complies with Contract Document requirements.
  - s. Remarks.
- E. Options: Identify options requiring selection by Architect/Engineer.
- F. Deviations and Additional Information: On an attached separate sheet, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by Architect/Engineer on previous submittals, and deviations from requirements in the Contract Documents, including minor variations and limitations. Include same identification information as related submittal.
- G. Contractor Certification: On transmittal include Contractor's certification that information complies with Contract Document requirements.
- H. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.
- 1. Note date and content of previous submittal.
  - 2. Note date and content of revision in label or title block and clearly indicate extent of revision.
  - 3. Resubmit submittals until they are marked with approval notation from Architect/Engineer's action stamp.
- I. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
- J. Use for Construction: Retain complete copies of submittals on Project site. Use only final action submittals that are marked with approval notation from Architect/Engineer's action stamp.
- K. Record Documents: Retain complete additional copies of submittals on Project site to be submitted as record documents in accordance with requirements of Section 01 78 39 "Project Record Documents."
- L. Legibility: Provide clear and legible submittals. Submittals that are blurry or are for any reason unreadable will be returned without action.

## PART 2 - PRODUCTS

### 2.1 SUBMITTAL PROCEDURES

- A. General Submittal Procedure Requirements: Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.
1. Action Submittals: Submit three paper copies of each submittal to Architect/Engineer and one to University unless otherwise indicated. Architect/Engineer will return one copy.
  2. Informational Submittals: Submit two paper copies of each submittal to Architect/Engineer and one to University unless otherwise indicated. Architect/Engineer will not return copies.
  3. Certificates and Certifications Submittals: Provide a statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
- B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
1. If information must be specially prepared for submittal because standard published data are not suitable for use, submit as Shop Drawings, not as Product Data.
  2. Mark each copy of each submittal to show which products and options are applicable.
  3. Include the following information, as applicable:
    - a. Manufacturer's catalog cuts.
    - b. Manufacturer's product specifications.
    - c. Manufacturer's installation instructions.
    - d. Manufacturer's printed recommendations.
    - e. Standard color charts.
    - f. Statement of compliance with specified referenced standards.
    - g. Statement of compliance with specified trade association standards.
    - h. Testing by recognized testing agency.
    - i. Application of testing agency labels and seals.
    - j. Notation of coordination requirements.
    - k. Notation of dimensions verified by field measurement.
  4. For equipment, include the following in addition to the above, as applicable:
    - a. Wiring diagrams showing factory-installed wiring.
    - b. Printed performance curves.
    - c. Operational range diagrams.
    - d. Rough-in diagrams and templates indicating clearances required to other construction, if not indicated on accompanying Shop Drawings.
  5. Submit Product Data before or concurrent with Samples.
  6. Confirm compliance of Product Data with requirements of Contract Documents. Submit cover letter indicating Contractor's certification of compliance.
  7. Submit additional copies of Product Data as required complying with requirements of Section 01 78 39 "Project Record Documents."
- C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Highlight, encircle or otherwise indicate deviations from Contract Documents. Do not base Shop

Drawings on reproductions of the Contract Documents or standard printed data, unless submittal based on Architect/Engineer's digital data drawing files is otherwise permitted. Standard information prepared without specific reference to the Project is not considered a shop drawing.

1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
    - a. Identification of products.
    - b. Schedules.
    - c. Compliance with specified standards.
    - d. Notation of coordination requirements.
    - e. Notation of dimensions established by field measurement.
    - f. Relationship and attachment to adjoining construction clearly indicated.
    - g. Seal and signature of professional engineer if specified.
  2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches, but no larger than size of Construction Drawings.
- 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. Mount, display or package Samples in the manner specified to facilitate review of qualities indicated. Prepare Samples to match the Architect/Engineer's Sample.
  3. Identification: Attach label on unexposed side of Samples that includes the following:
    - a. Generic description of Sample.
    - b. Product name and name of manufacturer.
    - c. Sample source.
    - d. Number and title of applicable Specification Section.
    - e. Specification paragraph number and generic name of each item.
    - f. Compliance with recognized standards.
    - g. Availability and delivery time.
  4. For projects where electronic submittals are required, provide corresponding electronic submittal of Sample transmittal, digital image file illustrating Sample characteristics, and identification information for record.
  5. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.
    - a. Number of Samples: Submit one full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect/Engineer will return submittal with options selected.
  6. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing

color, texture, and pattern; color range sets; and components used for independent testing and inspection.

- a. Number of Samples: Submit three sets of Samples. Architect/Engineer will retain two Sample sets; remainder will be returned. Mark up and retain one returned Sample set as a project record sample.
  - 1) Submit a single Sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.
  - 2) If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least three sets of paired units that show approximate limits of variations.
7. 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 University's property, are the property of Contractor.
8. Distribution of Samples: Prepare and distribute additional sets to Subcontractors, manufacturers, fabricators, suppliers, Installers, and others as required for performance of the Work. Show distribution on transmittal forms.
9. Field Samples and Mock-Ups: Field Samples and mock-ups specified in individual Sections are full-size examples erected on site to illustrate finishes, coatings, or finish materials and to establish the standard by which the Work will be judged.
- E. Selection of Related Materials: Where selections of colors, patterns, textures are specified to be made by Architect/Engineer, assemble complete samples of all specified or approved products for all Specification Sections and submit to Architect/Engineer. Review specifications and assemble all such samples for a combined single submittal. Indicate on the transmittal the latest date for selections to be made for each item to permit delivery of material in accordance with Progress Schedule. Architect/Engineer's action is limited solely to the specified selections or rejection of submittal items not in accordance with Specifications.
- F. Coordination Drawing Submittals: Comply with requirements specified in Section 01 31 00 "Project Management and Coordination."
- G. Contractor's Construction Schedule: Comply with requirements specified in Section 01 32 00 "Construction Progress Documentation."
- H. Application for Payment and Schedule of Values: Comply with requirements specified in Section 01 29 00 "Payment Procedures."
- I. Test and Inspection Reports and Schedule of Tests and Inspections Submittals: Comply with requirements specified in Section 01 40 00 "Quality Requirements."
- J. Closeout Submittals and Maintenance Material Submittals: Comply with requirements specified in Section 01 77 00 "Closeout Procedures."



- K. Maintenance Data: Comply with requirements specified in Section 01 78 23 "Operation and Maintenance Data."
- L. LEED Submittals: For project required to obtain LEED certification, comply with requirements specified in Division 01 Section "Sustainable Design Requirements".
- M. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of architects and owners, and other information specified.
- N. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification and Procedure Qualification Record on AWS forms. Include names of firms and personnel certified.
- O. Installer Certificates: Submit written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
- P. Manufacturer Certificates: Submit written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
- Q. Product Certificates: Submit written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
- R. Material Certificates: Submit written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
- S. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
- T. Product Test Reports: Submit written reports indicating that current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
- U. Research Reports: Submit written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project. Include the following information:
  - 1. Name of evaluation organization.
  - 2. Date of evaluation.
  - 3. Time period when report is in effect.
  - 4. Product and manufacturers' names.
  - 5. Description of product.
  - 6. Test procedures and results.
  - 7. Limitations of use.
- V. Preconstruction Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.

- W. Compatibility Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.
- X. Field Test Reports: Submit written reports indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.
- Y. Design Data: Prepare and submit written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.

### PART 3 - EXECUTION

#### 3.1 CONTRACTOR'S REVIEW

- A. Action and Informational Submittals: Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect/Engineer. Submittals received without Contractor's substantive review and approval stamp will be rejected and returned to the Contractor.
- B. Project Closeout and Maintenance Material Submittals: See requirements in Section 01 77 00 "Closeout Procedures."
- C. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

#### 3.2 ARCHITECT/ENGINEER'S ACTION

- A. Action Submittals: Architect/Engineer will review each submittal, make marks to indicate corrections or revisions required, and return it. Architect/Engineer will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action.
- B. Informational Submittals: Architect/Engineer will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect/Engineer will forward each submittal to appropriate party.
- C. Partial submittals prepared for a portion of the Work will be reviewed when use of partial submittals has received prior approval from Architect/Engineer.
- D. Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for resubmittal without review.
- E. Submittals not required by the Contract Documents may be returned by the Architect/Engineer without action.

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**END OF SECTION 01 33 00**

## **SECTION 01 35 46 - INDOOR AIR QUALITY PROCEDURES**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

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

#### **1.2 SUMMARY**

- A. Section includes administrative and procedural requirements for managing emissions and moisture control during construction.

#### **1.3 DEFINITIONS**

- A. Sustainable Design Related Terminology: As defined is ASTM E 2114.
- B. Adequate Ventilation: Ventilation, including air circulation and air changes, required to cure materials, dissipate humidity, and prevent accumulation of particulates, dust, fumes, vapors, or gases.
- C. Hazardous Materials: Any material that is regulated as a hazardous material in accordance with 49 CFR 173, requires a Material Safety Data Sheet (MSDS) in accordance with 29 CFR 1910.1200, or which during end use, treatment, handling, storage, transportation or disposal meets or has components which meet or have the potential to meet the definition of a Hazardous Waste in accordance with 40 CFR 261. Throughout this specification, hazardous material includes hazardous chemicals.
  - 1. Hazardous materials include: pesticides, biocides, and carcinogens as listed by recognized authorities, such as the Environmental Protection Agency (EPA) and the International Agency for Research on Cancer (IARC).
- D. Indoor Air Quality (IAQ): The composition and characteristics of the air in an enclosed space that affect the occupants of that space. The indoor air quality of a space refers to the relative quality of air in a building with respect to contaminants and hazards and is determined by the level of indoor air pollution and other characteristics of the air, including those that impact thermal comfort such as air temperature, relative humidity and air speed.
- E. Interior Final Finishes: Materials and products that will be exposed at interior, occupied spaces including but not limited to flooring, wallcovering, finish carpentry, and ceilings.
- F. Packaged Dry Products: Materials and products that are installed in dry form and are delivered to the site in manufacturer's packaging including but not limited to carpets, resilient flooring, ceiling tiles, and insulation.
- G. Wet Products: Materials and products installed in wet form, including paints, sealants, adhesives, special coatings, and other materials which require curing.

#### **1.4 QUALITY ASSURANCE**

- A. Inspection and Testing Lab Qualifications: Minimum of 5 years experience in performing the types of testing specified herein.

## 1.5 PRECONSTRUCTION MEETING

- A. After award of Contract and prior to the commencement of the Work, schedule and conduct meeting with University and Architect/Engineer to review and discuss the proposed IAQ Management Plan and develop a mutual understanding of detailed requirements for maintaining indoor air quality and environmental protection.

## 1.6 SUBMITTALS

- A. Indoor Air Quality (IAQ) Management Plan: Not less than 10 business days before the Pre-construction meeting, prepare and submit an IAQ Management Plan including, but not limited to, the following:
  - 1. Procedures for control of emissions during construction.
    - a. Identify schedule for application of interior finishes.
  - 2. Procedures for moisture control during construction.
    - a. Identify porous materials and absorptive materials.
    - b. Identify schedule for inspection of stored and installed absorptive materials.
  - 3. Revise and resubmit Plan as required by University.
    - a. Approval of Contractor's Plan will not relieve the Contractor of responsibility for compliance with applicable environmental regulations.
- B. Product Data:
  - 1. Submit product data for filtration media used during construction and during operation. Include Minimum Efficiency Reporting Value (MERV).
  - 2. Submit air pressure difference maps for each mode of operation of HVAC.
  - 3. Material Safety Data Sheets: Submit MSDSs for inclusion in Operation and Maintenance Manual for the following products. Coordinate with Section 01 78 23 – Operation and Maintenance Data.
    - a. Adhesives.
    - b. Floor and wall patching/leveling materials.
    - c. Caulking and sealants.
    - d. Insulating materials.
    - e. Fireproofing and firestopping.
    - f. Carpet.
    - g. Paint.
    - h. Clear finish for wood surfaces.
    - i. Lubricants.
    - j. Cleaning products.
- C. Inspection and Test Reports:
  - 1. Moisture control inspections.
  - 2. Moisture content testing.
  - 3. Moisture penetration testing.
  - 4. Microbial growth testing.

## PART 2 - PRODUCTS (Not Used)

## PART 3 - EXECUTION

### 3.1 IAQ MANAGEMENT - EMISSIONS CONTROL

- A. Provide point person responsible for the implementation and assurance that the Indoor Air Quality Plan is being implemented.
- B. University Indoor Air Quality Plan: Comply with the requirements of the University IAQ Plan, latest version, appended to this Specification Section.
- C. Flush-Out: After construction ends, prior to occupancy and with all interior finishes installed, perform a building flush-out by supplying a total air volume of 14,000 cu.ft. of outdoor air per sq.ft. of floor area while maintaining an internal temperature of at least 60 degrees F and relative humidity no higher than 60%.

### 3.2 IAQ MANAGEMENT - MOISTURE CONTROL

- A. Housekeeping:
  - 1. Keep materials dry. Protect stored on-site and installed absorptive materials from moisture damage.
  - 2. Verify that installed materials and products are dry prior to sealing and weatherproofing the building envelope.
  - 3. Install interior absorptive materials only after building envelope is sealed and weatherproofed.
- B. Inspections: Document and report results of inspections; state whether or not inspections indicate satisfactory conditions.
  - 1. Examine materials for dampness as they arrive. If acceptable to University, dry damp materials completely prior to installation; otherwise, reject materials that arrive damp.
  - 2. Examine materials for mold as they arrive and reject materials that arrive contaminated with mold.
  - 3. Inspect stored and installed absorptive materials regularly for dampness and mold growth. Inspect weekly.
    - a. Where stored on-site or installed absorptive materials become wet, notify Architect/Engineer and University. Inspect for damage. If acceptable to University, dry completely prior to closing in assemblies; otherwise, remove and replace with new materials.
  - 4. Basement: Monitor basement and crawlspace humidity, and dehumidify when relative humidity is greater than 85 percent for more than 2 weeks or at the first sign of mold growth.
  - 5. Site drainage: Verify that final grades of site work and landscaping drain surface water and ground water away from the building.
  - 6. Weather-proofing: Inspect moisture control materials as they are being installed. Include the following:
    - a. Air and weather-resistive barrier: Verify air and weather-resistive barrier is installed without punctures and/or other damage. Verify air barrier and weather-resistive is sealed completely.
    - b. Flashing: Verify correct shingling of the flashing for roof, walls, windows, doors, and other penetrations.
    - c. Insulation layer: Verify insulation is installed without voids.
    - d. Roofing: In accordance with ASTM D7186 Standard Practice for Quality Assurance Observation of Roof Construction and Repair
  - 7. Plumbing: Verify satisfactory pressure test of pipes and drains is performed before closing in and insulating lines.
  - 8. HVAC: Inspect HVAC system as specified in Section 23 08 00 – Commissioning.
    - a. And, inspect HVAC to verify:
      - 1) Condensate pans are sloped and plumbed correctly.
      - 2) Access panels are installed to allow for inspection and cleaning of coils and ductwork downstream of coils.

- 3) Ductwork and return plenums are air sealed.
- 4) Duct insulation is installed and sealed.
- 5) Chilled water line and refrigerant line insulation are installed and sealed.

C. Schedule:

1. Schedule work such that absorptive materials, including but not limited to porous insulations, paper-faced gypsum board, ceiling tile, and finish flooring, are not installed until they can be protected from rain and construction-related water.
2. Weather-proof as quickly as possible. Schedule installation of moisture-control materials, including but not limited to air and weather-resistive barriers, flashing, exterior sealants and roofing, at the earliest possible time.

D. Testing for Moisture Content: Test moisture content of porous materials and absorptive materials to ensure that they are dry before sealing them into an assembly. Document and report results of testing. Where tests are not satisfactory, dry materials and retest. If satisfactory results cannot be obtained with retest, remove and replace with new materials.

1. Concrete: Moisture test prior to finish flooring application as specified in Division 09.
2. Wood: Moisture test as per ASTM D4444 - Standard Test Methods for Use and Calibration of Hand-Held Moisture Meters; unless otherwise indicated acceptable upper limits for wood products are < 20% at center of piece; < 15% at surface.
3. Gypsum Board, Gypsum Plaster, Insulation, and other absorptive materials: Moisture test with a Pinless Moisture Meter to assess patterns of moisture, if any.

E. Testing for Moisture Penetration:

1. Windows: Test as per ASTM E1105 Test Method for Field Determination of Water Penetration of Installed Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform or Cyclic Static Air Pressure Difference at 100 percent static-air-pressure difference specified in applicable Division 08 Sections; unless otherwise indicated, acceptable upper limits are no leakage for 15 minutes.
  - a. Number of Tests: 1 percent of openings but not less than two.
2. Horizontal Waterproofing (not roofing): Test as per ASTM D5957 Standard Guide for Flood Testing Horizontal Waterproofing Installations; acceptable upper limits are no leakage for 15 minutes.
  - a. Test frequency: 100 percent of horizontal waterproofed surfaces.
3. Masonry: Test as per ASTM C1601 Standard Test Method for Field Determination of Water Penetration of Masonry Wall Surfaces; acceptable upper limits are no leakage for 15 minutes.
4. Exterior Walls:
  - a. Air tightness of the enclosure test: ASTM E779 Standard Test Method for Determining Air Leakage Rate by Fan Pressurization or ASTM E1827
    - 1) Air Leakage: The mean value of the air leakage flow rate calculated from measured data at 0.3 in wg (75 Pa) must not exceed 0.25 cu ft/ minute per square foot of envelope area. Measurements must be referenced at standard conditions of 14.696 psi (101.325 KPa) and 68 deg F.

F. Testing for Support of Microbial Growth: Test and report in accordance with ASTM D6329 Standard Guide for Developing Methodology for Evaluating the Ability of Indoor Materials to Support Microbial Growth Using Static Environmental Chambers. Indicate susceptibility of product or material to colonization and amplification of microorganisms. Identify microorganisms and conditions of testing.

1. Normal conditions: Perform testing at 35 degrees Centigrade and 50 percent relative humidity.
2. Extreme conditions: Perform worst case scenarios screening tests by providing an atmosphere where environmental conditions may be favorable for microbial growth.
3. Perform testing for the following:
  - a. Fireproofing material on appropriate substrate.

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- b. Ceiling tile.
- c. Wall covering.
- d. Other appropriate material.

**END OF SECTION 01 35 46**



### **Indoor Air Quality Plan**

**Project** \_\_\_\_\_

**Completed by:** \_\_\_\_\_

**(Name & Company)**

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

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This plan describes the measures to be taken to provide good indoor air quality (IAQ) during construction and after construction is complete and the occupants have moved into the building. This plan is based on the SMACNA standard "IAQ Guidelines for Occupied Buildings under Construction" and the requirements of the LEED.

It is not the intent of this document to replace or supersede OSHA regulations as to safe construction workplace practices. It remains the responsibility of the Construction Manager and the individual sub-contractors to maintain safe building and site operations. Addition precautions may be necessary when hazardous materials are present.

The plan will address construction IAQ by recommending procedures in five areas of concern, which in turn will allow the building to achieve two LEED program points:

- HVAC system protection
- Containment source control
- Pathway interruption
- Housekeeping
- Scheduling

The following describes the specific measures to be performed in each area of concern:

1. HVAC Protection

- During construction, provide MERV 13 filters for supply air intake when in use. Provide MERV 8 filters at the return air system openings when in use. Perform frequent maintenance when the HVAC system is being utilized and replace filters as they become loaded, prior to building flushout, and prior to occupancy.
- When performing construction activities that produce dust, such as drywall sanding, concrete cutting, masonry work, wood sawing or adding insulation, seal off the supply diffusers and return air system openings completely for the duration of the task.
- Shut down and seal off the supply diffusers and return air ducts during any demolition operations.
- Whenever the HVAC system is not used during construction, seal off the supply diffusers and return air system openings to prevent the accumulation of dust and debris in the duct system.
- Do not use the mechanical rooms to store construction or waste materials. Keep rooms clean and neat.
- Provide periodic duct inspections during construction; if the ducts become contaminated due to inadequate protection, clean the ducts professionally in accordance with NADCA (National Air Duct Cleaning Association) standards.
- The General Contractor shall take photographs showing measures in place.

2. Source Control

- Use low VOC products as indicated by the specifications to reduce potential problems.

- Restrict traffic volume and prohibit idling of motor vehicles where emissions could be drawn into the building.
- Utilize electric or natural gas alternatives for gasoline and diesel equipment where possible and practical. Use low-sulfur diesel in lieu of regular diesel.
- Cycle equipment off when not being used or needed.
- Exhaust pollution sources to the outside with portable fan systems. Prevent exhaust from recirculating back into the building from construction equipment outside the building.
- Keep containers of wet products closed as much as possible. Cover or seal containers of waste materials that can release odor or dust.
- Protect stored on-site or installed absorptive building materials from weather and moisture; wrap with plastic and seal tight to prevent moisture absorption.
- The General Contractor shall take photographs showing measures in place.

3. Pathway Interruption

- Provide dust curtains or temporary enclosures to prevent dust from migrating to other areas when applicable.
- Locate pollutant sources as far away as possible from supply ducts and areas occupied by workers when feasible. Supply and exhaust systems may have to be shut down or isolated during such activity.
- During construction, isolate areas of work to prevent contamination of clean or occupied areas. Pressure differentials may be utilized to prevent contaminated air from entering clean areas.
- Depending on weather, ventilation using 100% outside air will be used to exhaust contaminated air directly to the outside during installation of VOC emitting materials.

4. Housekeeping

- Provide regular cleaning concentrating on HVAC equipment and building spaces to remove contaminants from the building prior to occupancy.
- All coils, air filters, fans and ductwork shall remain clean during installation and, if required, will be cleaned prior to performing the testing, adjusting and balancing of the systems.
- Suppress and minimize dust with wetting agents or sweeping compounds. Utilize efficient and effective dust collecting methods such as a damp cloth, wet mop, or vacuum with particulate filters, or wet scrubber.
- Remove accumulations of water inside the building. Protect porous materials such as insulation and ceiling tile from exposure to moisture.
- Thoroughly clean all interior surfaces prior to replacing filters and running HVAC system for system balancing, commissioning and building flushout.
- Provide photographs of the above activities during construction to document compliance.

5. Scheduling and Construction Activity Sequence

- Schedule high pollution activities that utilize high VOC level products (including paints, sealers, insulation, adhesives, caulking and cleaners) to take place prior to installing highly absorbent materials (such as ceiling tiles, gypsum wall board, fabric furnishing, carpet and insulation, for example). These materials will act as 'sinks' for VOCs, odors and other contaminants, and release them later after occupancy.

## PLANNING AND INSPECTION CHECKLISTS

The planning and inspection checklists included in this document are useful to ensure construction IAQ management is planned and implemented correctly. The planning checklist should be completed by the

contractor prior to construction. The inspection checklists should be completed monthly to confirm the IAQ management plan is being followed. At the time of inspection, photographs should be taken to support the checklist and to provide audit documentation for the USGBC.

**University of Colorado Denver IAQ**

**Planning Checklist**  
(Must be completed weekly)

**Project** \_\_\_\_\_

**Completed by:** \_\_\_\_\_  
**(Name & Company)**

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

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**1. HVAC Protection**

- ☐ MERV 13 filters at supply air intake
- ☐ MERV 8 filters at return air openings
- ☐ Seal supply diffusers and return air during demolition
- ☐ Seal supply diffusers and return air openings during construction
- ☐ Mechanical rooms clean and neat
- ☐ Periodic duct inspections during construction
- ☐ General Contractor to document with photographs

**2. Source Control**

- ☐ Low/no VOC products as indicated by specifications
- ☐ Restrict vehicle traffic volume and prohibit idling
- ☐ Utilize electric or natural gas alternatives for gasoline and diesel
- ☐ Cycle equipment off when not being used or needed
- ☐ Exhaust pollution sources to the outside
- ☐ Keep containers of wet products closed
- ☐ Cover or seal containers of waste materials
- ☐ Protect absorptive building materials from weather and moisture
- ☐ Prevent fume migration from construction vehicles and equipment into adjacent buildings
- ☐ General Contractor to document with photographs

**3. Pathway Interruption**

- ☐ Provide dust curtains or temporary enclosures
- ☐ Locate pollutant sources as far away as possible from supply dusts and areas occupied by workers
- ☐ General Contractor to document with photographs
- ☐ Isolate areas of work to prevent contamination of clean or occupied areas
- ☐ When using VOC emitting materials ventilate using 100% outside air

- ☐ General Contractor to document with photographs

**4. Housekeeping**

- ☐ Provide regular cleaning, including HVAC equipment
- ☐ If necessary clean HVAC equipment prior to testing, adjusting and balancing the systems
- ☐ Suppress and minimize dust with wetting agents or sweeping compounds
- ☐ Remove accumulations of water inside the building
- ☐ Protect porous materials
- ☐ General Contractor to document with photographs

**5. Scheduling and Construction Activity Sequence**

- ☐ Schedule high pollution activities prior to installing absorbent materials
- ☐ General Contractor to document with photographs

I confirm the checked activities to be proceeding according to the Construction Indoor Air Quality Plan. Items that are not checked will be addressed, initialed and dated once corrective actions have been taken. Items that are not applicable are labeled as such.

Signed: \_\_\_\_\_

Date:

\_\_\_\_\_  
(Contractor)

**University of Colorado Denver IAQ**

**Inspection Checklist**  
(Must be completed weekly)

**Project** \_\_\_\_\_

**Completed by:** \_\_\_\_\_  
**(Name & Company)**

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

---

**1. HVAC Protection**

- ☐ MERV 13 filters at supply air intake
- ☐ MERV 8 filters at return air openings
- ☐ Seal supply diffusers and return air during demolition
- ☐ Seal supply diffusers and return air openings during construction
- ☐ Mechanical rooms clean and neat
- ☐ Periodic duct inspections during construction
- ☐ General Contractor to document with photographs

**2. Source Control**

- ☐ Low/no VOC products as indicated by specifications
- ☐ Restrict vehicle traffic volume and prohibit idling
- ☐ Utilize electric or natural gas alternatives for gasoline and diesel
- ☐ Cycle equipment off when not being used or needed
- ☐ Exhaust pollution sources to the outside
- ☐ Keep containers of wet products closed
- ☐ Cover or seal containers of waste materials
- ☐ Protect absorptive building materials from weather and moisture
- ☐ General Contractor to document with photographs

**3. Pathway Interruption**

- ☐ Provide dust curtains or temporary enclosures
- ☐ Locate pollutant sources as far away as possible from supply dusts and areas occupied by workers
- ☐ General Contractor to document with photographs
- ☐ Isolate areas of work to prevent contamination of clean or occupied areas
- ☐ When using VOC emitting materials ventilate using 100% outside air
- ☐ General Contractor to document with photographs

**4. Housekeeping**

- ☐ Provide regular cleaning, including HVAC equipment
- ☐ If necessary clean HVAC equipment prior to testing, adjusting and balancing the systems
- ☐ Suppress and minimize dust with wetting agents or sweeping compounds
- ☐ Remove accumulations of water inside the building
- ☐ Protect porous materials
- ☐ General Contractor to document with photographs

**5. Scheduling and Construction Activity Sequence**

- ☐ Schedule high pollution activities prior to installing absorbent materials
- ☐ General Contractor to document with photographs

I confirm the checked activities to be proceeding according to the Construction Indoor Air Quality Plan. Items that are not checked will be addressed, initialed and dated once corrective actions have been taken. Items that are not applicable are labeled as such.

Signed: \_\_\_\_\_

Date:

\_\_\_\_\_  
(Contractor)

## SECTION 01 40 00 - QUALITY REQUIREMENTS

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
  - 1. Specific quality-assurance and -control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
  - 2. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and -control procedures that facilitate compliance with the Contract Document requirements.
  - 3. Requirements for Contractor to provide quality-assurance and -control services required by Architect/Engineer, University, or authorities having jurisdiction are not limited by provisions of this Section.
  - 4. Specific test and inspection requirements are not specified in this Section.
- C. Related Requirements:
  - 1. Section 01 42 00 "Reference" for list of references, standards and definitions.
  - 2. Section 01 91 13 "General Commissioning" for coordination of testing with commissioning activities.
  - 3. Division 23 for testing, adjusting and balancing of mechanical systems.
  - 4. Division 26 for testing of electrical systems.

#### 1.3 DEFINITIONS

- A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
- B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include contract enforcement activities performed by Architect/Engineer.



- C. Preconstruction Testing: Tests and inspections performed specifically for Project before products and materials are incorporated into the Work, to verify performance or compliance with specified criteria.
- D. Product Testing: Tests and inspections that are performed by an NRTL, an NVLAP, or a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with specified requirements.
- E. Source Quality-Control Testing: Tests and inspections that are performed at the source, e.g., plant, mill, factory, or shop.
- F. Field Quality-Control Testing: Tests and inspections that are performed on-site for installation of the Work and for completed Work.
- G. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.
- H. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.
  - 1. Use of trade-specific terminology in referring to a trade or entity does not require that certain construction activities be performed by accredited or unionized individuals, or that requirements specified apply exclusively to specific trade(s).
- I. Experienced: When used with an entity or individual, "experienced" means having successfully completed a minimum of five previous projects similar in nature, size, and extent to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

#### 1.4 CONFLICTING REQUIREMENTS

- A. Referenced Standards: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer conflicting requirements that are different, but apparently equal, to Architect/Engineer 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/Engineer for a decision before proceeding.

#### 1.5 ACTION SUBMITTALS N/A

#### 1.6 INFORMATIONAL SUBMITTALS

- A. Contractor's Statement of Responsibility: When required by authorities having jurisdiction, submit copy of written statement of responsibility sent to authorities having jurisdiction before starting work on the following systems:

1. Seismic-force-resisting system, designated seismic system, or component listed in the designated seismic system quality-assurance plan prepared by Architect/Engineer.
  2. Main wind-force-resisting system or a wind-resisting component listed in the wind-force-resisting system quality-assurance plan prepared by Architect/Engineer.
- B. Testing Agency Qualifications: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.
- C. Schedule of Tests and Inspections: Prepare in tabular form and include the following:
1. Specification Section number and title.
  2. Entity responsible for performing tests and inspections.
  3. Description of test and inspection.
  4. Identification of applicable standards.
  5. Identification of test and inspection methods.
  6. Number of tests and inspections required.
  7. Time schedule or time span for tests and inspections.
  8. Requirements for obtaining samples.
  9. Unique characteristics of each quality-control service.

#### 1.7 REPORTS AND DOCUMENTS

- A. Test and Inspection Reports: Prepare and submit certified written reports specified in other Sections. Include the following:
1. Date of issue.
  2. Project title and number.
  3. Name, address, and telephone number of testing agency.
  4. Dates and locations of samples and tests or inspections.
  5. Names of individuals making tests and inspections.
  6. Description of the Work and test and inspection method.
  7. Identification of product and Specification Section.
  8. Complete test or inspection data.
  9. Test and inspection results and an interpretation of test results.
  10. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
  11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
  12. Name and signature of laboratory inspector.
  13. Recommendations on retesting and reinspecting.
- B. Manufacturer's Technical Representative's Field Reports: Prepare written information documenting manufacturer's technical representative's tests and inspections specified in other Sections. Include the following:
1. Name, address, and telephone number of technical representative making report.
  2. Statement on condition of substrates and their acceptability for installation of product.
  3. Statement that products at Project site comply with requirements.
  4. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
  5. Results of operational and other tests and a statement of whether observed performance complies with requirements.
  6. Statement whether conditions, products, and installation will affect warranty.

7. Other required items indicated in individual Specification Sections.

- C. **Factory-Authorized Service Representative's Reports:** Prepare written information documenting manufacturer's factory-authorized service representative's tests and inspections specified in other Sections. Include the following:
1. Name, address, and telephone number of factory-authorized service representative making report.
  2. Statement that equipment complies with requirements.
  3. Results of operational and other tests and a statement of whether observed performance complies with requirements.
  4. Statement whether conditions, products, and installation will affect warranty.
  5. Other required items indicated in individual Specification Sections.
- D. **Permits, Licenses, and Certificates:** For University'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.

## 1.8 QUALITY ASSURANCE

- A. **General:** Qualifications paragraphs in this article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.
1. Monitor quality control over products, services, site conditions, and workmanship to produce work of specified quality.
  2. Comply fully with manufacturers' instructions, including each step in sequence.
  3. If manufacturers' instructions conflict with Contract Document requirements, request clarification from Architect/Engineer before proceeding.
  4. Comply with specified standards as a minimum quality for the work except when more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
  5. Perform work by persons qualified to produce workmanship of specified quality.
- B. **Manufacturer Qualifications:** A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- C. **Fabricator Qualifications:** A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- D. **Subcontractor and Installer Qualifications:** A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance. In addition comply with the following:
1. For all trades: Proof of applicable licensing.
  2. Electrical contractors:
    - a. Company: State of Colorado master electrician license.
    - b. On-site electricians: State of Colorado journeyman license.

3. Plumbing Contractors:
  - a. Company: State of Colorado master plumbers license.
  - b. On-site plumbers: State of Colorado journeyman license.
  - c. Gas piping installations: State of Colorado master plumber with minimum 5 years institutional or heavy commercial gas piping experience. Provide an on-site supervisor with a minimum of 3 years of supervisory experience.
- E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that are similar in material, design, and extent to those indicated for this Project.
- F. Specialists: Certain Specification Sections require that specific construction activities shall be performed by entities who are recognized experts in those operations. Specialists shall satisfy qualification requirements indicated and shall be engaged for the activities indicated.
  1. Requirements of authorities having jurisdiction shall supersede requirements for specialists.
- G. Testing Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspecting indicated, as documented according to ASTM E 329 or ASTM D 3740 as appropriate; and with additional qualifications specified in individual Sections; and, where required by authorities having jurisdiction, that is acceptable to authorities.
  1. NRTL: A nationally recognized testing laboratory according to 29 CFR 1910.7.
  2. NVLAP: A testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program.
  3. Independent Agency: Meeting "Recommended Requirements for Independent Laboratory Qualifications" published by American Council for Independent Laboratories.
  4. Authorized to operate in the State of Colorado.
  5. Calibrate testing equipment at reasonable intervals with devices of accuracy traceable to National Bureau of Standards or of accepted values of natural physical constants.
- H. Manufacturer's Technical Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to observe and inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- I. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- J. Preconstruction Testing: Where testing agency is indicated to perform preconstruction testing for compliance with specified requirements for performance and test methods, comply with the following:
  1. Contractor responsibilities include the following:
    - a. Provide test specimens representative of proposed products and construction.
    - b. Submit specimens in a timely manner with sufficient time for testing and analyzing results to prevent delaying the Work.

- c. Provide sizes and configurations of test assemblies, mockups, and laboratory mockups to adequately demonstrate capability of products to comply with performance requirements.
  - d. When required, build site-assembled test assemblies and mockups using installers who will perform same tasks for Project.
  - e. When required, build laboratory mockups at testing facility using personnel, products, and methods of construction indicated for the completed Work.
  - f. When testing is complete, remove test specimens, assemblies, mockups, and laboratory mockups, as applicable; do not reuse products on Project.
2. Testing Agency Responsibilities: Submit a certified written report of each test, inspection, and similar quality-assurance service to Architect/Engineer, with copy to Contractor. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from the Contract Documents.

## 1.9 QUALITY CONTROL

- A. University Responsibilities: Where quality-control services are indicated as University's responsibility, University will engage a qualified testing agency to perform these services.
1. University 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 the University.
  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.
- B. Contractor Responsibilities: Tests and inspections not explicitly assigned to University are Contractor's responsibility. Perform additional quality-control activities required to verify that the Work complies with requirements, whether specified or not.
1. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control services required of Contractor by authorities having jurisdiction, whether specified or not.
  2. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.
    - a. Contractor shall not employ same entity engaged by University, unless agreed to in writing by University.
  3. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.
  4. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
  5. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
  6. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- C. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Section 01 33 00 "Submittal Procedures."

- D. **Manufacturer's Technical Services:** Where indicated, engage a manufacturer's technical representative to observe and inspect the Work. Manufacturer's technical representative's services include participation in preinstallation conferences, examination of substrates and conditions, verification of materials, observation of Installer activities, inspection of completed portions of the Work, and submittal of written reports.
- E. **Retesting/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.
- F. **Testing Agency Responsibilities:** Cooperate with Architect/Engineer and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
  - 1. Notify Architect/Engineer and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
  - 2. Determine the location from which test samples will be taken and in which in-situ tests are conducted.
  - 3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
  - 4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
  - 5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
  - 6. Do not perform any duties of Contractor.
- G. **Associated Services:** Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
  - 1. Access to the Work.
  - 2. Incidental labor and facilities necessary to facilitate tests and inspections.
  - 3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
  - 4. Facilities for storage and field curing of test samples including, but not limited to, safe storage and proper curing of concrete test cylinders at Project site for first 24 hours after casting as required by ASTM C 31.
  - 5. Delivery of samples to testing agencies.
  - 6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
  - 7. Security and protection for samples and for testing and inspecting equipment at Project site.
- H. **Coordination:** Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
  - 1. Schedule times for tests, inspections, obtaining samples, and similar activities.
- I. **Manufactured Items and Equipment:** Where manufactured products or equipment are required to have representative samples tested, do not use such materials or equipment until tests have been made and the materials or equipment found to be acceptable. Do not incorporate in the work any product which becomes unfit for use after acceptance.

- J. Schedule of Tests and Inspections: Prepare a schedule of tests, inspections, and similar quality-control services required by the Contract Documents. Coordinate and submit concurrently with Contractor's construction schedule. Update as the Work progresses.
  - 1. Distribution: Distribute schedule to University, Architect/Engineer, testing agencies, and each party involved in performance of portions of the Work where tests and inspections are required.

#### 1.10 SPECIAL TESTS AND INSPECTIONS

- A. Special Tests and Inspections: University will engage a qualified testing agency or special inspector to conduct special tests and inspections required by authorities having jurisdiction as the responsibility of University, and as follows:
  - 1. Verifying that manufacturer maintains detailed fabrication and quality-control procedures and reviews the completeness and adequacy of those procedures to perform the Work.
  - 2. Notifying Architect/Engineer and Contractor promptly of irregularities and deficiencies observed in the Work during performance of its services.
  - 3. Submitting a certified written report of each test, inspection, and similar quality-control service to Architect/Engineer with copy to Contractor and to authorities having jurisdiction.
  - 4. Submitting a final report of special tests and inspections at Substantial Completion, which includes a list of unresolved deficiencies.
  - 5. Interpreting tests and inspections and stating in each report whether tested and inspected work complies with or deviates from the Contract Documents.
  - 6. Retesting and reinspecting corrected work.

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

#### PART 3 - EXECUTION

##### 3.1 TEST AND INSPECTION LOG

- A. Test and Inspection Log: Prepare a record of tests and inspections including instructions received from University. 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/Engineer.
  - 4. Identification of testing agency or special inspector conducting test or inspection.
  - 5. Disposition: Pass, fail, nature of defects, if any.
  - 6. Date and descriptions of remedial or correction action taken.
- B. Maintain log at Project site. Post changes and revisions as they occur. Provide access to test and inspection log for Architect/Engineer'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 or matching existing substrates and finishes. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible. Comply with the Contract Document requirements for cutting and patching in Section 01 73 00 "Execution."
- B. Protect construction exposed by or for quality-control service activities.
- C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

### 3.3 SCHEDULE OF INSPECTIONS AND TESTS BY UNIVERSITY

- A. University will engage testing agency and pay for testing and inspection associated with the following materials and systems, where included in the Project:
  - 1. Compaction density of fill and backfill.
  - 2. Drilled pier end bearing conditions and depths.
  - 3. Cast-in-place concrete.
  - 4. Precast concrete.
  - 5. Post-tensioned concrete tendons.
  - 6. Masonry.
  - 7. Structural steel field welds and bolted connections.
  - 8. Spray-applied fireproofing.
  - 9. Built-up roof cutouts.
  - 10. Asphaltic concrete paving.
  - 11. Foundation drainage systems.
  - 12. Drainage structures and piping.
  - 13. Waterproofing.
  - 14. Air barriers.
  - 15. Fluid applied membranes.
  - 16. Thermal imaging.
  - 17. Curtain wall, window, and door field testing.
  - 18. Ceiling hanger wire pull-out.
  - 19. Electrical resistance of static-control resilient flooring.
  - 20. Field sound testing of operable partitions.
  - 21. Elevator safety.
  - 22. Fan vibration.

**END OF SECTION 01 40 00**



## SECTION 01 41 00 - REGULATORY REQUIREMENTS

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section Includes:
  - 1. Building Department Authority.
  - 2. MS 4 Storm Water and Water Quality Permits
  - 3. Applicable Codes and Standards.

#### 1.3 BUILDING DEPARTMENT AUTHORITY

- A. The University of Colorado Denver is charged with the responsibility of ensuring that provision of applicable codes, standards and guidelines are met on its campuses.
- B. The University Denver campus has an established Building Authority responsible to review and examine buildings and plan documents, to permit and inspect construction and/or demolition to ensure conformance to codes adopted by the University and issue certificates of temporary occupancy and occupancy if satisfactory conformance is demonstrated.
- C. The authority is executed by the Campus Building Official (CBO) who has the responsibility to perform all the duties set forth in the Current Approved State Buildings Codes and other applicable codes and standards indicated in the "Applicable Codes and Standards" Article of this Section.
- D. Permits: Obtain a separate permit for each Project from the Office of the CBO prior to erecting, constructing, enlarging, repairing, moving, removing, converting or demolishing any building or portion thereof. Coordinate and obtain all permits through the University Project Manager. The Contractor is not responsible for costs associated with construction permits.
  - 1. Exempt work: A building permit is not required for the following:
    - a. Fences less than or equal to 6 feet tall.
    - b. Movable casework, counters and partitions not over 5 feet 9 inches tall with no electrical or plumbing.
    - c. Platforms, walks, and driveways not more than 30 inches above grade and not over any basement or story below.
    - d. Painting, papering and similar finish work.
    - e. Other work of limited scope at the discretion of the CBO.
- E. Permit Issuance: The CBO, or at the discretion of the CBO a third party code consultant, will review application, Drawings, Specifications, computations and other data filed for permit. Complete the permit application with the University Project Manager. Permits require submittal of two (2) stamped, signed sets of Construction Documents, including Drawings, Specifications and all Addenda, and one (1) set of each engineering discipline's calculations, where such calculations are required. If CBO determines that submittal conforms to the requirements of the

Building Code and other applicable codes, standards, laws, regulations and ordinances, an inspection record card will be issued with the building permit. Keep one stamped set of documents on site. The University will keep one stamped set in the Campus Support plan room.

- F. Suspension or Revocation of Permit: CBO may, in writing, suspend or revoke a permit issued in error or on the basis of submitted information that is incorrect or that is in violation of the Building Code and other applicable codes and standards.
- G. Posting of Permit: Post the Permit in a visible and protected location near the access to the project.
- H. Inspection Record Card: Post the Inspection Record Card next to the permit in a visible and protected location near the access to the project. CBO will make required entries based on inspection of the work.
- I. Inspection Requests:
  - 1. Notify CBO that work is ready for inspection two business days before such inspection is desired by telephoning the number posted on the permit. The CBO retains the right to require requests in writing.
  - 2. A re-inspection fee may be charged for prior rejected items.
- J. Construction Inspections:
  - 1. Contractor is not responsible for costs associated with construction inspections, except re-inspections. The CBO or his/her designee will perform all general building, electrical and plumbing inspections. All construction or work for which a permit is required must remain accessible and exposed for inspection purposes. Provide access to and means for inspection of work.
  - 2. Site Utilities: Contact and comply with all requirements of City and County of Denver for site utility inspections.
  - 3. Plumbing and Electrical Inspections: For new buildings and major additions, contact and comply with all requirements of State of Colorado Plumbing and Electrical Boards.
  - 4. Provisions for structural and other special inspections required by Contract Documents, current approved State Building Codes and University Codes will be provided by the University.
- K. Certification of Occupancy:
  - 1. When CBO inspects the project and finds no violations of any provision of the Building Code, other applicable codes, standards, laws, regulations and ordinances, CBO will issue a Certification of Occupancy (CO) which will contain the following:
    - a. Building permit number.
    - b. Address of building.
    - c. Name and address of Owner.
    - d. Description of building or portion thereof for which certification is issued.
    - e. Statement that described building or portion thereof has been inspected for compliance with the requirements of the Building Code, other applicable codes, standards, laws, regulations and ordinances, as relates to type of occupancy and use for which the building is intended.
  - 2. Temporary Certificate of Occupancy (TCO): If CBO finds no substantial hazard will result from occupancy of any building or portion thereof before the same is completed, CBO may issue a TCO for the use of a portion or portions of a building or structure prior to the completion of the entire building or structure.
  - 3. Posting of CO: Provide a copy to the University Project Manager and post in a conspicuous location on the premises. CO may not be removed except by CBO upon initial occupancy.
  - 4. Revocation of CO:

#### 1.4 MS4 STORM WATER AND WATER QUALITY PERMITS

- A. Obtain necessary State of Colorado and City and County of Denver Permits to the extent that Project impacts site.

#### 1.5 APPLICABLE CODES AND STANDARDS

- A. The following approved building codes and standards have been adopted by State Buildings Programs (SBP) as the minimum requirements to be applied to all state-owned buildings and physical facilities including capital construction and controlled maintenance construction projects. Current applicable codes can be obtained from The Office of the State Architect's website.
- B. University of Colorado Denver Codes and Standards: The following codes and standards supplement those indicated on the Office of the State Architect website.
  - 1. The Manual of Guidelines and Standards for Construction Projects
    - a. <http://ucdenver.edu/about/departments/FacilitiesManagement/FacilitiesProjects/Pages/GuidelinesStandards.aspx>
  - 2. Colorado Rules and Regulations pertaining to Radiation Control, 6 CCR 1007 Part 1-20.
  - 3. Colorado Rules and Regulations pertaining Air Quality Control Commission Regulations, 5 CCR 1001-10, Part B "Asbestos Control."
  - 4. Colorado Rules and Regulations pertaining to Solid Waste, 6 CCR 1007-2.
  - 5. Colorado Rules and Regulations pertaining to Hazardous Waste, 6 CCR 1007-3.
  - 6. Federal Hazardous Waste Regulations, 40 CFR, Parts 260 through 264.
  - 7. Federal Clean Water Act (CWA) is 33 U.S.C § 1251 et seq. (1972).
  - 8. University of Colorado Denver | Anschutz Medical Campus, Asbestos Contaminated Soil Management, Standard Operating Procedure (SOP) Document.
  - 9. NFPA 30: Flammable and Combustible Liquids Code.
  - 10. NFPA 45: Standard on Fire Protection for Laboratories Using Chemicals.
  - 11. NFPA 72: National Fire Alarm and Signaling Code.
  - 12. Life Safety Code (NFPA 101) – latest edition.
    - a. Use the most restrictive interpretation where NFPA 101 conflicts with the IBC requirements.
  - 13. ANSI/AIHA Z9.5 Laboratory Ventilation – latest edition.
    - a. <http://www.aiha.org/insideaiha/standards/Pages/ANSIZ9.aspx>
  - 14. ANSI/AIHA Z9.6 Exhaust Systems for Grinding, Buffing and Polishing – latest edition.
    - a. <http://www.aiha.org/insideaiha/standards/Pages/ANSIZ9.aspx>
  - 15. ANSI/AIHA Z9.10 Fundamentals Governing the Design and Operation of Dilution Ventilation Systems in Industrial Occupancies – latest edition.
    - a. <http://www.aiha.org/insideaiha/standards/Pages/ANSIZ9.aspx>
  - 16. ANSI/ASHRAE/ASHE Standard 170 – Ventilation of Healthcare Facilities – latest edition.
  - 17. ASHRAE 62.1 – Ventilation for Acceptable Indoor Air Quality.
  - 18. OSHA "Safety and Health Regulation for Construction" (29 CFR 1926).
  - 19. OSHA "Occupational Safety and Health Standards" (29 CFR 1910).
  - 20. American Institute of Architects, Academy of Architecture for Health (AIA AAHA) and Facility Guidelines Institute (FGI), Guidelines for Design and Construction of Hospital and Healthcare Facilities – latest edition (FOR PATIENT CARE AREAS ONLY).
  - 21. CDC-NIH Bio-safety in Microbiological and Biomedical Laboratories (BMBL); latest edition.
  - 22. NIH Design Requirements Manual (DRM) – latest edition.
    - a. <http://orf.nih.gov/PoliciesAndGuidelines/BiomedicalandAnimalResearchFacilitiesDesignPoliciesandGuidelines/DesignRequirementsManualPDF.htm>
  - 23. NIH Guidelines for Research Involving Recombinant DNA Molecules – latest edition.
  - 24. ILAR Guide for Care and Use of Laboratory Animals - latest edition.

25. National Research Council of the National Academies, Institute for Laboratory Animal Research, Division on Earth and Life Studies: Guide for the Care and Use of Laboratory Animals - latest edition.
26. Uniform Federal Accessibility Standards (UFAS) – latest edition.
27. Metro Wastewater District's Rules and Regulations, (Sections 6.17 [6.13, 6.14] and 6.18).
28. City of Aurora Asphalt and Paving Standards - latest edition.

C. Other Standards: As indicated in individual Specification Sections.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

**END OF SECTION 01 41 00**

## SECTION 01 42 00 - REFERENCES

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section Includes:
  - 1. Definitions.
  - 2. Industry Standards.
  - 3. Abbreviations and Acronyms.
- B. Related Requirements:
  - 1. Section 01 10 00 "Summary" for an explanation of specification and drawing conventions.
  - 2. Section 01 41 00 "Regulatory Requirements" for a list of applicable codes.

#### 1.3 DEFINITIONS

- A. General: Basic Contract definitions are included in the Conditions of the Contract.
  - 1. Definitions in this Section are not intended to be complete, exhaustive or exclusive. They are general and apply to the Work to the extent that such definitions are not stated more explicitly in other provisions of the Contract Documents.
- B. "Approved": When used to convey Architect/Engineer's action on Contractor's submittals, applications, and requests, "approved" is limited to Architect/Engineer's duties and responsibilities as stated in the Conditions of the Contract. Except where expressly indicated, such approval does not release the Contractor from responsibility to fulfill requirements of the Contract Documents.
- C. "Backup": N+1 system.
- D. "Directed": A command or instruction by Architect/Engineer. Other terms including "requested," "authorized," "selected," "required," and "permitted" have the same meaning as "directed."
- E. "EHS": Environmental Health and Safety.
- F. "Engineer": Architect/Engineer. Other terms including "Mechanical Engineer", "Electrical Engineer", or "Structural Engineer" have the same meaning as "Engineer."
- G. "General Conditions": Contract terms contained in **Contractor's Agreement Design/Bid/Build, State Form SC-6.21 and The General Conditions of the Construction Contract Design/Bid/Build, State Form SC-6.23** "General Requirements": Provisions and requirements of all Division 01 Sections as they apply to all aspects of the Work.

- H. "Guarantee": The narrow definition of the term "warranty" applying to both "warranty" and "guarantee" which terms are used interchangeably.
- I. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."
- J. "Redundant": 2N system. The level of redundancy is determined by design.
- K. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work, whether lawfully imposed by authorities having jurisdiction or not.
- L. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
- M. "Install": Operations at Project site including unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
- N. "Owner": Principal Representative and/or University.
- O. "Provide": Furnish and install, complete and ready for the intended use.
- P. "Project Manual": Bound, printed volume or volumes including Conditions of the Contract and Specifications, which may also include bidding requirements, contract forms, details, schedules, surveys, reports or other relevant items that may or may not be Contract Documents.
- Q. "Project Site": Space available for performing construction activities, either exclusively or in conjunction with others performing other work as part of the Project. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.
- R. "Supplementary Conditions": University Special Supplementary General Conditions. Other terms including "Supplementary General Conditions" shall have the same meaning.

#### 1.4 INDUSTRY STANDARDS

- A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.
  - 1. Referenced standards take precedence over standards that are not referenced but generally recognized in the construction industry as applicable.
- B. Publication Dates: Comply with standards in effect as of date of the Contract Documents.
  - 1. Updated Codes and Standards: Where an applicable code or standard has been revised and reissued after the date of the Contract Documents and before performance of Work affected, submit Contractor-Initiated Change Order Bulletin and Change Order Proposal in accordance with Section 01 26 00 "Contract Modification Procedures" for consideration to modify contract requirements to comply with revised code or standard.

- C. Copies of Standards: Each entity engaged in construction on Project should be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.
1. Where copies of standards are needed to perform a required construction activity, obtain copies directly from publication source.
  2. Where required by individual Specification Sections provide and maintain copies of referenced codes and standards at Project Site.
  3. Although copies of standards needed for enforcement of requirements may be part of required submittals, the Architect/Engineer reserves the right to require the Contractor to submit additional copies as necessary for enforcement of requirements.
- D. Unreferenced Standards: Unreferenced standards are not directly applicable to the Work, except as a general requirement of whether the Work complies with recognized construction industry standards.
- E. Conflicting Requirements: Where compliance with two or more standards is specified, and they establish different or conflicting requirements for minimum quantities or quality levels, the most stringent requirement will be enforced, unless the Contract Documents indicate otherwise. Refer requirements that are different, but apparently equal, and uncertainties as to which quality level is more stringent to the Architect/Engineer for a decision before proceeding.

## 1.5 ABBREVIATIONS AND ACRONYMS

- A. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

AABC	Associated Air Balance Council www.aabc.com	(202) 737-0202
AAMA	American Architectural Manufacturers Association www.aamanet.org	(847) 303-5664
AASHTO	American Association of State Highway and Transportation Officials www.transportation.org	(202) 624-5800
AATCC	American Association of Textile Chemists and Colorists www.aatcc.org	(919) 549-8141
ABMA	American Bearing Manufacturers Association www.americanbearings.org	(202) 367-1155
ACI	American Concrete Institute (Formerly: ACI International) www.concrete.org	(248) 848-3700
ACPA	American Concrete Pipe Association www.concrete-pipe.org	(972) 506-7216
AEIC	Association of Edison Illuminating Companies, Inc. (The) www.aeic.org	(205) 257-2530

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AF&PA	American Forest & Paper Association <a href="http://www.afandpa.org">www.afandpa.org</a>	(800) 878-8878 (202) 463-2700
AGA	American Gas Association <a href="http://www.aga.org">www.aga.org</a>	(202) 824-7000
AHAM	Association of Home Appliance Manufacturers <a href="http://www.aham.org">www.aham.org</a>	(202) 872-5955
AHRI	Air-Conditioning, Heating, and Refrigeration Institute (The) <a href="http://www.ahrinet.org">www.ahrinet.org</a>	(703) 524-8800
AI	Asphalt Institute <a href="http://www.asphaltinstitute.org">www.asphaltinstitute.org</a>	(859) 288-4960
AIA	American Institute of Architects (The) <a href="http://www.aia.org">www.aia.org</a>	(800) 242-3837 (202) 626-7300
AISC	American Institute of Steel Construction <a href="http://www.aisc.org">www.aisc.org</a>	(800) 644-2400 (312) 670-2400
AISI	American Iron and Steel Institute <a href="http://www.steel.org">www.steel.org</a>	(202) 452-7100
AITC	American Institute of Timber Construction <a href="http://www.aitc-glulam.org">www.aitc-glulam.org</a>	(303) 792-9559
AMCA	Air Movement and Control Association International, Inc. <a href="http://www.amca.org">www.amca.org</a>	(847) 394-0150
ANSI	American National Standards Institute <a href="http://www.ansi.org">www.ansi.org</a>	(202) 293-8020
AOSA	Association of Official Seed Analysts, Inc. <a href="http://www.aosaseed.com">www.aosaseed.com</a>	(607) 256-3313
APA	APA - The Engineered Wood Association <a href="http://www.apawood.org">www.apawood.org</a>	(253) 565-6600
APA	Architectural Precast Association <a href="http://www.archprecast.org">www.archprecast.org</a>	(239) 454-6989
API	American Petroleum Institute <a href="http://www.api.org">www.api.org</a>	(202) 682-8000
ARI	Air-Conditioning & Refrigeration Institute (See AHRI)	
ARI	American Refrigeration Institute (See AHRI)	
ARMA	Asphalt Roofing Manufacturers Association <a href="http://www.asphaltroofing.org">www.asphaltroofing.org</a>	(202) 207-0917
ASCE	American Society of Civil Engineers <a href="http://www.asce.org">www.asce.org</a>	(800) 548-2723 (703) 295-6300



ASCE/SEI	American Society of Civil Engineers/Structural Engineering Institute (See ASCE)	
ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers <a href="http://www.ashrae.org">www.ashrae.org</a>	(800) 527-4723 (404) 636-8400
ASME	ASME International (American Society of Mechanical Engineers) <a href="http://www.asme.org">www.asme.org</a>	(800) 843-2763 (973) 882-1170
ASSE	American Society of Safety Engineers (The) <a href="http://www.asse.org">www.asse.org</a>	(847) 699-2929
ASSE	American Society of Sanitary Engineering <a href="http://www.asse-plumbing.org">www.asse-plumbing.org</a>	(440) 835-3040
ASTM	ASTM International (American Society for Testing and Materials International) <a href="http://www.astm.org">www.astm.org</a>	(610) 832-9500
ATIS	Alliance for Telecommunications Industry Solutions <a href="http://www.atis.org">www.atis.org</a>	(202) 628-6380
AWEA	American Wind Energy Association <a href="http://www.awea.org">www.awea.org</a>	(202) 383-2500
AWI	Architectural Woodwork Institute <a href="http://www.awinet.org">www.awinet.org</a>	(571) 323-3636
AWMAC	Architectural Woodwork Manufacturers Association of Canada <a href="http://www.awmac.com">www.awmac.com</a>	(403) 453-7387
AWPA	American Wood Protection Association (Formerly: American Wood-Preservers' Association) <a href="http://www.awpa.com">www.awpa.com</a>	(205) 733-4077
AWS	American Welding Society <a href="http://www.aws.org">www.aws.org</a>	(800) 443-9353 (305) 443-9353
AWWA	American Water Works Association <a href="http://www.awwa.org">www.awwa.org</a>	(800) 926-7337 (303) 794-7711
BHMA	Builders Hardware Manufacturers Association <a href="http://www.buildershardware.com">www.buildershardware.com</a>	(212) 297-2122
BIA	Brick Industry Association (The) <a href="http://www.gobrick.com">www.gobrick.com</a>	(703) 620-0010
BICSI	BICSI, Inc. <a href="http://www.bicsi.org">www.bicsi.org</a>	(800) 242-7405 (813) 979-1991
BIFMA	BIFMA International	(616) 285-3963

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	(Business and Institutional Furniture Manufacturer's Association) www.bifma.com	
BISSC	Baking Industry Sanitation Standards Committee www.bissc.org	(866) 342-4772
BOCA	BOCA (Building Officials and Code Administrators International Inc.) (See ICC)	
BWF	Badminton World Federation (Formerly: International Badminton Federation) www.bwfbadminton.org	60 3 9283 7155
CDA	Copper Development Association www.copper.org	(800) 232-3282 (212) 251-7200
CEA	Canadian Electricity Association www.electricity.ca	(613) 230-9263
CEA	Consumer Electronics Association www.ce.org	(866) 858-1555 (703) 907-7600
CFFA	Chemical Fabrics & Film Association, Inc. www.chemicalfabricsandfilm.com	(216) 241-7333
CFSEI	Cold-Formed Steel Engineers Institute www.cfsei.org	(866) 465-4732 (202) 263-4488
CGA	Compressed Gas Association www.cganet.com	(703) 788-2700
CIMA	Cellulose Insulation Manufacturers Association www.cellulose.org	(888) 881-2462 (937) 222-2462
CISCA	Ceilings & Interior Systems Construction Association www.cisca.org	(630) 584-1919
CISPI	Cast Iron Soil Pipe Institute www.cispi.org	(404) 622-0073
CLFMI	Chain Link Fence Manufacturers Institute www.chainlinkinfo.org	(301) 596-2583
CPA	Composite Panel Association www.pbmdf.com	(703) 724-1128
CRI	Carpet and Rug Institute (The) www.carpet-rug.org	(706) 278-3176
CRRC	Cool Roof Rating Council www.coolroofs.org	(866) 465-2523 (510) 485-7175
CRSI	Concrete Reinforcing Steel Institute www.crsi.org	(800) 328-6306 (847) 517-1200

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CSA	Canadian Standards Association <a href="http://www.csa.ca">www.csa.ca</a>	(800) 463-6727 (416) 747-4000
CSA	CSA International (Formerly: IAS - International Approval Services) <a href="http://www.csa-international.org">www.csa-international.org</a>	(866) 797-4272 (416) 747-4000
CSI	Construction Specifications Institute (The) <a href="http://www.csinet.org">www.csinet.org</a>	(800) 689-2900 (703) 684-0300
CSSB	Cedar Shake & Shingle Bureau <a href="http://www.cedarbureau.org">www.cedarbureau.org</a>	(604) 820-7700
CTI	Cooling Technology Institute (Formerly: Cooling Tower Institute) <a href="http://www.cti.org">www.cti.org</a>	(281) 583-4087
CWC	Composite Wood Council (See CPA)	
DASMA	Door and Access Systems Manufacturers Association <a href="http://www.dasma.com">www.dasma.com</a>	(216) 241-7333
DHI	Door and Hardware Institute <a href="http://www.dhi.org">www.dhi.org</a>	(703) 222-2010
ECA	Electronic Components Association <a href="http://www.ec-central.org">www.ec-central.org</a>	(703) 907-8024
ECAMA	Electronic Components Assemblies & Materials Association (See ECA)	
EIA	Electronic Industries Alliance (See TIA)	
EIMA	EIFS Industry Members Association <a href="http://www.eima.com">www.eima.com</a>	(800) 294-3462 (703) 538-1616
EJMA	Expansion Joint Manufacturers Association, Inc. <a href="http://www.ejma.org">www.ejma.org</a>	(914) 332-0040
ESD	ESD Association (Electrostatic Discharge Association) <a href="http://www.esda.org">www.esda.org</a>	(315) 339-6937
ESTA	Entertainment Services and Technology Association (See PLASA)	
EVO	Efficiency Valuation Organization <a href="http://www.evo-world.org">www.evo-world.org</a>	(415) 367-3643 44 20 88 167 857
FIBA	Fédération Internationale de Basketball (The International Basketball Federation) <a href="http://www.fiba.com">www.fiba.com</a>	41 22 545 00 00

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FIVB	Fédération Internationale de Volleyball (The International Volleyball Federation) <a href="http://www.fivb.org">www.fivb.org</a>	41 21 345 35 45
FM Approvals	FM Approvals LLC <a href="http://www.fmglobal.com">www.fmglobal.com</a>	(781) 762-4300
FM Global	FM Global (Formerly: FMG - FM Global) <a href="http://www.fmglobal.com">www.fmglobal.com</a>	(401) 275-3000
FRSA	Florida Roofing, Sheet Metal & Air Conditioning Contractors Association, Inc. <a href="http://www.floridarroof.com">www.floridarroof.com</a>	(407) 671-3772
FSA	Fluid Sealing Association <a href="http://www.fluidsealing.com">www.fluidsealing.com</a>	(610) 971-4850
FSC	Forest Stewardship Council U.S. <a href="http://www.fscus.org">www.fscus.org</a>	(612) 353-4511
GA	Gypsum Association <a href="http://www.gypsum.org">www.gypsum.org</a>	(301) 277-8686
GANA	Glass Association of North America <a href="http://www.glasswebsite.com">www.glasswebsite.com</a>	(785) 271-0208
GS	Green Seal <a href="http://www.greenseal.org">www.greenseal.org</a>	(202) 872-6400
HI	Hydraulic Institute <a href="http://www.pumps.org">www.pumps.org</a>	(973) 267-9700
HI/GAMA	Hydronics Institute/Gas Appliance Manufacturers Association (See AHRI)	
HMMA	Hollow Metal Manufacturers Association (See NAAMM)	
HPVA	Hardwood Plywood & Veneer Association <a href="http://www.hpva.org">www.hpva.org</a>	(703) 435-2900
HPW	H. P. White Laboratory, Inc. <a href="http://www.hpwhite.com">www.hpwhite.com</a>	(410) 838-6550
IAPSC	International Association of Professional Security Consultants <a href="http://www.iapsc.org">www.iapsc.org</a>	(415) 536-0288
IAS	International Approval Services (See CSA)	
ICBO	International Conference of Building Officials (See ICC)	
ICC	International Code Council <a href="http://www.iccsafe.org">www.iccsafe.org</a>	(888) 422-7233 (202) 370-1800

ICEA	Insulated Cable Engineers Association, Inc. www.icea.net	(770) 830-0369
ICPA	International Cast Polymer Alliance www.icpa-hq.org	(703) 525-0511
ICRI	International Concrete Repair Institute, Inc. www.icri.org	(847) 827-0830
IEC	International Electrotechnical Commission www.iec.ch	41 22 919 02 11
IEEE	Institute of Electrical and Electronics Engineers, Inc. (The) www.ieee.org	(212) 419-7900
IES	Illuminating Engineering Society (Formerly: Illuminating Engineering Society of North America) www.ies.org	(212) 248-5000
IESNA	Illuminating Engineering Society of North America (See IES)	
IENT	Institute of Environmental Sciences and Technology www.ient.org	(847) 981-0100
IGMA	Insulating Glass Manufacturers Alliance www.igmaonline.org	(613) 233-1510
IGSHPA	International Ground Source Heat Pump Association www.igshpa.okstate.edu	(405) 744-5175
ILI	Indiana Limestone Institute of America, Inc. www.iliai.com	(812) 275-4426
Intertek	Intertek Group (Formerly: ETL SEMCO; Intertek Testing Service NA) www.intertek.com	(800) 967-5352
ISA	International Society of Automation (The) (Formerly: Instrumentation, Systems, and Automation Society) www.isa.org	(919) 549-8411
ISAS	Instrumentation, Systems, and Automation Society (The) (See ISA)	
ISFA	International Surface Fabricators Association (Formerly: International Solid Surface Fabricators Association) www.isfanow.org	(877) 464-7732 (801) 341-7360
ISO	International Organization for Standardization www.iso.org	41 22 749 01 11

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ISSFA	International Solid Surface Fabricators Association (See ISFA)	
ITU	International Telecommunication Union <a href="http://www.itu.int/home">www.itu.int/home</a>	41 22 730 51 11
KCMA	Kitchen Cabinet Manufacturers Association <a href="http://www.kcma.org">www.kcma.org</a>	(703) 264-1690
LMA	Laminating Materials Association (See CPA)	
LPI	Lightning Protection Institute <a href="http://www.lightning.org">www.lightning.org</a>	(800) 488-6864
MBMA	Metal Building Manufacturers Association <a href="http://www.mbma.com">www.mbma.com</a>	(216) 241-7333
MCA	Metal Construction Association <a href="http://www.metalconstruction.org">www.metalconstruction.org</a>	(847) 375-4718
MFMA	Maple Flooring Manufacturers Association, Inc. <a href="http://www.maplefloor.org">www.maplefloor.org</a>	(888) 480-9138
MFMA	Metal Framing Manufacturers Association, Inc. <a href="http://www.metalframingmfg.org">www.metalframingmfg.org</a>	(312) 644-6610
MHIA	Material Handling Industry of America <a href="http://www.mhia.org">www.mhia.org</a>	(800) 345-1815 (704) 676-1190
MIA	Marble Institute of America <a href="http://www.marble-institute.com">www.marble-institute.com</a>	(440) 250-9222
MMPA	Moulding & Millwork Producers Association (Formerly: Wood Moulding & Millwork Producers Association) <a href="http://www.wmmpa.com">www.wmmpa.com</a>	(800) 550-7889 (530) 661-9591
MPI	Master Painters Institute <a href="http://www.paintinfo.com">www.paintinfo.com</a>	(888) 674-8937 (604) 298-7578
MSS	Manufacturers Standardization Society of The Valve and Fittings Industry Inc. <a href="http://www.mss-hq.org">www.mss-hq.org</a>	(703) 281-6613
NAAMM	National Association of Architectural Metal Manufacturers <a href="http://www.naamm.org">www.naamm.org</a>	(630) 942-6591
NACE	NACE International (National Association of Corrosion Engineers International) <a href="http://www.nace.org">www.nace.org</a>	(800) 797-6223 (281) 228-6200
NADCA	National Air Duct Cleaners Association <a href="http://www.nadca.com">www.nadca.com</a>	(202) 737-2926
NAIMA	North American Insulation Manufacturers Association	(703) 684-0084

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	<a href="http://www.naima.org">www.naima.org</a>	
NBGQA	National Building Granite Quarries Association, Inc. <a href="http://www.nbgqa.com">www.nbgqa.com</a>	(800) 557-2848
NCAA	National Collegiate Athletic Association (The) <a href="http://www.ncaa.org">www.ncaa.org</a>	(317) 917-6222
NCMA	National Concrete Masonry Association <a href="http://www.ncma.org">www.ncma.org</a>	(703) 713-1900
NEBB	National Environmental Balancing Bureau <a href="http://www.nebb.org">www.nebb.org</a>	(301) 977-3698
NECA	National Electrical Contractors Association <a href="http://www.necanet.org">www.necanet.org</a>	(301) 657-3110
NELMA	Northeastern Lumber Manufacturers Association <a href="http://www.nelma.org">www.nelma.org</a>	(207) 829-6901
NEMA	National Electrical Manufacturers Association <a href="http://www.nema.org">www.nema.org</a>	(703) 841-3200
NETA	InterNational Electrical Testing Association <a href="http://www.netaworld.org">www.netaworld.org</a>	(888) 300-6382 (269) 488-6382
NFHS	National Federation of State High School Associations <a href="http://www.nfhs.org">www.nfhs.org</a>	(317) 972-6900
NFPA	NFPA (National Fire Protection Association) <a href="http://www.nfpa.org">www.nfpa.org</a>	(800) 344-3555 (617) 770-3000
NFPA	NFPA International (See NFPA)	
NFRC	National Fenestration Rating Council <a href="http://www.nfrc.org">www.nfrc.org</a>	(301) 589-1776
NHLA	National Hardwood Lumber Association <a href="http://www.nhla.com">www.nhla.com</a>	(800) 933-0318 (901) 377-1818
NLGA	National Lumber Grades Authority <a href="http://www.nlga.org">www.nlga.org</a>	(604) 524-2393
NOFMA	National Oak Flooring Manufacturers Association (See NWFA)	
NOMMA	National Ornamental & Miscellaneous Metals Association <a href="http://www.nomma.org">www.nomma.org</a>	(888) 516-8585
NRCA	National Roofing Contractors Association <a href="http://www.nrca.net">www.nrca.net</a>	(800) 323-9545 (847) 299-9070
NRMCA	National Ready Mixed Concrete Association <a href="http://www.nrmca.org">www.nrmca.org</a>	(888) 846-7622 (301) 587-1400

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NSF	NSF International (National Sanitation Foundation International) <a href="http://www.nsf.org">www.nsf.org</a>	(800) 673-6275 (734) 769-8010
NSPE	National Society of Professional Engineers <a href="http://www.nspe.org">www.nspe.org</a>	(703) 684-2800
NSSGA	National Stone, Sand & Gravel Association <a href="http://www.nssga.org">www.nssga.org</a>	(800) 342-1415 (703) 525-8788
NTMA	National Terrazzo & Mosaic Association, Inc. (The) <a href="http://www.ntma.com">www.ntma.com</a>	(800) 323-9736
NWFA	National Wood Flooring Association <a href="http://www.nwfa.org">www.nwfa.org</a>	(800) 422-4556 (636) 519-9663
PCI	Precast/Prestressed Concrete Institute <a href="http://www.pci.org">www.pci.org</a>	(312) 786-0300
PDI	Plumbing & Drainage Institute <a href="http://www.pdionline.org">www.pdionline.org</a>	(800) 589-8956 (978) 557-0720
PLASA	PLASA (Formerly: ESTA - Entertainment Services and Technology Association) <a href="http://www.plasa.org">www.plasa.org</a>	(212) 244-1505
RCSC	Research Council on Structural Connections <a href="http://www.boltcouncil.org">www.boltcouncil.org</a>	
RFCI	Resilient Floor Covering Institute <a href="http://www.rfci.com">www.rfci.com</a>	(706) 882-3833
RIS	Redwood Inspection Service <a href="http://www.redwoodinspection.com">www.redwoodinspection.com</a>	(925) 935-1499
SAE	SAE International (Society of Automotive Engineers) <a href="http://www.sae.org">www.sae.org</a>	(877) 606-7323 (724) 776-4841
SBCCI	Southern Building Code Congress International, Inc. (See ICC)	
SCTE	Society of Cable Telecommunications Engineers <a href="http://www.scte.org">www.scte.org</a>	(800) 542-5040 (610) 363-6888
SDI	Steel Deck Institute <a href="http://www.sdi.org">www.sdi.org</a>	(847) 458-4647
SDI	Steel Door Institute <a href="http://www.steeldoor.org">www.steeldoor.org</a>	(440) 899-0010
SEFA	Scientific Equipment and Furniture Association <a href="http://www.sefalabs.com">www.sefalabs.com</a>	(877) 294-5424 (516) 294-5424



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SEI/ASCE	Structural Engineering Institute/American Society of Civil Engineers (See ASCE)	
SIA	Security Industry Association <a href="http://www.siaonline.org">www.siaonline.org</a>	(866) 817-8888 (703) 683-2075
SJI	Steel Joist Institute <a href="http://www.steeljoist.org">www.steeljoist.org</a>	(843) 293-1995
SMA	Screen Manufacturers Association <a href="http://www.smainfo.org">www.smainfo.org</a>	(773) 636-0672
SMACNA	Sheet Metal and Air Conditioning Contractors' National Association <a href="http://www.smacna.org">www.smacna.org</a>	(703) 803-2980
SMPTE	Society of Motion Picture and Television Engineers <a href="http://www.smpte.org">www.smpte.org</a>	(914) 761-1100
SPFA	Spray Polyurethane Foam Alliance <a href="http://www.sprayfoam.org">www.sprayfoam.org</a>	(800) 523-6154
SPIB	Southern Pine Inspection Bureau <a href="http://www.spib.org">www.spib.org</a>	(850) 434-2611
SPRI	Single Ply Roofing Industry <a href="http://www.spri.org">www.spri.org</a>	(781) 647-7026
SRCC	Solar Rating and Certification Corporation <a href="http://www.solar-rating.org">www.solar-rating.org</a>	(321) 638-1537
SSINA	Specialty Steel Industry of North America <a href="http://www.ssina.com">www.ssina.com</a>	(800) 982-0355 (202) 342-8630
SSPC	SSPC: The Society for Protective Coatings <a href="http://www.sspc.org">www.sspc.org</a>	(877) 281-7772 (412) 281-2331
STI	Steel Tank Institute <a href="http://www.steeltank.com">www.steeltank.com</a>	(847) 438-8265
SWI	Steel Window Institute <a href="http://www.steelwindows.com">www.steelwindows.com</a>	(216) 241-7333
SWPA	Submersible Wastewater Pump Association <a href="http://www.swpa.org">www.swpa.org</a>	(847) 681-1868
TCA	Tilt-Up Concrete Association <a href="http://www.tilt-up.org">www.tilt-up.org</a>	(319) 895-6911
TCNA	Tile Council of North America, Inc. (Formerly: Tile Council of America) <a href="http://www.tileusa.com">www.tileusa.com</a>	(864) 646-8453
TEMA	Tubular Exchanger Manufacturers Association, Inc. <a href="http://www.tema.org">www.tema.org</a>	(914) 332-0040

TIA	Telecommunications Industry Association (Formerly: TIA/EIA - Telecommunications Industry Association/Electronic Industries Alliance) <a href="http://www.tiaonline.org">www.tiaonline.org</a>	(703) 907-7700
TIA/EIA	Telecommunications Industry Association/Electronic Industries Alliance (See TIA)	
TMS	The Masonry Society <a href="http://www.masonrysociety.org">www.masonrysociety.org</a>	(303) 939-9700
TPI	Truss Plate Institute <a href="http://www.tpinst.org">www.tpinst.org</a>	(703) 683-1010
TPI	Turfgrass Producers International <a href="http://www.turfgrasssod.org">www.turfgrasssod.org</a>	(800) 405-8873 (847) 649-5555
TRI	Tile Roofing Institute <a href="http://www.tilerroofing.org">www.tilerroofing.org</a>	(312) 670-4177
UBC	Uniform Building Code (See ICC)	
UL	Underwriters Laboratories Inc. <a href="http://www.ul.com">www.ul.com</a>	(877) 854-3577
UNI	Uni-Bell PVC Pipe Association <a href="http://www.uni-bell.org">www.uni-bell.org</a>	(972) 243-3902
USAV	USA Volleyball <a href="http://www.usavolleyball.org">www.usavolleyball.org</a>	(888) 786-5539 (719) 228-6800
USGBC	U.S. Green Building Council <a href="http://www.usgbc.org">www.usgbc.org</a>	(800) 795-1747
USITT	United States Institute for Theatre Technology, Inc. <a href="http://www.usitt.org">www.usitt.org</a>	(800) 938-7488 (315) 463-6463
WASTEC	Waste Equipment Technology Association <a href="http://www.wastec.org">www.wastec.org</a>	(800) 424-2869 (202) 244-4700
WCLIB	West Coast Lumber Inspection Bureau <a href="http://www.wclib.org">www.wclib.org</a>	(800) 283-1486 (503) 639-0651
WCMA	Window Covering Manufacturers Association <a href="http://www.wcmanet.org">www.wcmanet.org</a>	(212) 297-2122
WDMA	Window & Door Manufacturers Association <a href="http://www.wdma.com">www.wdma.com</a>	(800) 223-2301 (312) 321-6802
WI	Woodwork Institute (Formerly: WIC - Woodwork Institute of California) <a href="http://www.wicnet.org">www.wicnet.org</a>	(916) 372-9943

WMMPA	Wood Moulding & Millwork Producers Association (See MMPA)	
WSRCA	Western States Roofing Contractors Association <a href="http://www.wsrca.com">www.wsrca.com</a>	(800) 725-0333 (650) 938-5441
WWPA	Western Wood Products Association <a href="http://www.wwpa.org">www.wwpa.org</a>	(503) 224-3930

- B. Code Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

DIN	Deutsches Institut für Normung e.V. <a href="http://www.din.de">www.din.de</a>	49 30 2601-0
IAPMO	International Association of Plumbing and Mechanical Officials <a href="http://www.iapmo.org">www.iapmo.org</a>	(909) 472-4100
ICC	International Code Council <a href="http://www.iccsafe.org">www.iccsafe.org</a>	(888) 422-7233
ICC-ES	ICC Evaluation Service, LLC <a href="http://www.icc-es.org">www.icc-es.org</a>	(800) 423-6587 (562) 699-0543

- C. Federal Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

COE	Army Corps of Engineers <a href="http://www.usace.army.mil">www.usace.army.mil</a>	(202) 761-0011
CPSC	Consumer Product Safety Commission <a href="http://www.cpsc.gov">www.cpsc.gov</a>	(800) 638-2772 (301) 504-7923
DOC	Department of Commerce National Institute of Standards and Technology <a href="http://www.nist.gov">www.nist.gov</a>	(301) 975-4040
DOD	Department of Defense <a href="http://dodssp.daps.dla.mil">http://dodssp.daps.dla.mil</a>	(215) 697-2664
DOE	Department of Energy <a href="http://www.energy.gov">www.energy.gov</a>	(202) 586-9220
EPA	Environmental Protection Agency <a href="http://www.epa.gov">www.epa.gov</a>	(202) 272-0167
FAA	Federal Aviation Administration <a href="http://www.faa.gov">www.faa.gov</a>	(866) 835-5322
FG	Federal Government Publications <a href="http://www.gpo.gov">www.gpo.gov</a>	(202) 512-1800

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GSA	General Services Administration <a href="http://www.gsa.gov">www.gsa.gov</a>	(800) 488-3111 (202) 619-8925
HUD	Department of Housing and Urban Development <a href="http://www.hud.gov">www.hud.gov</a>	(202) 708-1112
LBL	Lawrence Berkeley National Laboratory Environmental Energy Technologies Division <a href="http://eetd.lbl.gov">http://eetd.lbl.gov</a>	(510) 486-4000
OSHA	Occupational Safety & Health Administration <a href="http://www.osha.gov">www.osha.gov</a>	(800) 321-6742
SD	Department of State <a href="http://www.state.gov">www.state.gov</a>	(202) 647-4000
TRB	Transportation Research Board National Cooperative Highway Research Program <a href="http://www.trb.org">www.trb.org</a>	(202) 334-2934
USDA	Department of Agriculture Agriculture Research Service U.S. Salinity Laboratory <a href="http://www.ars.usda.gov">www.ars.usda.gov</a>	(202) 720-3656
USDA	Department of Agriculture Rural Utilities Service <a href="http://www.usda.gov">www.usda.gov</a>	(202) 720-2791
USDJ	Department of Justice Office of Justice Programs National Institute of Justice <a href="http://www.ojp.usdoj.gov">www.ojp.usdoj.gov</a>	(202) 307-0703
USP	U.S. Pharmacopeia <a href="http://www.usp.org">www.usp.org</a>	(800) 227-8772 (301) 881-0666
USPS	United States Postal Service <a href="http://www.usps.com">www.usps.com</a>	(202) 268-2000

- D. Standards and Regulations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the standards and regulations in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

CFR	Code of Federal Regulations Available from Government Printing Office <a href="http://www.gpo.gov/fdsys">www.gpo.gov/fdsys</a>	(866) 512-1800 (202) 512-1800
DOD	Department of Defense Military Specifications and Standards Available from Department of Defense Single Stock Point <a href="http://dodssp.daps.dla.mil">http://dodssp.daps.dla.mil</a>	(215) 697-2664
DSCC	Defense Supply Center Columbus	

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(See FS)

FED-STD Federal Standard  
(See FS)

FS Federal Specification (215) 697-2664  
Available from Department of Defense Single Stock Point  
<http://dodssp.daps.dla.mil>

Available from Defense Standardization Program  
[www.dsp.dla.mil](http://www.dsp.dla.mil)

Available from General Services Administration (800) 488-3111  
[www.gsa.gov](http://www.gsa.gov) (202) 619-8925

Available from National Institute of Building Sciences/Whole Building Design Guide (202) 289-7800  
[www.wbdg.org/ccb](http://www.wbdg.org/ccb)

MILSPEC Military Specification and Standards  
(See DOD)

USAB United States Access Board (800) 872-2253  
[www.access-board.gov](http://www.access-board.gov) (202) 272-0080

USATBCB U.S. Architectural & Transportation Barriers Compliance Board  
(See USAB)

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

**END OF SECTION 01 42 00**

## **SECTION 01 50 00 - TEMPORARY FACILITIES AND CONTROLS**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

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

#### **1.2 SUMMARY**

- A. Section includes requirements for temporary utilities, support facilities, and security and protection facilities.
  - 1. Nothing in this Section is intended to limit types and amounts of temporary work required, and no omission from this Section will be recognized as an indication by Architect/Engineer that such temporary activity is not required for successful completion of the Work. The use of alternative facilities equivalent to those specified is the Contractor's option, subject to Architect/Engineer's and University acceptance.
- B. Related Requirements:
  - 1. Section 01 10 00 "Summary" for work restrictions and limitations on utility interruptions.
  - 2. Section 01 35 46 "Indoor Air Quality" for temporary facility work including HVAC, air filtration, moisture management, air filtration and dust control partitions required to comply with indoor air quality requirements during construction.

#### **1.3 USE CHARGES**

- A. General: Installation and removal of and use charges for temporary facilities shall be included in the Contract Sum unless otherwise indicated. Allow other entities to use temporary services and facilities without cost, including, but not limited to, University's construction forces, Architect/Engineer, testing agencies, and authorities having jurisdiction.
- B. Use Charges: As follows:
  - 1. For new construction: Arrange for and pay for water, sewer, electric power, steam and chilled water use charges for utility usage by all entities for construction operations.
  - 2. For renovations of existing facilities: Arrange for and University will pay for all use charges.
- C. Temporary Metering: For all utility connection; sub-meter at point of connection to existing systems.
  - 1. Temporary utility meter must be approved by University Campus Energy Engineer.
  - 2. Meters shall be operational prior to any use of utility for temporary heating.

#### 1.4 INFORMATIONAL SUBMITTALS

- A. Site Plan: Show temporary facilities, utility hookups, staging areas, and parking areas for construction personnel.
- B. Erosion- and Sedimentation-Control Plan: Show compliance with requirements of EPA Construction General Permit or authorities having jurisdiction, whichever is more stringent.
- C. Fire-Safety Program: Show compliance with requirements of NFPA 241 and authorities having jurisdiction. Indicate Contractor personnel responsible for management of fire-prevention program.
- D. Dust- and HVAC-Control Plan: Submit coordination drawing and narrative that indicates the dust- and HVAC-control measures proposed for use, proposed locations, and proposed time frame for their operation. Identify further options if proposed measures are later determined to be inadequate. Include the following:
  - 1. Locations of dust-control partitions at each phase of work.
  - 2. HVAC system isolation schematic drawing.
  - 3. Location of proposed air-filtration system discharge.
  - 4. Waste handling procedures.
  - 5. Other dust-control measures.

#### 1.5 QUALITY ASSURANCE

- A. General: Comply with governing regulations and utility company regulations and recommendations for the construction of temporary facilities including, but not necessarily limited to, code compliances, permits, inspections, testing, health, safety, pollution and environmental compliances.
- B. Fire-safety: Comply with NFPA 421 "Standard for Safeguarding Construction, Alteration, and Demolition Operations."
- C. Safety: Comply with ANSI/ASSE A10 "Construction Package" series of safety construction standards.
- D. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.
- E. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.
- F. Accessible Temporary Egress: Where temporary accessible egress from existing buildings or portions thereof is provided, comply with applicable provisions in the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines and ICC/ANSI A117.1.

#### 1.6 PROJECT CONDITIONS

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

- B. Conditions of Use: Keep temporary services and facilities clean and neat in appearance. Operate in a safe and efficient manner. Take necessary fire prevention measures. Do not overload facilities, or permit them to interfere with progress. Do not allow hazardous, dangerous or unsanitary conditions, or public nuisances to develop or persist on the site.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- A. General: Provide both new or used materials and equipment for temporary facilities, which are in substantially undamaged and serviceable condition. Provide types and qualities which are recognized in the construction industry as suitable for the intended use in each application. Comply with Utility Company requirements as applicable.

### 2.2 TEMPORARY FACILITIES

- A. Field Offices, General: N/A

### 2.3 EQUIPMENT

- A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.
- B. Digital Camera: Minimum 12 megapixel; available in field office for use.

## 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, expand 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.
- C. Use qualified workers for the installation of temporary facilities.

### 3.2 TEMPORARY UTILITY INSTALLATION

- A. General: Install temporary service or connect to existing service.
  - 1. Arrange with utility company, University, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services. Comply with requirements in Section 01 10 00 "Summary" for existing utility disruption procedures.



- B. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking water for use of construction personnel. Comply with requirements of authorities having jurisdiction for type, number, location, operation, and maintenance of fixtures and facilities.
  - 1. Toilets: Use of University's existing toilet facilities is permitted on construction floor only.
  - 2. Supply and maintain toilet tissue, paper towels, paper cups and similar disposable materials as appropriate for each sanitary facility, and provide appropriate waste paper containers for used materials.
  - 3. At Contractor's option, provide drinking water for construction personnel by either water-system-connected drinking fountains or by containerized tap dispensers with paper cups (or both).
- C. Heating: Provide temporary heating required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of low temperatures or high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed.
  - 1. HVAC Equipment: Unless University authorizes use of permanent HVAC system, provide vented, self-contained, liquid-propane-gas or fuel-oil heaters with individual space thermostatic control.
    - a. Use of gasoline-burning space heaters, open-flame heaters, or salamander-type heating units is prohibited.
    - b. Permanent HVAC System: If University authorizes use of permanent HVAC system for temporary use during construction, provide filter with MERV of 8 at each return-air and exhaust grille in system and remove at end of construction. Clean and adjust HVAC system and put in new condition before Completion as required in Section 01 77 00 "Closeout Procedures".
- D. Isolation of Work Areas in Occupied Facilities: Prevent dust, fumes, and odors from entering occupied areas.
  - 1. Prior to commencing work, isolate the HVAC system in area where work is to be performed.
  - 2. Maintain dust partitions during the Work. Use vacuum collection attachments on dust-producing equipment. Isolate limited work within occupied areas using portable dust-containment devices.
  - 3. Perform daily construction cleanup and final cleanup using approved, HEPA-filter-equipped vacuum equipment.
- E. Ventilation and Humidity Control: Provide temporary ventilation required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed. Coordinate ventilation requirements to produce ambient condition required and minimize energy consumption.
  - 1. Provide dehumidification systems when required to reduce substrate moisture levels to level required to allow installation or application of finishes.
- F. Lighting: Provide temporary lighting with local switching that provides adequate illumination for construction operations, observations, inspections, and traffic conditions.
  - 1. Provide temporary light to levels and as required by governing regulations but not less than minimum 5 foot-candle illumination in all areas accessible to workers during hours

- they are at the job; minimum 10 foot-candles for shop areas; 20 foot-candles or more where detailed or finishing work is being done, supplemented as may be required.
  2. Install and operate temporary lighting that fulfills security and protection requirements without operating entire system.
  3. Install lighting for Project identification sign.
  4. Where permanent light fixtures have been used for temporary lighting, supply temporary lamps and replace with new lamps at time of Completion.
- G. Telephone Service: Provide temporary telephone service in Contractor's field office and distribute to each work station.
1. Provide superintendent with cellular telephone or portable two-way radio for use when away from field office.

### 3.3 SUPPORT FACILITIES INSTALLATION

- A. General: Comply with the following:
- 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: Comply with requirements in Section 01 10 00 "Summary."
- D. Project Signs: Provide Project signs at locations indicated or directed. Unauthorized signs are not permitted.
1. Temporary Signs: Provide other signs as indicated and as required to inform public and individuals seeking entrance to Project.
    - a. Provide temporary, directional signs for construction personnel and visitors.
  2. Engage an experience sign painter to apply required colors and graphics in a neat and professional manner.
  3. Maintain and touchup signs so they are legible at all times.
- 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 progress cleaning requirements in Section 01 73 00 "Execution."
1. Obtain necessary permits and approvals from City and County of Denver.
  2. Provide waste chutes as required in accordance with applicable laws and regulations.
- F. Lifts and Hoists: Provide facilities necessary for hoisting materials and personnel. The selection of type, size and number of hoisting facilities is the solely the responsibility of the Contractor.
1. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.
- G. Temporary Elevator Use: Use of elevators is not permitted without prior written approval of the Architect/Engineer and University Project Manager.

1. If so approved, only one designated elevator may be used subject to the requirements of "Existing Elevator Use" paragraph below.
- H. Existing Elevator Use: When approved by University, one designated existing elevator may be used at no charge to Contractor or other subcontractors for transporting personnel, small tools, materials, and equipment. Comply with requirements of Section 01 10 00 "Summary" and the following:
1. Contractor will not be granted exclusive use of the designated elevator. University personnel and staff will be permitted to use this elevator as their work duties require.
  2. Entire car is lined (floor, walls, ceiling) with 3/4 inch Fir plywood or equivalent.
  3. Total load carried does not exceed rated capacity of elevator.
  4. No materials, equipment, trash, tools or other items too large to be readily moved into and out of the car may be carried in the elevator.
  5. Before acceptance of the building, linings are removed; all exposed surfaces are in new condition; all controls, relays, other parts showing any wear have been replaced.
  6. Entire elevator, including machinery, electrical components, doors, operators and controls shall be tested, adjusted, and put in new condition with specified warranties and maintenance to take effect at date of Completion Certificate.
  7. Written clearance has been obtained from the Elevator Service Company stating that the installation is safe and complete for this use prior to using it.
  8. The Contractor signs the Elevator Service Company's standard agreement and release forms for this usage and pays charges for maintenance, service, repairs, and reconditioning.
- I. Existing Stair Usage: Use of University's existing stairs will be permitted, provided stairs are cleaned and maintained in a condition acceptable to University. At Substantial Completion, restore stairs to condition existing before initial use.
1. Provide protective coverings, barriers, devices, signs, or other procedures to protect stairs and to maintain means of egress. If stairs become damaged, restore damaged areas so no evidence remains of correction work.
- J. Temporary Use of Permanent Stairs: Use of new stairs for construction traffic will be permitted, provided stairs are protected and finishes restored to new condition at time of Substantial Completion.

### 3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Protection of Existing Facilities: Protect existing vegetation, equipment, structures, utilities, and other improvements at Project site and on adjacent properties, except those indicated to be removed or altered. Repair damage to existing facilities.
- B. Protection of Work: Protect in-progress and completed work from damage or deterioration, other than normal weathering of exposed materials, through construction duration until completion, as appropriate and as recommended by manufacturer and Installer.
1. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings. Protect finished floors and stairs from traffic, movement of heavy objects, and storage.
  2. Prohibit traffic and storage on waterproofed and roofed surfaces, on lawn and landscaped areas.
  3. Always protect excavation, trenches, and building, from damage from rain water, spring water, ground water, backing up of drains or sewers. Provide pumps, equipment, enclosures, to provide this protection.

4. Remove protective coverings and materials at the appropriate time but no later than final cleaning operations.
- C. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction as required to comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
1. Comply with work restrictions specified in Section 01 10 00 "Summary."
- D. Security: Provide security program and facilities to protect the Work, existing facilities, and University operations and to prevent unauthorized entrance, vandalism, theft, and similar violations of security.
1. Coordinate with University Police.
  2. Provide lockable entrances and lock entrances at end of each work day.
  3. After review and approval by University, install temporary enclosure around partially completed areas of construction.
  4. Storage: Where materials and equipment must be stored, and are of value or attractive for theft, provide a secure lockup. Enforce discipline in connection with the installation and release of material to minimize the opportunity for theft and vandalism.
- E. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting wherever required to prevent accidents and losses.
- F. Temporary Egress: Maintain temporary egress from existing occupied facilities as indicated and as required by authorities having jurisdiction.
- G. Temporary Partitions: Provide floor-to-floor or floor-to-ceiling dustproof partitions terminating in dustproof floor or ceiling above to limit dust and dirt migration and to separate existing active elevator hoistways and other areas occupied by University from dust, fumes and noise in compliance with Section 01 35 46 "Indoor Air Quality" and the following:
1. Construct dustproof partitions with 5/8 inch gypsum wallboard with joints taped on occupied side, and 1/2 inch fire-retardant-treated plywood on construction operations side.
  2. Where fire-resistance-rated temporary partitions are indicated or are required by authorities having jurisdiction, construct partitions according to the rated assemblies.
  3. Insulate partitions to control noise transmission to occupied areas.
  4. Seal joints and perimeter. Equip partitions with gasketed dustproof doors and security locks where openings are required.
  5. Protect air-handling equipment.
  6. Provide walk-off mats at each entrance through temporary partition.
  7. At elevator hoistway entrances not used during construction, seal openings with plastic sheet and duct tape.
- H. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241; manage fire-prevention program.
1. Fire Extinguishers: Minimum one per floor at or near useable exit.
    - a. Provide additional extinguishers where convenient and effective for intended purpose.
    - b. Comply with NFPA 10 to the extent applicable.

2. Strictly enforce site prohibition against smoking.
3. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition according to requirements of authorities having jurisdiction.
4. Develop and supervise an overall fire-prevention and -protection program for personnel at Project site. Coordinate with University Project Manager to review needs with local fire department and establish procedures to be followed. Instruct personnel in methods and procedures. Post warnings and information.
5. Provide temporary standpipes and hoses for fire protection. Hang hoses with a warning sign stating that hoses are for fire-protection purposes only and are not to be removed. Match hose size with outlet size and equip with suitable nozzles.
6. Maintain unobstructed access to fire extinguishers, temporary fire protection facilities, stairways and other access routes for fighting fires.
7. Store combustible materials in containers in fire-safe locations.
8. Permanent Fire Protection System: Complete and make operational at earliest possible date. Instruct site personnel on use of permanent system.

### 3.5 MOISTURE AND MOLD CONTROL

- A. Contractor's Moisture-Protection Plan: Comply with requirements in Section 01 35 46 "Indoor Air Quality Procedures."

### 3.6 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
  1. Do not permit temporary offices and similar temporary or permanent spaces to be used as living quarters or for other unintended occupancies or uses.
- B. Maintenance: Maintain facilities in good operating condition until removal.
  1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.
- C. Janitorial Services: Provide daily janitorial services for temporary offices, toilets, and similar areas at the project site. Require users of other temporary facilities to maintain clean and orderly premises.
- D. Temporary Facility Changeover: Do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.
- E. 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, unless Architect/Engineer requests that it be retained for a longer period of time. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
  1. Materials and facilities that constitute temporary facilities are property of Contractor. University reserves right to take possession of Project identification signs.

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2. At Substantial Completion, repair, renovate, and clean permanent facilities used during construction period. Comply with final cleaning requirements specified in Section 01 77 00 "Closeout Procedures."

**END OF SECTION 01 50 00**

## SECTION 01 60 00 - PRODUCT REQUIREMENTS

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; and comparable products.
- B. Related Requirements:
  - 1. Section 01 21 00 "Allowances" for products selected under an allowance, if applicable.
  - 2. Section 01 23 00 "Alternates" for products selected under an alternate, if applicable.
  - 3. Section 01 25 00 "Substitution Procedures" for requests for substitutions.
  - 4. Section 01 42 00 "References" for applicable industry standards for products specified.
  - 5. Section 01 77 00 "Closeout Procedures" for submittal of project warranties.

#### 1.3 DEFINITIONS

- A. Products: Items obtained for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
  - 1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature, that is current as of date of the Contract Documents.
  - 2. New Products: Items that have not previously been incorporated into another project or facility. Products salvaged or recycled from other projects are not considered new products.
  - 3. Comparable Product: Product that is demonstrated and approved through submittal process to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.
- B. Basis-of-Design Product Specification: A specification in which a specific manufacturer's product is named and accompanied by the words "basis-of-design product," including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of additional manufacturers named in the specification.

#### 1.4 ACTION SUBMITTALS

- A. Comparable Product Requests: Submit request for consideration of each comparable product. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
  - 1. Requests for consideration of comparable products will only be entertained during bidding.
  - 2. Include data to indicate compliance with the requirements specified in "Comparable Products" Article.
  - 3. Architect/Engineer's Action: If necessary, Architect/Engineer will request additional information or documentation for evaluation of a comparable product request. Architect/Engineer will notify Contractor of approval or rejection of proposed comparable product.
    - a. Form of Approval: Written Addendum.
- B. Basis-of-Design Product Specification Submittal: Comply with requirements in Section 01 33 00 "Submittal Procedures." Show compliance with requirements.

#### 1.5 QUALITY ASSURANCE

- A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, select product compatible with products previously selected, even if previously selected products were also options. The complete compatibility between the various choices available to the Contractor is not assured by the various requirements of the Contract Documents, but must be provided by the Contractor.
- B. Source Limitations: To the fullest extent possible, provide products of the same kind, from a single source.
- C. Nameplates: Except for required labels and operating data, do not attach or imprint manufacturers or producer's nameplates or trademarks on exposed surfaces of products which will be exposed to view in occupied spaces or on the exterior.
- D. Labels: Locate required product labels and stamps on a concealed surface or, where required for observation after installation, on an accessible surface that is not conspicuous.
- E. Equipment Nameplates: Provide a permanent nameplate on each item of service-connected or power-operated equipment. Locate on an easily accessible surface which is inconspicuous in occupied spaces. The nameplate shall contain the following information and other essential operating data.
  - 1. Name of product and manufacturer.
  - 2. Model and serial number.
  - 3. Capacity.
  - 4. Speed.
  - 5. Ratings.
  - 6. Power characteristics (if applicable).
  - 7. UL label or compliance (if applicable).



## 1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft and vandalism. Comply with manufacturer's written instructions.
- B. Delivery and Handling:
  - 1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
  - 2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
  - 3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
  - 4. Inspect products on delivery to determine compliance with the Contract Documents and to determine that products are undamaged and properly protected.
- C. Storage:
  - 1. Store products to allow for inspection and measurement of quantity or counting of units.
  - 2. Store materials in a manner that will not endanger Project structure.
  - 3. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
  - 4. Protect foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
  - 5. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
  - 6. Protect stored products from damage and liquids from freezing.

## 1.7 PRODUCT WARRANTIES

- A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents. Such disclaimers and limitations do not relieve warranty requirements on Work that incorporates product nor do they relieve suppliers, manufacturers and subcontractors required to countersign special warranties with the Contractor.
  - 1. Manufacturer's Warranty: Written warranty furnished by individual manufacturer for a particular product and specifically endorsed by manufacturer to University.
  - 2. Special Warranty: Written warranty required by the Contract Documents to provide specific rights for University.
- B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution.
  - 1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
  - 2. Specified Form: When specified forms are included with the Specifications, prepare a written document using indicated form properly executed.
  - 3. See other Sections for specific content requirements and particular requirements for submitting special warranties.

- C. Submittal Time and Form: Comply with requirements in Section 01 77 00 "Closeout Procedures."
- D. Warranty Requirements:
1. Related Damages and Losses: When correcting warranted Work that has failed, remove and replace other Work that has been damaged as a result of such failure or that must be removed and replaced to provide access for correction of warranted Work.
  2. Reinstatement of Warranty: When Work covered by a warranty has failed and been corrected by replacement or rebuilding, reinstate the warranty by written endorsement. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for depreciation.
  3. Replacement Cost: Upon determination that Work covered by a warranty has failed, replace or rebuild the Work to an acceptable condition complying with requirements of Contract Documents. The Contractor is responsible for the cost of replacing or rebuilding defective Work regardless of whether the University has benefited from use of the Work through a portion of its anticipated useful service life.
  4. University's Recourse:
    - a. Written warranties made to the University are in addition to implied warranties, and shall not limit the duties, obligations, rights and remedies otherwise available under the law, nor shall warranty periods be interpreted as limitations on time in which the University can enforce such other duties, obligations, rights, or remedies.
    - b. Rejection of Warranties: The University reserves the right to reject warranties and to limit selections to products with warranties not in conflict with requirements of the Contract Documents.
    - c. The University reserves the right to refuse to accept Work for the Project where a special warranty, certification, or similar commitment is required on such Work or part of the Work, until evidence is presented that entities required to countersign such commitments are willing to do so.

## PART 2 - PRODUCTS

### 2.1 PRODUCT SELECTION PROCEDURES

- A. General Product Requirements: Provide products that comply with the Contract Documents, are undamaged, are asbestos free, and, unless otherwise indicated, are new at time of installation.
1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
  2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
  3. University reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
  4. Where products are accompanied by the term "as selected," Architect/Engineer will make selection.
  5. Descriptive, performance, and reference standard requirements in the Specifications establish salient characteristics of products.
  6. Or Equal: For products specified by name and accompanied by the term "or equal," or "or approved equal," or "or approved," comply with requirements in "Comparable Products" Article to obtain approval for use of an unnamed product and provide only

products previously approved during bid phase by written Addendum. The determination of equivalence is at the sole discretion of the Architect/Engineer who has no obligation to prove non-equivalence.

7. Mechanical and electrical equipment design and their space requirements are based on the first named item of the Section in which specified or that scheduled on the Drawings. If other than the first named or scheduled item listed for use is selected, modification to other elements of Work may be required. Show all such modification on shop drawings and submittals as appropriate. The cost of such modifications is solely the responsibility of the Contractor.
8. Where manufacturers are listed as acceptable for specific proprietary products but precise identification by model, series, or trade name is not specified, submit detailed product information for such products for Architect/Engineer's acceptance prior to ordering. Include specific requirements for modifications to other construction, including but not limited to, power and utility requirements, characteristics, capacities, size and locations. The cost of such modifications is solely the responsibility of the Contractor.

B. Product Selection Procedures:

1. Product: Where Specifications name a single manufacturer and product, provide the named product that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
2. Manufacturer/Source: Where Specifications name a single manufacturer or source, provide a product by the named manufacturer or source that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
3. Products:
  - a. Restricted List: Where Specifications include a list of names of both manufacturers and products, provide one of the products listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
4. Manufacturers:
  - a. Restricted List: Where Specifications include a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
5. Basis-of-Design Product: Where Specifications name a product, or refer to a product indicated on Drawings, and include a list of manufacturers, provide the specified or indicated product or a comparable product by one of the other named manufacturers. If proposing a comparable product by another manufacturer, whether named or not, provide a custom product if manufacturer's standard product does not include salient features of the Basis-of-Design product indicated. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with requirements in "Comparable Products" Article for consideration of an unnamed product by one of the other named manufacturers.
6. Contractor's Option: Where materials, products, systems or methods are specified to be selected from a list of options, subject to compliance with requirements, the choice of which material, method, product or system will be solely at the Contractor's discretions. There will be no change in Contract Sum or Time because of such choice.

- C. Visual Matching Specification: Where Specifications require "match Architect/Engineer's sample", provide a product that complies with requirements and matches Architect/Engineer's sample. Architect/Engineer's decision will be final on whether a proposed product matches.

1. If no product available within specified category matches and complies with other specified requirements, comply with requirements in Section 01 25 00 "Substitution Procedures" for proposal of product.
- D. Visual Selection Specification: Where Specifications include the phrase "as selected by Architect/Engineer from manufacturer's full range" or similar phrase, select a product that complies with requirements. Architect/Engineer will select color, gloss, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.

## 2.2 COMPARABLE PRODUCTS

- A. Conditions for Consideration: Prior to bid, Architect/Engineer will consider Contractor's request for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, Architect/Engineer will reject request:
  1. Evidence that the proposed product does not require revisions to the Contract Documents, that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.
  2. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
  3. Evidence that proposed product provides specified warranty.
  4. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners, if requested.
  5. Samples, if requested.

## PART 3 - EXECUTION (Not Used)

### END OF SECTION 01 60 00

## **SECTION 01 73 00 - EXECUTION**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

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

#### **1.2 SUMMARY**

- A. Section includes general administrative and procedural requirements governing execution of the Work including, but not limited to, the following:
  - 1. Construction layout.
  - 2. Field engineering and surveying.
  - 3. Installation of the Work.
  - 4. Cutting and patching.
  - 5. Coordination of University-installed products.
  - 6. Progress cleaning.
  - 7. Starting and adjusting.
  - 8. Protection of installed construction.
  - 9. Correction of the Work.
- B. Related Requirements:
  - 1. Section 01 10 00 "Summary" for limits on use of Project site and procedures related to utility interruptions.

#### **1.3 DEFINITIONS**

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

#### **1.4 INFORMATIONAL SUBMITTALS**

- A. Qualification Data: For land surveyor or professional engineer.
- B. Certificates: Submit certificate signed by land surveyor or professional engineer certifying that location and elevation of improvements comply with requirements.
- C. Cutting and Patching Plan and Request: Submit plan and request describing procedures at least 21 calendar days prior to the time cutting and patching will be performed.
  - 1. Submit request whenever cutting and patching operation affect:

- a. Work of the University or any separate contractor.
    - b. Structural value or integrity of any element of the Project.
    - c. Integrity or effectiveness of weather-exposed or moisture-resistant elements or systems.
    - d. Efficiency, operational life, maintenance or safety of operational elements.
    - e. Visual qualities of sight-exposed elements.
    - f. Cutting new openings in existing structural concrete walls, floors and suspended slabs.
    - g. Cutting new openings in existing roofs and roofing materials.
    - h. Cutting exterior walls.
    - i. Cutting into shafts.
  2. Include the following information:
    - a. Extent: Describe reason for and extent of each occurrence of cutting and patching, including explanation of why cutting and patching operation cannot be reasonable avoided.
    - b. Changes to In-Place Construction: Describe cutting and patching methods and anticipated results. Include changes to structural elements and operating components as well as changes in building appearance and other significant visual elements.
    - c. Products: List products to be used for patching and firms or entities that will perform patching work.
    - d. Trades: Indicate trades and subcontractors who will perform the work.
    - e. Dates: Indicate when cutting and patching will be performed.
    - f. Utilities and Mechanical and Electrical Systems: List services and systems that cutting and patching procedures will disturb or affect. List services and systems that will be relocated and those that will be temporarily out of service. Indicate length of time permanent services and systems will be disrupted.
      - 1) Include description of provisions for temporary services and systems during interruption of permanent services and systems.
      - 2) Comply with requirements of Section 01 10 00 "Summary" related to existing utility and system interruptions.
    - g. Structural Elements: Where cutting and patching structural elements requires the addition of reinforcement, submit details and calculations signed and sealed by an Engineer registered in the State of Colorado. Indicate how new reinforcing will be integrated with original structure.
  3. Limitations: Approval of cutting and patching request does not waive right of Architect/Engineer or University to later require complete removal and replacement of work found to be unsatisfactorily cut and patched.
- D. Certified Surveys: Submit two copies signed by land surveyor or professional engineer.
- E. Final Property Survey: Submit one electronic and two paper copies showing the Work performed and record survey data.
1. Include certified statement that lines and levels of the work comply with the requirements of the Contract Documents and listing authorized or accepted deviations, cross-referenced to Change Order number, where applicable.

## 1.5 QUALITY ASSURANCE

- A. Land Surveyor Qualifications: A professional land surveyor who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing land-surveying services of the kind indicated.
- B. Cutting and Patching: Comply with requirements for and limitations on cutting and patching of construction elements.
  - 1. Structural Elements: When cutting and patching structural elements, notify Architect/Engineer of locations and details of cutting and await directions from Architect/Engineer before proceeding. Shore, brace, and support structural elements during cutting and patching. Do not cut and patch structural elements in a manner that could change their load-carrying capacity or increase deflection
  - 2. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety. Operational elements include but are not limited to the following:
    - a. Primary operational systems and equipment.
    - b. Fire separation assemblies.
    - c. Air or smoke barriers.
    - d. Fire-suppression systems.
    - e. Mechanical systems piping and ducts.
    - f. Control systems.
    - g. Communication systems.
    - h. Fire-detection and -alarm systems.
    - i. Conveying systems.
    - j. Electrical wiring systems.
    - k. Operating systems of special construction.
  - 3. Other Construction Elements: Do not cut and patch other construction elements or components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety. Other construction elements include but are not limited to the following:
    - a. Water, moisture, or vapor barriers.
    - b. Membranes and flashings.
    - c. Exterior curtain-wall construction.
    - d. Sprayed fire-resistive material.
    - e. Equipment supports.
    - f. Piping, ductwork, vessels, and equipment.
    - g. Noise- and vibration-control elements and systems.
  - 4. Visual Elements: Do not cut and patch construction exposed to the exterior or exposed in occupied spaces in a manner that results in visual evidence of cutting and patching. Do not cut and patch exposed construction in a manner that would, in Architect/Engineer's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.
  - 5. Hazardous Materials: Do not proceed with cutting and patching operations until University has examined existing construction for the presence of asbestos and/or lead-based coatings. Comply with requirements in Section 01 35 00 "Special Procedures."

- C. Manufacturer's Installation Instructions: Obtain and maintain on-site manufacturer's written recommendations and instructions for installation of products and equipment.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- A. General: Comply with requirements specified in other Sections.
  - 1. For projects requiring compliance with sustainable design and construction practices and procedures, use products for patching that comply with requirements in Division 01 Section "Sustainable Design Requirements."
- B. In-Place Materials: Use materials for patching identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.
  - 1. If identical materials are unavailable or cannot be used, use materials that, when installed, will provide a match acceptable to Architect/Engineer for the visual and functional performance of in-place materials.
- C. 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.
  - 1. Use cleaning products that comply with Green Seal's GS-37, or if GS-37 is not applicable, use products that comply with the California Code of Regulations maximum allowable VOC levels.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Existing Conditions: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities, mechanical and electrical systems, and other construction affecting the Work. Notify University Project Manager and Architect/Engineer and obtain approval prior to disturbing, moving or penetrating soil.
  - 1. Arrange for locating buried utilities including water and sewer lines within construction limits. Obtain location information and stake all known utilities prior to commencing construction activities.
    - a. Contact Utility Notification Center of Colorado (UNCC), 1-800-922-1987, and comply with UNCC guidelines.
  - 2. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping; underground electrical services, and other utilities.
  - 3. Furnish location data for work related to Project that must be performed by public utilities serving Project site.



- B. Examination and Acceptance of Conditions: Before proceeding with each component of the Work, examine substrates, areas, and conditions, with Installer or Applicator present, for compliance with requirements for installation tolerances and other conditions affecting performance.
  - 1. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
  - 2. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
  - 3. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
  - 4. 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 or University, as appropriate, that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.
- B. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- C. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- D. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents caused by differing field conditions outside the control of Contractor, submit a request for information to Architect/Engineer according to requirements in Section 01 31 00 "Project Management and Coordination."

### 3.3 CONSTRUCTION LAYOUT

- A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks. If discrepancies are discovered, notify Architect/Engineer promptly.
- B. General: Engage a land surveyor or professional engineer to lay out the Work using accepted surveying practices.
  - 1. Establish benchmarks and control points to set lines and levels at each story of construction and elsewhere as needed to locate each element of Project.
  - 2. Establish limits on use of Project site.
  - 3. Establish dimensions within tolerances indicated. Do not scale Drawings to obtain required dimensions.
  - 4. Inform installers of lines and levels to which they must comply.
  - 5. Check the location, level and plumb, of every major element as the Work progresses.
  - 6. Notify Architect/Engineer when deviations from required lines and levels exceed allowable tolerances. Record deviation which are accepted (i.e., not corrected) on record

drawings in accordance with the requirements of Section 01 78 39 "Project Record Documents."

7. Close site surveys with an error of closure equal to or less than the standard established by authorities having jurisdiction.
- C. Site Improvements: Locate and lay out site improvements, including pavements, grading, fill and topsoil placement, utility slopes, and rim and invert elevations.
- D. Building Lines and Levels: Locate and lay out control lines and levels for structures, building foundations, column grids, and floor levels, including those required for mechanical and electrical work. Transfer survey markings and elevations for use with control lines and levels. Level foundations and piers from two or more locations.
- E. 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/Engineer.

### 3.4 FIELD ENGINEERING

- A. Identification: University 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.
  1. Do not change or relocate existing benchmarks or control points without prior written approval of Architect/Engineer. Report lost or destroyed permanent benchmarks or control points promptly. Report the need to relocate permanent benchmarks or control points to Architect/Engineer before proceeding.
  2. Replace lost or destroyed permanent benchmarks and control points promptly. Base replacements on the original survey control points.
- 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.
- D. Certified Survey: On completion of foundation walls, major site improvements, and other work requiring field-engineering services, prepare a certified survey showing dimensions, locations, angles, and elevations of construction and sitework.
- E. Final Property Survey: Engage a land surveyor or professional engineer to prepare a final property survey showing significant features (real property) for Project. Include on the survey a certification, signed by land surveyor or professional engineer, that principal metes, bounds, lines, and levels of Project are accurately positioned as shown on the survey.

1. Show boundary lines, monuments, streets, site improvements and utilities, existing improvements and significant vegetation, adjoining properties, acreage, grade contours, and the distance and bearing from a site corner to a legal point.
2. Recording: At Substantial Completion, have the final property survey recorded by or with authorities having jurisdiction as the official "property survey."

### 3.5 INSTALLATION

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
  1. Make vertical work plumb and make horizontal work level.
  2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
  3. Conceal pipes, ducts, and wiring in finished areas unless otherwise indicated.
  4. Maintain minimum headroom clearance of 96 inches in occupied spaces and 90 inches in unoccupied spaces.
- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated to the extent they are more explicit or stringent than requirements of the Contract Documents.
- C. Install products at the time and under conditions, including weather that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.
- D. Isolate each part of complete installation from incompatible material as needed to prevent deterioration.
- E. 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.
- F. Sequence the Work and allow adequate clearances to accommodate movement of construction items on site and placement in permanent locations.
- G. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.
- H. 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.
- I. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place, accurately located and aligned, true and level as applicable, with other portions of the Work. Where size and type of attachments are not indicated, verify size and type required for load conditions.
  1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect/Engineer.
  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.

J. Attachment to Concrete:

1. No drilled inserts or powder-actuated fasteners are permitted in pre-stressed concrete except as specifically authorized by Contractor and carried out under the direct supervision of its Superintendent.
2. Only those devices with a maximum controlled penetration of 3/4 inch or less will be permitted. Make holes through slabs by means of sleeves placed no closer than 2 inch from tensioning cables. Core drilling will not be permitted unless unavoidable and as specified for cutting and patching in this Section.

K. Joints: Unless indicated otherwise, make joints of uniform width. Where joint locations in exposed work are required but not indicated, arrange joints for the best visual effect. Confirm arrangement with Architect/Engineer before proceeding. Fit exposed connections together to form hairline joints.

L. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

### 3.6 CUTTING AND PATCHING

A. Cutting and Patching, General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.

1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.

B. Responsibility: Provide cutting and patching work, including attendant excavation and backfill required to complete the Work or to:

1. Make components fit together properly.
2. Uncover portions of the Work to provide for installation of ill-timed work.
3. Remove and replace defective work or work not conforming to requirements of Contract Documents.
4. Remove samples of installed work as specified for testing.
5. Provide routine penetrations of non-structural surfaces for installation of piping and electrical conduit.

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

D. Temporary Support: Provide temporary support of work to be cut.

E. 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.

F. Adjacent Occupied Areas: Where interference with use of adjoining areas or interruption of free passage to adjoining areas is unavoidable, coordinate cutting and patching according to requirements in Section 01 10 00 "Summary."

G. 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, coordinate cutting and patching according to requirements in Section 01 10 00 "Summary."

- H. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
  - 1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots neatly to minimum size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
  - 2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
  - 3. Concrete and Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
  - 4. Excavating and Backfilling: Comply with requirements in applicable Sections where required by cutting and patching operations. Employ methods which will prevent settlement or damage to other work.
  - 5. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
  - 6. Proceed with patching after construction operations requiring cutting are complete.
- I. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other work. Patch with durable seams that are as invisible as practicable. Provide materials and comply with installation requirements, including tolerance, specified in other Sections, where applicable.
  - 1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate physical integrity of installation.
  - 2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
    - a. Clean piping, conduit, and similar features before applying paint or other finishing materials.
    - b. Restore damaged pipe covering to its original condition.
  - 3. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance. Remove in-place floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
    - a. Where patching occurs in a painted surface, prepare substrate and apply primer and intermediate paint coats appropriate for substrate over the patch, and apply final paint coat over entire unbroken surface containing the patch. Provide additional coats until patch blends with adjacent surfaces.
  - 4. Ceilings: Patch, repair, or rehang in-place ceilings as necessary to provide an even-plane surface of uniform appearance.
  - 5. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition and ensures thermal and moisture integrity of building enclosure.
- J. Cleaning: Clean areas and spaces where cutting and patching are performed. Remove paint, mortar, oils, putty, and similar materials from adjacent finished surfaces.

### 3.7 UNIVERSITY-INSTALLED PRODUCTS

- A. Site Access: Provide access to Project site for University's construction personnel.
- B. Coordination: Coordinate construction and operations of the Work with work performed by University's construction personnel.
  - 1. Construction Schedule: Inform University of Contractor's preferred construction schedule for University's portion of the Work. Adjust construction schedule based on a mutually agreeable timetable. Notify University if changes to schedule are required due to differences in actual construction progress.
  - 2. Preinstallation Conferences: Include University's construction personnel at preinstallation conferences covering portions of the Work that are to receive University's work. Attend preinstallation conferences conducted by University's construction personnel if portions of the Work depend on University's construction.

### 3.8 PROGRESS CLEANING

- A. General: Clean Project site and work areas daily, including common areas. Enforce requirements strictly. Dispose of materials lawfully.
  - 1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
  - 2. Do not hold waste materials more than seven calendar days during normal weather or three calendar 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 regulations.
    - a. Use containers intended for holding waste materials of type to be stored.
- B. Collection Point: Review location with University and obtain approval.
- C. Site: Maintain Project site free of waste materials and debris.
- D. Wind Blown Debris: Prevent spread of trash, debris, cartons, packing material, or other waste on or off Project site by wind.
- E. Dust: Sprinkle dusty debris with water.
- F. Packing Materials: Immediately after uncrating or unpacking materials or equipment, remove all crating, lumber, excelsior, wrapping or other like combustible materials from building to central collection facility.
- G. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
  - 1. Remove liquid spills promptly.
  - 2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
- H. 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.

- I. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.
- J. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.
- K. Waste Disposal: Do not bury or burn waste materials on-site. Do not wash waste materials down sewers or into waterways. Comply with waste disposal requirements in Section 01 74 19 "Construction Waste Management and Disposal."
- L. 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.
- M. 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.
- N. 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.
- O. Snow and Ice: Remove snow and ice from sidewalks adjacent to site and from access ways to building and construction site.
- P. Streets: At frequency required by University and/or governing authority, clean adjacent and nearby streets of dirt resulting from construction operations.

### 3.9 STARTING AND ADJUSTING

- A. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.
- B. Adjust equipment for proper operation. Adjust operating components for proper operation without binding.
- C. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
- D. Manufacturer's Field Service: Comply with qualification requirements in Section 01 40 00 "Quality Requirements."

### 3.10 PROTECTION OF INSTALLED CONSTRUCTION

- A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.
- B. Comply with manufacturer's written instructions for temperature and relative humidity.
- C. Limiting Exposures: Supervise construction activities to ensure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious

exposure during the construction period. Where applicable, such exposures include, but are not limited to, the following:

1. Excessive static or dynamic loading.
2. Excessive internal or external pressures.
3. Excessively high or low temperatures.
4. Thermal shock.
5. Excessively high or low humidity.
6. Air contamination or pollution.
7. Water or ice.
8. Solvents.
9. Chemicals.
10. Light.
11. Radiation.
12. Puncture.
13. Abrasion.
14. Heavy traffic.
15. Soiling, staining and corrosion.
16. Bacteria.
17. Rodent and insect infestation.
18. Combustion.
19. Electrical current.
20. High speed operation.
21. Improper lubrication.
22. Unusual wear or other misuse.
23. Contact between incompatible materials.
24. Misalignment.
25. Excessive weathering.
26. Unprotected storage.
27. Improper shipping or handling.
28. Theft.
29. Vandalism.

**END OF SECTION 01 73 00**



## **SECTION 01 77 00 - CLOSEOUT PROCEDURES**

### **1.1 RELATED DOCUMENTS**

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

### **1.2 SUMMARY**

- A. Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
  - 1. Substantial Completion procedures, including Notice of Completion and Final Inspection procedures.
  - 2. Occupancy procedures, including Notice of Approval of Occupancy/Use and University Supplemental Notice of Occupancy and Use List.
  - 3. Final Acceptance procedures, including Pre-Acceptance Checklist and University Supplemental Building/Project Acceptance List.
  - 4. Inspections after completion.
  - 5. Warranties.
  - 6. Final cleaning.
  - 7. Repair of the Work.
- B. Related Requirements:
  - 1. Section 01 32 33 "Photographic Documentation" for submitting final completion construction photographic documentation.
  - 2. Section 01 73 00 "Execution" for progress cleaning of Project site.
  - 3. Section 01 78 23 "Operation and Maintenance Data" for operation and maintenance manual requirements.
  - 4. Section 01 78 39 "Project Record Documents" for submitting record Drawings, record Specifications, and record Product Data.
  - 5. Section 01 79 00 "Demonstration and Training" for requirements for instructing University's personnel.

### **1.3 ACTION SUBMITTALS**

- A. Product Data: For cleaning agents.
- B. Contractor's List of Incomplete Items: Initial submittal at Notice of Completion.
- C. Certified List of Incomplete Items: Final submittal at Final Acceptance.

### **1.4 CLOSEOUT SUBMITTALS**

- A. Certificates of Release: From authorities having jurisdiction.
- B. Certificate of Insurance: For continuing coverage.
- C. Field Report: For pest control inspection.

1.5 MAINTENANCE MATERIAL SUBMITTALS

- A. Schedule of Maintenance Material Items: For maintenance material submittal items specified in other Sections.

1.6 NOTICE OF COMPLETION AND SUBSTANTIAL COMPLETION PROCEDURES

- A. Procedures and Submittals Prior to Notice of Completion: Complete and submit all of the following items prior to submitting Notice of Completion to Architect/Engineer. Include Contractor's comprehensive list of items to be completed, corrected or not in compliance with the Drawings and Specifications.
  - 1. Contractor's List of Incomplete Items: Prepare and submit a list of items to be completed and corrected (Contractor's preliminary punch list), indicating the value of each item on the list and reasons why the Work is incomplete.
  - 2. Building Inspection Record: Submit completed record with all required corrections noted.
  - 3. Certificate of Occupancy: Submit Certificate of Occupancy (CO) or Temporary Certificate of Occupancy (TCO).
  - 4. Final Completion Schedule: Submit schedule for performing and completing all work indicated on the Contractor's list of incomplete items.
  - 5. Submit sustainable design documentation.
  - 6. Submit closeout submittals specified in other Division 01 Sections, including project record documents, operation and maintenance manuals, final completion construction photographic documentation, damage or settlement surveys, property surveys, and similar final record information.
  - 7. Submit closeout submittals specified in individual Sections, including specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
  - 8. Submit test/adjust/balance records.
- B. Final Inspection: Submit Notice of Completion to Architect/Engineer. Upon receipt, Architect/Engineer and University will review and if all items on the University Supplemental Notice of Completion Checklist are complete will, within the timeframe required by the Contract, schedule and make an inspection of the Project to determine whether the Work is substantially complete.
  - 1. Final Punch List: Based on the inspection, Architect/Engineer will prepare a final punch list of work to be completed, work not in compliance with the Drawings or Specifications, and unsatisfactory work for any reason.
  - 2. Re-inspection: If the cumulative number of items identified on the final punch list prevents a determination that the work is substantially complete, complete those items and when complete resubmit Notice of Completion. Upon receipt of resubmittal, Architect/Engineer and University will then schedule and make a re-inspection of the Project to determine whether the Work is substantially complete.
- C. Notice of Substantial Completion: When inspection of the Work indicates that the Project is substantially complete and all other Contract provisions required for substantial completion have been satisfied, Architect/Engineer will issue a Notice of Substantial Completion (State Form SBP-07).

#### 1.7 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- A. Organization of List: Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.
  - 1. Organize list of spaces in sequential order, starting with exterior areas first and proceeding from lowest floor to highest floor or as approved by Architect/Engineer.
  - 2. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.
  - 3. Include the following information at the top of each page:
    - a. Project name.
    - b. Date.
    - c. Name of Architect/Engineer.
    - d. Name of Contractor.
    - e. Page number.
  - 4. Submit list of incomplete items in the following format:
    - a. MS Excel and PDF electronic file. Architect/Engineer will return annotated file.

#### 1.8 OCCUPANCY PROCEDURES

- A. Procedures and Submittals Prior to Occupancy: Complete and submit all items on both State Form SBP-01 "Notice of Approval of Occupancy/Use" and University Supplemental Notice of Occupancy and Use List.

#### 1.9 FINAL ACCEPTANCE PROCEDURES

- A. Procedures and Submittals Prior to Final Acceptance: Complete and submit all items on both State Form SBP-05 "Pre-Acceptance Checklist" and University Supplemental Building/Project Acceptance List.
- B. Inspection: Submit a written request for final inspection to determine acceptance a minimum of 10 business days prior to date the work will be completed and ready for final inspection and tests. On receipt of request, Architect/Engineer will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect/Engineer 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.

#### 1.10 SETTLEMENT AND FINAL PAYMENT

- A. Submit and complete all of the following as a condition precedent to settlement and final payment:
  - 1. All guarantees and warranties.
  - 2. All statement to support local sales tax refunds, if any.
  - 3. Three (3) sets of operation and maintenance manuals.
  - 4. One (1) set of as-built Contract Documents showing all job changes.
  - 5. All demonstration and training completed in accordance with Section 01 79 00.

6. All punch list items documented as complete.

- B. Final Certificate of Payment: Submit in accordance with the requirements of Section 01 29 00 "Payment Procedures."

#### 1.11 INSPECTIONS AFTER COMPLETION

- A. Warranty/Guarantee Inspections: During the warranty period, accompany Architect/Engineer and University Representative, and participate in inspection(s) of the Project to identify defective and deficient work at intervals and as required by the Contract.
- B. List of Deficient or Defective Work: Within 10 business days of inspection, Architect/Engineer will provide Contractor with a list of items requiring correction.
- C. Remedial Work: Upon receive of itemized list, immediately correct and remedy deficiencies and defects in a manner satisfactory to the Architect/Engineer and University.

#### 1.12 SUBMITTAL OF PROJECT WARRANTIES

- A. Time of Submittal: Submit written warranties to the Architect/Engineer prior to advertisement of the Notice of Contractor's Settlement. If the Notice of Acceptance designates a commencement date for warranties other than the date of Notice of Acceptance for the Work, or a designated portion of the Work, submit written warranties upon request of the Architect.
- B. Partial Occupancy: When a designated portion of the Work is completed and occupied or used by the University, by separate agreement with the Contractor during the construction period, submit properly executed warranties to the Architect/Engineer within fifteen (15) calendar days of completion of that designated portion of the Work.
- C. Special Warranties: When a special warranty is required to be executed by the Contractor, or the Contractor and a Subcontractor, supplier or manufacturer, prepare a written document that contains appropriate terms and identification, ready for execution by the required parties. Submit a draft to the University through the Architect/Engineer for approval prior to final execution. Refer to individual Specification Sections for specific requirements for special warranties.
- D. Form of Submittal: Organize warranty documents into an orderly sequence based on the table of contents of Project Manual.
1. Number of Copies: Two.
  2. Bind warranties and bonds in heavy-duty, three-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch paper.
  3. 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.
  4. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.
  5. Warranty Electronic File: Scan warranties and bonds and assemble complete warranty and bond submittal package into a single indexed electronic PDF file with links enabling navigation to each item. Provide bookmarked table of contents at beginning of document.

- E. Provide additional copies of each warranty to include in operation and maintenance manuals.
- F. List of Extended Warranties: Provide a comprehensive list of all manufacturers' standard and special warranties with duration greater than one year after Notice of Acceptance. Organize list into an orderly sequence based on table of contents of the Project Manual.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.
  - 1. Use cleaning products that comply with Green Seal's GS-37, or if GS-37 is not applicable, use products that comply with the California Code of Regulations maximum allowable VOC levels.
  - 2. Do not use sweeping compounds on concrete floors that will leave residue affecting finish floor materials.

## PART 3 - EXECUTION

### 3.1 FINAL CLEANING

- A. General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
  - 1. Complete the following cleaning operations immediately prior to Occupancy for entire Project or for a designated portion of Project:
    - a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
    - b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
    - c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
    - d. Remove tools, construction equipment, machinery, and surplus material from Project site.
    - e. Remove snow and ice to provide safe access to building.
    - f. Clean exposed exterior and interior finishes to a dirt-free condition, free of grease, dust, stains, films, fingerprints, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
    - g. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
    - h. Sweep concrete floors broom clean in unoccupied spaces.

- i. Vacuum carpet and similar soft surfaces, removing debris and excess nap; clean according to manufacturer's recommendations if visible soil or stains remain.
  - j. Power scrub and power buff resilient flooring surfaces, tile and fluid-applied flooring.
  - k. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Polish mirrors and glass, taking care not to scratch surfaces.
  - l. Remove labels that are not permanent.
  - m. Wipe surfaces of mechanical and electrical equipment, elevator equipment where applicable, and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
  - n. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
  - o. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
  - p. Clean ducts, blowers, and coils if units were operated without filters during construction or that display contamination with particulate matter on inspection.
    - 1) Clean HVAC system in compliance with NADCA Standard 1992-01. Provide written report on completion of cleaning.
  - q. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency.
  - r. Clean food service equipment to sanitary condition acceptable for intended food service use and approved by authority having jurisdiction.
  - s. Leave Project clean and ready for occupancy.
- C. Pest Control: Comply with pest control requirements in Section 01 50 00 "Temporary Facilities and Controls." Prepare written report.

### 3.2 REPAIR OF THE WORK

- A. Complete repair and restoration operations before requesting inspection for determination of Substantial Completion.
- B. Repair or remove and replace defective construction. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment. Where damaged or worn items cannot be repaired or restored, provide replacements. Remove and replace operating components that cannot be repaired. Restore damaged construction and permanent facilities used during construction to specified condition.
- 1. Remove and replace chipped, scratched, and broken glass, reflective surfaces, and other damaged transparent materials.
  - 2. Touch up and otherwise repair and restore marred or exposed finishes and surfaces. Replace finishes and surfaces that already show evidence of repair or restoration.
    - a. Do not paint over "UL" and other required labels and identification, including mechanical and electrical nameplates. Remove paint applied to required labels and identification.
  - 3. Replace parts subject to operating conditions during construction that may impede operation or reduce longevity.
  - 4. Replace burned-out bulbs, bulbs noticeably dimmed by hours of use, and defective and noisy starters in fluorescent and mercury vapor fixtures to comply with requirements for new fixtures.

### 3.3 ATTACHMENTS

- A. Samples of the following forms are appended to this Section for reference following End of Section 01 77 00:
1. University of Colorado Denver | Anschutz Medical Campus Supplemental Notice of Occupancy and Use List.
  2. University of Colorado Denver | Anschutz Medical Campus Supplemental Building / Project Acceptance List.

**END OF SECTION 01 77 00**

## Supplemental Notice of Occupancy and Use List

Project Name & Number: CU Denver Business School 5<sup>th</sup> & 6<sup>th</sup> Roof Drainage Repair PN# 21-115057

Contractor: \_\_\_\_\_

In addition to completing Notice of Approval of Occupancy / Use (SBP-01), the following items must be completed before Occupancy is approved.

Activity	Date Completed	Remarks
1. Final and formal address posted on the building entries.		
2. A copy of the Contractor's in-progress red line "as-built" drawings has been given to BMO representative & a 2 <sup>nd</sup> copy is provided-for Projects plan room. This is to include landscape drawings showing irrigation installation.		
3. Maintenance, operations and spare parts manuals on all installed equipment.		
4. Notice of Partial Substantial Completion concerning roles/ responsibilities of University and Contractor for security, maintenance, heat, utilities reviewed and accepted.		
5. Manufacturer maintenance, operations and spare parts manuals for fixtures, mechanical, electrical and plumbing.		
6. Hardware-maintenance, operations and spare parts manuals for doors & locks, including roll up doors.		
7. Warranty Dates and Contact list for all Contractors and Suppliers given to BMO.		
8. Transfer utility account from Contractor to Facilities Operations.		
9. Site plan to include first floor main isolation locations and plans for each floor to include main utility shutoffs, for utilities to include water, electrical, steam, sewer, fuel supply, telecom, fiber optic and gasses, identified on a set of drawings.		
10. If Commissioning Report is completed, BMO has reviewed/ commented, including electrical, plumbing, mechanical/ HVAC.		
11. All Contractor provided equipment has new filters & construction filters removed.		
12. Not Used		
13. Elevator equipment rooms insulated and space conditioned for control system requirements.		
14. Testing Certifications provided to BMO for Elevators, Fire Systems & Annunciator Systems.		
15. FSS has been provided with copy of Building Department testing and inspection report for window washing equipment.		
16. Roof walking pads to access equipment are installed.		
17. PM to communicate to fire department via Life Safety Officer that building has transitioned to BMO. Alarms at Anschutz Medical Campus report to University Police Dispatch and at Downtown report to designated monitoring company.		





## Supplemental Building / Project Acceptance List

Project Name & Number: CU Denver Business School 5<sup>th</sup> & 6<sup>th</sup> Roof Drainage Repair PN# 21-115057

Contractor: \_\_\_\_\_

In addition to completing Pre-Acceptance Checklist (SBP-05), the following items must be completed before Final Acceptance.

Activity	Date Completed	Remarks
1. Review State Buildings Pre-Acceptance check list & Notice of Approval of Occupancy / use form with BMO rep & confirm agreement with status		
*2. Establish list of post construction change orders & track separately from basic project until items are complete – call it Phase 2 to avoid delay on basic project		
3. O & M Manuals given to BMO Representative and BMO Archivist (2 hard copies and 1 electronic total)		
*4. Record Documents – a hard copy of plans and specifications are provided for plan room & given to BMO & electronic auto cad & specs are given to Archive Officer (Art Steinman) this is to include landscape drawings showing irrigation installation.		
*5. Final Site Walk is completed with University Grounds Supervisor. Drain barriers are removed and storm drains cleared. MS4 storm water plan, CDPHE permits, and evidence of final closeout received by Project Manager and all copied to University Engineering Division.		
<b><u>*/**6. Move-related work items complete including physical move, tours (occupants &amp; police), mail, phone &amp; electrical hook ups for equipment &amp; furniture systems complete &amp; freezers enrolled in University freezer program.</u></b>		
7. If exterior work is applicable: Landscape – Include a walk through with University Grounds for 1) new & established 1-year service date; 2) existing damaged landscape is repaired; and 3) irrigation – zone control test is complete.		
8. Attic stock, matches spec. requirements, is located in secured location, and is inventoried.		
9. Electrical system one line diagram framed and mounted in electrical room.		
10. Spare fire suppression heads in cabinets and tool: cabinet in main electrical room includes one complete set of spare fuses for major equipment.		
11. Contractor keys issued by University BMO returned to University Key Shop via PM/ BMO Rep.		
12. Interior Finishes Binder given to the University Project Manager: (Two hard copies)		
13. Not Used		
14. Not Used		

15. Safety grating in pipe chases in place.		
16. Signs in place including monument sign, building exterior and site signage and building interior signage.		
17. All applicable reports, including Air Emission reports; Sewer Reports, including for process diverters, traps and collection tanks; Fuel Storage Tank and Detection reports; and Water System tests and reports provided to BMO via PM and BMO Rep.		
18. Not Used		
19. Not Used		
20. Not Used		
21. Not Used		
22. If commissioning is included for project, Commissioning Agent certification is received by BMO via PM and BMO Rep.		

\_\_\_\_\_  
University Project Manager  
(sign & print name)

\_\_\_\_\_  
Date

\_\_\_\_\_  
University BMO Rep.  
(sign & print name)

\_\_\_\_\_  
Date

\_\_\_\_\_  
University FSS  
(sign & print name)

\_\_\_\_\_  
Date

\_\_\_\_\_  
University Downtown Rep (if necessary)  
(sign & print name)

\_\_\_\_\_  
Date

\*Warranty dates are not subject to completion of these items by contract

**\*\* Highlighted items are not the responsibility of Contractor but PM and BMO Rep must ensure these are completed and operational prior to occupancy and use.**

Mark N/A by item if it is not applicable to project

3.1.12

## **SECTION 01 78 23 - OPERATION AND MAINTENANCE DATA**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

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

#### **1.2 SUMMARY**

- A. Section includes administrative and procedural requirements for preparing operation and maintenance manuals, including the following:
  - 1. Operation and maintenance documentation directory.
  - 2. Systems, subsystems, and equipment operation and maintenance manuals.
  - 3. Product maintenance manuals.
  - 4. Emergency manuals.
  - 5. Framed operating and maintenance instructions.
- B. Related Requirements:
  - 1. Section 01 33 00 "Submittal Procedures" for submitting copies of submittals for operation and maintenance manuals.
  - 2. Section 01 91 13 "General Commissioning Requirements" for verification and compilation of data into operation and maintenance manuals.

#### **1.3 DEFINITIONS**

- A. System: An organized collection of parts, equipment, or subsystems united by regular interaction.
- B. Subsystem: A portion of a system with characteristics similar to a system.

#### **1.4 CLOSEOUT SUBMITTALS**

- A. Schedule: Submit each manual in final form prior to requesting inspection for Substantial Completion and at least 30 calendar days before commencing demonstration and training. Architect/Engineer will return copy with comments.
  - 1. Correct or revise each manual to comply with Architect/Engineer's comments. Submit copies of each corrected manual within 15 calendar days of receipt of Architect/Engineer's comments and prior to commencing demonstration and training.
- B. Format: Submit operations and maintenance manuals in the following format:
  - 1. PDF electronic file. Assemble each manual into a composite electronically indexed file. Submit on digital media acceptable to Architect/Engineer.

- a. Name each indexed document file in composite electronic index with applicable item name. Include a complete electronically linked operation and maintenance directory.
  - b. Compile entirely from documents with searchable text.
  - c. Enable inserted reviewer comments on draft submittals.
2. Paper copies. Assemble in accordance with the requirements of this Section.
  - a. Submit three final copies, one to be retained by the Architect/Engineer and two to be retained by the University.
- C. Final Manual Submittal: Submit each manual in final form prior to requesting inspection for Substantial Completion and at least 30 calendar days before commencing demonstration and training. Architect/Engineer will return copy with comments.
  1. Correct or revise each manual to comply with Architect/Engineer's comments. Submit copies of each corrected manual within 15 calendar days of receipt of Architect/Engineer's comments and prior to commencing demonstration and training.

## PART 2 - PRODUCTS

- 2.1 GENERAL REQUIREMENTS FOR EMERGENCY, OPERATION, AND MAINTENANCE MANUALS
  - A. Intent: Prepare data in form of an instructional manual for use by University personnel.
  - B. Organization: Unless otherwise indicated, organize each manual into a separate section for each system and subsystem, and a separate section for each piece of equipment not part of a system. Each manual shall contain the following materials, in the order listed:
    1. Title page.
    2. Table of contents.
    3. Manual contents.
  - C. Title Page: Include the following information:
    1. Subject matter included in manual.
    2. Name and address of Project.
    3. Name and address of University.
    4. Date of submittal.
    5. Name and contact information for Contractor.
    6. Name and contact information for Construction Manager.
    7. Name and contact information for Architect/Engineer.
    8. Name and contact information for Commissioning Authority.
    9. Names and contact information for major consultants to the Architect/Engineer that designed the systems contained in the manuals.
    10. Cross-reference to related systems in other operation and maintenance manuals.
  - D. Table of Contents: List each product included in manual, identified by product name, indexed to the content of the volume, and cross-referenced to Specification Section number in Project Manual.

1. If operation or maintenance documentation requires more than one volume to accommodate data, include comprehensive table of contents for all volumes in each volume of the set.
- E. Manual Contents: Organize into sets of manageable size. Arrange contents alphabetically by system, subsystem, and equipment. If possible, assemble instructions for subsystems, equipment, and components of one system into a single binder.
- F. Manufacturers' Data: Where manuals contain manufacturers' standard printed data, include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data include more than one item in a tabular format, identify each item using appropriate references from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.
  1. Prepare supplementary text if manufacturers' standard printed data are not available and where the information is necessary for proper operation and maintenance of equipment or systems.
- G. Drawings: Prepare drawings supplementing manufacturers' printed data to illustrate the relationship of component parts of equipment and systems and to illustrate control sequence and flow diagrams. Coordinate these drawings with information contained in record Drawings to ensure correct illustration of completed installation.
- H. Manuals, Electronic Files: Submit manuals in the form of a multiple file composite electronic PDF file for each manual type required.
  1. Electronic Files: Use electronic files prepared by manufacturer where available. Where scanning of paper documents is required, configure scanned file for minimum readable file size and enable OCR (optical character recognition) to provide searchable text.
  2. File Names and Bookmarks: Enable bookmarking of individual documents based on file names. Name document files to correspond to system, subsystem, and equipment names used in manual directory and table of contents. Group documents for each system and subsystem into individual composite bookmarked files, then create composite manual, so that resulting bookmarks reflect the system, subsystem, and equipment names in a readily navigated file tree. Configure electronic manual to display bookmark panel on opening file.
- I. Manuals, Paper Copy: Submit manuals in the form of hard copy, bound and labeled volumes.
  1. Binders: Heavy-duty, three-ring, vinyl-covered, loose-leaf binders, in minimum 1 inch and maximum 2 inch thickness necessary to accommodate contents, sized to hold 8-1/2-by-11-inch paper; with clear plastic sleeve on spine to hold label describing contents and with pockets inside covers to hold folded oversize sheets.
    - a. If two or more binders are necessary to accommodate data of a system, organize data in each binder into groupings by subsystem and related components. Cross-reference other binders if necessary to provide essential information for proper operation or maintenance of equipment or system.
    - b. Identify each binder on front and spine, with printed title "OPERATION AND MAINTENANCE MANUAL," Project title or name, and subject matter of contents, and indicate Specification Section number on bottom of spine. Indicate volume number for multiple-volume sets.
  2. Dividers: Heavy-paper dividers with plastic-covered tabs for each section of the manual. Mark each tab to indicate contents. Include typed list of products and major components

- of equipment included in the section on each divider, cross-referenced to Specification Section number and title of Project Manual.
3. Protective Plastic Sleeves: Transparent plastic sleeves designed to enclose diagnostic software storage media for computerized electronic equipment.
  4. Supplementary Text: Prepared on 8-1/2-by-11-inch, 20 lb., white bond paper.
  5. Drawings: Attach reinforced, punched binder tabs on drawings and bind with text.
    - a. If oversize drawings are necessary, fold drawings to same size as text pages and use as foldouts.
    - b. If drawings are too large to be used as foldouts, fold and place drawings in labeled envelopes and bind envelopes in rear of manual. At appropriate locations in manual, insert typewritten pages indicating drawing titles, descriptions of contents, and drawing locations.

## 2.2 SYSTEMS, SUBSYSTEMS AND EQUIPMENT OPERATION AND MAINTENANCE MANUALS

- A. General: Provide operation and maintenance manuals where indicated in individual Specification Section and the following:
1. Heating, ventilating and air-conditioning equipment and systems.
  2. Plumbing equipment and systems.
  3. Special piping equipment and systems.
  4. Electrical distribution systems.
  5. Standby generator systems.
  6. Communications systems.
  7. Fire alarm and detection systems.
  8. Underground sprinkler systems.
  9. Automatic entrances.
  10. Food service equipment.
  11. Elevators.
  12. Other special construction and conveying systems.
- B. Operation Content: In addition to requirements in this Section, include operation data required in individual Specification Sections.
1. Additional Operation Content Required:
    - a. System, subsystem, and equipment descriptions. Use designations for systems and equipment indicated on Contract Documents.
    - b. Performance and design criteria if Contractor has delegated design responsibility.
    - c. Operating standards.
    - d. Operating procedures.
    - e. Operating logs.
    - f. Wiring diagrams.
    - g. Control diagrams.
    - h. Piped system diagrams.
    - i. Precautions against improper use.
    - j. License requirements including inspection and renewal dates.
  2. Descriptions: Include the following:
    - a. Product name and model number. Use designations for products indicated on Contract Documents.
    - b. Manufacturer's name.

- c. Equipment identification with serial number of each component.
    - d. Equipment function.
    - e. Operating characteristics.
    - f. Limiting conditions.
    - g. Performance curves.
    - h. Engineering data and tests.
    - i. Complete nomenclature and number of replacement parts.
  3. Operating Procedures: Include the following, as applicable:
    - a. Startup procedures.
    - b. Equipment or system break-in procedures.
    - c. Routine and normal operating instructions.
    - d. Regulation and control procedures.
    - e. Instructions on stopping.
    - f. Normal shutdown instructions.
    - g. Seasonal and weekend operating instructions.
    - h. Required sequences for electric or electronic systems.
    - i. Special operating instructions and procedures.
  4. Systems and Equipment Controls: Describe the sequence of operation, and diagram controls as installed.
  5. Piped Systems: Diagram piping as installed, and identify color-coding where required for identification.
- C. Maintenance Content: For each system, subsystem, and piece of equipment not part of a system, include source information, manufacturers' maintenance documentation, maintenance procedures, maintenance and service schedules, spare parts list and source information, maintenance service contracts, and warranty and bond information, as described below.
  1. Source Information: Provide the following information in a list for each product included in manual:
    - a. Name, address, and telephone number of Installer or supplier and maintenance service agent.
    - b. Name, address, and telephone number of local source for supply of replacement parts.
    - c. Name, address, and telephone number of maintenance contractor, where appropriate.
    - d. Cross-reference Specification Section number and title.
    - e. Drawing or schedule designation or identifier where applicable.
  2. Manufacturers' Maintenance Documentation: Manufacturers' maintenance documentation including the following information for each component part or piece of equipment:
    - a. Standard maintenance instructions and bulletins.
    - b. Drawings, diagrams, and instructions required for maintenance, including disassembly and component removal, replacement, and assembly.
    - c. Identification and nomenclature of parts and components.
    - d. List of items recommended to be stocked as spare parts.
  3. Maintenance Procedures: Include the following information and items that detail essential maintenance procedures:



- a. Test and inspection instructions.
  - b. Troubleshooting guide.
  - c. Precautions against improper maintenance.
  - d. Disassembly; component removal, repair, and replacement; and reassembly instructions.
  - e. Aligning, adjusting, and checking instructions.
  - f. Demonstration and training video recording, if available.
4. Maintenance and Service Schedules: Include service and lubrication requirements, list of required lubricants for equipment, and separate schedules for preventive and routine maintenance and service with standard time allotment.
  - a. Scheduled Maintenance and Service: Tabulate actions for daily, weekly, monthly, quarterly, semiannual, and annual frequencies.
  - b. Maintenance and Service Record: Include manufacturers' forms for recording maintenance.
5. Spare Parts List and Source Information: Include lists of replacement and repair parts, with parts identified and cross-referenced to manufacturers' maintenance documentation and local sources of maintenance materials and related services.
6. Maintenance Service Contracts: Include copies of maintenance agreements with name and telephone number of service agent.
7. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.
  - a. Include procedures to follow and required notifications for warranty claims.
  - b. Include information sheet covering proper procedures in event of failure and instances which might affect validity of warranties and bonds.

## 2.3 PRODUCT MAINTENANCE MANUALS

- A. Content: Organize manual into a separate section for each product, material, and finish. Separate into two manuals: one for exterior moisture protection products and those exposed to weather and one for interior products. Include source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds, as described below.
- B. Source Information: Provide the following information for each product included in manual:
  1. Name, address, and telephone number of Installer or supplier and maintenance service agent.
  2. Cross-reference Specification Section number and title.
  3. Drawing or schedule designation or identifier where applicable.
- C. Product Information: Include the following, as applicable:
  1. Product name and model number.
  2. Manufacturer's name.
  3. Color, pattern, and texture.
  4. Material and chemical composition.
  5. Reordering information for specially manufactured products.
- D. Maintenance Procedures: Include manufacturer's written recommendations and the following:

1. Inspection procedures.
  2. Types of cleaning agents to be used and methods of cleaning.
  3. List of cleaning agents and methods of cleaning detrimental to product.
  4. Schedule for routine cleaning and maintenance.
  5. Repair instructions.
- E. Repair Materials and Sources: Include lists of materials and local sources of materials and related services.
- F. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.
1. Include procedures to follow and required notifications for warranty claims.

## 2.4 EMERGENCY MANUALS

- A. Content: Organize manual into a separate section for each of the following:
1. Type of emergency.
  2. Emergency instructions.
  3. Emergency procedures.
- B. Type of Emergency: Where applicable for each type of emergency indicated below, include instructions and procedures for each system, subsystem, piece of equipment, and component:
1. Fire.
  2. Flood.
  3. Gas leak.
  4. Water leak.
  5. Power failure.
  6. Water outage.
  7. System, subsystem, or equipment failure.
  8. Chemical release or spill.
- C. Emergency Instructions: Describe and explain warnings, trouble indications, error messages, and similar codes and signals. Include responsibilities of University's operating personnel for notification of Installer, supplier, and manufacturer to maintain warranties.
- D. Emergency Procedures: Include the following, as applicable:
1. Instructions on stopping.
  2. Shutdown instructions for each type of emergency.
  3. Operating instructions for conditions outside normal operating limits.
  4. Required sequences for electric or electronic systems.
  5. Special operating instructions and procedures.

## 2.5 FRAMED OPERATING AND MAINTENANCE INSTRUCTIONS

- A. All mechanically and electrically operated equipment and controls shall be provided with legible and complete wiring diagrams, schematics, operating instructions, and pertinent preventative maintenance instructions in a sturdy frame with clear glass or plastic cover. Use non-fading, permanent media.

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- B. Locate frames in the same room or service enclosure as equipment, or in the nearest mechanical or electrical room.

PART 3 - EXECUTION (Not Used)

**END OF SECTION 01 78 23**

## **SECTION 01 78 39 - PROJECT RECORD DOCUMENTS**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

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

#### **1.2 SUMMARY**

- A. Section includes administrative and procedural requirements for project record documents, including the following:
  - 1. Record Drawings.
  - 2. Record Specifications.
  - 3. Record Product Data.
  - 4. Record Samples.
  - 5. Miscellaneous record submittals.
- B. Related Requirements:
  - 1. Section 01 73 00 "Execution" for final property survey.
  - 2. Section 01 77 00 "Closeout Procedures" for general closeout procedures.
  - 3. Section 01 78 23 "Operation and Maintenance Data" for operation and maintenance manual requirements.

#### **1.3 CLOSEOUT SUBMITTALS**

- A. General: Submit record drawings with duplicate original transmittal letters containing:
  - 1. Date.
  - 2. Project title and number.
  - 3. Contractor's name and address.
  - 4. Certification that each document as submitted is complete and accurate.
  - 5. Signature of authorized representative of the Contractor.
- B. Record Drawings: Submit copies of record Drawings as follows:
  - 1. Submit three paper-copy sets of marked-up record prints, two copies will be retained by the University and one copy retained by the Architect/Engineer.
  - 2. Submit three paper-copy sets and three digital copies on CD of electronic files for all delegated-design submittals. Two copies will be retained by the University and one copy retained by the Architect/Engineer.
- C. Record Specifications: Submit three paper copies of Project's Specifications, including addenda and contract modifications. Two copies will be retained by the University and one copy retained by the Architect/Engineer.

- D. Record Product Data: Submit three paper copies of each submittal. Two copies will be retained by the University and one copy retained by the Architect/Engineer.
  - 1. Where record Product Data are required as part of operation and maintenance manuals, submit duplicate marked-up Product Data as a component of manual.
- E. Miscellaneous Record Submittals: See other Specification Sections for miscellaneous record-keeping requirements and submittals in connection with various construction activities. Submit three paper copies of each submittal. Two copies will be retained by the University and one copy retained by the Architect/Engineer.
- F. Interior Finishes Binder: Three copies. Two copies will be retained by the University and one copy retained by the Architect/Engineer.

## PART 2 - PRODUCTS

### 2.1 RECORD DRAWINGS

- A. Record Prints: Maintain one set of marked-up paper copies of the Contract Drawings and Shop Drawings, incorporating new and revised drawings as modifications are issued.
  - 1. Preparation: Mark record prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to provide information for preparation of corresponding marked-up record prints.
    - a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
    - b. Accurately record information in an acceptable drawing technique.
    - c. Record data as soon as possible after obtaining it.
    - d. Record and check the markup before enclosing concealed installations.
    - e. Cross-reference record prints to corresponding archive photographic documentation.
    - f. Mark using line types and symbols conforming to Contract Documents.
  - 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 referenced to permanent surface improvements.
    - e. Revisions to routing of piping and conduits.
    - f. Revisions to electrical circuitry.
    - g. Actual equipment locations.
    - h. Duct size and routing.
    - i. Locations of concealed internal utilities referenced to visible and accessible features of structure.
    - j. Locations of concealed valves, dampers, controls, balancing devices, junction boxes, cleanouts, and other items requiring access or maintenance.
    - k. Changes made by Change Order.
    - l. Changes made following Architect/Engineer's written orders.
    - m. Details not on the original Contract Drawings.

- n. Field records for variable and concealed conditions.
  - o. Record information on the Work that is shown only schematically.
- 3. Mark the Contract Drawings and Shop Drawings completely and accurately. Use personnel proficient at recording graphic information in production of marked-up record prints.
- 4. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
- 5. Mark additional information important to University that was either shown schematically or omitted from original Drawings.
- 6. Note Change Order numbers, and similar identification, where applicable.
- B. Record Delegated Design Electronic Files: For all delegated design submittals, including but not limited to landscape irrigation, fire alarm and fire sprinkler plans, prepare electronic files in full compliance with University of Colorado Denver | Anschutz Medical Campus Guidelines and Design Standards, Part 1.0, Paragraph "Drawing Production Standards."
- C. Identification: Identify and date each record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.
  - 1. Record Prints: Organize record prints into manageable sets. Bind each set with durable paper cover sheets. Include identification on cover sheets.
  - 2. Identification: As follows:
    - a. Project name.
    - b. Date.
    - c. Designation "PROJECT RECORD DRAWINGS."
    - d. Name of Architect/Engineer.
    - 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 substitutions, selection of options, and similar 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. Note related Change Orders where applicable.
  - 4. Maintain one complete copy of all Addenda, Change Orders and other written change documents in printed form during construction.

## 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, record Specifications, and record Drawings where applicable.
- B. Directory: Include record Product Data directory organized by Specification Section number and title.
- C. Product List: Update and record any changes to Product List submitted in accordance with Section 01 60 00 "Product Requirements", including any changes to brand, model, subcontractor, or Installer so that final list reflects materials, equipment and systems incorporated into the Work.

## 2.4 RECORD SAMPLES

- A. Prior to Final Acceptance, meet with University Project Manager and Architect/Engineer at site to review and identify which submitted samples maintained during the progress of the Work are to be transmitted to the University.
- B. Deliver selected samples to storage area identified by University.
- C. Finishes Binder: Three-ring notebook or notebooks, organized by Specification Section number, providing a listing and description of all material finishes on the Project and including a minimum 6 inch by 6 inch sample thereof to accompany the description. Accompany each material selection indicated with the following:
  1. Manufacturer and product name.
  2. Pattern name and number, as applicable.
  3. Color name, as applicable.
  4. Any additional information required to order replacement product.

## 2.5 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.
  1. Include manufacturer's certifications, field test record, copies of permits, licenses, certifications, inspection reports, releases, notices, receipts for fee payments and similar documents.
- B. Directory: Include miscellaneous record submittals directory organized by Specification Section number and title.

## PART 3 - EXECUTION

### 3.1 RECORDING AND MAINTENANCE

- A. Recording: Maintain one copy of each submittal during the construction period for project record document purposes. Post changes and revisions to project record documents as they occur; do not wait until end of Project. Update at least weekly.

- 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/Engineer's and University's reference during normal working hours.

**END OF SECTION 01 78 39**



## **SECTION 01 79 00 - DEMONSTRATION AND TRAINING**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

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

#### **1.2 SUMMARY**

- A. Section includes administrative and procedural requirements for instructing University's personnel, including the following:
  - 1. Demonstration of operation of systems, subsystems, and equipment.
  - 2. Training in operation and maintenance of systems, subsystems, and equipment.

#### **1.3 INFORMATIONAL SUBMITTALS**

- A. Instruction Program: Submit outline of instructional program for demonstration and training, including a list of training modules and a schedule of proposed dates, times, length of instruction time, and instructors' names for each training module. Include outline for each training module.
- B. Qualification Data: For instructor, demonstrating qualifications and ability to instruct on maintenance and care of system, equipment and products.
- C. Schedule of Demonstration and Training: Prepare a schedule in tabular form of all demonstration and training required in individual Specification Sections including:
  - 1. Specification Section number and title.
  - 2. Description of required demonstration and training.
- D. Attendance Record: For each training module, submit list of participants and length of instruction time.

#### **1.4 QUALITY ASSURANCE**

- A. Instructor Qualifications: A factory-authorized service representative, complying with requirements in Section 01 40 00 "Quality Requirements," experienced in operation and maintenance procedures and training. Manufacturer's sales staff is not acceptable.
- B. Pre-instruction Conference: Conduct conference at Project site to comply with requirements in Section 01 31 00 "Project Management and Coordination." Review methods and procedures related to demonstration and training.

## PART 2 - PRODUCTS

### 2.1 INSTRUCTION PROGRAM

- A. Program Structure: Develop an instruction program that includes individual training modules for each system and for equipment not part of a system, as required by individual Specification Sections.
- B. Training Modules: For each module, include instruction for the following as applicable to the system, equipment, or component:
  - 1. Basis of System Design, Operational Requirements, and Criteria: Include the following:
    - a. System, subsystem, and equipment descriptions.
    - b. Performance and design criteria if Contractor is delegated design responsibility.
    - c. Operating standards.
    - d. Regulatory requirements.
    - e. Equipment function.
    - f. Operating characteristics.
    - g. Limiting conditions.
    - h. Performance curves.
  - 2. Documentation: Review the following items in detail:
    - a. Emergency manuals.
    - b. Operations manuals.
    - c. Maintenance manuals.
    - d. Project record documents.
    - e. Identification systems.
    - f. Warranties and bonds.
    - g. Maintenance service agreements and similar continuing commitments.
  - 3. Emergencies: Include the following, as applicable:
    - a. Instructions on meaning of warnings, trouble indications, and error messages.
    - b. Instructions on stopping.
    - c. Shutdown instructions for each type of emergency.
    - d. Operating instructions for conditions outside of normal operating limits.
    - e. Sequences for electric or electronic systems.
    - f. Special operating instructions and procedures.
    - g. A tour of the installation identifying the location of all system components.
  - 4. Operations: Include the following, as applicable:
    - a. Startup procedures.
    - b. Equipment or system break-in procedures.
    - c. Routine and normal operating instructions.
    - d. Regulation and control procedures.
    - e. Control sequences.
    - f. Safety procedures.
    - g. Instructions on stopping.
    - h. Normal shutdown instructions.
    - i. Operating procedures for emergencies.
    - j. Operating procedures for system, subsystem, or equipment failure.

- k. Seasonal and weekend operating instructions.
  - l. Required sequences for electric or electronic systems.
  - m. Special operating instructions and procedures.
  - n. Sequence of operation.
- 5. Adjustments: Include the following:
  - a. Alignments.
  - b. Checking adjustments.
  - c. Noise and vibration adjustments.
  - d. Economy and efficiency adjustments.
- 6. Troubleshooting: Include the following:
  - a. Diagnostic instructions.
  - b. Test and inspection procedures.
- 7. Maintenance: Include the following:
  - a. Inspection procedures.
  - b. Types of cleaning agents to be used and methods of cleaning.
  - c. List of cleaning agents and methods of cleaning detrimental to product.
  - d. Procedures for routine cleaning
  - e. Procedures for preventive maintenance.
  - f. Procedures for routine maintenance.
  - g. Instruction on use of special tools.
- 8. Repairs: Include the following:
  - a. Diagnosis instructions.
  - b. Repair instructions.
  - c. Disassembly; component removal, repair, and replacement; and reassembly instructions.
  - d. Instructions for identifying parts and components.
  - e. Review of spare parts needed for operation and maintenance.
  - f. Product support/service model.
  - g. Purchasing of replacement parts.
- 9. Instruction specific to Instrumentation and Controls, Electrical Gateway, Network Lighting Controls, or any other new technology that is integrated with another system: Include the following:
  - a. Overview and theory.
  - b. Wiring diagrams, including the one line diagram.
  - c. Creation, editing, and programming of the point database.
  - d. Integration topology and platform for communication.
  - e. Graphics packages and touch screens for the system.
  - f. Alarms and diagnostics.
  - g. Reporting functions dynamically and historically.
  - h. Remote access to the system.
  - i. Database back-up and maintenance.
  - j. Replacement and re-programming of replacement parts.
  - k. Point type and functionality for each type of point.
  - l. Programming.
  - m. Point/object editing.

- n. Loop tuning.
  - o. Help files and other troubleshooting documentation.
  - p. Instruction is given by the staff that setup the integration.
- C. Operation and Maintenance Manuals: Provide appropriate Operation and Maintenance manuals in each training session so that the detail drawings and maintenance activities are outlined and discussed for each application.

## PART 3 - EXECUTION

### 3.1 PREPARATION

- A. Assemble educational materials necessary for instruction, including documentation and training module.
- B. Set up instructional equipment at instruction location.

### 3.2 INSTRUCTION

- A. Engage qualified instructors to instruct University's personnel to adjust, operate, and maintain systems, subsystems, and equipment not part of a system.
  - 1. University will furnish Contractor with names and positions of participants.
- B. Scheduling: Provide instruction at mutually agreed on times. For equipment that requires seasonal operation, provide similar instruction at start of each season.
  - 1. Coordinate schedule for all training with University Project Manager and provide the following:
    - a. Minimum 3 weeks notification.
    - b. Training matrix in calendar format.
    - c. Training outline for each session.
  - 2. Do not schedule training until equipment has been started up, commissioned, and is currently operating in its normal condition.
  - 3. Do not schedule overlapping training sessions.
  - 4. Schedule training sessions for a maximum of 4 hours per day; afternoons preferred.
  - 5. Provide separate training session on each system for operational/maintenance groups and user groups.
  - 6. Training sessions will be cancelled and rescheduled unless the following documentation is received:
    - a. Instruction qualifications.
    - b. Evidence that equipment has been started up, commissioned, and is currently operating in its normal condition.
    - c. Operation and Maintenance manuals.
- C. Training Location and Reference Material: Conduct training on-site in the completed and fully operational facility using the actual equipment in-place. Conduct training using final operation and maintenance data submittals.

- D. Travel, Room and Board: Coordinate any out-of-state training with the University Project Manager.
- E. Cleanup: Collect used and leftover educational materials and remove from Project site. Remove instructional equipment. Restore systems and equipment to condition existing before initial training use.

### 3.3 DEMONSTRATION SCHEDULE

SECTION	TITLE	DESCRIPTION
10 11 00	VISUAL DISPLAY SURFACES	Engage a factory-authorized service representative to train University's maintenance personnel to adjust, operate, and maintain motor-operated, sliding visual display units.
12 21 13	HORIZONTAL LOUVER BLINDS	Engage a factory-authorized service representative to train University's maintenance personnel to adjust, operate, and maintain systems.
12 24 13	ROLLER WINDOW SHADES	Engage a factory-authorized service representative to train University's maintenance personnel to adjust, operate, and maintain motor-operated roller shades.
13 20 00	SPECIAL PURPOSE ROOMS	Engage a factory-authorized service representative to train and provide training video to University's maintenance personnel to operate, adjust, maintain, and repair controlled environmental rooms and cold rooms.
23 00 00	HEATING, VENTILATING, AND AIR CONDITIONING (HVAC)	Schedule instructional meetings for The University of Colorado Denver Facilities Operations maintenance personnel on the proper operation and maintenance of mechanical systems. Provide the project manager a minimum of 5 days notice prior to any testing.
23 05 13	MOTORS	Engage a factory-authorized representative to train the University's representative for 2 hours for each variable frequency drive installed. Training includes startup, shutdown, emergency operation, maintenance and servicing.
23 08 00	COMMISSIONING OF HVAC	Engage the commissioning authority to provide a customized one to two day training class for the university's engineering personnel in problem solving techniques including the review of mechanical system design as a whole, integrated unit, unique qualities of the installed mechanical system, insights into how to solve system-wide, multi-faceted problems, and identify a variety of resources to assist with problem solving.
23 09 00	INSTRUMENTATION AND CONTROLS	Engage a factory-authorized trained representative to conduct a minimum of 1-four hour on-site training course and an additional 1-four hour on-site training course per 25,000 sq. ft. for designated University personnel.
23 21 23	PUMPS	Engage a factory-authorized service representative to train a University Representative for 2 hours of instruction for each pumping system provided.
26 00 00	ELECTRICAL	Engage a factory-authorized service representative to train

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		the University's Operations personnel a minimum of 8 hours for each system. Provide an additional minimum of 4 hours for any electrical gateway or networked lighting controls.
28 31 00	FIRE DETECTION AND ALARM	Engage a factory-authorized service representative to train the University's Operations personnel a minimum of 8 hours for each system.

**END OF SECTION 01 79 00**

## **SECTION 03 30 00**

### **CAST-IN-PLACE CONCRETE**

#### **PART 1 GENERAL**

##### **1.1 SUMMARY**

- A. Section Includes: Supply and placement of ready-mix concrete, including formwork, reinforcement, concrete materials, mix design, batching procedures, placement procedures, finishes, curing and protection.

##### **1.2 REFERENCES**

- A. All references shall be latest edition as of Specification date, unless otherwise noted with -##, where ## indicates the publication year.
- B. Reference Guides:
  - 1. American Concrete Institute (ACI):
    - a. 305R: Guide to Hot Weather Concreting.
    - b. 306R: Guide to Cold Weather Concreting.
- C. Reference Standards:
  - 1. American Concrete Institute (ACI):
    - a. 117: Specification for Tolerances for Concrete Construction and Materials and Commentary.
    - b. 301: Specifications for Structural Concrete.
    - c. 318: Building Code Requirements for Structural Concrete
  - 2. ASTM International:
    - a. A615: Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement.
    - b. A1064: Standard Specification for Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete.
    - c. C31: Standard Practice for Making and Curing Concrete Test Specimens in the Field.
    - d. C33: Standard Specification for Concrete Aggregates.
    - e. C39: Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens.
    - f. C42: Standard Test Method of Obtaining and Testing Drilled Cores and Sawed Beams of Concrete.
    - g. C94: Standard Specification for Ready-Mixed Concrete.
    - h. C143: Standard Test Method for Slump of Hydraulic-Cement Concrete.
    - i. C150: Standard Specification for Portland Cement.
    - j. C171: Standard Specification for Sheet Materials for Curing Concrete.
    - k. C172: Standard Practice for Sampling Freshly Mixed Concrete.
    - l. C231: Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method.
    - m. C260: Standard Specification for Air-Entraining Admixtures for Concrete.
    - n. C494: Standard Specification for Chemical Admixtures for Concrete.

- o. C595: Standard Specification for Blended Hydraulic Cements.
  - p. C856: Standard Practice for Petrographic Examination of Hardened Concrete.
  - q. C1064: Standard Test Method for Temperature of Freshly Mixed Hydraulic-Cement Concrete.
  - r. C1077: Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation.
  - s. C1152: Standard Test Method for Acid-Soluble Chloride in Mortar and Concrete.
  - t. C1218: Standard Test Method for Water-Soluble Chloride in Mortar and Concrete.
  - u. C1260: Standard Test Method for Potential Alkali Reactivity of Aggregates (Mortar-Bar Method).
  - v. C1293: Standard Test Method for Determination of Length Change of Concrete Due to Alkali-Silica Reaction.
  - w. C1524: Standard Test Method for Water-Extractable Chloride in Aggregate (Soxhlet Method).
  - x. C1567: Standard Test Method for Determining the Potential Alkali-Silica Reactivity of Combinations of Cementitious Materials and Aggregate (Accelerated Mortar Bar)
  - y. C1778: Standard Guide for Reducing the Risk of Deleterious Alkali-Aggregate Reaction in Concrete.
  - z. D994: Standard Specification for Preformed Expansion Joint Filler for Concrete
  - aa. D1752: Standard Specification for Preformed Sponge Rubber, Cork and Recycled PVC Expansion Joint Fillers for Concrete Paving and Structural Construction
  - bb. D7174: Standard Specification for Preformed Closed-Cell Polyolefin Expansion Joint Fillers for Concrete Paving and Structural Construction
3. Concrete Reinforcing Steel Institute (CRSI):
- a. Manual of Standard Practice.

### **1.3 DEFINITIONS:**

- A. Concrete Mixture: A single combination of materials as specified. Changes to material sources or proportions shall constitute a new concrete mixture.
- B. Final point of discharge: The point from which the concrete last leaves the conveying equipment, such as a pump or bucket intended to deposit into its final position in the element for which it was intended.
- C. Discharge for Placement: The discharge of the concrete, from the final point of discharge, into the final element for which it was intended.
- D. Testing Agency: Third party testing agency qualified to perform the testing specified.
- E. The term concrete, ready-mix, material, replacement material, and repair material shall generally refer to the ready-mix concrete mix used to perform the work.

### **1.4 ADMINISTRATIVE REQUIREMENTS**

- A. Pre-placement Meeting:
  - 1. Conduct meeting at Site.
  - 2. Review requirements for concrete Work, including:
    - a. Construction schedule.



- b. Availability of materials, personnel, equipment, and facilities needed to make progress and avoid delays.
  - c. Site use, access, staging, and set-up location limitations.
  - d. Forecast weather conditions.
  - e. Placement procedures.
  - f. Special details.
  - g. Minimum cure period.
  - h. Testing and inspection requirements.
  - i. Temporary protection and repair of damaged concrete.
  - j. Structural loading limitations.
  - k. Government regulations.
3. Contractor's Site superintendent, Owner's Representative, and Architect/Engineer shall attend.

## **1.5 SUBMITTALS**

- A. Contractor Qualifications (for information only): Evidence that Contractor's existing company has minimum five years of continuous experience in similar concrete work; list of at least five representative, successfully-completed projects of similar scope and size, including:
  1. Project name.
  2. Owner's name.
  3. Owner's Representative name, address, and telephone number.
  4. Description of work.
  5. Project supervisor.
  6. Total cost of concrete work and total cost of project.
  7. Completion date.
- B. Mock-up Plan (for information only): Prior to field execution of mock-ups, provide detailed description of materials, methods, techniques, equipment, sequence of operations, and quality control procedures to be used during the mock-up, including but not limited to the following:
  1. Schedule.
  2. Protection of surrounding materials on project site.
  3. Concrete mixing.
  4. Concrete placement.
  5. Concrete curing.
- C. Reinforcing Steel:
  1. Mill test reports for steel reinforcement, indicating conformance with ASTM A615/A615M.
- D. Joint Layout: Proposed construction, control, and isolation joint layout required for Work.
- E. Design Mixes: For each concrete mix, including required test reports.
  1. Proportions of materials.
  2. Mill tests and certification for cement, fly ash, and slag cement. Certification for silica fume.
  3. Sieve analysis for fine and coarse aggregate.
  4. Test results for deleterious substances in aggregates and potential aggregate reactivity.
  5. Air content during laboratory tests.

6. Three-, seven-, and 28-day laboratory compression test results. Minimum three cylinders at each test age.
  7. Indicate:
    - a. Target slump at time of placement
    - b. Amount of mix water to be withheld for later addition at Site.
- F. Field Quality Control:
1. Batch tickets for ready-mix concrete.
  2. Fresh material testing.
  3. Compressive strength testing.

## **1.6 QUALITY ASSURANCE**

- A. Contractor Qualifications: Experienced firm that has successfully completed concrete work similar in material, design, and extent to that indicated for the Project. Must have successful construction with specified materials in local area in use for minimum of five years.
1. Employ foreman with minimum five years of experience as foreman on similar projects, who is fluent in English, to be on Site at all times during the Work. Do not change foreman during the course of the Project except for reasons beyond the control of Contractor; inform Architect/Engineer in advance of any changes.
- B. Ready-Mix Supplier Qualifications: ASTM C94/C94M; Certification of Production Facilities and Delivery Vehicles by National Ready Mixed Concrete Association.
- C. Samples: Provide (3) minimum 12" by 12" samples of concrete for approval of color by Owner.
- D. Mock-ups: Construct mock-ups to demonstrate construction procedures, quality of Work, and aesthetic effects.
1. Provide Owner and Architect/Engineer with a schedule for mock-up activities at least one week prior to start of mock-up work. Clearly define sequence of work including required hold point observations.
  2. At location selected by Owner, place, finish, and cure a minimum 5 foot by 5 foot area. Mockup locations will be selected after schedule and work sequence is submitted by contractor. Use personnel, equipment, materials, and procedures proposed for use on Project.
  3. Provide access to mock-up locations during Work, and after, to allow for completion of observations and testing.
  4. Photograph concealed portions of mock-up before concealing, and retain photographs at Site, regardless of observation by Architect/Engineer and inspection by Testing Agency or Special Inspector.
  5. Coordinate performance of, or perform, quality measures and testing as required by this section; including, but not limited to:
    - a. Reinforcing steel special inspections.
    - b. Fresh or plastic concrete material testing.
    - c. Compressive strength testing.
  6. If Owner's Representative determines mock-up does not comply with requirements, modify mock-up or construct new mock-up until mock-up is approved. Remove and replace mock-ups that are not approved.

7. Approved mock-ups shall be maintained in undisturbed condition throughout Project as basis for acceptance of completed work and may become part of completed Work if undisturbed at time of Substantial Completion.

## **1.7 DELIVERY, STORAGE, AND HANDLING**

- A. Deliver, store, and handle materials according to manufacturer's recommendations and in such manner as to prevent damage to materials or structure.
- B. Limit stored materials on structures to safe loading capacity of structure at time materials are stored, and to avoid permanent deck deflection.
- C. Handle and place materials in strict accordance with safety requirements required by material manufacturers; Safety Data Sheets (SDS); and local, state, and federal rules and regulations. Maintain Safety Data Sheets (SDS) with materials in storage area and available for ready reference on Site.
- D. Deliver, store, and handle reinforcing steel to prevent bending and damage.

## **PART 2 PRODUCTS**

### **2.1 FORM MATERIALS**

- A. Forms: Plywood, lumber, metal, plastic, or another approved material.
  1. Provide plywood and lumber dressed on at least two edges and one side for tight fit.
  2. Do not use rust-stained, steel, form-facing material.
  3. Furnish panels in largest practicable sizes to minimize number of joints.
- B. Accessories:
  1. Chamfer Strips: Wood, metal, PVC, or rubber strips, match adjacent concrete work or as specified on the construction documents.
  2. Form Ties: Factory-fabricated; removable or snap-off metal or glass-fiber-reinforced plastic form ties; designed to resist lateral pressure of fresh concrete on forms and to prevent spalling of concrete on removal.
    - a. Furnish units that will leave no corrodible metal closer than 1 inch to the plane of the exposed concrete surface.
    - b. Furnish ties that, when removed, will leave holes not larger than 1 inch in diameter in the concrete surface.
    - c. Furnish ties with integral water-barrier plates for walls indicated to receive dampproofing or waterproofing.
  3. Form-Release Agent: Commercially-formulated form-release agent that will not bond with, stain, or adversely affect the concrete surface and will not impair subsequent treatments of the concrete surface.
    - a. Formulate form-release agent with rust inhibitor for steel, form-facing materials.

## **2.2 STEEL REINFORCEMENT**

- A. Reinforcing Bars: ASTM A615, Grade 60, deformed.
- B. Welded Wire Reinforcing (WWR): ASTM A1064, fabricated from as-drawn steel wire with 65,000 pounds per square inch minimum yield strength.
  - 1. Provide welded wire reinforcing in flat sheets, not rolls.
- C. Accessories:
  - 1. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded wire reinforcing in place. Manufacture bar supports according to CRSI Manual of Standard Practice from steel wire, plastic, or precast concrete or fiber-reinforced concrete of greater compressive strength than specified for the repair.
    - a. For concrete surfaces exposed to view where legs of wire bar supports contact forms, use CRSI Class 1 plastic-protected or CRSI Class 2 stainless-steel bar supports.

## **2.3 CONCRETE MATERIALS**

- A. Source Limitations: Obtain each type or class of cementitious material of same brand from same manufacturer's plant, each aggregate from one source, and admixtures through one source from single manufacturer.
- B. Portland Cement: ASTM C150, Type I or II.
- C. Fly Ash: ASTM C618, Class F or C.
- D. Ground-Granulated Blast-Furnace Slag (GGBFS): ASTM C595.
- E. Silica Fume: ASTM C1240, amorphous silica.
- F. Aggregates: ASTM C33; from single source with documented record of at least ten years of satisfactory service using similar aggregates and cementitious materials in similar applications and service conditions.
  - 1. Coarse Aggregates: Uniformly graded; 3/4-inch nominal maximum size; Class 4S.
  - 2. Alkali Reactivity: Coarse and fine aggregates shall have expansion indicative of innocuous behavior; that is, less than 0.08 percent expansion after 16 days when tested according to ASTM C1260.
    - a. ASTM C1293 or ASTM C1567 procedures may be substituted for ASTM C1260.
    - b. If one or more of the aggregate expansions exceed 0.08 percent at 16 days per ASTM C1260, then perform ASTM C1567 testing of that aggregate including supplementary cementitious material type and replacement percent showing mitigation of expansive reaction per ASTM C1778. The expansion of the test specimens, tested in accordance with ASTM C1567 as required, shall not exceed 0.08 percent at 16 days.
    - c. If ASTM C1567 testing is required to mitigate expansion, the concrete mixtures containing that aggregate must contain the same supplementary cementitious material type and minimum proportion showing mitigation in the ASTM C1567 testing.
    - d. All testing shall be performed within the last year.

- G. Water: Potable.
- H. Admixtures:
  - 1. General: Admixtures certified by manufacturer to contain no more than 0.1 percent chloride ions and to be compatible with other admixtures and cementitious materials. Do not use admixtures containing calcium chloride.
    - a. Air-Entraining Admixture: ASTM C260.
    - b. Water-Reducing Admixture: ASTM C494, Type A.
    - c. High-Range, Water-Reducing Admixture: ASTM C494, Type F.
    - d. Water-Reducing and Accelerating Admixture: ASTM C494, Type E.
    - e. Water-Reducing and Retarding Admixture: ASTM C494, Type D

## **2.4 CONCRETE MIXES**

- A. Prepare design mixes for each type and strength of concrete determined by either laboratory trial mixes or field-test data, according to ACI 301.
  - 1. Use qualified independent testing agency conforming to requirements of ASTM C1077 for preparing, testing, and reporting proposed mix designs for laboratory trial mix basis.
- B. Proportion normal-weight concrete mix as follows:
  - 1. For Exposure Categories (ACI 318): F3, S0, W1, C2
  - 2. Minimum 28-day Compressive Strength: 5,000 pounds per square inch.
  - 3. Maximum Water-Cementitious Materials Ratio, by weight: 0.40.
  - 4. Fly Ash: Include 10 percent by mass minimum, 25 percent maximum of total cementitious materials, as cement replacement.
  - 5. Air Content: Add air-entraining admixture at manufacturer's prescribed rate to result in concrete at point of placement having air content of 6 percent for 3/4-inch nominal aggregate size. Tolerance for air content shall be plus 1.5 percent and minus 1.5 percent of value listed, no additional tolerance allowed.
  - 6. Admixtures: Use admixtures according to manufacturer's written instructions.
    - a. Use water-reducing admixture. Alternately use high-range, water-reducing admixture (superplasticizer), as required, for placement and workability.
    - b. Use retarding admixture when required by high temperatures, low humidity, or other adverse placement conditions.
  - 7. No chlorides shall be intentionally introduced into concrete mix.
    - a. In hardened concrete, limit acid-soluble chloride ion content to 0.10 percent by weight of cement when tested according to ASTM C1152, or water-soluble chloride ion content to 0.08 percent by weight of cement when tested according to ASTM C1218.
    - b. If hardened concrete exceeds chloride ion limits above, limit water-extractable chloride ion content to 0.08 percent by weight of cement when tested according to ASTM C1524.

## **2.5 CURING MATERIALS**

- A. Water: Potable.
- B. Moisture-Retaining Cover: ASTM C171, white burlap-polyethylene sheet.

## **2.6 ISOLATION JOINT MATERIALS**

- A. Provide concrete isolation joint materials conforming to ASTM D994, ASTM D1752, or ASTM D7174.
  - 1. Minimum isolation joint material thickness: 1/2-inches, unless otherwise noted.
  - 2. Isolation joint material shall be flexible and uniformly surround all applicable features.
  - 3. Install isolation joint material per manufacturer's guidelines including but not limited to the use of compatible joint sealant material.

## **PART 3 EXECUTION**

### **3.1 SAMPLES AND CONCRETE MOCKUPS**

- A. Refer to Item 1.6-D for additional information.
- B. Contractor to perform sample mock-ups for concrete.
- C. The concrete materials and finishing techniques shall be such as to create a surface and appearance, finish, and appearance approved by Owner. Methods of finishing and curing utilized in mock-up will be used in production.
- D. No work shall proceed on the plaza until review and approval of samples and mock-ups.
- E. Approved samples and mock-ups to be retained as the standard during the duration of the project.

### **3.2 EXAMINATION**

- A. Examine substrates and conditions for compliance with requirements and other conditions affecting installation or performance of concrete.
  - 1. Ensure that work done by other trades is complete and ready for concrete Work.
  - 2. Verify that areas and conditions under which concrete Work is to be performed permit proper and timely completion of the Work.
  - 3. Notify Architect/Engineer in writing of conditions which may adversely affect installation or performance of concrete and recommend corrections.
  - 4. Do not proceed with concrete Work until adverse conditions have been corrected and reviewed by Architect/Engineer.
  - 5. Commencing concrete Work constitutes acceptance of Work surfaces and conditions.

### **3.3 FORMWORK**

- A. Design, erect, shore, brace, and maintain formwork according to ACI 301, to support vertical, lateral, static, and dynamic loads, and construction loads that might be applied, until concrete structure can support such loads.
- B. Construct formwork so concrete members and structures are of size, shape, alignment, elevation, and position indicated.
  - 1. Form openings, chases, offsets, keyways, reglets, blocking, screeds, and bulkheads required in Work.

2. Construct forms tight enough to prevent loss of concrete paste.
- C. Fabricate forms for easy removal without hammering or prying against concrete surfaces. Provide crush or wrecking plates where stripping may damage cast concrete surfaces. Provide top forms for inclined surfaces steeper than 1.5 horizontal to 1 vertical. Kerf wood inserts for forming keyways, reglets, and recesses, for easy removal.
- D. Coat contact surfaces of forms with form-release agent, according to manufacturer's written instructions, before placing reinforcement.
- E. Clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt, and other debris immediately before placing concrete.
- F. Retighten forms and bracing before placing concrete to prevent mortar leaks and maintain proper alignment.
- G. Removing and reusing forms
  1. General: Formwork, for sides of beams, walls, columns, and similar parts of the Work, that does not support the weight of concrete, may be removed after cumulatively curing at not less than 50 degrees F for 24 hours after placing concrete, provided concrete is hard enough not to be damaged by form-removal operations and provided curing and protection operations are maintained.
  2. Clean and repair surfaces of forms to be reused in the Work. Do not use split, frayed, delaminated, or otherwise damaged form-facing material, or patched forms, for exposed surfaces.

### **3.4 PLACING REINFORCEMENT**

- A. General: Comply with CRSI Manual of Standard Practice for fabricating and placing reinforcement.
- B. Welded Wire Reinforcing shall conform to the recommendations of the Wire Reinforcing Institutes WWR 400-R-03.
- C. Clean reinforcement of loose rust and mill scale, earth, ice, and other foreign materials.
- D. Accurately position, support, and secure reinforcement against displacement. Locate and support reinforcement with bar supports to maintain minimum concrete cover. Do not tack weld crossing reinforcing bars.
- E. Do not weld reinforcement unless specifically approved by Architect/Engineer.
- F. Set wire ties with ends directed into concrete, not toward exposed concrete surfaces.
- G. Install welded wire reinforcing in longest practicable lengths on bar supports spaced to minimize sagging. Lap edges and ends of adjoining sheets at least one mesh spacing plus two inches. Offset laps of adjoining sheet widths to prevent continuous laps in either direction. Lace overlaps with wire. Use only sheets, not rolls.

### **3.5 EMBEDDED ITEMS**

- A. Place and secure items to be embedded in concrete.

### **3.6 INSTALLATION OF ADHESIVE ANCHORED STEEL ITEMS**

- A. Drill, clean and install adhesive and anchored item in accordance with adhesive material manufacturer's requirements, and those listed below. If a conflict exists between the requirements of these specifications and the adhesive manufacturer, notify Architect/Engineer and request direction.
  - 1. Locate existing reinforcement with reinforcing bar locator and position holes to avoid existing reinforcement.
  - 2. Do not damage existing reinforcement.
  - 3. Drill hole diameter larger than anchored item diameter as required by adhesive manufacturer.
- B. Clean holes with stiff brush and dry, oil-free compressed-air jet to remove loose concrete, dust, and debris.
- C. Inject adhesive with tube into back of hole and fill hole to front, withdrawing tube.
  - 1. Carefully proportion and mix two-part adhesives according to manufacturer's directions. Scrape out entire contents of both containers to assure accurate proportions.
  - 2. Mix adhesive for approximately three minutes with paint stirrer attached to low speed (400 to 600 rpm) electric or pneumatic drill, unless otherwise specified by manufacturer. Move stirrer up and down and around sides of mixing container until even, streak-free color is attained. Do not whip in air.
  - 3. Install sufficient adhesive material to completely fill annular space around item.
- D. Insert item to bottom of hole and secure in center of hole until adhesive has set.
- E. Promptly remove excess adhesive.

### **3.7 BATCHING AND MIXING**

- A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C94, and furnish batch ticket information.
  - 1. Deliver concrete to Site and discharge within 90 minutes or before 300 revolutions of mixer drum, whichever comes first, after introduction of mix water. When air temperature is between 85- and 90-degrees F, reduce mixing and delivery time to 75 minutes; when air temperature is above 90 degrees F, reduce mixing and delivery time to 60 minutes. Concrete that exceeds the specified time or revolution limits shall be rejected.
  - 2. High range water-reducing admixtures may be added on site to increase slump, but only at the guidance of the ready-mix producer. Introduce high-range, water-reducing admixture at the Site with additional mixing per the manufacturer's recommendations. If unspecified, 70 revolutions of the drum shall be required to ensure proper mixing. Do not add water and superplasticizer at the same time.
  - 3. Site added water shall be only that amount withheld during initial batching as trim or held water and be clearly indicated on the batch ticket. Water shall only be added at the guidance of the ready-mix producer. Do not exceed mix design w/cm with site added water. Water addition at site shall be performed only once, meaning initial discharge, water addition,



mixing, and second/final discharge. If unspecified by ready-mix producer, 70 revolutions of the drum shall be required to ensure proper mixing.

4. Air adjustments may be made once at the site after initial discharge of material. Air adjustments shall be made only at the guidance of the ready-mix producer.
5. All tests of record shall be performed after all changes or additions to the concrete have occurred.

### **3.8 PLACEMENT**

- A. Before placing concrete, verify the following:
  1. Installation of formwork, reinforcement, and embedded items is complete.
  2. Concrete surfaces and forms are clean of frost, ice, mud, debris, and water.
  3. Forms are thoroughly wetted or oiled.
  4. Reinforcement is securely tied in place and thoroughly cleaned of ice and other coatings that may reduce or destroy bond with concrete.
  5. Required inspections have been performed.
  6. Equipment for transporting concrete is clean.
  7. Vibrators are operational, if required.
- B. Convey material from the mixer to the place of deposit in a manner such that no segregation or loss of materials occurs.
- C. Place concrete as near as possible to its final position to avoid segregation due to re-handling or flowing.
  1. Do not allow concrete material to fall a vertical distance greater than 4-feet from the point of discharge to the point of deposit.
  2. Do not allow concrete material to disturb or displace reinforcing bars, floor drains, or other embedments.
- D. Place concrete at a rate so that it is plastic and flows readily into corners of forms and into spaces around reinforcing bars.
- E. Place concrete continuously until the volume or section is completed, with no cold joints.
  1. Dispose of concrete that has partially set prior to placement or that has been contaminated by foreign material.
- F. Consolidate concrete with mechanical vibrating equipment, so that the concrete is thoroughly worked around reinforcement and other embedded items and into corners.
  1. Use internal vibrators with minimum speed of 7,000 vibrations per minute and that are sufficiently narrow to fit into spaces between reinforcing bars, formwork, and existing concrete. Have extra vibrators at the Site in case a vibrator does not work.
  2. Do not use vibrators to transport concrete.
  3. Insert and withdraw vibrators vertically at uniformly spaced locations no farther apart than the visible effectiveness of the vibrator.
  4. At each insertion, limit the duration of the vibration to the time necessary to consolidate the concrete without causing mix constituents to segregate.
  5. For slabs:
    - a. Strike-off the surface and consolidate the concrete with a vibrating screed, to the correct elevation.

- b. Slope surfaces uniformly to drains where required.
  - c. Before excess bleed water appears on the surface, use a wood bull float, darby, or modified highway straightedge to form a uniform, planar, open-textured surface. Do not further disturb the surface before starting finishing operations.
- G. Cold-Weather Placement: Protect concrete Work from physical damage or reduced strength due to frost, freezing, or low temperatures. Refer to ACI 306R for guidance and comply with the following.
  - 1. When the air temperature has fallen or is expected to fall below 40 degrees F, uniformly heat water and aggregates before mixing to obtain a concrete mixture temperature of not less than 50 degrees F and not more than 80 degrees F at the point of placement. Mix water and aggregates together before adding cement. Do not add cement if the temperature of the water/aggregate mixture exceeds 70 degrees F.
  - 2. Do not use frozen materials or materials containing ice or snow.
  - 3. Do not use calcium chloride, salt, or other materials containing antifreeze agents or chemical accelerators, unless otherwise specified and approved in mix design.
- H. Hot-Weather Placement: Protect concrete Work from physical damage or reduced strength due to rapid evaporation or overheating of concrete. Refer to ACI 305R for hot-weather conditions that may adversely affect concrete placement, finishing, and curing. Do not allow the temperature of the concrete at the time of placement to exceed 90 degrees F. When hot-weather conditions exist, use one or more of the following procedures:
  - 1. Place concrete at night or early in morning.
  - 2. Cool ingredients before mixing to maintain the concrete temperature below 90 degrees F at the time of placement. Chilled mixing water or chopped ice may be used to control the temperature; include the water equivalent of the ice in the mixing water quantity. Use liquid nitrogen to cool the concrete at Contractor's option.
  - 3. Cover steel reinforcement with water-soaked burlap so the steel temperature will not exceed the ambient air temperature immediately before embedding in concrete.
  - 4. Fog-spray forms, steel reinforcement, and subgrade just before placing concrete. Keep the subgrade moisture uniform without standing water, soft spots, or dry areas.
  - 5. Provide windbreaks or sunshades, or both.

### **3.9 FINISHING SLABS**

- A. Do not wet concrete surfaces or add cement.
- B. Do not use finishing aids of any kind, or any other product or material added to the surface and worked into the concrete during finishing.
- C. Float and broom finish.
  - 1. Float finish: Consolidate the surface with a power-driven float or by hand floating if the area is small or inaccessible to a power-driven float. Restraighten, cut down high spots, and fill low spots. Repeat float passes and restraightening until the surface is left with uniform, smooth, granular texture.
  - 2. Medium-Broom Finish: Apply medium-broom finish, perpendicular to traffic flow, on top surfaces subjected to vehicular or pedestrian traffic.

- D. The finished surface flatness shall be such that the measured gaps between the slab surface and an unleveled, freestanding, 10-foot-long straightedge, resting on two high spots and placed anywhere on the surface, does not exceed 3/8-inch.
- E. Hot-Weather Conditions: Fog the surface with water if hot, dry, or windy conditions cause moisture loss approaching 0.2 pounds per square foot per hour before or during finishing operations (value may be estimated using ACI 305R-20, Figure 4.1.4).

### **3.10 JOINTS**

- A. Locate construction and control joints per approved submittal. Ensure joints are evenly spaced and either parallel or perpendicular to existing structures unless otherwise noted on drawings.
- B. Construction Joints:
  - 1. Construct joints true to line with faces perpendicular to the surface plane of the concrete.
  - 2. Place joints perpendicular to the main reinforcement. Continue reinforcement across construction joints, unless otherwise indicated. Do not continue reinforcement through sides of strip placements of floors and slabs.
  - 3. Provide sufficient joints so that members or sections can be cast continuously.
  - 4. Locate joints in slabs, beams, joists, and girders in middle third of spans.
- C. Control Joints:
  - 1. Construct joints true to line with faces perpendicular to the surface plane of the placement.
  - 2. Provide tooled control joints, as default unless adjacent construction uses sawcut joints.
  - 3. If sawcut joints are necessary, sawcut as soon as possible without damaging surface of concrete. In no instance shall this occur after the concrete is expected to reach 1,500 psi. Sawcut joints at least 1/3 of slab depth or 1 inch, whichever is greater. Do not damage reinforcing with sawcut.
- D. Isolation Joints: Form isolation joints with preformed filler at walls, columns, drains, and other locations noted on Drawings.
  - 1. Install isolation joints at locations to match existing
  - 2. Ensure adequate depth of joint material to allow for sealant installation.

### **3.11 CURING AND PROTECTION**

- A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures.
  - 1. Maintain concrete above 55 degrees F and in a moist condition for at least seven days after placing for ready-mix concrete.
- B. Unformed Top Surfaces: Use moisture-retaining cover.
  - 1. Begin curing within 30 minutes after finishing concrete.
  - 2. Place cover in widest practicable width, with sides and ends lapped at least 12 inches.
  - 3. Seal sides and ends of cover by holding down with soil, concrete pieces, or some other weight, or by using waterproof tape or adhesive.
  - 4. Immediately repair holes or tears in cover during curing period, using cover material and waterproof tape.
  - 5. Re-wet concrete surface as necessary to maintain moist condition for a minimum of 7 days.

- C. No construction traffic shall be permitted on the new concrete for at least 3 days and until the concrete has achieved at least 75 percent of its specified 28-day compressive strength.

### **3.12 QUALITY CONTROL**

- A. Submit batch tickets for ready-mix concrete.
- B. Owner will engage a qualified independent testing and inspecting agency to sample materials and perform tests prior to, during, and after concrete placement.
- C. Provide:
  - 1. Access to Work.
  - 2. Materials for sampling.
  - 3. Site facilities for sampling, testing, and storage of materials.
  - 4. Incidental labor.
  - 5. Disposal of concrete or materials related to testing.
  - 6. Cleaning or washout materials and facilities.
- D. Testing Services: Sampling and testing of composite samples of fresh concrete material shall be performed according to the following requirements:
  - 1. Testing Frequency: Obtain one composite sample of each concrete mix for each day's pour exceeding 500 square feet.
  - 2. Take samples from ready-mix truck or mixer during discharge according to ASTM C172.
  - 3. Slump testing:
    - a. Perform one slump test on each composite sample in accordance with ASTM C143 on all concrete materials with a design slump less than or equal to 10 inches.
      - 1) Perform one test on the first two ready-mix trucks. Perform additional tests when concrete material consistency appears to change.
  - 4. Air Content: Per ASTM C231; one test for each composite sample.
  - 5. Concrete Temperature: Per ASTM C1064
    - a. On ready-mix concrete perform one test for each composite sample; and one test hourly when air temperature is 40 degrees F and below or 80 degrees F and above.
  - 6. Compression Test Specimens: ASTM C31. Use 4-inch by 8-inch cylinders.
    - a. Standard-cured (lab-cured): Cast and test seven standard cure cylinder specimens for each composite sample.
    - b. Field-cured: If requested by Architect/Engineer, or at the discretion of the Contractor, take additional sets of specimens and field cure in the vicinity of the area that they represent and in the same manner as that portion of the material.
  - 7. Compressive-Strength Tests: ASTM C39.
    - a. Standard-cured (lab-cured): Test three standard-cured specimens at seven days, and three at 28 days. Hold the final specimen in reserve in case additional testing is required.
    - b. Field-cured (if requested by Architect/Engineer): Test three field-cured specimens at seven days, and three at 28 days. Hold the final specimen in reserve in case additional testing is required
  - 8. Test results shall be reported in writing to Owner's Representative, Architect/Engineer, concrete supplier, and Contractor within 48 hours of testing. Reports of compressive-strength tests shall contain:
    - a. Name of concrete testing and inspecting agency.

- b. Project identification name.
- c. Date of concrete placement.
- d. Specific location of concrete batch in Work.
- e. Concrete mix number, design compressive strength at 28 days, design slump range, and design air content range.
- f. Specimen number, cylinder size, dates of compression tests, compressive breaking strengths and types of break for seven- and 28-day tests, and measured spread, air content, and air and concrete temperatures.
- g. Statement that indicates whether test results are in conformance with Specifications.
- 9. Concrete strength is satisfactory if the average of the 28-day standard-cured compressive-strength tests equals, or exceeds, the specified 28-day compressive strength and no test value is more than 500 pounds per square inch less than the specified 28-day strength. Strength tests confirming 28-day strength are acceptable at earlier ages.
- 10. When the compressive strength of field cured specimens is less than 85 percent of the companion standard cured cylinders, evaluate operations and provide corrective procedures for protecting and curing the in-place concrete.
- 11. Non-Conforming Concrete:
  - a. If tests indicate that concrete is not in conformance with the Specification, remove and replace non-conforming concrete or perform additional testing, acceptable to Architect/Engineer, to verify conformance with the Specification, at no cost to Owner.
  - b. Procure core samples in accordance with ASTM C42.
  - c. If tests indicate that the slump, air entrainment, or other requirements have not been met, examine core samples petrographically, according to ASTM C856, to evaluate hardened concrete characteristics. Design intent for desired hardened concrete properties shall be based on the Specification, and applicable portions of ACI 201.2R, as determined by Architect/Engineer.
  - d. If compressive-strength tests do not meet the acceptance requirements, procure three core samples from each portion of the structure represented by the unsatisfactory test(s), and test in compression. The strength of concrete in the area represented by core tests is satisfactory if the average of three compressive strength tests equals or exceeds 85 percent of the specified 28-day compressive strength and no compressive-strength test value is less than 75 percent of the specified 28-day compressive strength. If strength acceptance criteria are not met, remove and replace non-conforming concrete areas at no cost to Owner.
  - e. Perform additional inspection and testing, at no cost to the Owner, to determine the compliance of replaced or additional Work with requirements.

### **3.13 CONCRETE REPAIR DEFECTS**

- A. Repair defective areas designated by Architect/Engineer. Remove and replace concrete that cannot be repaired to Architect/Engineer's satisfaction.
- B. Surface defects on exposed surfaces include:
  - 1. Voids, spalls, air bubbles, honeycomb, and rock pockets more than 1/2 inch in any dimension in solid concrete but not less than 1 inch deep. Any item which covers more than 2 percent of the surface.
  - 2. Cracks at least 0.015-inch wide and any that penetrate to the depth of the reinforcing or completely through the section.

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3. Surface finish not meeting the requirements above.
- C. Repair latent defects that affect concrete's durability and structural performance as determined by Architect/Engineer.

**END OF SECTION**

**SECTION 03 55 00**

**POLYACRYLATE COMPOSITION UNDERLAYMENT**

**Dex-O-Tex A-81**

**PART 1.00 - GENERAL**

**1.01 GENERAL REQUIREMENTS**

- A. Work of this Section, as shown or specified, shall be in accordance with the requirements of the Contract Documents.

**1.02 WORK INCLUDED**

- A. Work of this Section includes all labor, materials, equipment and services necessary to complete the polyacrylate resin composition underlayment as scheduled on the drawings and/or specified herein.

**1.03 RELATED WORK**

- A. Concrete - Section 03300.  
(Note to Specifier: Concrete should be either water cured or cured using sodium silicate curing compounds only. Other types of curing compounds are generally not acceptable. Concrete should be cured for a minimum of 28 days.)
- B. Floor drains - Division 15.  
(Note to Specifier: Floor drains, clean-outs, etc. should be of the "floor-flange" type as manufactured for use with composition floors by most major drain manufacturers.)

**1.04 SUBMITTALS**

- A. General: Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections.
- B. Product Data: Submit manufacturer's technical data, application instructions and general recommendations for waterproof flooring.
- C. LEED Submittals:
  - 1. Product Data for Credit MR 4.1 and Credit MR 4.2: For products having recycled content, submit documentation indicating percentages by weight of post-consumer and pre-consumer recycled content.
    - a. Include statement indicating costs for each product having recycled content.
    - b. Include LEED Product Information Form for LEED Credits MR 4.1 and 4.2.
  - 2. Product Data for Credit EQ 4.2: For field applied, interior, paints coatings and primers, include printed statement of VOC content indicating compliance with Credit requirements.
    - a. Include LEED Product Information Form for LEED Credit EQ 4.2.
  - 3. Provide additional documentation for products as required to achieve each Credit(s).
- D. Samples:
  - 1. Submit 2-1/2" x 4" samples of underlayment as designed by the Architect.
- E. Material certificates signed by manufacturer certifying that the polyacrylate resin composition underlayment complies with requirement specified herein.

**1.05 QUALITY ASSURANCE**

- A. Installer Qualifications: Engage an experienced installer or applicator that has specialized in installing resinous polyacrylate types similar to that required for this Project and who is acceptable to manufacturer of primary materials.

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- B. Single-Source Responsibility: Obtain polyacrylate resin composition materials from a single manufacturer.
  - C. Qualified Materials: Request for material approvals for any products other than the specified product must be submitted to the architect two weeks prior to the bid, including complete application specification and physical characteristics. Any request after this date will not be accepted. Failure of performance requires immediate removal and replacement of unapproved substituted material with those originally specified at no cost to the owner, Architect, construction manager, or general contractor.
- 1.06 DELIVERY, STORAGE AND HANDLING
- A. Deliver materials in original packages and containers with seals unbroken and bearing manufacturer's labels containing brand name and directions for storage and mixing with other components.
  - B. Store materials to comply with manufacturer's directions to prevent deterioration from moisture, heat, cold, direct sunlight, or other detrimental effects.
- 1.07 PROJECT CONDITIONS
- A. Environmental Conditions: Comply with polyacrylate resin composition underlayment manufacturer's directions for maintenance of ambient and substrate temperature, moisture, humidity, ventilation, and other conditions required to execute and protect Work.
  - B. Lighting: Permanent lighting will be in place and working before installing resinous polyacrylate.

**PART 2.00 - PRODUCTS**

- 2.01 MATERIALS
- A. Trowel applied polyacrylate resin composition underlayment shall be Dex-O-Tex A-81 as manufactured by Crossfield Products Corp located in Rancho Dominguez, California and Roselle Park, New Jersey.
- 2.02 PROPERTIES
- A. Physical Properties:  
Provide polyacrylate system that meets or exceeds the listed minimum physical property requirements when tested according to the referenced standard test method in parentheses.
- |  |  |
|--|--|
| Compressive Strength (ASTM C109) .....           | 5,140 psi.   |
| Flexural Strength (ASTM C78).....                | 1,268 psi  |
| Flexural Modulus of Elasticity (ASTM C580) ..... | 2,415 psi.   |
| Indentation (MIL-PRF-3134) .....                 | 0.005" max.  |
| Impact Resistance (Gardner Impact Tester).....   | No chipping, cracking, or delamination<br>and not more than 0.014" indentation |
| Adhesion (A.C.I. Comm. No. 503.1) .....          | >400 psi (100% failure in concrete)  |
| Shear Bond Strength (ASTM C882) .....            | 410 psi  |

**PART 3.00 - EXECUTION**

- 3.01 INSPECTION
- A. Examine the areas and conditions where the polyacrylate resin composition underlayment is to



be installed and notify the Architect of conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected by the Contractor in a manner acceptable to the Architect.

**3.02 PREPARATION**

- A. Substrate: Perform preparation and cleaning procedures according to polyacrylate manufacturer's instructions for particular substrate conditions involved, and as specified. Provide clean, dry, and neutral substrate for polyacrylate underlayment application.
- B. Concrete Surfaces: Shot-blast, acid etch or power scarify as required to obtain optimum bond of polyacrylate to concrete. Remove sufficient material to provide a sound surface free of laitance, glaze, efflorescence, and any bond-inhibiting curing compounds or form release agents. Remove grease, oil, and other penetrating contaminate. Remove damaged and deteriorated concrete. Leave surface free of dust, dirt, laitance, and efflorescence.
- C. Materials: Mix resin catalyst and aggregate when required, and prepare materials according to polyacrylate underlayment system manufacturer's instructions.

**3.03 APPLICATION**

- A. General: Apply each component of polyacrylate resin composition underlayment system according to manufacturer's directions to produce a uniform monolithic surface of thickness indicated.
- B. Bond Coat: Apply bondcoat/primer over prepared substrate at manufacturer's recommended spreading rate.
- C. Body Coat: Over fresh bondcoat/ primer, trowel apply polyacrylate mortar mix at nominal thickness as specified; hand or power trowel. When cured, sand or grind if necessary to remove trowel marks or roughness.  
(Note to Specifier: A-81 Underlayment may be applied in any thickness from 0 to 2" thickness in one application, or any thickness in multiple applications for leveling or sloping as required, note on drawings specific application parameters.)

**3.04 CURING, PROTECTION AND CLEANING**

- A. Cure polyacrylate resin composition underlayment materials according to manufacturer's directions, taking care to prevent contamination during application stages and before completing curing process. Close application area for a minimum of 24 hours.

END OF SECTION

DEX-O-TEX PRODUCT LINE	3000 E. Harcourt Street	140 Valley Road
CROSSFIELD PRODUCTS CORP.	Rancho Dominguez, CA 90221	Roselle Park, NJ 07204
www.dexotex.com.	Tel: (310) 886-9100	Tel: (908) 245-2800
	Fax: (310) 886-9119	Fax: (908) 245-2583



## **SECTION 04 05 23.19**

### **MASONARY CAVITY DRAINAGE, WEEPHOLES, AND VENTS**

#### **PART 1 - GENERAL**

##### **1.1 WEEP HOLE SCREEN**

- A. The Weepa Protector Weep Hole Screen is the ultimate solution for weep hole security and protection. Crafted from premium marine-grade stainless steel, this weep hole screen fits securely into existing weep holes in brick walls and is extremely easy to install. The patented design ensures adequate airflow and cavity ventilation while providing a strong defense against pests and sparks from wildfires.

#### **PART 2 - PRODUCTS**

##### **2.1 MATERIALS**

- A. Weep Hole Heros – Weep Protector Weep Hole Screen or comparable  
<https://www.weepholeheroes.com/weep-hole-screens/>

#### **PART 3 - EXECUTION**

##### **3.1 INSTALLATION**

- A. Applications
  1. Weep hole inserts used for retrofitting into existing weeps.
  2. Fits weep holes sized between 7mm and 17mm in width.
  3. Suits brick heights of 75mm with allowance for mortar.
  4. Use only on existing buildings.
- B. Specifications
  1. Size: 87mm x 20mm with ventilation holes of 1.6mm diameter.
  2. Construction: Made from 316 stainless steel.

**END OF SECTION 04 05 23.19**



## **SECTION 05 73 00**

### **DECORATIVE METAL RAILINGS**

#### **PART 1 - GENERAL**

##### **1.1 STANDARD RAIL SYSTEM:**

- A. Railings: Design style as shown on drawings for each stair.
- B. Stainless Steel finishes on all exterior rails and posts.

#### **PART 2 - PRODUCTS**

##### **2.1 MATERIALS**

- A. Steel Shapes and Plates: To ASTM A36. Copper Alloys: Bronze, brass, copper, or nickel silver.
- B. Steel Pipe: To ASTM A53 Type E or S, Grade B.
- C. Steel Tubing: c.1) Structural Use: To ASTM A500, Grade B or C. 150303 Page | 6 c.2) Non-Structural Use: To ASTM A513, hot rolled or coiled rolled (mill option).
- D. Fasteners: As recommended by manufacturer. Stainless steel.
- E. Welding Rods: In accordance with AWS code and AWS filler metal specifications.
- F. Stainless Steel: Type 304 at interior; Type 316 at exterior.

#### **PART 3 - EXECUTION**

##### **3.1 EXAMINATION**

- A. Verification of conditions: The Erector installing the Railing System(s) shall verify that conditions of substrates previously installed under prior to metal stair and railing installation.
  - 1. Inform General Contractor of unacceptable conditions.
  - 2. Proceed with installation after unacceptable conditions have been remedied.

##### **3.2 PREPARATION**

- A. Ensure structure being connected to is stable, and complete enough in the construction phase to commence the installation of the Steel Railing System(s).
- B. Remove all construction debris from work area and properly barricade the stair shaft(s) from general construction traffic while the Steel Railing System is being installed.

##### **3.3 INSTALLATION**

- A. Coordinate installation of metal stairs and railing with the General Contractor.

- B. Coordinate metal railings installation with the work of other trades for proper time and sequence to avoid construction delays.
- C. Install handrails and guardrails in accordance with manufacturer's instructions. Install square, plumb, straight, and true to line and level, with neatly fitted joints and intersections.
- D. Minimum Tolerances: 1) Maximum variation of vertical alignment = 0.25" per floor, non-accumulative. 2) Maximum differential of true elevation bench mark(s) = > 0.50" per floor, nonaccumulative.

#### 3.4 ADJUSTING

- A. Upon completion of installation remove all tools, debris and surplus materials from the stair shaft(s).
- B. Remove any debris from stair assemblies which was acquired during transit and storage, leave ready for final finish coat preparation by the painting contractor.

**END OF SECTION 05 73 00**

## **SECTION 06 10 53**

### **MISCELLANEOUS ROUGH CARPENTRY**

#### **PART 1 - GENERAL**

##### **1.1 SYSTEM REQUIREMENTS**

- A. Design Requirements
  - 1. Wood studs not permitted. If required and approved by the University Project Manager provide fire-retardant-treated lumber.
  - 2. Select composite wood products with low emissions based on ASTM testing standards E1333-10.

#### **PART 2 - PRODUCTS**

##### **2.1 MATERIALS**

- A. Wood Products, General:
  - 1. Maximum Moisture Content of Lumber: 15 percent for 2-inch nominal thickness or less, 19 percent for more than 2-inch nominal thickness.
- B. Wood-Preservative-Treated Materials:
  - 1. Preservative Treatment: AWPA U1; use Category UC2
    - a. Preservative Chemicals: Containing no arsenic or chromium.
  - 2. Application: Items indicated and the following:
    - a. Items in contact with roofing or waterproofing.
    - b. Items in contact with concrete or masonry.
- C. Fire-Retardant-Treated Materials:
  - 1. Interior Type A unless otherwise indicated.
  - 2. Application: All miscellaneous carpentry.
- D. Miscellaneous Lumber:
  - 1. Dimension Lumber: Construction or No. 2 grade any species.
- E. Plywood Backing Panels: Exterior, AC, fire-retardant treated.
- F. Fasteners: Hot-dip galvanized steel where exposed to weather, in ground contact, in contact with treated wood, or in area of high relative humidity.

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

**END OF SECTION 06 10 53**

## **SECTION 065200**

### **PLASTIC STRUCTURAL ASSEMBLIES**

#### **PART 1 - GENERAL**

##### **1.1 SECTION INCLUDES**

Versadjust Adjustable Pedestals

Bison Bracing

##### **1.2 RELATED SECTIONS**

Section 065300 -Plastic Decking

Section 067313 – Composite Structural Decking

##### **1.3 REFERENCES**

FBC TAS 110-2000 – Testing Requirements for Physical Properties of Roof Membranes, Insulation, Coatings, and Other Roofing Components

UL 790 – Tests for Fire Resistance of Roof Covering Materials (equivalent to ASTM E 108-04)

UL 94 – Standard for Tests for Flammability of Plastic Materials for Parts in Devices and Appliances

LARR 26041– Versadjust™ Adjustable Pedestal System, Bison Ipê Wood Tiles, and Bison 2cm Paver System

##### **1.4 SUBMITTALS**

- A. Submit under provisions of Section 013300.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
  - 1. Preparation instructions and recommendations.
  - 2. Storage and handling requirements and recommendations.
  - 3. Installation methods.
- C. Shop Drawings: Submit shop drawings detailing the installation methods. Coordinate placement with locations noted on the Contract Drawings.
- D. Fire Resistance Ratings: As required for exterior pedestal supported deck system by the presiding jurisdiction.
- E. Wind Uplift Ratings: As required for exterior air permeable pedestal supported deck systems by the presiding jurisdiction.



## 1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: All primary products specified in this section will be supplied by a single manufacturer with a minimum of ten (10) years' experience.
- B. Installer Qualifications: The deck support system installer must have a minimum of two (2) years' proven construction experience, be capable of estimating and building from blueprint plans and details, determine elevations, and properly handle materials. All work must comply with the Bison installation application procedures for deck support work specified herein.

## 1.6 DELIVERY, STORAGE, AND HANDLING

- A. Inspect all delivered materials to insure they are undamaged and in good condition.
- B. Deliver and store Bison pedestals and system components with labels intact and legible.
- C. Store Bison products in an enclosed or covered area protected from the elements as site conditions allow.
- D. Store and dispose of solvent-based materials such as construction adhesive, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

## 1.7 PROJECT CONDITIONS

- A. There are no pedestal installation temperature restriction guidelines other than the practical considerations of working in any unsafe condition or inclement weather.
- B. Pedestals specified are for pedestrian traffic only.
- C. Perimeter Walls and Containment:
  - 1. Decks must be restrained by perimeter blocking or walls on all sides including "on-grade" installations. Lateral movement greater than one-tab set (not to exceed 3/16 inch or 4.5 mm) is unacceptable and will be subject to rejection.
  - 2. It is recommended that the deck surfacing tiles or pavers sit above the waterproofing, integral flashing, and/or counter flashing. In situations where the perimeter of the deck comes into contact with the flashing material, protective wall covering should be specified if deemed necessary by the specifier.
- D. Heavy Roof Top and Flat Bottom Features require individual support in addition to the deck pedestal system.
  - 1. A minimum of one additional pedestal support must be installed for every 500 lbs. (or portion thereof) of static loading. These additional support pedestals must be installed directly under the decking and evenly spaced immediately below the feature locations. One additional pedestal must be placed under each corner of any rectangular feature.

2. When installing Bison Cubes, additional support may be needed under the center and corners of the cubes depending on the size and anticipated weight loads.
  3. Features supported by legs or feet are not advised or are considered unacceptable because of the dangers of point loading.
  4. Any feature that creates vibration must be provided for in special consultation and written agreement with Bison. Cell phone towers, heavy planters and other similar features require their own separate curb designed by an architect or professional engineer.
- E. All decks shall be designed to not exceed the design capacity of the pedestal.
- F. The substrate immediately below the pedestals shall provide positive drainage.
- G. Roof systems must meet local building code and be in accordance with the NRCA recommended good construction practices. Only roofing manufacturer approved systems shall be used.
- H. It's recommended that a 12 x 12 inch piece of installed membrane be used as a separate protective slip sheet underneath each pedestal.
- I. Pedestals must be supported by a surface that provides 40 psi bearing capacity. Membranes installed over rigid insulation board typically incorporate 20 psi density insulation which requires additional support for adequate load bearing of 40 psi.
1. Suggested methods to accomplish the noninvasive and required support:
    - a. Incorporate one of the thin *Cap Bearing Protective Layer Insulation* specifications that call for a very thin protective layer to be installed on top of the common 20 psi insulation. Such a cap type insulation product is commonly formed as a thin dense low-foamed polyisocyanurate layer and provides the necessary pedestal support.
    - b. Bison Model FIB Pedestal Base: Install an enlarged base that supports the pedestal to distribute the anticipated loaded weight of a pedestal over an enlarged area. Bison manufactures the Floating Insulation Base (Model FIB) for this purpose. Model FIB is specifically designed to be directly installed over Type 1 roof systems that incorporate 20 psi common insulation boards.
    - c. Insulation above the Membrane: Install a 1 ½ inch thick (min.) layer of dense, closed cell 40 psi (min.) extruded cell poly-styrene insulation board *above* the common roofing system that has buried insulation to provide support for the pedestal system.
- J. Bison Pedestals can be installed directly on top of gravel removed 40 psi, or greater, extruded closed cell polystyrene insulation with 1 ½ inch thickness or greater. Install deck system pedestals directly on the insulation prior to the installation of ballast rock. Seek alternative methods of ballasting until deck installation is completed.

## 1.8 WARRANTY

- A. At project closeout and upon request, Bison pedestals can provide to the Owner or Owners Representative, an executed copy of the manufacturer's standard

document outlining the terms, conditions and limitations of their limited warranty against manufacturing defect for a period of five (5) years.

- B. The Contractor warrants that his work will remain free from defects of labor and materials used in conjunction with his work in accordance with the General Conditions for this project or a minimum of five (5) years.
- C. It is the responsibility of the Contractor installing the product listed in this section to coordinate warranty requirements with any related sections or adjacent work. Notify the Architect immediately of any potential lapses or limitations in warranty coverage.
- D. For use with pedestrian traffic only – Never use Bison pedestals to support or construct decks that have wheeled, motorized or equipment traffic.
- E. Decks should be restrained on all sides and not have lateral movement in excess of one tab set (not to exceed 3/16 inch or 4.5 mm).
- F Deck must be installed according to specifications or warranty is voided.

## 1.9 MANUFACTURERS

- A. Acceptable Pedestal System Manufacturer: Bison Innovative Products; 701 Osage Street, Unit 120, Denver, CO 80204 Toll Free: 800-333-4234 Phone: 303-892-0400 Fax: 303-825-5988 Email: info@bisonip.com Web: www.bisonip.com.
- B. Substitutions: Not permitted.
- C. Requests for substitutions will be considered in accordance with provisions of Section 012500.

## PART 2 - PRODUCTS

### 2.1 VERSADJUST ADJUSTABLE PEDESTALS Typical Height Range 2 ¼ -24 inches (36 inches with bracing); Weight Bearing 1250 lbs./pedestal (FS:3); Made in the U.S.A.

- A. V-Series Base Model:
  - 1. General Pedestal Details:
    - a. Load Capacity: Maximum 1250 lbs. (567 kg) per pedestal with a Safety Factor of 3 (FS:3).
    - b. Material: Mineral Filled High Density Copolymer Polypropylene. Bison #B-PP-2025.
    - c. Contains 20% post-industrial recycled material.
  - 2. Pedestal Base Details:
    - a. Diameter: 8 inches (203 mm) diameter x 3/16 inch (4.75mm) top wall thickness.
    - b. Bearing Surface Area: 50.3 in<sup>2</sup> (325 cm<sup>2</sup>).
    - c. Six (6) -1/2 inch (13mm) diameter holes for drainage and/or BB-PEGS.
    - d. Includes a Model VB Integral Base Leveler Disk (not sold separately) that compensates for 0" to 2" per foot slope.

3. Pedestal Top Details:
  - a. Diameter: 6  $\frac{3}{4}$  inches (172 mm) x 5/32 inch (4mm) thick plate.
  - b. Bearing Surface Area: 35.8 in<sup>2</sup> (231 cm<sup>2</sup>).
4. Spacer Tabs:
  - a. Free spinning insert maintains gapping while allowing for height adjustments under load.
  - b. Two Spacing Configurations (specify selection): 1) VT18 1/8 inch (3.175 mm) tab thickness. 2) VT316 3/16 inch (4.5mm) tab thickness.

## 2.3 FASTENING KITS

- A. Model: FS-1 Fastening Kit – Secures Bison Wood Tiles or Paver Trays to Bison Pedestals without penetrating or damaging the Wood Tile, Paver Tray, or selected paver:
  - 1 Components: Washer (US Patent #8,302,356), long screw, and short screw.
  - 2 FS-1 with Bison Wood Tiles: Use long screw with Bison Adjustable Pedestals, HD50 Fixed Height Pedestals, and HD75 Fixed Height Pedestals.
  - 3 FS-1 with Bison Paver Trays: Use long screw with Bison Adjustable Pedestals; short screw with Bison HD50 and HD75 Fixed Height Pedestals.
  - 4 Weight: 0.192 oz. (5.4 g)
  - 5 Material: Nylon
- B. Model: FS-12 Spline – Secures Bison Wood Tiles or Paver Trays to Bison Pedestals without penetrating or damaging the Wood Tile, Paver Tray, or selected paver when greater lock-down force is required:
  - 1 Components: Spline, long screw, and short screw.
  - 2 FS-12 with Bison Wood Tiles: Use long screw with Bison Adjustable Pedestals, HD50 Fixed Height Pedestals, and HD75 Fixed Height Pedestals.
  - 3 FS-12 with Bison Paver Trays: Use long screw with Bison Adjustable Pedestals; short screw with Bison HD50 and HD75 Fixed Height Pedestals.
  - 4 Tab: 3/16" (4.5 mm)
  - 5 Weight: 1.41 oz. (40 g)
  - 6 Material: Mineral Filled High Density Copolymer Polypropylene (Bison #B-PP-2025)

## 2.4 SHIMS

- A. Model B11: Flexible Shim 1/16 inch (1.5mm)
  - 1 Use no more than 4 shims per pedestal. If using a segment, adhere it to the pedestal with construction adhesive. Ensure the adhesive does not contact the roofing membrane.
  - 2 Material: Thermoplastic Elastomer.
- B. Model PS1: Rigid Poly Shims 1/8 inch (3.175mm)
  - 1 Use no more than 2 shims. If using a segment, adhere it to the pedestal with construction adhesive. Ensure the adhesive does not contact the roofing membrane.
  - 2 Material: Mineral Filled High Density Copolymer Polypropylene. Bison #B-PP-2025.
  - 3 Contains 20% Post-industrial recycled material.
- C. Model: BB-Wedge

1. Spacing Wedge.
2. Material: Mineral Filled High Density Copolymer Polypropylene. Bison #B-PP-2025.
3. Contains 20% post-industrial recycled material.

## 2.5 BISON BRACE SYSTEM

- A. Required for Installations 24 to 36 inches in height or for applications requiring additional stability.
- B. Material: All Bison Bracing components are manufactured using Mineral Filled High Density Copolymer Polypropylene. Bison #B-PP-2025.
- C. Contains 20% post-industrial material.
- D. Model BB-C: Bison Brace Collar
  1. Fits Model V3 and V4 only.
  2. Allows for braced connections away from the pedestal base.
  3. *Required* for additional stability installations (i.e. Seismic Conditions).
  4. *Optional* for Excessive Cavity Height, Wind Uplift, On-Grade installations.
- E. Model BB-BRACE: Bison Brace Kit
  1. For 11 ¾ to 36 inch wide pavers (center of pedestal to center of pedestal measurement).
  2. BB-BRACES can be trimmed in order to accommodate listed range as required.
  3. Kit contains two (2) each 17 inch long brace pieces and BB-LATCHES.
- F. Model BB-FH: Bison Fixed Height Brace Kit
  1. For 8 ½ to 25 ½ inch wide pavers (center of pedestal to center of pedestal measurement)
  2. BB-FH can be trimmed in order to accommodate listed range as required.
  3. Kit contains two (2) each 12 inch long brace pieces and BB-SCREWS.
- G. Model BB-CONNECT: Bison Fixed Height Brace Connector
  - 1 Allows for a braced transition between BB-FH and adjustable pedestal base with BB-PEGS.
  - 2 For use when transitioning from fixed height pedestals and fixed height bracing to adjustable pedestals and bracing; while ensuring a fully interconnected decking system.
- H. Model BB-PEGS
  - 1 Individual pegs to be inserted into Versadjust Pedestal Base which allow for secure BB-BRACE attachment via quick clip locking-mechanism.
  - 2 Six (6) Model BB-PEGS are required for each Versadjust pedestal receiving bracing, and Eight (8) Model BB-PEGS are required for each Model LO Pedestal receiving bracing.
- I. Model: V1-316 BB-PEGS / V2-316 BB-PEGS / V3-316 BB-PEGS / V4-316 BB-PEGS or V1-18 BB-PEGS / V2-18 BB-PEGS / V3-18 BB-PEGS / V4-18 BB-PEGS

1. Versadjust and BB-PEGS pre-inserted into Pedestal Base at the factory.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Verify all elevations, required pedestal heights, insulation density, and deck dimensions before commencing work.
- B. Do not begin installation until substrates have been properly prepared.
  - 1 The substrate surface that will receive the pedestals must be well compacted (on grade) and structurally capable of carrying the dead and live loads anticipated.
  - 2 The substrate must be clean and free of projections and debris that could impair the performance of the pedestals or the total deck system.
- C. If substrate preparation is the responsibility of another installer, notify Architect (or other appropriate party: Engineer, General Contractor, or Project Manager) of unsatisfactory preparation before proceeding.

### 3.2 PREPARATION

- A. Reference Installation Details documentation for recommended preparations.
- B. Establish accurate lines, levels and pattern as per installation instructions.

### 3.3 INSTALLATION

- A. Reference manufacturer Installation Details documentation for recommended installation procedures (details can be found online on the Bison website).
- B. If you encounter a situation during installation which is not covered in the installation details, please contact Bison at 303-892-0400 or Toll-Free at 800-333-4234.

### 3.4 PEDESTAL ADJUSTMENT

- A. Ensure pedestals have been shimmed/adjusted for rocking, uneven, or un-level pavers prior to substantial completion.
- B. Reference manufacturer Installation Details documentation for adjustment procedures such as shimming a pedestal or adjusting the slope compensation on the pedestal.

### 3.5 FIELD QUALITY CONTROL

- A. During Installation:
  - 1 Inspect construction progress regularly to ensure grid line spacing is being maintained in a straight and consistent manner and deck panels or pavers are level and not rocking, shim as required. Particular attention should be paid to pedestrian entrance or access points to eliminate potential trip hazards.

- 2 Confirm that deck pedestal height does not exceed specified height (24 inches for no bracing; 36 inches with bracing).
  - 3 Unless otherwise specified in writing to allow for expansion, inspect to ensure that all paver spacing between tiles and at the perimeter is no greater than one tab set (not to exceed 3/16 inch or 4.5 mm). Install/Adhere partial tab sets as required to maintain proper gapping.
- B. Immediately Following Installation: The Owner, or the Owner's Agent, shall carefully inspect the deck system to verify:
- 1 The new deck is blocked on all sides to contain the surface decking and related components.
  - 2 There is no more than one tab set (not to exceed 3/16 inch or 4.5 mm) gapping between any deck panels and at all sides of the deck perimeter.
  - 3 There is no ballasting rock used to fill in any perimeter voids.
  - 4 Deck panels do not rock when you walk across the decking surface.
  - 5 All spacer tabs are in place, visible and secure.
- C. Other: Installer and/or Architect has the responsibility of informing the Owner about performing routine maintenance on the deck, this includes:
1. Checking for rocking pavers or surface tiles and properly applying shims as the substrate can settle and require pedestal adjustment.
  2. Periodically checking for broken, damaged, or missing tab sets and replacing them to limit deck movement.
  3. Maintaining intact and structurally sound perimeter containment.
  4. Replacing damaged surface tiles, pavers, or pedestals.

**END OF SECTION 06 52 00**

SECTION 07 57 00

DEX-FLEX WATERPROOF TRAFFIC COATING SYSTEM

PART 1.00 - GENERAL

1.01 GENERAL REQUIREMENTS

- A. Work of this Section, as shown or specified, shall be in accordance with the requirements of the Contract Documents.

1.02 WORK INCLUDED

- A. Work of this Section includes all labor, materials, equipment and services necessary to complete the waterproof deck system as scheduled on the drawings and/or specified herein.

1.03 RELATED WORK

- A. Concrete - Section 03300.  
**(Note to Specifier: Concrete slab should be either water cured or cured using sodium silicate curing compounds only. Other types of curing compounds are generally not acceptable. Concrete should be cured for a minimum of 28 days with a maximum moisture content of 7% per ASTM F1869. Concrete substrate should meet or exceed ACI 302 or ACI 318 depending on design considerations. Concrete should be pitched for drainage.)**
- B. Drains - Division 15.  
**(Note to Specifier: Drains, clean-outs, etc. should be of the "floor-flange" type as manufactured for use with composition substrates by most major drain manufacturers. Drain flange shall be finished with substrate. Bi-Level drains shall be used with mortar bed installations)**
- C. Insulation, vapor barrier and protective waterproofing  
**(Consult Crossfield Products Corp. for specific recommendation)**
- D. Sheet metal flashing  
**(Note to Specifier: Sheet metal flashing shall be minimum 26 gauge galvanized. All joint or seams shall be overlapped approximately every 3 inches and caulked with Dex-O-Tex Elastatex 500 flashing paste or approved equal.)**
- E. Slope for drainage  
**(Note to Specifier: Allow minimum 1/4 inch per foot slope to drain. This can be provided for in the substrate or by application of Dex-O-Tex A-81 or High Strength Mortar Underlayment. Care must be taken to provide adequate elevation at thresholds to provide proper slope to drain.)**

1.04 SUBMITTALS

- A. General: Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections.
- B. Product Data: Submit manufacturer's technical data sheet.
- C. LEED Submittals:
  - 1. Product Data for Credit MR 4.1 and Credit MR 4.2: For products having recycled content, submit documentation indicating percentages by weight of postconsumer and preconsumer recycled content.
    - a. Include statement indicating costs for each product having recycled content.
    - b. Include LEED Product Information Form for LEED Credits MR 4.1 and 4.2.
  - 2. Product Data for Credit EQ 4.2: For field applied, interior, paints coatings and primers, include



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- printed statement of VOC content indicating compliance with Credit requirements.
  - a. Include LEED Product Information Form for LEED Credit EQ 4.2.
- 3. Provide additional documentation for products as required to achieve each Credit(s).
- D. Samples for initial selection purposes in form of manufacturer's recommended installation procedures for specific application parameters.
- E. Maintenance Instructions: Submit manufacturer's written instructions for recommended maintenance practices.

**1.05 QUALITY ASSURANCE**

- A. Installer Qualifications: Engage an experienced installer who has a minimum of 5 years experience installing similar materials, and who is certified as factory trained by manufacturer of primary materials. Contractor must demonstrate they are qualified in the installation of waterproof deck materials types similar to those specified for this Project and who offers a joint labor and material warranty with manufacturer of primary materials. **Contact Brandon Carpenter for Dex-O-Tex Applicators and other information: Phone: 619-865-0479 or Email: [brandonc@cpcmail.net](mailto:brandonc@cpcmail.net).**
- B. Single-Source Responsibility: Obtain waterproof traffic coating membrane materials, including primers, underlayments, copolymer, as well as protective coatings and wearing surface, and finish or sealing coats if required, from a single manufacturer.
- C. Pre-Qualified Materials: Submit any request for alternative products for review two weeks prior to bid date. Any request for alternate products received after this date will not be considered.

**1.06 DELIVERY, STORAGE AND HANDLING**

- A. Deliver materials in original packages and containers with seals unbroken and bearing manufacturer's labels containing brand name and directions for storage and mixing with other components.
- B. Comply with manufacturer's directions for materials storage to prevent deterioration from moisture, heat, cold, direct sunlight, or other detrimental effects.

**1.07 PROJECT CONDITIONS**

- A. Environmental Conditions: Comply with waterproof deck system manufacturer's directions for maintenance of ambient and substrate temperature, moisture, humidity, ventilation, and other conditions required to execute and protect work.

**1.08 WARRANTY**

- A. Provide a two-year joint manufacturer installer warranty.

**PART 2.00 PRODUCTS**

**2.01 MATERIALS**

- A. Basis of Design: Waterproof traffic coating system shall be Dex-O-Tex Dex-Flex for concrete as manufactured by Crossfield Products Corp.; Rancho Dominguez, California and Cibolo, Texas.
- B. Primer shall be Dex-O-Tex VL Primer as manufactured by Crossfield Products Corp.; Rancho Dominguez, California and Cibolo, Texas.
- C. Waterproof membrane shall be Dex-O-Tex Cemceil as manufactured by Crossfield Products Corp.; Rancho Dominguez, California and Cibolo, Texas.
- D. Detail membrane shall be Dex-O-Tex Barrier-Guard with fabric reinforcement as manufactured by Crossfield Products Corp.; Rancho Dominguez, California and Cibolo, Texas.
- F. Texture coats shall be Dex-O-Tex Resistite as manufactured by Crossfield Products Corp.; Rancho Dominguez, California and Cibolo, Texas.
- G. Color sealer shall be Dex-O-Tex AJ-44 as manufactured by Crossfield Products Corp.; Rancho Dominguez, California and Cibolo, Texas.

## **2.02 PROPERTIES**

### **A. Membrane Physical Properties:**

Provide a waterproof deck system that meets or exceeds the listed minimum physical property requirements when tested according to the referenced standard test methods in parentheses.

#### **1. TYPICAL PHYSICAL PROPERTIES at 75°F (24°C)**

<b>Waterproofness</b> .....	No Passage of Water Resistance to passage
	when Subject to 27.7" head of water (Hydrostatic pressure of 1 lb./ft.) for one month.
<b>Elongation</b> ASTM D638 .....	580%
<b>Tensile Strength</b> ASTM D638.....	345 psi
<b>Adhesion in Peel to Concrete</b> ASTM C794.....	8.3 lbs (pounds per inch width)
<b>Moisture Vapor Transmission</b> ASTM E96 .....	2.04 gr
<b>Crack-Bridging</b> ASTM E836, 1/8" opening .....	no rupture
<b>Hydrostatic Resistance</b> ASTM D751 .....	Passes Procedure
<b>Permeability</b> ASTM E96.....	0.13 perm/in
<b>Antimicrobial Resistance</b> ASTM G21.....	Passes

### **B. IAPMO and ANSI Compliance Requirement:**

Copolymer waterproofing membrane shall have IAPMO (International Association of Plumbing and Mechanical Officials) and ANSI (American National Standards Institute) compliance.

1. IAPMO File No. Certification
2. ANSI A118.10-99 manufactured compliance

## **PART 3.00 - EXECUTION**

### **3.01 CONTRACTOR QUALIFICATIONS**

- A. Waterproof traffic coating system shall be installed in strict accordance with the manufacturer's recommendations by a contractor trained and approved by the materials manufacturer and has a minimum five years experience in the application of similar materials.

### **3.02 INSPECTION**

- A. Examine the areas and conditions where the waterproof traffic coating system is to be installed and notify the Architect of conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected by the Contractor in a manner acceptable to the Architect.
- B. Evaluate level of moisture in the substrate to determine that moisture levels are acceptable for application of specified waterproof deck system.

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**303 PREPARATION**

- A. Substrate: Perform surface preparation in accordance with ICRI Guideline No. 03732 with CSP of 2 to 3 and cleaning procedures according to manufacturer's instructions for particular substrate conditions involved, and as specified. Provide clean, dry and neutral substrate for application of waterproof deck covering.
- B. Materials: Pre-mix aqueous copolymer per manufacturer's instructions. Prepare materials according to waterproof traffic coating system manufacturer's instructions.

**3.04 FIELD CONDITIONS**

- A. Waterproof traffic coating system shall not be applied during either freezing or inclement weather, or when such weather can logically be expected.

**3.05 APPLICATION**

- A. General: Apply each component of waterproof traffic coating according to manufacturer's directions to produce a uniform monolithic surface of thickness indicated.
- B. Primer Coat: Apply the primer in the selected color as recommended. Allow to dry.
- C. Detail Membrane: Apply eight inch wide detail membrane with fabric reinforcement over joints, cracks, ninety degree changes of elevation and transitions. Allow to dry.
- D. Membrane: Trowel or squeegee apply two coats of the primary membrane. Allow to dry between coats and before recoating.
- E. Texture Coats: Apply two cementitious texture coats to create the approved finish texture. Allow to dry between coats and before recoating.
- F. Apply two sealer coats in the selected color as recommended to produce a surface matching the submittal sample and project mock-up samples. Allow to dry between coats.

**3.04 CURING, PROTECTION AND CLEANING**

- A. Cure waterproof traffic deck system materials according to manufacturer's directions, taking care to prevent contamination during application stages and before completing curing process. Close application area for a minimum of 24 hours.

**END OF SECTION**

DEX-O-TEX PRODUCT LINE  
Crossfield Products Corp.  
www.dexotex.com

3000 E. Harcourt Street  
Rancho Dominguez, CA 90221  
Tel: (310) 886-9100  
Fax: (310) 886-9119

128 Industrial Drive  
Cibola, TX 78108  
Tel: (210) 888-0449  
Fax: (210) 245-0659

**SECTION 07 60 00**

**FLASHING AND SHEET METAL**

**PART 1 - GENERAL**

**1.1 SUMMARY:**

- A. Section Includes:
  - 1. Copings.
  - 2. Flashings.
  - 3. Counterflashings.
  - 4. Related clips, anchors, and fasteners.
- B. Related Sections:
  - 1. Section 042000 - Unit Masonry.
  - 2. Section 075300 - Single Ply Membrane Roofing.
  - 3. Section 079000 - Joint Sealers.

**1.3 SUBMITTALS:**

- A. Submit full size samples in conformance with Section 01300 including:
  - 1. Flashing and counterflashing.
- B. Shop drawings showing profiles, methods of joining, and anchorages details, including major counter flashings, trim/fascia units, scuppers, and control joint systems. Provide details at 3-inch scale.
- C. Pre-finished Sheet Metal Color Charts (where applicable): Submit pre-finished sheet metal manufacturer's standard color charts for color selection.

**1.4 QUALITY ASSURANCE:**

- A. Except as otherwise indicated, conform to requirements and recommendations of SMACNA "Architectural Sheet Metal Manual", as applicable and including joints, seams, details and accommodation of thermal movement.
- B. Sheet metal and flashing installations shall be designed to withstand 120 mph wind uplift.
- C. Completed work must be free from water leakage under all weather conditions.

**1.5 WARRANTY:**

- A. Sheet metal work shall be warranted for a period of 2 years from date of the Notice of Acceptance.
- B. Warranty shall include replacement at Contractor's expense any defects which occur during the warranty period which, in the opinion of the Architect are due to defective materials, workmanship, or for failure to allow for expansion and/or contraction.

**PART 2 - PRODUCTS**

**2.1 MATERIALS:**

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- A. Zinc-Coated Steel Sheet: Commercial quality carbon steel sheets with minimum of 0.20% copper content complying with ASTM A526 or A527 for lock-forming; hot-dip galvanized to comply with ASTM A525, G90, mill phosphatized, 20 gage except as otherwise indicated.
- B. Pre-finished Flashing: Fluoropolymer coating applied to 24 ga. G90 galvanized steel, containing 70% Kynar 500 resins, factory applied baked-on finish. Color as selected from standard color charts.

**PART 3 - EXECUTION**

**3.1 INSTALLATION:**

- A. Seams:
  - 1. For non-moving seams provide soldered common-lock seams, except as otherwise indicated.
  - 2. Comply with metal producer's recommendations for tinning, soldering and cleaning the joints.
  - 3. Mastic sealed seams are not acceptable.
  - 4. All cap flashing seams shall be SMACNA Double-S seams.
- B. Expansion Provisions:
  - 1. Provide for thermal expansion of all exposed sheet metal work exceeding 15'-0" running length, except as otherwise indicated.
    - a. Flashing and Trim: 10'-0" maximum spacing, and located 2'-0" from corners and intersections.
  - 2. Conceal fasteners and expansion provisions wherever possible. Fold back edges on concealed side of exposed edges, to form a hem.
- C. Flashings:
  - 1. Insert flashings into reglets. Anchor by mechanical means, including driven wedges of lead or other compatible metal, spaced 2'-0". Seal the joint with sealant.
  - 2. Provide two piece flashing at all locations.
  - 3. Hem all exposed edges by fold-back on concealed side.

**END OF SECTION 07 60 00**

## **SECTION 07 92 00**

### **JOINT SEALERS**

#### **PART 1 - GENERAL**

##### **1.1 SUMMARY:**

###### **A. Section Includes:**

1. Joints between dissimilar materials
2. Joints in cast-in-place and precast concrete.
3. Masonry control joints.
4. Roof flashing and counterflashing.
5. Penetrations of floors, walls and roofs.
6. Expansion joints.
7. Door, window and louver frames.

###### **B. Related Sections:**

1. Section 03300 - Cast-in-Place Concrete.
2. Section 08100 - Metal Doors and Frames.
3. Section 08800 - Glazing.
4. Section 09260 - Gypsum Board Systems.
5. Section 09300 - Tile.
6. Divisions 15 and 16.

##### **1.2 SUBMITTALS:**

- A. Submit manufacturer's surface preparation and installation instructions under provisions of Section 01300.
- B. Provide documentation from the manufacturer identifying the VOC and chemical component limits for the material supplied.

##### **1.3 QUALITY ASSURANCE:**

###### **A. Applicator Qualifications:**

1. Application shall be done by a Joint Sealant Subcontractor with five years experience. Submit documentation to the Architect and Owner.

###### **B. Manufacturer Technical Assistance:**

1. Materials shall be supplied by manufacturer who will provide qualified technical assistance at the project site.

##### **1.4 WARRANTY:**

- A. Submit 2 copies of written 2-year warranty agreeing to repair or replace joint sealers which fail to perform as airtight and watertight joints; or fail in joint adhesion, cohesion, abrasion resistance, weather resistance, extrusion resistance, migration resistance, stain resistance, or general durability; or appear to deteriorate in any other manner not clearly specified by submitted manufacturer's data as an inherent quality of the

material for the exposure indicated.

- B. Provide warranty signed by the Installer and Contractor.

## PART 2 - MATERIALS

### 2.1 MANUFACTURERS:

- A. Tremco Manufacturing.
- B. Dow Corning.
- C. General Electric.
- D. Pecora Corporation.
- E. Mameco International.
- F. Sika Corporation.
- G. Sonneborn Building Products.

### 2.2 SEALANTS:

#### A. One-Component Acrylic Sealant:

1. Acrylic emulsion sealant, one-part, mildew resistant and paintable, complying with ASTM C834, recommended by manufacturer for general use as an exposed building construction sealant, Pecora AC-20 or approved substitute.
2. All sealants shall meet or exceed the VOC limits of South Coast Air Quality Management District Rule #1168 and all sealants used as fillers must or exceed the requirements of the Bay Area Quality Management District Regulation 8, Rule 51.

#### B. Interior Silicone Rubber Sealant:

1. Silicone rubber-based, one-part elastomeric sealant, complying with ASTM C920, Type S, Class 25, Grade NS.
2. Use acid-type for non-porous joint surfaces, and non-acid type where one or both joint surfaces are porous.
3. For wet areas use type compounded specifically for mildew resistance.
4. Use for interior joints between equipment or counters and walls.
5. All sealants shall meet or exceed the VOC limits of South Coast Air Quality Management District Rule #1168 and all sealants used as fillers must or exceed the requirements of the Bay Area Quality Management District Regulation 8, Rule 51.

#### C. Two-Component Polyurethane Sealant:

1. Polyurethane-based, 2-part elastomeric sealant, complying with ASTM C920, Type M, Class 25, Grade NS (non-sag), Tremco "Dymeric", Pecora "Dynatrol II".
2. Optional Sealant: Contractor may, at his option, provide 1-Component Silicone Sealant, "Silpruf" by General Electric or #790 by Dow-Corning in lieu of above.

3. For exterior and interior sidewalk and floor joints, polyurethane as above except Grade P (self-leveling), Tremco "Dymeric", Pecora "Urexpan NR-200".
4. All sealants shall meet or exceed the VOC limits of South Coast Air Quality Management District Rule #1168 and all sealants used as fillers must or exceed the requirements of the Bay Area Quality Management District Regulation 8, Rule 51.

D. Backer Rod: Compressible, closed cell non-gassing type compatible with required sealant.

### PART 3 - EXECUTION

#### 3.1 INSTALLATION:

##### A. Joints:

1. Install sealants to depths as recommended by the sealant manufacturer but within the following general limitations, measured at the center (thin) section of the bead:
  - a. For sidewalks, pavements and similar joints sealed with elastomeric sealants and subject to traffic and other abrasion and indentation exposures, fill joints to a depth equal to 75% of joint width, but neither more than 0.625" deep nor less than 0.375" deep.
  - b. For normal moving joints sealed with elastomeric sealants, but not subject to traffic, fill joints to a depth equal to 50% of joint width, but neither more than 0.5" deep nor less than 0.25" deep.
  - c. For joints sealed with non-elastomeric sealants and calking compounds, fill joints to a depth in the range of 75% to 125% of joint width.

#### 3.2 SCHEDULE OF SEALANT APPLICATION:

- A. At joints in vertical planes on exterior of building and interior face of through expansion or control joints, provide non-sag type polyurethane or silicone sealant.
- B. At joints in horizontal planes on interior and exterior of building, provide self-leveling type polyurethane sealant.
- C. At joints on interior of building, except as indicated in item A above, provide acrylic type sealant.
- D. At perimeter of plumbing fixtures, and kitchen equipment provide silicone type sealant.
- E. Set all thresholds in full bed of urethane type caulking.
- F. See drawings for typical locations.
- G. Apply continuous sealants at the top and bottom of stud walls for all exterior walls.

**END OF SECTION 07 92 00**



**SECTION 08 00 00**

**OPENINGS**

**PART 1 - GENERAL**

**1.1 SYSTEM REQUIREMENTS**

- A. Design Requirements:
  - 1. Design doors to be larger than the width of the largest piece of equipment to be installed in the space.
  - 2. Provide either hollow metal or solid-core wood for interior doors.
  - 3. Provide 3'-0" by 8'-6" doors typical; wider doors are permitted if required by function and approved by the University Project Manager.
  - 4. Prepare doors and frames to receive security hardware including door switch monitoring devices. Refer to 28 13 00 – Access Control.
  - 5. All replacement windows must be approved by the University Campus Architect and the University Project Manager.
  - 6. All-glass doors are prohibited for interior use. Provide wood stile and rail doors with glass.

**PART 2 - PRODUCTS**

**2.1 MATERIALS**

- A. Doors:
  - 1. Provide all fire-rated doors and frames with an approved UL label.

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

**END OF SECTION 08 00 00**

## SECTION 08 41 13

### ALUMINUM-FRAMED ENTRANCES AND STOREFRONTS

#### PART 1 - GENERAL

##### 1.1 SYSTEM REQUIREMENTS

###### A. Design Requirements:

1. Curtain wall framing systems preferred, storefront glazing systems acceptable only for ground floor glazing not greater than 10 feet in height and for punched or ribbon windows located not greater than 60 feet above grade. All storefront glazing systems must be provided with extruded sills and end dams.
2. All aluminum-framed storefront glazing members shall be thermally-broken.
3. Narrow and medium stile doors are not permitted.
4. Sliding entrance doors are not permitted.

###### B. Performance Requirements:

1. Delegated Design: Contractor to design aluminum-framed systems.
2. Structural Performance:
  - a. Wind Loads: Project specific.
3. Deflection of Framing Members:
  - a. Deflection Normal to Wall Plane: Limited to L/175.
  - b. Deflection Parallel to Glazing Plane: Limited to L/360 or 1/8 inch, whichever is smaller.
4. Air Infiltration: 0.06 cfm/sq. ft. when tested according to ASTM E 283 at a minimum static-air-pressure difference of 6.24 lbf/sq. ft.
5. Water Penetration under Static Pressure: No water penetration when tested according to ASTM E 331 at a minimum static-air-pressure difference of 20 percent of positive wind-load design pressure, but not less than 6.24 lbf/sq. ft.
6. Water Penetration under Dynamic Pressure: No water penetration when tested according to AAMA 501.1 under dynamic pressure equal to 20 percent of positive wind-load design pressure, but not less than 6.24 lbf/sq. ft.
7. Condensation Resistance: No condensation shall form on interior surfaces of aluminum glazing at exterior and interior winter design temperature and relative humidity.

#### PART 2 - PRODUCTS

##### 2.1 MANUFACTURERS

- ###### A. Basis-of-Design Product: Subject to compliance with requirements, provide Kawneer TrifabVG-451T or comparable products by one of the following:
1. EFCO Corporation.
  2. Oldcastle BuildingEnvelope.
  3. United States Aluminum.
  4. YKK AP America Inc.

##### 2.2 MATERIALS

- ###### A. Aluminum: Alloy and temper recommended by manufacturer.
- ###### B. Steel reinforcement as required for loads.

## 2.3 FRAMING SYSTEMS

- A. Framing Members: Manufacturer's standard extruded-aluminum framing members.
  - 1. Construction: Thermally broken.
  - 2. Glazing System: Retained mechanically with gaskets on four sides.
  - 3. Glazing Plane: Multiplane.
  - 4. Nominal Size: 2-inch-wide by 4-1/2-inch-deep.

## 2.4 ENTRANCE DOOR SYSTEMS

- A. Entrance Doors:
  - 1. Door Construction: 1-3/4-inch overall thickness.
  - 2. Door Design: Wide stile.
    - a. Stiles must be wide enough to accommodate rim type metal exit hardware.
  - 3. Glazing: Insulating glass.
- B. Entrance Door Hardware:
  - 1. Butt hinges; pivots not permitted on new installations.
  - 2. Closers: surface mounted.
  - 3. Reinforce doors to accept magnetic locking hardware, door position switches and request-to-exit devices for control by security system.
  - 4. Locks: Where provided cylinders must accept small format (7-pin) interchangeable cores.

## 2.5 ALUMINUM FINISHES

- A. Aluminum Finishes: High-performance organic (three coats).

## PART 3 - EXECUTION (Not Applicable)

**END OF SECTION 08 41 13**

## SECTION 08 80 00

### GLAZING

#### PART 1 - GENERAL

##### 1.1 SYSTEM REQUIREMENTS

- A. Design Requirements:
  - 1. At a minimum provide high-performance, low-e, heat-strengthened, insulating-glass units at all exterior glazed openings.
    - a. Basis-of-Design Exterior Glazing: PPG Solarban 70XL Solar Control Low-E.
  - 2. At all exterior glazed openings, provide glazing with low reflectivity.
  - 3. Select and configure glazing to support daylighting wherever possible and appropriate.
- B. PERFORMANCE REQUIREMENTS
  - 1. Engineering design of glass by Contractor.

#### PART 2 - PRODUCTS

##### 2.1 MANUFACTURERS

- A. Glass Manufacturers: Subject to compliance with requirements, provide products from one of the following:
  - 1. PPG Industries.
  - 2. Viracon.
  - 3. AFG Industries, Inc.
  - 4. Guardian Glass.
  - 5. Pilkington North America.
- B. Fire-Protection-Rated Glazing Manufacturers: Subject to compliance with requirements, provide products from one of the following:
  - 1. InterEdge, Inc., a subsidiary of AFG Industries, Inc.
  - 2. Nippon Electric Glass Co., Ltd. (distributed by Technical Glass Products).
  - 3. Pilkington Group Limited (distributed by Technical Glass Products).
  - 4. Safli First; SuperLite C/P.
  - 5. Schott North America, Inc.
  - 6. Vetrotech Saint-Gobain.

##### 2.2 MONOLITHIC-GLASS TYPES

- A. Clear float glass: Use at all interior door and window locations not required to be safety glass or fire-protection-rated.
- B. Clear fully tempered float glass at all interior door and window locations where safety glass is required.
- C. Polished wired glass permitted where fire-protection-rated glass is required.

##### 2.3 INSULATING-GLASS TYPES

- A. Insulating-Glass Units: Factory-assembled units consisting of sealed lites of glass separated by a dehydrated interspace, qualified according to ASTM E 2190. Use at all exterior glazed openings.

2.4 FIRE-PROTECTION-RATED GLAZING TYPES

- A. Fire-Protection-Rated Glazing: Listed and labeled by a testing agency acceptable to authorities having jurisdiction, for fire-protection ratings indicated, based on testing according to NFPA 252 for door assemblies and NFPA 257 for window assemblies. Permitted in lieu of polished wired glass where fire-protection-rated glass is required.

PART 3 - EXECUTION (Not Applicable)

**END OF SECTION 08 80 00**

## **SECTION 09 00 00**

### **FINISHES**

#### **PART 1 - GENERAL**

##### **1.1 SYSTEM REQUIREMENTS**

- A. Performance Requirements:
  - 1. Fire-Test-Response Characteristics:
    - a. Surface-Burning Characteristics: As determined by testing per ASTM E 84.
      - 1) Flame-Spread Index: 25 or less.
      - 2) Smoke-Developed Index: 25 or less.
      - 3) Fuel Contributed Index: 15 or less.

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

#### **PART 3 - EXECUTION**

##### **3.1 PREPARATION OF CONCRETE TO RECEIVE MOISTURE SENSITIVE FLOORING**

- A. Prepare all concrete substrates to receive moisture sensitive floor finishes including, but not limited to, resilient sheet floor, linoleum flooring, resilient tile flooring, resinous matrix terrazzo flooring, resinous flooring, sheet carpeting and tile carpeting, according to ASTM F 710 and the following:
  - 1. Verify that substrates are dry and free of curing compounds, sealers, and hardeners.
  - 2. Remove substrate coatings and other substances that are incompatible with adhesives and that contain soap, wax, oil, or silicone, using mechanical methods recommended by manufacturer. Do not use solvents.
  - 3. Alkalinity and Adhesion Testing: Perform tests recommended by manufacturer. Proceed with installation only after substrate pH is between 7.0 and 9.0.
  - 4. Moisture Testing: Perform tests recommended by manufacturer and as follows. Proceed with installation only after substrates pass testing.
    - a. Perform anhydrous calcium chloride test, ASTM F 1869. Proceed with installation only after substrates have maximum moisture-vapor-emission rate of 3 lb of water/1000 sq. ft. in 24 hours.
    - b. Perform relative humidity test using in situ probes, ASTM F 2170. Proceed with installation only after substrates have a maximum 80 percent relative humidity level measurement.
- B. Provide moisture vapor emissions and alkalinity control system to all concrete substrates that fail alkalinity and/or moisture testing.

**END OF SECTION 09 00 00**

## **SECTION 09 22 16**

### **NON-STRUCTURAL METAL FRAMING**

#### **PART 1 - GENERAL**

##### **1.1 SYSTEM REQUIREMENTS**

- A. Design Requirements:
  - 1. Space studs at 16 inches on center maximum.
  - 2. Where interior partitions do not extend to the underside of structure, brace to structure at 4 feet on center.
- B. Performance Requirements:
  - 1. Partitions, General: Provide metal framing systems of base-metal thickness and spacing capable of limiting lateral deflections when subjected to a 5 psf uniform lateral load to the following:
    - a. L/240 where supporting gypsum board only.
    - b. L/360 where supporting plaster or ceramic tile finishes.
    - c. L/720 where providing backup to stone or masonry.
  - 2. Suspended Ceiling Design Requirements: Provide metal framing systems of base-metal thickness and spacing capable of limiting ceiling deflections to L/360 when subjected to a minimum 4 psf uniform load or the actual weight of ceiling hung materials, whichever is greater.
  - 3. Engineering design of non-structural metal framing by Contractor.

#### **PART 2 - PRODUCTS**

##### **2.1 MATERIALS**

- A. Steel Framing for Framed Assemblies:
  - 1. Steel studs and runners: 0.033-inch-thick (20 gauge) minimum.
  - 2. Dimpled steel studs and runners: 0.025-inch-thick minimum, with structural properties equivalent to 0.0329-inch-thick steel studs.

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

##### **3.1 INSTALLATION**

- A. Secure with fasteners or proper crimping tools; do not weld.

**END OF SECTION 09 22 16**

**SECTION 09 26 00**

**GYPSUM BOARD SYSTEMS**

**PART 1 - GENERAL**

**1.1 SUMMARY:**

- A. Section Includes:
  - 1. Metal framing required for gypsum board.
  - 2. Resilient Channels
  - 3. Gypsum board.
  - 4. Acoustical insulation.
  - 5. Acoustical sealant.
  - 6. Ceramic tile substrate.
- B. Related Sections:
  - 1. Section 061000 - Rough Carpentry: Wood furring and blocking.
  - 2. Section 054000 - Cold Formed Metal Framing.
  - 3. Section 072100 - Building Insulation: Thermal insulation.
  - 4. Section 081000 - Metal Doors and Frames: Hollow metal frames.
  - 5. Section 093000 - Ceramic Tile.
  - 6. Section 099000 - Painting.

**1.2 SUBMITTALS:**

- A. Manufacturer's Data:
  - 1. Certification Requirements:
    - a. Certify that products furnished for this project are asbestos free.
    - b. Certify that products meet or exceed specification requirements.
  - 2. Indicate compliance with specified fire or sound ratings.
  - 3. Indicate stud height limitations.

**1.3 QUALITY ASSURANCE:**

- A. Industry Standard: Comply with applicable requirements of ASTM C840, "Application and Finishing of Gypsum Board" by the Gypsum Association, except where more detailed or more stringent requirements are indicated, including the recommendations of the manufacturer.
- B. Allowable Tolerances: 1/16" offset between planes of board faces and 1/4" in 8'-0" for plumb, level, warp, and bow.
- C. Manufacturer: Obtain each type of gypsum board and related joint treatment materials from a single manufacturer.
- D. Comply with applicable requirements of Mountain States Bureau of Lath, Plaster and Drywall, Inc.



## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS:

- A. Subject to compliance with requirements, manufacturers offering products which may be incorporated in the work include the following:
  - 1. Metal Support Materials:
    - a. Clark Western Building Systems
    - b. Dietrich Industries, Inc.
    - c. USG Interiors, Inc.
  - 2. Direct Suspension Systems:
    - a. Georgia-Pacific Corp.
    - b. Donn Corporation.
    - c. National Rolling Mills Co.
    - d. USG Interiors, Inc.
  - 3. Gypsum Board and Related Products:
    - a. Georgia-Pacific Corp.
    - b. Gold Bond Building Products Div., National Gypsum Co.
    - c. United States Gypsum Co.
- B. All catalog numbers and trade names used in this Section are those of United States Gypsum, unless otherwise noted, and are to establish continuity and a standard of quality.

### 2.2 MATERIALS:

- A. Gypsum Board:  
USE IN LARGEST POSSIBLE DIMENSIONS--MINIMIZE JOINTS: ARCHITECT TO LIST UL ASSEMBLY NUMBERS AS NEEDED FOR CODE REVIEW.
  - 1. 5/8" regular, tapered edge Type X gypsum board complying with ASTM C36.
  - 2. 5/8" Type X gypsum sheathing board, square edges complying with ASTM C79.
  - 3. 5/8" water resistant Type X, tapered edge gypsum backing board complying with ASTM C630.
  - 4. 5/8" water resistant, tapered edge, exterior gypsum soffit board complying with ASTM C931.
- B. Partitions:
  - 1. Studs: ASTM C645; 25 gage x 3.625" deep, except as otherwise indicated, or required by height. Maintain deflection of L/240 or less without gypsum board applied.
    - a. Use 20 gage or heavier studs at tile backing and at door jambs. Use double studs at door jambs.
  - 2. Space all studs 16" o.c. maximum, unless specifically approved otherwise.
  - 3. Double studs to structure at doors and as needed at corners to stiffen and support.
- C. Ceilings:
  - 1. ASTM C754. Use 1.5" steel channels, 0.475 lb. per ft., cold-rolled.

- D. Furring Members: ASTM C645; 25 gage, hat-shaped or z-shaped as required.
- E. Resilient Channels: RC-1 Pro Resilient Channel (RCUR) or Equal.
- F. Acoustical Sealant: Non-shrinking, non-drying, non-migrating and non-staining type formulated for acoustical use.  
  
Use one of the following:
  - 1. Pecora BA-98.
  - 2. Tremco Acoustical Sealant.
  - 3. U.S. Gypsum Acoustical Sealant.
  - 4. Approved substitute.
- G. Sound Attenuation Blankets: ASTM C665, Type I, semi-rigid mineral or glass fiber blanket without membrane, Class 25 flame-spread. Provide 1.5" mineral fiber 3.0 lb. density or full thickness of 1.0 density glass fiber.
- H. Ceramic Tile Substrate:
  - 1. 5/8" thick glass mesh reinforced cementitious board, "Wonderboard" as manufactured by Modulars, Inc. or "Durock" by USG Industries, Inc.
  - 2. Install cementitious board substrate instead of gypsum board at all tile wall locations.
- I. Joint Treatment: Durabond 90 by U.S. Gypsum Co. or approved substitute.
- J. Accessories: ASTM C840 as follows:  
CAUTION: SOFFITS AND FRAMING ALLOWING MOVEMENT SHOULD WORK CONSISTENTLY OFF FLOOR OF SUSPENSION FROM STRUCTURE ABOVE. DO NOT MIX SYSTEMS.
  - 1. Provide corner beads at all external corners, CB-118 x 118.
  - 2. LC-58 at all termination edges exposed to view.
  - 3. L-58 at all termination edges abutting another material.
  - 4. Expansion/control joints as recommended by manufacturer to be located by Architect approved substitute to No. 093 by U.S. Gypsum.

### PART 3 - EXECUTION

ADD DECORATIVE REVEALS AS REQUIRED. REFER TO DRAWINGS FOR LOCATIONS.

#### 3.1 ACOUSTICAL SEALANT:

- A. Explain clearly where sealant is to be used.
- B. Provide sealant at all joints between drywall system and adjoining materials.

#### 3.2 ACCESSORIES:

- A. Gypsum Board Finish Levels: Finish panels to levels indicated below, according to ASTM C 840, for locations indicated:

1. Level 1: Embed tape at joints in ceiling plenum areas, concealed areas, and where indicated for fire-resistance-rated assemblies and sound-rated assemblies.
  2. Level 2: Embed tape and apply separate first coat of joint compound to tape, fasteners, and trim flanges where panels are substrate for thin set ceramic tile, acoustical tile, and where indicated.
  3. Level 3: Embed tape and apply separate first and fill coats of joint compound to tape, fasteners, and trim flanges. Level 3 is suitable for surfaces receiving medium or heavy textured finishes before painting of wall covering in conditions where lighting conditions are not critical.
  4. Level 4: Embed tape and apply separate first, fill, and finish coats of joint compound to tape, fasteners, and trim flanges. Level 4 is suitable for surfaces receiving light-textures finish, wall coverings, and flat paints. It is generally the standard exposed finish.
  5. Level 5: Embed tape and apply separated first, fill, and finish coats of joint compound to tape, fasteners, and trim flanges, and apply skim coat of joint compound over entire surface. Level 5 is suitable for surfaces receiving gloss enamels and surfaces subject to severe lighting. It is considered a high-quality gypsum board finish reserved for only special applications.
- B. Explain clearly where gypsum drywall and accessories must allow for sealant joints.

**END OF SECTION 09 26 00**

**SECTION 09 68 13**

**TILE CARPETING**

**PART 1 - GENERAL**

**1.1 SUBMITTALS**

- A. Review shop drawings for pattern match, if any, for matching during installation and possible waste factors in ordering required amounts. Provide copy of approved shop drawings on job site during installation.
- B. Verification Samples: Submit one full size samples illustrating color and pattern for each carpet material specified.
- C. Manufacturer's Installation Instructions: Indicate special procedures and perimeter conditions requiring special attention.

**1.2 QUALITY ASSURANCE**

- A. Manufacturer Qualifications
  - 1. Upon request, provide a representative to assist in project start-up and to inspect installation while in process and upon completion.
    - a. Representative will notify designated contact if any installation instructions are not followed.
    - b. Representative will be present at 6 month and 11 month punch walks.
  - 2. 5 year documented experience in manufacturing of carpet tile.
- B. Installer Qualifications
  - 1. Flooring contractor must be certified by the carpet manufacturer prior to bid.
  - 2. Flooring contractor to be a specialty contractor normally engaged in this type of work and has prior experience in the installation of carpet tiles.
  - 3. Flooring contractor will be responsible for proper product installation, including floor testing and preparation, as specified by the carpet manufacturer and job conditions herein.
- C. Single Source Responsibility: Obtain each type of carpet from one source and by a single manufacturer.

**1.3 DELIVERY, STORAGE, AND HANDLING**

- A. Deliver materials to the site in manufacturer's original packaging listing manufacturer's name, product name, identification number, and related information.
- B. Store in a dry location, between 60 degrees F and 80 degrees F and a relative humidity below 65%. Protect from damage and soiling. Stack carpet in boxes.
- C. Make stored materials available for inspection by The University's representative.
- D. Store materials in area of installation for minimum period of 48 hours prior to installation.

#### 1.4 PROJECT CONDITIONS

- A. Sub-floor preparation is to include all required work to prepare the existing floor for installation of the product as specified in this document and Manufacturer's installation instructions.
- B. Comply with 09 00 00 – Finishes, Part 3.1 for preparation of concrete to receive moisture sensitive flooring.
- C. Provide all material used in sub-floor preparation and repair as recommended by the carpet manufacturer and chemically and physically compatible with the carpet system being bid.
- D. Maintain minimum 65 degrees F ambient temperature and 65% Relative Humidity for 72 hours prior to, during, and 48 hours after installation.
- E. Do not install carpet until space is enclosed and weatherproof, wet-work in space is completed and nominally dry, work above ceilings is complete, and ambient temperature and humidity conditions are and will be continuously maintained at values near those indicated for final occupancy.
- F. Extra Materials: Deliver all unused carpet tiles to The University for "attic stock."

#### 1.5 WARRANTY

- A. Warranty to be sole source responsibility of the Manufacturer. Second source warranties and warranties that involve parties other than the carpet manufacturer are unacceptable.
- B. If the product fails to perform as warranted when properly installed and maintained, repair or replace the affected area at the discretion of the Manufacturer.
- C. Chair Pads are not required for carpet warranty coverage.
- D. Provide warranty for a specifically defined non-prorated period of 15 years to cover the following. "Lifetime" warranties are not acceptable.
  - 1. Excessive Surface Wear: More than 15% loss of pile fiber weight
  - 2. Excessive Static Electricity: More than 3.0 kV per AATCC 134
  - 3. Resiliency Loss of the Backing: More than 10% loss of backing resiliency
  - 4. Delamination
  - 5. Edge Ravel
  - 6. Zippering
- E. Provide an additional warranty for a minimum non-prorated period of two years and cover against shrinkage, cupping, and doming.
- F. Tuft Bind warranty in lieu of edge ravel and zippering is not acceptable.

### PART 2 - PRODUCTS

#### 2.1 MATERIALS, GENERAL

- A. FIBER
  - 1. Nylon Fiber: Fiber must be premium branded nylon. Mill extruded nylon will not be accepted
  - 2. Apply durable stain inhibitor to the fiber during product manufacturing to resist fiber staining and soiling. (Minimum average of three fluorine analyses of a single composite sample per CRI TM-102: 500 ppm.)

3. Fiber to contain carbon-core filament for permanent static control (*AATCC 20: Cross Section with Photo, Report on Determination of Antistat Existence*). Topical treatments not allowed.
4. Dye Method: Fiber to be minimum 95% solution dyed

## 2.2 BACKING CHARACTERISTICS

1. Primary Backing: Synthetic Woven or Non-Woven.
2. Pre-Coat (Fusion Coat): Sealant Vinyl
3. Secondary Backing: Vinyl Hardback. 100% reclaimed-content, nylon reinforced vinyl matrix backing is preferred and should be provided if available.
  - a. Density (ASTM D-1667): Minimum 65 lbs/cu ft +/- 5%
  - b. Fiberglass Reinforced.
  - c. 24" x 24" or 60cm

## 2.3 PERFORMANCE CHARACTERISTICS

- A. Test reports for the following performance assurance testing to be submitted upon request. Submitted results shall represent average results for production goods of the referenced style.
- B. Requirements listed below must be met by all products.
  1. Flooring Radiant Panel; ASTM E-648 / NFPA 253: Class 1 (CRF: 0.45 watts/sq cm or greater)
  2. Federal Flammability : CPSC FF 1-70: Passes
  3. Smoke Density: ASTM E-662 / NFPA 258: < 450 Flaming Mode
  4. Electrostatic Propensity: AATCC 134 (Step & Scuff): 3.0 kV or less
  5. Static Coefficient of Friction: ASTM C-1028: Passes ADA Requirements for Accessible Routes (minimum 0.60)
  6. Delamination of Secondary Backing of Pile Floor Coverings: ASTM D-3936: Minimum 15 lbs.
  7. Lightfastness: AATCC 16E: > 4 @ 100 hours
  8. Vetterman Drum: ASTM D-5417: Minimum 3 @ 22,000 cycles
  9. VOC Chamber Testing
    - a. ASTM D-5116: Product inclusive of "dry" adhesive system meets criteria established by the State of Washington Indoor Air Quality Specification for Carpet and/or Carpet & Rug Institute's (CRI) Indoor Air Quality Carpet Testing Program. If "dry" adhesive (2.02D) not available from manufacturer and "wet" adhesive is used to install the product, carpet and adhesive to meet CRI's Green Label requirements.
  10. Dimensional Stability: Aachen / ISO 2551: Maximum Change +/- 0.149%

## 2.4 SUBSTITUTES/ALTERNATES

- A. No substitutions or alternates allowed for this project.

## 2.5 ACCESSORIES

- A. Adhesives: Product to be installed using manufacturer's recommended adhesive. Non adhesive methods are preferred and should be provided if available.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Prepare sub-floor to comply with criteria established in Manufacturer's installation instructions. Use only preparation materials that are acceptable to the Manufacturer.

1. Remove all deleterious substances from substrate(s) that would interfere with or be harmful to the installation. (*i.e. floor wax*)
  2. Remove sub-floor ridges and bumps. Fill cracks, joints, holes, and other defects.
- B. Verify that sub-floor is smooth and flat within specified tolerances and ready to receive carpet.
- C. Verify that substrate surface is dust-free and free of substances that would impair bonding of product to the floor.
- D. There will be no exceptions to the provisions stated in the Manufacturer's installation instructions.

### 3.2 INSTALLATION, GENERAL

- A. Where demountable partitions or other items are indicated for installation on top of finished carpet tile floor, install carpet tile before installation of these items.
- B. Cut and fit carpet tile to butt tightly to vertical surfaces, permanent fixtures, and built-in furniture including cabinets, pipes, outlets, edgings, thresholds, and nosings.
- C. Extend carpet tile into toe spaces, door reveals, closets, open-bottomed obstructions, removable flanges, alcoves, and similar openings.
- D. Install borders parallel to walls (where applicable).
- E. Trim carpet neatly at walls and around interruptions.
- F. Completed carpet is to be smooth and free of bubbles, puckers, and other defects.

### 3.3 TESTING, CLEANING, AND CERTIFICATION

- A. Remove excess adhesive and/or seam sealer from floor and wall surfaces without damage.
- B. All rubbish, wrappings, debris, trimmings, etc. to be removed from site and disposed of properly.
- C. Clean and vacuum carpet surfaces per manufacturer's instructions.
- D. After each area of carpet is installed, protect from soiling and damage by other trades.

**END OF SECTION 09 68 13**

**SECTION 09 91 23**

**INTERIOR PAINTING**

**PART 1 - GENERAL**

**1.1 SYSTEM REQUIREMENTS**

- A. Design Requirements:
  - 1. Single-Source Responsibility: Provide primers and undercoats produced by and certified compatible with each other and with topcoat.
  - 2. Quality: Provide manufacturer's first line commercial products.
  - 3. Locally Available: Provide products readily available within the Denver metropolitan area in 1- and 5-gallon containers. Readily available means within 24-hours of placing order.
  - 4. Dry Film Thickness (DFT): Apply all coatings in strict conformance with manufacturer's recommendations for minimum DFT.

**1.2 SUBMITTALS**

- A. MSDS: Contractor to provide Material Safety Data Sheets (MSDS) for all coatings to the University Project Manager prior to application.

**1.3 QUALITY ASSURANCE**

- A. MPI Standards: Provide products that comply with Master Painter Institute (MPI) standards indicated and that are listed in its "MPI Approved Products List."
- B. All painting must be of journeyman level craftsmanship, paying special attention to preparation, etching, priming and undercoating.

**PART 2 - PRODUCTS**

**2.1 MANUFACTURERS**

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  - 1. Benjamin Moore & Co.
  - 2. PPG Architectural Finishes, Inc.
  - 3. Sherwin-Williams Company (The).

**2.2 BLOCK FILLERS**

- A. Block Filler, Acrylic/Latex, Interior/Exterior for Concrete Masonry Unit Substrates: MPI #4

**2.3 PRIMERS/SEALERS**

- A. Primer, Alkali Resistant, Water Based, for Concrete Substrates: MPI #3
- B. Primer Sealer, Interior, Institutional Low Odor/No VOC, for Gypsum Board and Plaster Substrates: MPI #149
- C. Primer, Latex, for Interior Wood Substrates: MPI #39



- D. Wood-Knot Sealer: Sealer recommended in writing by topcoat manufacturer for use in paint systems indicated.

## 2.4 METAL PRIMERS

- A. Primer, Rust-Inhibitive, Water Based, for Ferrous-Metal Substrates: MPI #107
- B. Primer, Galvanized, Water Based, for Zinc-Coated Metal Substrates: MPI #134
- C. Primer, Quick Dry, for Aluminum Substrates: MPI #95

## 2.5 WATER-BASED PAINTS

- A. Latex, Interior, Gloss (Gloss Level 6, except minimum gloss of 65 units at 60 degrees): MPI #114.
- B. Latex, Interior, Institutional Low Odor/No VOC, Flat (Gloss Level 1): MPI #143.
- C. Latex, Interior, Institutional Low Odor/No VOC, Egg-Shell (Gloss Level 2) MPI #144 or (Gloss Level 3) MPI #145.
- D. Latex, Interior, Institutional Low Odor/No VOC, Semi-Gloss (Gloss Level 5): MPI #147.

## 2.6 DRY FOG/FALL COATINGS

- A. Dry Fall, Latex, Flat: MPI #118.
- B. Dry Fall, Water Based, for Galvanized Steel, Flat (Gloss Level 1): MPI #133.

# PART 3 - EXECUTION

## 3.1 INTERIOR PAINTING SCHEDULE

- A. Concrete Substrates, Nontraffic Surfaces: The following system is acceptable, high performance coating specified in SECTION 09 96 00 preferred.
  - 1. Institutional Low-Odor/No VOC Latex System: MPI INT 3.1M
    - a. Prime Coat: Primer sealer, interior, institutional low odor/No VOC, MPI #149.
    - b. Intermediate Coat: Latex, interior, institutional low odor/No VOC, matching topcoat.
    - c. Topcoat: Latex, interior, institutional low odor/No VOC, semi-gloss (Gloss Level 5), MPI #147.
- B. Concrete Substrates, Traffic Surfaces: At all concrete traffic surfaces scheduled to receive sealer.
  - 1. Water-Based Clear Sealer System: MPI INT 3.2G
    - a. First Coat: Sealer, water based, for concrete floors, MPI #99.
    - b. Topcoat: Sealer, water based, for concrete floors, MPI #99.
- C. CMU Substrates: The following system is acceptable, high performance coating specified in SECTION 09 96 00 preferred.
  - 1. Institutional Low-Odor/No VOC Latex System: MPI INT 4.2E
    - a. Block Filler: Block filler, latex, interior/exterior, MPI #4.
    - b. Intermediate Coat: Latex, interior, institutional low odor/No VOC, matching topcoat.

- c. Topcoat: Latex, interior, institutional low odor/No VOC, semi-gloss (Gloss Level 5), MPI #147.
- D. Steel Substrates: At all steel substrates not indicated to receive high-performance coatings specified in SECTION 09 96 00.
  - 1. Water-Based Dry-Fall System (for overhead work only): MPI INT 5.1C
    - a. Prime Coat: Shop primer to be specified in Division 05.
    - b. Topcoat: Dry fall, latex, flat, MPI #118.
  - 2. Institutional Low-Odor/No VOC Latex System: MPI INT 5.1S
    - a. Prime Coat: Primer, rust-inhibitive, water based MPI #107.
    - b. Intermediate Coat: Latex, interior, institutional low odor/No VOC, matching topcoat.
    - c. Topcoat: Latex, interior, institutional low odor/No VOC, semi-gloss (Gloss Level 5), MPI #147.
- E. Galvanized-Metal Substrates: At all galvanized metal substrates not indicated to receive high-performance coatings specified in SECTION 09 96 00.
  - 1. Water-Based Dry-Fall System (for overhead work only): MPI INT 5.3H
    - a. Prime Coat: Dry fall, water based, for galvanized steel, flat (Gloss Level 1), MPI #133.
    - b. Topcoat: Dry fall, water based, for galvanized steel, flat (Gloss Level 1), MPI #133.
  - 2. Institutional Low-Odor/No VOC Latex System: MPI INT 5.3N
    - a. Prime Coat: Primer, galvanized, water based, MPI #134.
    - b. Intermediate Coat: Latex, interior, institutional low odor/No VOC, matching topcoat.
    - c. Topcoat: Latex, interior, institutional low odor/No VOC, semi-gloss (Gloss Level 5), MPI #147.
- F. Aluminum (Not Anodized or Otherwise Coated) Substrates:
  - 1. Institutional Low-Odor/No VOC Latex System: MPI INT 5.4G
    - a. Prime Coat: Primer, quick dry, for aluminum, MPI #95.
    - b. Intermediate Coat: Latex, interior, institutional low odor/No VOC, matching topcoat.
    - c. Topcoat: Latex, interior, institutional low odor/No VOC, semi-gloss (Gloss Level 5), MPI #147.
- G. Wood Substrates:
  - 1. Institutional Low-Odor/No VOC Latex System: MPI INT 6.1Q, MPI INT 6.2L, MPI INT 6.3V, and MPI INT 6.4T
    - a. Prime Coat: Primer, latex, for interior wood, MPI #39.
    - b. Intermediate Coat: Latex, interior, institutional low odor/No VOC, matching topcoat.
    - c. Topcoat: Latex, interior, institutional low odor/No VOC, semi-gloss (Gloss Level 5), MPI #147.
- H. Gypsum Board and Plaster Substrates:
  - 1. Latex System: MPI INT 9.2A. At gypsum board, GFRG, and plaster substrates scheduled to receive gloss paint.
    - a. Prime Coat: Primer sealer, latex, interior, MPI #50.
    - b. Intermediate Coat: Latex, interior, matching topcoat.
    - c. Topcoat: Latex, interior; gloss, (Gloss Level 6, except minimum gloss of 65 units at 60 degrees), MPI #114.
  - 2. Institutional Low-Odor/No VOC Latex System: MPI INT 9.2M. At all gypsum board, GFRG, and plaster substrates, unless indicated otherwise.
    - a. Prime Coat: Primer sealer, interior, institutional low odor/No VOC, MPI #149.

- b. Intermediate Coat: Latex, interior, institutional low odor/No VOC, matching topcoat.
- c. Topcoat: Latex, interior, institutional low odor/No VOC; Provide one of the following as indicated in Finish Schedule:
  - 1) Flat (Gloss Level 1), MPI #143
  - 2) Egg-shell (Gloss Level 2), MPI #144 or (Gloss Level 3), MPI #145
  - 3) Semi-gloss (Gloss Level 5), MPI #147
- d. Typical Sheen: Egg-shell (Gloss Level 2 or 3) unless indicated otherwise.

**END OF SECTION 09 91 23**

